A comparative study of students served in a transitional first-grade with students retained in grade and regularly promoted students

Philip Iovino

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A comparative study of students served in a transitional first grade with students retained in grade and regularly promoted students

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The College of William and Mary, 1991

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A COMPARATIVE STUDY OF STUDENTS
SERVED IN A TRANSITIONAL FIRST GRADE
WITH STUDENTS RETAINED IN GRADE AND
REGULARLY PROMOTED STUDENTS

A Dissertation
Presented to
The Faculty of the School of Education
The College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

by
Philip Iovino
December 1991
A COMPARATIVE STUDY OF STUDENTS
SERVED IN A TRANSITIONAL FIRST GRADE
WITH STUDENTS RETAINED IN GRADE AND
REGULARLY PROMOTED STUDENTS

by

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A Comparative Study of Students Served in a Transitional First Grade with Students Retained in Grade and Regularly Promoted Students

Abstract

The purpose of this study was to compare three groups of students: 1) those who were served in a transitional first grade program by a teacher having an interactionist philosophy, 2) those who were previously retained in grade, and 3) a random sample of regularly promoted students. This study used the philosophical orientation of the teacher as the indicator for the type of transitional program (independent variable). The age of the student (birthdate) was also used as an independent variable. The dependent variables used to make these comparisons were ability scores, achievement scores, self-esteem scores, and attendance.

The subjects in this study were 125 third graders from three elementary schools in eastern Virginia. Thirty-nine students had been served in a transitional program, 39 students had been retained prior to the 1991-92 school year, and 47 students who had never been retained were randomly selected as a control group. The control group approximated the gender and racial make-up of the other two groups and were chosen from the same schools.

For measures of achievement, scores from the Iowa Test of Basic Skills taken during the spring semester of second grade
were analyzed. The Cognitive Abilities Test, which was administered as part of the State Testing Program during the fall semester of first grade, was used for obtaining ability scores. In the fall semester of third grade, the Self-Concept and Motivation Inventory: What Face Would You Wear? was administered to the children in this study. Attendance records from the 1990-91 school year were analyzed. Analysis of variance was used to examine the data.

Findings indicate that no significant difference occurred between students formerly served in a transitional program and students who had been retained for any of the dependent variables measured. Regularly promoted students had significantly higher achievement scores and ability scores normed by age than the other two groups. Grade level comparisons revealed no significant difference for measures of ability. There was no birthdate effect present on achievement test scores for the students in this study. There was no interaction present between the group and the student's birthdate. There were no significant differences found among the three groups on self-concept and motivation scores, nor did the students in these three groups differ on the number of days absent from school. Several conclusions were drawn. First, there was no evidence found from this study to indicate that being served in a transitional program was any more beneficial than being retained. Second, successful transitional programs found in the literature had the
characteristics of interactionism. From this study, a teacher with an interactionist philosophy, in and of itself, was not enough to produce achievement results for students in a transitional program comparable to those of regularly promoted students. Third, it is recommended that the student's ability be a primary consideration for placement into a transitional program.

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A COMPARATIVE STUDY OF
STUDENTS SERVED IN A TRANSITIONAL FIRST GRADE
WITH STUDENTS RETAINED IN GRADE AND
REGULARLY PROMOTED STUDENTS
In almost every kindergarten classroom, there are several students whom the teacher perceives as being "unready" for first grade. These students typically are poorly prepared in the reading readiness skills of identifying letters and understanding letter/sound relationships. Oftentimes, these are children who do not follow directions well, have short attention spans, and generally do poorly on paper-and-pencil academic tasks. Other children may be identified by their lack of social skills which are important in the school setting. These are the children who may be aggressive toward other children, unusually passive in class to the point of not speaking or participating, or generally display immature behavior (Brewer, 1990).

To solve this problem, many school systems have implemented transitional programs following kindergarten. Most transitional programs are designed to provide another year of school for children who display characteristics of being cognitively, socially, or emotionally immature, or display delayed psycho-motor skills. Following this transitional year, students typically go on to first grade.

Many extra-year programs are administrative responses to the "push-down" curriculum which has become prevalent in schools. Formal academic instruction which was once provided
only to older students has now been forced upon younger and younger students. Elkind (1981) brought the subject of trying to teach our young children too much too soon to prominence in his book The Hurried Child. Many concerns about "pressuring" young children and exposing them to developmentally age-inappropriate curricula have caused different advocate groups to speak out on behalf of young children. The use of transitional programs (i.e., extra-year programs) to provide children with extra time to develop has become a topic of heated debate in the field of early education.

Not everyone agrees that transitional programs are effective and worthy of support. Conflicting opinions regarding transitional kindergarten programs usually have their roots in various theoretical perspectives regarding child development.

Theories of child development that influence educational practice are dominated by three major schools of thought: maturationism, behaviorism, and interactionism. Maturationism, espoused by Gesell (1971) and others, stresses the role of genetically controlled biological change in behavior and learning. In contrast, behaviorism, associated with Skinner (1953), emphasizes the importance of environmental factors. Interactionism, also known as cognitive-developmental theory, is based on the work of Piaget (1973) and views development as the dynamic interaction of the individual and the environment" (Freeman & Hatch, 1989, p.596).

According to Brewer, (1990) transitional programs generally reflect one of these three views about children and learning.

One of the reasons cited by the National Association for the Education of Young Children for opposing extra-year options is that "the more you weed out kids who seem less
likely to succeed, the more you give license for having kindergarten remain academically inappropriate" (Goodman, 1990; cited in Uphoff). Proponents of extra-year programs maintain that the battle should be to establish developmental programs in all schools, not to eliminate extra-year programs when no alternatives are currently in place for dealing with high numbers of children not "ready" for the next grade.

The kindergarten curriculum of today is recognizably different than it was two decades ago. The shift from play and socialization to kindergartens characterized by direct teaching of discrete skills and specific expectations for achievement is being questioned by recent calls for reform of public education (Elkind, 1986). Spodek (1986) states that well-known and respected bodies of research information are often ignored in the formulation of curriculum for today's kindergarten. The academic demands of kindergarten and first grade are considerably higher today than they were twenty years ago (Shepard & Smith, 1988). Today, educators must serve children coming to school with a much wider range of experience outside the home than children of the past (Egertson, 1987). As a result, many parents, teachers, and administrators feel that the curriculum must be more advanced. Children are now asked to spend prolonged periods of sitting at tables trying to complete pencil and paper tasks which some experts (Elkind, 1986; Shepard & Smith, 1988) claim are clearly inappropriate for most children of this age. Public
school kindergartens adhere to policies and procedures which are neither well integrated into the regular school curriculum nor reflect findings from either current or established research (cited in Siegel & Hanson, 1991).

In contrast, twenty percent of entering kindergarten children live below the poverty line (World Almanac, 1988). These children have very limited outside experiences. Their language may be poorly developed and they often lack the structured home environment which resembles the structured school environment. In truth, these students frequently start out behind when compared to children coming from more enriched environments and may or may not "catch-up" with the rest of the children.

Those who debate whether transitional programs are really necessary basically agree on the point that the resolution of the problem will only occur when all children are instructed at the appropriate developmental level. "The institution of transitional classes is often the quick fix to school structure that takes the place of fundamental, philosophical change that is really needed to improve schools" (Bredekamp, p.20). Uphoff (1990a), a supporter of transitional programs, concedes that point. However, he argues that when what is commonly available to our nation's children in the primary grades is appropriate, the need for most extra-year programs will have been dramatically reduced. Uphoff's position is that this "appropriate" primary curriculum is not currently in
place so there does exist a need for transitional programs. Opponents counter that the continuing practice of implementing transitional programs retards the fundamental revisions which are necessary for primary education today.

Theoretical Constructs

Maturational View

For the maturationists, transitional programs provide a year of developmental time which will make it possible for children to succeed the following year in the first grade class (Bohl, 1984; cited in Brewer). Gesell's theory holds that children's readiness for any given task is determined by biological maturation. Attempts made to teach children before they are ready will be ineffective and will cause serious harm to their social and emotional development. This theory is based on a nativist or hereditarian concept (Shepard & Smith, 1985).

In matters of retention or extra-year programs, the Gesell philosophy expects that retention will be effective only if children repeat because they are "immature" and not if they are slow learners or suffer some other academic problem. Several studies have been done to evaluate programs where children were either retained or placed in a transitional pre-first class because they were "unready" for first grade. In all but two of the eight studies reviewed by Shepard & Smith (1985), children who were identified as potential failures but
whose parents refused retention achieved the same or better than children who repeated. In two studies, there was an initial benefit in reading for retained children, but this advantage disappeared by third grade. Furthermore, children who had been identified as "immature" and "potential failures" but who did not repeat were indistinguishable from the other children by the time they reached third grade.

Maturationists would argue that inequities of social provisions for pre-school children are glaring. At one extreme there exists an infant born without any record of medical supervision in the squalor of a rural or city slum. At the other extreme is the infant born in a sanitary hospital from a mother benefiting from the best prenatal care available. "Only through a democratically conceived system of developmental supervision can we attain a more just and universal distribution of developmental opportunity for infants and preschool children" (Gesell, 1943, p.360).

The curriculum in such transitional programs often consists of many physical activities, such as walking on a balance beam, skipping, hopping, riding tricycles, and catching a ball. Five-year olds enjoy a routine and adjust well to activities that allow freedom of movement and yet maintain control of the sequence of separate activities. Much of reading and number work is closely associated with play, both at home and school. Children of this age enjoy counting objects and listening to stories. Stories with repetitive
action and phrases are favorites, especially stories about animals, trains, and fire engines. These students work in short bursts of energy. Activities such as sitting at a table to color or mold clay, playing in a sandbox, housekeeping, or block building can be done individually or in small groups (Gesell, Ilg, & Ames, 1977).

Behavioral View

In contrast, behavioral transitional programs emphasize skill development (Bereiter & Englemann, 1966; cited in Brewer). Brewer describes these classes as small in class size with a well-trained teacher, a program of carefully sequenced skills, and an appropriate reward system. Children can go directly to second grade with mastery of first grade skills in this type of classroom setting. Behaviorists assume that all learning is a result of experiences and that maturational readiness is relatively unimportant. All knowledge exists in the outside world and must be transferred to the child little by little until complex ideas are built up. Motivation to learn comes from outside the person. If children are to learn the desired behaviors, their actions must be positively reinforced or rewarded so that the child will repeat the behavior (Richelle, 1989). Undesirable behaviors are best stopped by being ignored. The behavioral theory is derived from the work of such people as E.L.

Cognitive psychologists have turned to brain science and computer science for confirmation of their theories. By building machines that do what people do, computer science can demonstrate how the mind works. Skinner (1989) feels that the direction taken by cognitive psychologists has gone astray. Skinner claims no account of what is happening inside the human body, no matter how complete, will explain the origins of human behavior. "The greater part of human behavior must be traced to contingencies of reinforcement, especially to the very complex social contingencies we call culture" (Skinner, 1989, p.18). Although behaviorism is no longer as popular in psychology as it once was, it continues to have great appeal to educators (Rockler, 1987). Elements of behaviorism abound in education. Behavioral objectives and programmed learning are both derived from this theory. The rewarding and punishing of children have their roots in behaviorism. Rockler claims the knowledge base in teacher education needs improvement. Behaviorism arose because of a need of psychologists to be scientific. Stimulus-response psychology has come to dominate the knowledge base in teacher education.

Behavioral transitional programs and kindergarten programs are quite common in both public and private schools. Escalating demands placed on schools have pressured schools to take this approach. Children are not allowed to "waste time"
with activities that do not have a direct application to academic skills (Brewer, 1990). Behaviorists feel that children can generally do a lot more than is asked of them. There is a strong emphasis placed on drill and practice. Methods would include homework and filling out ditto sheets on material covered. Products, such as completed worksheets, are evidence that the child has mastered the skill. "In this view, because behaviorists assume a passive learner— one incapable of constructing knowledge by acting on experience— there is a great concern about simplifying and carefully planning learning experiences" (Schickedanz, York, Stewart, & White, 1990).

**Interactional View**

The interactional view, as its name suggests, does not depend solely on environment or biology, but rather on the interaction of the two. At the heart of Piaget's contribution to education are the many insights his work has provided for understanding the thought and the behavior of children (Elkind, 1976). Elkind describes two insights which Piaget has contributed to education. The first has to do with externalization, the process which makes it difficult for us to fully appreciate when the reality of the child is different from our own. The second, having to do with egocentrism, deals with aspects of children's thought and behavior that bring them into conflict with adults.
The main focus of the interactional view is based on Piaget’s stages of learning. Most of the children with whom early childhood teachers will work are in the preoperational stage of their thinking. Preoperational children are egocentric in their thinking. They view the world from their own point of view and have little awareness that others see the world differently. These children can not perform mental operations typical of children in the concrete operations stage. They center on one aspect of a situation and are unable to reverse the process in their minds. For example, a child shown two glasses of equivalent amounts of water will agree that they are the same. However, when that volume of water is spread out to several glasses, the child cannot understand that it is still the same amount. This opinion will be maintained even after the water has been poured back and forth between the set of small glasses and a large glass several times (cited in Schickedanz, 1990).

There are teaching implications for teachers holding the interactional view. The philosophy of readiness is that a Stage 1 child (sensory stage) is not ready for most activities provided in a kindergarten class. The Stage 2 child, moving from preoperational to concrete operational level, is in transition. The educator needs to provide materials and to ask Stage 2 children questions to help them in this transition. The educator’s role in this type of program is to
provide appropriate materials at hand and to ask questions, not to give explanations (Copeland, 1988).

Athey and Rubadeau (1970) enumerate several educational implications which can be drawn from Piaget's theory. First, discovery learning is indicated, especially in the early years. The child's natural tendency to explore and manipulate the environment must be sustained and encouraged by the school. Second, individual differences should be encouraged and developed. Piaget's theory places firmly on the shoulders of the teacher the responsibility for knowing the experiential background which has brought each child to the particular level of functioning including areas lacking and those well developed. Third, acceleration of the stages may be possible within broadly defined limits. In general, what needs to be done is enrichment, rather than acceleration. Providing the child with the richest environment possible will be more beneficial than providing work in concepts which can be learned more easily and with fuller comprehension at a later time. Fourth, early childhood education should provide the foundation for later learning. "There is an optimal period in the child's life for certain kinds of learning, and failure to capitalize on these periods may lead to difficulties at later stages" (Athey & Rubadeau, 1970, p. xviii).

In regard to curriculum, transitional programs are not defined in terms of skills to be mastered, but are viewed as appropriate for children when they match the child's cognitive
developmental level and when the curriculum is child centered and responsive to individual interests and needs (Bredekamp, 1987; cited in Brewer). There is much active exploration and discovery learning through play and activities that offer intellectual challenge. A child in this program might choose from blocks, sand, water, magnetic alphabets, books, puzzles, writing opportunities, or painting at an easel. The teacher's role is one of observer, facilitator, and creator of varied material and work centers that might challenge the student to explore areas of interest. Children learn reading and writing through experiences and the recording of their experiences in their own writing. This program also has a strong emphasis on helping children develop social skills. Cognitive interactionists believe children learn best from that which is interesting to them and connected to their own experiences. Concerns about programs which introduce stress on young children faced with unreasonable academic tasks and emphasize mastery of skills are also expressed by cognitive interactionists.
Purpose of the Study

The purpose of this study was to compare three groups of students: 1) those who were served in an transitional first grade program by a teacher having an interactionist philosophy, 2) those who were previously retained in grade, and 3) a random sample of regularly promoted students. This study used the philosophical orientation of the teacher as the indicator for the type of transitional program (independent variable). The age of the student was also used as an independent variable to test for birthdate effect. The dependent variables used to make these comparisons were ability scores, achievement scores, self-esteem scores, and attendance.

Rationale for Study

According to the Educational Research Service (cited in Stroud & Williams, 1990), a "transitional classroom" between kindergarten and first grade is an alternative for approximately 17% of the nation’s elementary schools. With nearly one school in five using these programs, can it be established that they work? To answer that question, this study addressed several questions pertaining to transitional programs. This study examined only those transitional programs which were identified as interactionist. The limited time these programs have been in existence hinders a
longitudinal study of greater length. For this reason, third graders served as the subjects for this study.

With research studies divided on the effectiveness of transitional programs, the methodology used in these studies has come into question. One obvious factor which has been given only cursory mention is that of the type of program. Where the effectiveness of transitional programs has been studied, there has been no attempt to identify the program as maturationist, behaviorist, or interactionist. In essence, these programs have all been treated as one and the same. "Despite the common-sense rationality and hence popularity of transitional programs, research on them is both limited and difficult to generalize" (Brewer, p.17). Stroud and Williams (1990) argue that the fact that some transitional programs are successful and others are not may be due to the congruency (or discrepancy) between the program’s goals and what actually takes place in the classroom.

It would not be at all unusual for a teacher with an interactionist philosophy to work in a behaviorist system, or vice versa. Based on the research of Good, Biddle, & Brophy (1975), the teacher given enough autonomy will create a classroom environment in which he/she feels comfortable. Although the school system would act as an independent variable, this study did not investigate its impact, nor did the study compare the congruency (or discrepancy) of stated program goals (if they existed at all) with what actually took
place in the classroom. The "what actually takes place in the classroom" was defined by the teacher, which encompasses the philosophical orientation of the teacher. One conclusion which can be inferred from the literature is that it is the behaviorist primary program which has given a bad name to all primary programs. From a study of 61 Ohio public school kindergarten report cards, Freeman and Hatch (1989) report "a strong behaviorist orientation and (reporting systems) seem to devalue the influence of the maturationists and the interactionists in the education of young children" (p. 603). Additionally, the emphasis on readiness skills and work habits obscures other important areas that were not evident in the report cards, most notably, self-esteem, play, or any other affective factors such as curiosity, interest, motivation, and enjoyment. As is often the case, the curriculum is driven by the report card or behavioral objectives which are to be mastered. Both proponents and opponents of transitional programs agree that children should be provided appropriate instruction at an appropriate level in order to be successful. The generic "transitional program" may possibly be given a bad name because of its connection to behaviorism. Brewer (1990) states that if the transitional program is behavioristic, it might reinforce the school's narrow, academic, test-and-fail orientation for educating young children. Thus, transitional programs should be examined separately as to type.
Research Questions

1) Do students who were served in a transitional program described as interactionist parallel their third grade classmates who had never been retained as measured by achievement test scores and self-concept scores?

2) Do students who were served in a transitional program described as interactionist exceed their third grade classmates who had been retained in a grade prior to or including third grade as measured by achievement test scores and self-concept scores?

3) Does a birthdate affect on achievement test scores exist within groups and between groups when comparing students served in a transitional program described as interactionist with retained students and students who were never retained?

4) Do students' ability levels differ among these three groups as measured by the Cognitive Abilities Test? Do transitional children differ from retained children and regularly promoted children on measures of ability?

5) Do any differences exist among these three groups in regard to school attendance? Are students in an interactionist transitional program or formerly retained students absent more frequently than regularly promoted students?
Hypotheses

It was hypothesized that the differing conclusions found from related studies on transitional programs resulted from lumping various types of transitional programs together. This study investigated only one type of transitional program, the interactionist. Based on a review of literature, the following hypotheses were generated:

Hypothesis 1. At the conclusion of second grade, there will be no significant difference between students previously served in a transitional first grade program \((T_1)\) and students previously retained in grade \((RG)\) on achievement scores. The students who were never retained \((NR)\) will score significantly higher than either the \(T_1\) or \(RG\) group on achievement test scores.

Hypothesis 2. There will be no significant difference on self-concept scores among the \(T_1\), \(RG\), and the \(NR\) groups as measured during the beginning of third grade.

Hypothesis 3. Older children in each of the three groups will score significantly higher than the younger children in their respective group on measures of achievement.

Hypothesis 4. Younger children in the \(NR\) Group will score higher than children from either the \(T_1\) or \(RG\) Group, regardless of age, on measures of achievement. Older children in the \(T_1\) Group will score higher than younger children in the \(RG\) Group, and older children in the \(RG\) Group will score higher
than younger children in the T1 group on measures of achievement.

Hypothesis 5: There will be no significant difference in ability scores among the three groups as measured during the first grade.

Hypothesis 6: There will be no significant difference in the number of days missed from school among these three groups.

Limitations of the Study

The following factors limit the generalizibility of this study:

1. As stated earlier, transitional programs follow one of three philosophical designs. The question as to whether the three transitional programs used in this study resemble each other, even though the teacher has an interactionist philosophy, is one possible limitation of the study. However, there are probably more similarities than differences in the design of these programs.

2. Population validity is defined as the extent to which the results of a study from a specific sample can be generalized to the larger population (Borg & Gall, 1983). The target populations are all students served in interactionist transitional programs and all students retained through third grade. The fact that the transitional students and retained students used in this study may not represent all transitional
and retained students is recognized as a limitation. However, a random selection of students not exposed to these treatments was used as a control from the same general population. Comparisons made from these groups could be expected to parallel similar groups drawn from other populations.

3. A third limitation is small sample size. This would be a greater problem for comparing the means of the subgroups for birthdate-effect. This population is fairly homogeneous; therefore, very large sample sizes are not as crucial (Borg & Gall, p.260).

4. The method of identifying transitional classes as maturationist, behaviorist, or interactionist is a limitation. The identification is based on the self-reported philosophy of the classroom teacher. This could not be verified through direct classroom observation. Ideally, the researcher should assign students to the treatment group (interactionist transitional program). This luxury is often unavailable and the next best thing is to study classes which are considered interactionist based on the post-hoc data available.
Definition of Terms

Ability: Ability was defined as ability scores as measured by the Cognitive Abilities Test given during the first grade as part of the Virginia State Assessment Program. Both age and grade percentiles for verbal, quantitative, and nonverbal were analyzed. The second set of test scores were used for those students in the RG group who repeated first grade.

Achievement: Achievement was defined as the scaled score measures from The Iowa Test of Basic Skills for reading comprehension, total language arts, and total math. Scores used for all three groups were from the spring semester of the second grade.

Attendance: Attendance was defined as the total days absent for each student. Mean group averages were calculated and analyzed for determining differences in group profiles.

Behaviorism: Theory of child development, associated with Skinner, emphasizing the importance of environmental factors.

Interactionism (also cognitive-developmental theory): Theory of child development based on the work of Piaget and views development as the dynamic interaction of the individual and the environment.
Interactionist Transitional Program: As defined in this study, a program instructed by a teacher with a philosophy espousing interactionism.

Maturationism: Theory of child development, espoused by Gesell and others, stressing the role of genetically controlled biological change in behavior and learning.

NR: designates the group of third grade students who were never retained in grade. These students were randomly selected and approximate the racial and gender make-up of the other two groups.

Older students: Students, by virtue of the fact that they were placed in a transitional program or were retained, were one calendar year older than the students in their same grade, on average.

RG: RG designates the group containing students who were retained in either kindergarten, first grade, second grade, or third grade and who were currently in third grade. Students having more than one retention in grade are not included.

Self-concept: Measures of the student's feelings of self and motivation as assessed by The Self-Concept and Motivation Inventory (SCAMIN). Reviewers in the area of self-concept
measurement considered this instrument as adequate if used in research for groups over time (Goodwin & Driscoll, 1980; cited in Pomplun).

T1: T1 designates the group of students who were served in a transitional first grade program as defined below.

Transitional First Grade: An educational placement for children considered "not ready" to handle the regular first grade curriculum. These programs typically have a smaller teacher-pupil ratio, are more developmental in approach (i.e. more manipulatives, more free exploration, more emphasis on language development), and are less dependent on meeting strict grade-level standards.

Transitional Students: Kindergarten students considered by the placement committee (any combination of teacher, principal, counselor, resource teacher, and parents) to be socially, emotionally, physically, and/or intellectually unprepared to handle the demands of first grade.
Summary

The problem presented in this study was to make sense of the various findings resulting from the implementation of transitional first grade programs. It was recognized in this section that students have special needs which oftentimes require alternative programs to those traditionally in place in the public school systems. One such alternative, the transitional first grade program, has been criticized and extolled, and everything in between. The theory proposed in this study is that the various and conflicting results found in the literature can be attributed to the diverse types of programs established under the label of transitional programs.

This study examined students in a transitional program instructed by a teacher with an interactionist philosophy. Interactionism is a theory of child development based on the work of Piaget and views development as the dynamic interaction of the individual and the environment. Behaviorism, places environmental factors as the primary component in the development of the individual. Maturationism stresses the role of genetically controlled biological change as the influence for behavior and learning.
Chapter 2: Review of the Literature

Introduction

Transitional first grade programs have been investigated using many designs and various criterion variables, yet ambiguous findings still pervade the literature. Part of the problem, which this study has explored, was that of defining transitional programs as to type. Also, defining the success of the program was a source of ambiguity. Is success measured by student achievement or by other variables such as student self-esteem or satisfaction by parents and teachers? Are long-term effects such as dropout rate and the students' future successes a better measure of program effectiveness? This review of literature was limited to those variables which were investigated in this study. Even here, differences in methodology, implementation of the program, and sample (both in size and types of subjects), have resulted in conflicting conclusions as to the effectiveness of transitional programs.

The presentation of the review of literature creates some problems in its own right. Most studies have investigated more than one variable and therefore would appear in more than one section of the review. In these cases, the background of the study was presented in only one section of the review and the reader would be referred to that page for
background information. Significant findings and conclusions are generally presented under each section.

**Current Trends**

Opponents of transitional programs frequently compare these programs to "glossed-over" retentions and quote research on detrimental retention-effects and dropout statistics. Most notably, Shepard and Smith (1989) from the National Association for the Education of Young Children have had a tremendous impact on curriculum change in the United States. Citing research from Shepard and Smith, the Texas Education Agency banned the use of extra-year programs in their public schools (Uphoff, 1990b). The state of California has made transitional programs illegal (Brewer, 1990). Nebraska has issued a position paper which strongly suggests that all five-year olds be placed in kindergarten and that no child be held back for developmental reasons (Nebraska State Board of Education, 1984). Virginia, which only seven years ago had a position paper supporting extra-year programs (Supt. Memo., 1984) now has been advocating the return to developmental primary programs and stops short of endorsing the practice of transitional programs.

Rhode Island school districts have greatly increased the practice of using transitional classes. Sixty percent of Rhode Island districts utilize these programs (Ostrowski, 1988). In 1978, there were none. Proponents of extra-year
programs, notably led by Dr. James K. Uphoff, criticize the poor methodology and "selective" use of research by Shepard and Smith. Criticisms such as the use of different types of control groups, over-generalizations of findings, and the blatant omission of many successful research studies are argued by this group. In Real Facts from Real Schools (1990b), Uphoff cites evidence from 27 case studies supporting the successful implementation of extra-year programs. For example, in Flunking Grades, Shepard and Smith cite Caggiano’s doctoral dissertation and conclude "Caggiano (1984) found essentially no benefit for immature children assigned to extra-year placements" (cited in Uphoff, p.20). Uphoff contends that this interpretation is taken out of context and is totally misleading. From Caggiano’s abstract of his total study, it is apparent that his findings fall on the positive side of the scale when it comes to social-emotional consequences of transitional programs.

In regard to curriculum, Gredler (1984) states that transitional programs are established with the intention of helping young children gain the physical, social, emotional, and intellectual maturity needed to cope with academic tasks. These programs attend more to developmental needs of the individual learner and are less structured than traditional first grades. Burts, Hart, & Thomasson (1990) found that more story, music, center, and other activities were observed in the appropriate (developmental) classrooms, while more
workbook/worksheet, small group, and whole group, transitions, waiting, and punishment were noted in inappropriate classrooms. Furthermore, it was found that children in developmentally inappropriate classrooms exhibited significantly more stress behavior than children in the more appropriate classrooms. The researchers conclude that empirical evidence is mounting to support the contention that developmentally inappropriate curricula, with its narrowly focused academic emphasis, is potentially harmful to young children. Elkind claims that we may be placing children at risk for no useful purpose when we provide highly academic instruction (cited in Burt, Hart, & Thomasson). Humphrey & Humphrey (1985) have pointed out possible long-term effects of poorly managed stress for children in school including child burnout and diminished reserves of energy for coping (cited in Burt et al.).

**Transitional Students**

Mantzicopoulos and Morrison (1990) studied the characteristics of at-risk children in transitional classrooms. The subjects included 51 children eligible for kindergarten from a northern California county. Seventeen children (12 males) had been placed in a transitional prekindergarten program (TK) based on the Gesell School Readiness Test. Seventeen children recommended for retention (RK) were randomly selected from the same district and matched
to the TK group on gender. A control group (PK) of 17 kindergarten children was also randomly selected and matched on gender. The comparisons of retained and promoted children demonstrated considerable consistency with the literature on nonpromotion (cited in Mantzicopulos & Morrison). When comparing retained kindergartners to their promoted peers, the retained children tended to: 1) be younger in age, 2) have lower achievement test scores, 3) be rated by their teachers as more likely to develop a learning problem in the future, 4) score in the vulnerable range of the SEARCH screening (spatial and temporal orientation believed basic to beginning reading), 5) have a higher incidence of behavior problems, and 6) be less popular among peers. Transitional children, at the completion of the year, were similar to retained children. Despite their low academic performance, transitional children were not rated by their teachers as likely to develop learning problems as were the retained children. The authors conclude that their findings may carry positive implications for the child's self-esteem. Transitional children did not demonstrate the behavioral deviances of the retained group. "Given the similarities of transitional children and retained students, one could begin to speculate that the behavior problems of the retained children may be a result of their inability to cope with tasks for which they are not ready" (Mantzicopulos & Morrison, 1990, p.330).
This study supports the premise that transitional teachers rate their children higher because the homogeneity of the group precludes comparisons with other types of children, or immature behaviors are better tolerated in transitional programs and are more likely to be regarded as appropriate given the child's developmental stage. The authors conclude that the effectiveness of transitional kindergarten is an issue which merits extensive investigation. The limited evidence that exists paints a gloomy picture and suggests that placement on the basis of the Gesell Readiness Test is not suggestive of improved academic performance. A more comprehensive study using the Gesell is reviewed below.

Winstead (1986) described the transitional child in terms of social, emotional, physical, and intellectual traits. Winstead depicts the transitional child as being immature and relating better to younger children. This child can be either very passive or outgoing, and rarely assumes a leadership role. Emotionally, the transitional child cries easily, lacks self-confidence, and fears physical contact with peers. Anxiety about "being right" and a short attention span are other characteristics of the transitional child.

Physically, this type of student tires easily, has poor fine and gross muscle coordination, and is frequently absent. This child may resemble a child a half-year to a year younger than his/her chronological age. Visual perception problems
in transitional students frequently lead to skipped lines or reversals.

Intellectually, the transitional student has difficulty completing work, takes longer to develop study habits, and requires a rigid daily schedule. These students often lack understanding of time-space concepts and language experience. Although transitional students may be low achievers, they are typically of average or high intelligence.

Effects of Transitional Programs

Gredler (1984) draws conclusions on transitional classes based on a meta-analysis of the research. Studies indicate that transitional room children either do not perform as well or at most are equal in achievement levels to transitional room-eligible children placed in the regular classroom. Favorable attitudes toward transitional classes are generally based on good-faith by school personnel and not on any effective monitoring of the students' progress. Gredler's research indicates that less time is devoted to academic activities in the transitional class than is given to children eligible for the transitional class but placed in the next grade. This is true even though transitional classes tend to have a lower teacher-pupil ratio (Beckmann & Reinert, 1985). Further educational intervention within the regular class for the educationally at-risk child is indicated from almost all the research investigations in this area.
Shepard and Smith (1989) make no distinction between extra-year programs and retention in kindergarten. In either case, the child will spend two years in school before entering first grade. The researchers state that controlled studies do not support the benefits claimed for extra-year programs. Additionally, negative side effects of extra-year programs occurred just as they did for retention. In a review of 16 controlled studies on the effect of extra-year programs, Shepard and Smith reported that there was a predominant finding of no difference. Shepard and Smith defended this conclusion by citing the fact that when researchers followed extra-year children to the end of first grade or even as far as fifth grade, extra-year children performed no better than "unready" children whose parents refused the extra-year. This finding held true despite the fact that extra-year children were older for their grade. Where children were selected to attend extra-year programs based on immaturity (rather than academics), this conclusion of "no benefit" was still valid. Siegal and Hanson (1990) indicate that if children require remediation, simply holding them back a year, or placing them in a developmental class (which in essence does the same thing) will have more negative consequences for them than passing them on to the next grade.

Based on a meta-analysis of more than 25 studies from schools in various locations, Uphoff (1990b) synthesized the results and came up with three related but very different
conclusions. First, in terms of academic achievement, students in readiness or transitional classes have done as well or better than like students not in these programs, as measured in later grades. Second, readiness and transitional classes have been found to produce dramatically positive and statistically significant benefits in regard to self-esteem as well as emotional and social maturity. Third, study after study from across the United States has found an overwhelming parental satisfaction and support for these programs.

To evaluate the long-term impact of developmental placement, Jaworski & Riley (1985) conducted a longitudinal study of 500 students from various school settings across the state of Michigan. Three groups of subjects were selected: Group A) children recommended for a "growth" year before entering kindergarten who followed the recommendation, thus delaying entry into kindergarten one year, Group B) children similarly recommended who did not follow the recommendation, thus entering kindergarten at the expected chronological age, and Group C) a control group of randomly selected classmates. The results of the study revealed that children having a growth year were not significantly different than children in the other two groups. It was found in the Jaworski and Riley study that there are no indications from parents, students, or teachers that going through a readiness program has any detrimental effects. It can be concluded from this study that if transitional programs have no detrimental effects and the
student placement is less frustrating, then the program is a viable one.

Achievement Effects

The achievement benefits derived from using transitional programs remain unclear. Stroud and Williams (1990) cite three studies which suggested that transitional placement was less effective than regular first grade instruction in promoting academic achievement (Bell, 1973; Leinhardt, 1980; Wilson, 1979). In other studies, no significant differences in academic achievement were found between transitional students and similar children who did not participate in a transitional program (Beckmann & Reinert, 1985; Caggiano, 1985; Ivancic, 1967; Mossburg, 1987; Talmadge, 1982). Additional research has suggested that there may be academic benefits for children served in a transitional program. Raygor (1972) and Jones (1986) concluded that participation in a transitional program had a significant positive effect on achievement. However, in both studies the academic benefits were only short-term. Any differences between test scores of transitional students and comparison groups diminished or were non-existent by the end of third grade. Two other studies revealed long-term benefits. Test scores examined at the end of third and sixth grade revealed that the academic achievement of transitional students significantly exceeded that of similar children who were recommended for transitional
placement but were assigned to regular first grade classrooms (Dolan, 1982; Matthews, 1977).

Leinhardt (1980) attempted to address several questions pertaining to transitional students. First, can a group of children be reliably identified as having achievement deficits as early as kindergarten? Second, what is the impact of isolating versus integrating such children at the end of first grade (or at the end of the transitional year)? Third, what is the relative efficacy of an individual reading program (called NRS) for children in either setting? An urban school district served as the population for this study. Four elementary schools, with a black population of approximately 62% (grades kindergarten through second) from a middle-to-low income area, participated in the study.

The question as to whether children can be reliably identified at the end of kindergarten as having potential achievement deficits in reading was partially answered by the high level of observer agreement in selecting these children. The impact of the setting and reading program on achievement was the focus of the second question. Transition-eligible students in Cohort 1 received one of two treatments in reading (the basal series or NRS). Both treatments were received in a classroom setting while integrated with regular students. Cohort 2, which received only NRS instruction in an isolated setting, was compared to Cohort 1 (NRS only) to see whether isolated or integrated settings were more effective.
The results of the two contrast groups on entering ability revealed no significant difference between the NRS and the basal groups and between the Cohort 1 (NRS only) and Cohort 2. The NRS transition-eligible students in Cohort 1 did perform significantly better than students receiving basal instruction for final performance. Cohort 1 students receiving NRS in an integrated setting performed substantially better than Cohort 2 transitional students in an isolated setting. Cohort 1 students were between 30 and 45 points (raw score) below their regular counterparts, or approximately one standard deviation. Students in Cohort 2 differed by nearly 50 points, or approximately two standard deviations.

Conclusions from this study indicate that in an integrated setting, NRS, as an individualized code-emphasis approach to reading, was a more effective instructional tool for this particular group than a basal program. Despite the fact that the adult-to-student ratio was three times lower in transitional rooms than in regular rooms and the transfer rate of students moving in and out of classes was lower in transitional rooms, transitional students averaged 21% less reading instruction than either the previous year's students or the regular students. Also, regular students received 50% more test-relevant instruction in reading, and reviewed sight vocabulary words twice as often. "In summary, students in an integrated setting with NRS (both transition-eligible and regular students) were taught the basics of reading directly,
more often, and for longer periods of time, and demonstrated this by higher performance" (p.60). Small sample size and single location limited this study, but it seems to suggest that children can be consistently and objectively identified as "at-risk" at the end of kindergarten. Also, placing these children in small, homogeneous settings and focusing on "learning to learn" skills, rather than direct instruction, showed no advantage.

May and Welch (1985) studied 223 children in grades two through six who were enrolled in a suburban homogeneous white middle class school district. Children whose Gesell Screening Test scores indicated developmental immaturity were recommended by the school's staff to spend three years in school prior to second grade. Those children whose parents followed the recommendation were coded (BAY) for "buy a year". Those children whose parents did not follow the recommendation were coded (OP) for overplaced. A final group of children, those who tested developmentally mature, were coded (TR) for traditional. The developmental screening revealed a significant difference in the developmental age (D.A.) of the three groups. The TR group, with a mean D.A. of 59.84 months had a significantly higher (p<.01) score than either the OP or BAY groups. Additionally, the OP children had a significantly higher D.A. than the BAY children. This difference can not be explained by any extraneous factors since both groups were drawn from students who had low scores on the Gesell Test.
There was also a significant (p<.01) difference in chronological age (C.A.) between the three groups. The TR children had an average age of 61.1 months. This compares to 58.6 for the BAY group and 58.8 for the OP group. This C.A. reflects age at the time of testing. The BAY group by virtue of the fact that they were in school one extra year were actually older. In this study, the BAY children averaged nine months (C.A) older than the TR group and a full year older than the OP group.

The mean I.Q. scores on the OTIS Lennon Mental Ability Test for all three groups were above the test's mean (100). The TR group did score significantly higher (p<.05) than the BAY group. No other pairings were significant.

There were no significant differences for the number of referrals to the Committee on the Handicapped or their classification as handicapped. Likewise, there were no significant differences for speech and language services, remedial reading, remedial math, or counselling. There was a significantly higher percentage (p<.05) of BAY children referred to the adaptive motor and resource room program than either TR or OP children. Of the 35 children enrolled in the gifted program, there were 24 TR children (69%), 5 BAY children (14%), and 6 OP children (17%). Though not statistically analyzed, the TR group had approximately four times as many representatives than the other two groups. The population from which the study was drawn had less than twice
as many TR children. The percentages of BAY and OP children were similar. Follow-up teacher interviews provided an interesting dichotomy. Many of the fifth and sixth grade teachers said they could not tell which placement route a student followed. However, the primary level teachers who had been more closely involved with the developmental placement program felt that the BAY children were better adjusted and more successful learners than either the OP or TR children.

May and Welch conclude that the BAY children, even after having had an extra year of school, did not score as well as the TR and OP children on measures of standardized academic, achievement, and intellectual measures. These results do not support the Gesell Theory upon which this particular program was based. These measures are primarily academic and intellectual, and admittedly do not consider many of the social-emotional or motor components of development that the Gesell Institute values. In addition, the OP children did not display more difficulties as suggested by the Gesell Theory. While there was a difference in the number of children referred to adaptive motor or resource room programs, it was the BAY group, not the OP group, that had more referrals. Contrary to the maturationist philosophy, being overplaced did not negatively influence the attitude or performance of the children in the OP group. The perceptions of the teachers do suggest, contrary to hard data, that BAY children were more successful learners. Whether there exists some subtle
difference in how the students approach learning that is
evident to the teachers, or if it is just a matter of
believing what the teachers want to believe, was not yet
determined.

The purpose of Bell's (1972) study was to develop some
specific information concerning the effectiveness of the
Readiness Room Program which was implemented in a small,
suburban school district. Children in the Readiness Room
Program from six elementary schools were compared to children
in an experimental group in the regular program with similar
educational needs in another elementary school in the same
district over a two year period. In the spring of the first
year (1971) the Stanford Early School Achievement Test, Level
II (SESAT II), and the Self-Concept and Motivation Inventory
were administered to children in the study. In the second
year (1972) the Stanford Achievement Test, Primary I Reading
Test, and the self-concept inventory were administered.

Using the Peabody Picture Vocabulary Test as the
covariant, the achievement data was subjected to analysis of
covariance. Analysis of variance was used to consider the
difference between the two administrations of the self-concept
and motivation inventory. The study attempted to address five
points. The two points concerned with achievement are
addressed: 1) What was the difference in performance for those
children in the Readiness Room Program at the end of the two
years compared to the children in the experimental group? 2)
Did the isolation from the educational and social interaction of a regular heterogeneous classroom facilitate their progress?

The findings of the study indicated that the Readiness Room program was less effective than the instruction for the children in the experimental group. On only one subtest of the Stanford Early School Achievement Test, Level II, the Environment Test, did the Readiness Room children have a higher adjusted mean score. The adjusted mean scores were higher for the experimental group on five of the subtests and on the total score of the SESAT II. The difference on the Word Reading subtest of the SESAT II was very significant. The writer concluded that the Readiness Room Program did not facilitate the progress of the children.

Beckmann and Reinert (1985) analyzed the Kirkwood School District in Missouri which implemented a program for children who, at the end of kindergarten, lagged behind their peers in development and achievement. The transitional room offered the advantage of having a low pupil-teacher ratio and an aide for the teacher. The Kirkwood School District designed a study to determine: 1) whether there was a significant difference in mean pre- and post- scores on the Boehm Test of Basic Concepts for students in kindergarten, transitional room, and grade one; and 2) whether there was a significant difference in the mean scores on the Metropolitan Readiness Test for students in kindergarten, transition, and grade one.
Thirty-five children from five elementary schools were involved in the study. Group 1 consisted of 11 children who were retained in kindergarten and randomly selected; Group 2 consisted of 12 transitional room children; and Group 3 consisted of 12 students who had barely passed kindergarten, but were promoted to first grade.

The results of the tests administered revealed that all three groups made academic gains; however, analysis of variance applied to students' raw scores on the Metropolitan Readiness Test showed no significant difference in the groups' mean scores. Beckmann and Reinert warned that caution must be exercised in drawing any conclusions due to the small sample size. The authors also question whether it is more beneficial to expose students with low achievement to the higher expectations of a teacher who teaches reading and language to a normal population. The author concluded, "it appears from this study and from past research that sufficient evidence is not available to support the contention that students in a transitional room have a higher academic performance than their peers in a normal setting" (p.46).

Caggiano's (1984) study was undertaken to determine the effectiveness of the transitional first grade experience by measuring its impact on later school success. Caggiano hypothesized that there would be a significant difference in behavior, academic achievement, and four other indices of comparison. Public school students (n=431) from grades one
through seven participated in this study. A T-1 Group (n=128) consisted of students who were recommended for and participated in a transitional program. A T-1R Group (n=125) consisted of children recommended for the transitional program but whose parents declined participation. Those students not recommended for the transitional program and therefore did not participate (n=178) were called the 1R or control group.

Academic achievement was measured by the Iowa Test of Basic Skills (1975 and 1979, Levels 8, 10, and 12). Achievement variables were analyzed by means of a series of three group, one-way ANOVAs. In addition, two-way ANOVAs, grouped by grade and gender, were analyzed. Significant differences in achievement were found between the 1R group and both the T-1 and T-1R groups. No significant differences were found between the T-1 and T-1R groups. The 1R group had significantly fewer referrals and placement into special education and less need for compensatory education than either T-1 or T-1R group. Both the T-1 and the 1R groups differed significantly from the T-1R students with respect to frequencies of being retained. Caggiano interpreted the results to mean that students judged not ready for first grade were more likely to experience school success if provided sufficient time to mature, an adjusted curriculum, and acceptance without pressure. Such conditions existed for the T-1 students in this study who were placed according to developmental age. T-1R students whose parents declined the
Jones (1985) compared the academic effects of children in a year long pre-first grade transitional class with those students recommended for transition but who opted not to attend, labeled at-risk. The study took place in Deer Valley School District in Phoenix, Arizona. This study also evaluated longitudinal effects by comparing in-school progress of past transitional students in the second and third grade with their at-risk counterparts. There were 274 students used in this study. There were 143 transition through third graders and 131 at-risk first through third graders. The students were compared using the district’s basic skills test, which gave a reading and math raw score, and a minimum score in reading and math. The means were compared by using a t-test with the level of significance set at .05. A comparison of the pretest and posttest scores to examine gains accomplished by first graders was also done. The analysis used for this comparison was two-way ANOVA.

The results showed that the transitional first graders were scoring higher than the at-risk students on the pretest and posttest. However, the greater gains were made by at-risk students in comparing the pretest and posttest scores. The second grade transitional students significantly outscored the at-risk second graders only on the math minimum competency area. The third graders did not differ significantly on any
of the four areas of the basic skills test. The at-risk students were scoring higher in third grade; however, the difference was not statistically significant. Other comparisons were made looking at same age groups (transitional first versus at-risk second), and gender comparisons between groups. Jones recommended the use of stronger identification processes to place developmentally slow students into the transitional class. A follow-up in high school was also recommended.

Raygor (1972) looked at children in Roseville, Minnesota who had been retained in kindergarten and were randomly assigned to one of two treatments: a transitional first grade or repeating kindergarten. The transitional class was relatively structured and the children received intensive readiness work in the areas of language and conceptual development and visual and auditory perception, with the emphasis on sound-letter relationships. Comparisons were also made with children who were promoted to first grade but had a poor prognosis for success. A fourth group consisted of randomly selected first graders. Testing procedures (pre and post) utilized the Peabody Picture Vocabulary Test, the Bender Gestalt Test, and Metropolitan Readiness Test. Follow-up testing using the Stanford Achievement Test, Primary I, Primary II, and Intermediate I was done at the end of first, third, and fourth grade.
Results suggested that retention in kindergarten was effective in improving learning difficulties to the point where these children were able to continue to make satisfactory progress in school achievement and adjustment through third grade. Children in the transitional room showed higher scores on tests of academic performance than the children retained in kindergarten at the end of first grade. These differences were not evident at the end of third grade. Comparisons among the retained kindergarten group and the transitional group with the randomly selected promoted group at the same grade level (therefore, one year younger) showed no differences in most school achievement areas including reading, language, spelling, science, and social studies at the end of third grade. The randomly selected group did reveal higher arithmetic scores. By the end of fourth grade, children in the First Grade Potential Failure Group were significantly lower in reading achievement than their peer group and all of their achievement scores were below grade level.

Raygor concludes that the Transition Group treatment did not produce any lasting differences when compared to the retained group. However, both groups having been held back a year, were able to compete successfully with their peer group. Those in the First Grade Potential Failure Group continued a pattern of poor academic achievement when compared to their peer groups.
Dolan (1982) studied Transitional Classrooms (TC) which were offered as an option for kindergarten children not ready for the grade one program. The students lived in a suburban school district near Rochester, New York. The transitional classrooms ranged in size from 12 to 15 and a teacher aide was provided. Programs were individualized to cater to the child's specific learning and emotional needs. Regular consultation with the Pupil Personnel Services Teams were made with a full complement of adjunct services and opportunities for mainstreaming children who showed partial or full readiness to cope with the regular classroom. Observation, evaluation, and interaction with the teacher served as the primary source of determining which children required the transitional class. The school counselor subsequently administered "at-risk" children a battery of screening instruments predictive of first grade success. Parents of these children were invited to observe the transitional classroom prior to placement, and to confer with the teacher and counselor. The parent did have the option of refusing TC placement. The highlights of the program included a detailed individualized treatment plan and a continuous student evaluation. Evaluation of the program was undertaken after the program had been in existence for six years by comparing TC graduates with their current grade cohort focusing on cognitive achievement, school attitudes, social competence, and the use of special services.
The study compared second, fourth, and sixth graders at three elementary schools. Within each grade, four groups were identified. TC1 students spent a full year in TC prior to first grade (males= 46, females=24). TC2 students spent either a full year (n=35) or partial year (n=18) in TC prior to placement in second grade. A Parent Refusal Group consisted of students recommended for TC but parents refused placement. This group was ideal for comparison, but had small numbers (males=11, females=5). A Contrast Group with students selected post hoc by matching TC graduates with current class members by gender and quarter of birth was also included in the analysis. This was a randomly selected group of students who had attended school since first grade (males=38, females=22).

Achievement indices were Total Reading Percentile and Total Arithmetic Percentile from the Stanford Achievement Tests obtained in the second and fifth grade. Thus, second grade scores were available for all groups, and fifth grade scores were only available for sixth graders. The major hypothesis tested was that TC children blended with their "regular" peers as they progressed through the elementary school and they were significantly superior to the parent refusal group. To compare these variables, ANOVA was computed. Because of the different sample sizes, the Scheffe method was used for multiple comparisons.
At the second grade level in reading achievement, the TC1 group was significantly inferior to the TC2 group and the contrast group. The TC2 group did resemble the contrast group. The TC1 group was achieving at a higher level than the parent refusal group. In mathematics achievement, both TC groups performed significantly lower than the contrast group. The parent refusal group again lagged significantly behind. By the fifth grade, the blending goal had been achieved in reading using fifth grade achievement scores as an indicator. The TC1 group resembled the contrast group, and the TC2 group was actually superior to both. Again the parent refusal group was significantly lower than all other groups. The trend did not follow in arithmetic. The transitional groups (both TC1 and TC2) were significantly inferior than the contrast group in arithmetic achievement at grade five, achieving results comparable to the parent refusal group. Dolan concluded that the program met many of its critical objectives. For the TC2 students, it lead generally to successful early school experiences although the children lagged in arithmetic achievement. For TC1 students, reading achievement approximated those of regular peers. Dolan states that the emphasis on speech, reading skills, and language (with less emphasis on arithmetic) explains why reading achievement was superior to arithmetic achievement. The description of this program closely resembles that of a cognitive-interactionist program.
A longitudinal study by Matthews (1977) explored the effect an interim year of readiness instruction between kindergarten and first grade had on second and third grade achievement. Students were screened at the end of their kindergarten year to determine their readiness skills for first grade.

One group of students who lacked readiness skills, the experimental group, was assigned to a year of transition education featuring small class sizes, individual attention, and prescriptive instruction emphasizing development of readiness skills. Another group who were also diagnosed as lacking readiness skills, control group one, was assigned to the regular first grade. A third group from the same kindergarten class who exhibited no lack of readiness skills, control group two, was assigned to regular first grade. A fourth group from the same kindergarten class, control group three, exhibited lack of readiness skills, was assigned to regular first grade, and was retained in the first grade due to lack of achievement. The fifth group of students, control group four, was selected from the following year kindergarten class and were students who did not lack readiness skills nor were they retained in grade one.

Second grade test results indicated no significant advantage for the experimental group over control groups two, three, or four. The experimental group (transitional class) did show a higher mean grade equivalent score in reading comprehension than control group one. Third grade test results revealed significantly higher mean grade equivalent scores for the experimental group in reading and mathematics concepts and problem solving than for control groups one and three but not for control groups two and four.

Brevard County, Florida started its developmental options, Developmental Kindergarten (DK) and Transitional
Kindergarten/First (TK-1), with a pilot program in three schools in 1981-82. By 1988-89, the number of schools had grown to 40 and the number of actual classrooms had increased from 4 to 72. The total enrollment in both options exceeded 1,200 pupils per year. Extensive data has been collected by the district's research department and has been followed longitudinally. Students who were in the Transitional Kindergarten/First program were achieving equal to district averages by the end of first grade, and maintained this relative position in achievement through third grade. The former TK/1 students, as a group, were functioning 25 to 30 percentile points above the national average in reading and math by the end of third grade. TK/1 alumni who reached second grade scored as follows: 74th percentile in reading, 92nd percentile in math, and 80th percentile for composite score on the Comprehensive Test of Basic Skills. In contrast, those pupils who had been retained in kindergarten and repeated a year had scored at a much lower 63rd percentile for reading, 66th percentile for math, and 66th percentile for composite. The percentage of former TK/1 students in the gifted program was also higher than the district-wide average for third graders (cited in Uphoff, 1990).

In Chesterfield County, Virginia Public Schools, Phillips compared a JK group (five-year olds screened out of the regular kindergarten), an RT group (pupils who did not attend the junior kindergarten, but had been retained in either grade
K, 1, or 2), and a NRT group (students with similar characteristics but had neither been retained nor attended JK). At the end of second grade, the JK group performed better than either of the two comparison groups in the academic subjects. The program showed particularly strong positive effects for the JK students in language arts, spelling, and math when compared to the RT students, and similar positive effects for the JK students in language arts and spelling when compared to the NRT group. Just two years after the full implementation of the JK program, 98% of the students mastered between 81% and 100% of the school's objectives. This compares to 50.5% prior to implementing the program. The percentage of children, ages five through seven, receiving services for learning disabilities dropped 39% after the JK option was offered. Results indicated significant probable program effects and strong effect sizes for the children, specifically white and female children. Effects were present in all academic areas, in work/study habits, and self-perceptions of scholastic ability.

Talmadge (1981) investigated the value of a transitional program which had been in existence for 12 years in a Washington state school system. Talmadge investigated a number of correlational relationships among family environmental factors, cognitive factors, behavior rating scores, transitional room placement, and early reading achievement. After statistically controlling for cognitive
ability/reading readiness, it was found that the impact of transitional room placement appeared detrimental to early reading achievement in comparison to first grade. Transitional rooms, according to Talmadge, may only delay instruction.

Binkley, Brown, and Hooper (1989) studied the effects of transitional first grade achievement in reading and math. This was a three-year longitudinal study starting in 1985. In regard to achievement, general improvements were found after a year in the transitional class. After a sharp one-year increase, average scores often declined for the transitional cohort, but not to the level of deficit (of comparable grade) exhibited prior to the transitional class. Thus, while initial gains seemed remarkable, the long-term effects of the transitional class were less than fantastic, but nevertheless impressive in that the "gap" between regular students and transitional students diminished significantly.

Carlson (1986) studied the effects of kindergarten-grade 1 transitional classrooms in Eugene, Oregon. The focus of this study was to determine the effects of retention, transition, and promotion on student achievement and social skills. A four-year follow-up compared regular first graders (n=43) and a control group (n=59) of students entering a transition class (n=26), graduating transitional students (n=20), and retained students who spent two years in kindergarten. The Comprehensive Test of Basic Skills, Level B
was administered to each student to assess program differences. It was generally found that children targeted as "at risk" yielded beneficial effects if they had been retained in kindergarten or had spent a year in a transitional class. The only statistically significant difference between transitional students and retained students appeared in the area of Word Attack which was superior for transitional class graduates. "At risk" children targeted, but not spending an extra year remained marginal into the fourth year of school. Carlson states that the differences between this study and other studies with discrepant findings are interpreted as possibly being due to differences in design, sample, or treatment characteristics.

Summary of Conclusions- Achievement Effects

It is very apparent that the conflicting results of the studies reviewed confound any attempts to make definitive and confident conclusions. One can conclude with near certainty that a wide range of ability and achievement levels exist even as early as kindergarten and there needs to be a means of handling this situation. Typically, this leaves most school (systems) with one of four options: 1) retention, 2) transitional programs, 3) pro-motion with remedial interventions, and 4) promotion (no interventions). Carlson (1986) concluded that differences in the effects of transitional programs from study to study probably reflect the
types of treatment. It is this same hypothesis which motivates investigation in this present study. If the effects of transitional programs were due to maturation alone, one would expect all studies to have positive effects. "In light of the probably high degree of variation between curricula, the positive effects of transitional classrooms probably argue more for the success of a particular curriculum or teaching staff, more than for the universal efficaciousness or lack thereof of transitional classrooms" (Carlson, p.18). Without attaching labels, it was evident that the May and Welch (1985) study was based on the Gesell Theory (maturationist). Raygor (1972) defined the transitional class as relatively structured with intensive readiness work (behaviorist). Matthews (1977) studied a transitional class which featured small class size, individual attention, and prescriptive instruction emphasizing development of readiness skills (interactionist). It appears that those studies which report positive results for transitional programs more nearly resemble interactionist programs (i.e., Matthews, 1977; Phillips, 1990). For the most part, the type of transitional program was not even discussed in these studies, only the fact that the transitional program was the treatment. Even this present study defines the treatment as interactionist based on the teachers' philosophy, and not any on actual observation of the class. Shepard and Smith's opposition to transitional programs is based on the assumption that all programs are the same, and there is no
need for transitional programs if the child's needs are met in a program of continuous progress.

Differences in sample, sample size, and experimental design also affect the results. Leinhardt's (1980) study was done in an urban area which was predominantly black. Talmadge's (1984) study consisted of predominantly white (88%) students from a semi-rural, middle-class area. Some studies used small sample sizes (Dolan, 1982; Carlson, 1986) and others large sample sizes (Caggiano, 1984; Jaworski & Riley, 1985; Phillips, 1990). Some research designs were pretest-posttest (Carlson, 1986; Leinhardt, 1986). Some were posttest only (Shepard & Smith, 1986) and others were post-hoc studies (Dolan, 1982).

To synthesize all the data from the studies reviewed is a monumental task. It appears that programs which are successful meet the individual needs of the children. These programs can be called anything, but must have certain ingredients. They must be developmental in nature. Instruction should be geared to the student's readiness level. Successful programs have a variety of materials and resources which are planned and under the control of a well-trained teacher. The monitoring of students' progress is an essential ingredient. The program should have clearly defined goals. The teacher should expect that the students can and will learn. Transitional classrooms which are little more than holding tanks which allow the student to mature naturally
appear to be less effective. Transitional programs which make unrealistic demands of students tend to frustrate the child and at best encourage rote learning which is accompanied by little true understanding of concepts by the child.

**Self-Concept Effects**

The findings on achievement effects are ambiguous and inconclusive at best. Some researchers have focused on affective measures of transitional programs and retention. Several authors have suggested that not only does retention depress achievement levels, it also creates problems of social and emotional adjustment (cited in Plummer & Graziano, 1987). Sandin (1944) found that non promotion resulted in children being placed with younger, smaller, and oftentimes less mature classmates which tended to influence children's rejection/acceptance of classmates. The research on self-concept effects taken from retention studies, again equates retention to transitional programs.

Although the majority of teachers believe that retention in kindergarten does not carry a social stigma "if handled properly", extra-year children were likely to have lower self-concepts and poorer attitudes toward school compared to a control group (Shepard, 1989). Parent interviews, as reported by Shepard and Smith, revealed both short-term and long-term distress associated with the retention decision, such as ridicule by the child's peers and later regrets.
Studies dealing with transitional programs which have looked at self-esteem have not always uncovered the doomsday findings which might have been expected. A position taken by supporters of transitional programs is that if achievement is not affected (positively or negatively) but self-concept measures are positive, then this is enough to justify the implementation of transitional programs.

Plummer and Graziano (1987) investigated the relationship between retained and non-retained children using a multi-measure quasi-experimental methodology. Second and fifth grade children provided measures of: 1) differential peer reward allocations, 2) preferences for social partners, 3) preferences for task partners, 4) impressions and attitudes about the school environment, 5) report card expectancy, and 6) self-esteem measures. The sample consisted of 219 children (34% black, 65% white) who attended a consolidated county-wide elementary school in northeast Georgia.

The expectation that retained children would be the target of inequity and peer discrimination was partly corroborated, but it also needed to be qualified. When children chose a partner for non-school related activities, the regularly promoted child was generally preferred, but peer discrimination had limited generality. Independent of retention status, height appeared to influence children's evaluation of peers more than all other variables. The main effect revealed that non-retained children were better liked.
When children chose a partner to help on school-related tasks, the retained child was preferred more often. Children felt that the experience of the retained child would be helpful. There was no evidence that retained children expected lower evaluations on either report card grades or conduct. There was more evidence of lower expectations in second grade than fifth grade.

The disparity between aspirations and self-perceived reality is an index of one's self-image according to Katz and Zigler (1967; cited in Plummer & Graziano). For each child, the "real" self-concept was subtracted from the "ideal" self concept, and these differences were subjected to analysis of variance. The main effects revealed that retained children had smaller discrepancies between their indices of real and ideal self-concept than did non-retained children. These results suggest that retained children basically had a good self-concept. If anything, non-retained children had a larger difference between the way they saw themselves and the way they ideally wanted to be. Second graders and black students had higher levels of self-esteem than did fifth-graders and white students.

A retention status main effect indicated that participants who had been retained had a higher (more favorable) self-evaluation. The self-concept measure used included a questionnaire for the assessment of children's opinion on how others saw them. The various self-esteem measures, grade,
retention status, and age were correlated (zero-order and partial). The analyses indicated, contrary to prediction, that retained children had higher self-concepts than non-retained children with smaller discrepancies between real and ideal self-concepts. There was no significant correlation between retention status and ideal self-concept.

Chansky (1964) reported on the self-esteem of promoted and retained first graders. First grade teachers in four districts in Ulster County, New York, submitted to their principals a list of students judged by their teachers to be candidates for retention. After conferencing, the list was divided between good risks (promoted) and bad risks (retained). Thirty children were advanced to grade two and 33 were retained. The retained group had 26 boys and the promoted group had 23 boys. The ratio of three to one (boys to girls) was roughly the same. Each child was individually administered the California Test of Personality, Primary Form AA. Nine months after the testing (seven school months), the California Test of Personality, Primary Form BB was administered individually to each child.

Percentile equivalents were converted to raw scores and the two groups were compared yielding a t-score. The test had a mean of 50 and a standard deviation of 10. No initial differences between the two groups were found. The scores for both groups were below the 50th percentile for most attributes. After the initial testing, promoted and retained
children could not be differentiated from one another on the basis of personality attributes. Both groups were considered maladjusted. If the retest revealed an increase in personality scores for the promoted group, and a decrease for the retained group, then support could be given to the hypothesis that retention is detrimental to the affective domain. After the retest, the promoted group improved significantly in self-reliance, freedom from withdrawal tendencies, personal adjustment, and anti-social tendencies. The other 11 attributes measured remained unchanged. The retained group improved significantly in feelings of belonging, total personal adjustment, adequacy of community relationships, and total personal and social adjustment. For no attribute did the promoted group make greater progress than the retained group. Rather, where one group improved, the other group tended to improve as well. It is believed from other results that the improvement was a function of chronological age.

Chansky concluded that the belief that a retained group suffers or regresses in personality adjustment was not supported. Rather, personality stabilized during the year of retention. Chronological age is likely to be a contributor in this improvement. Any maladjustment displayed by a retained child was already present (prior to the retention). At the conclusion of the study, both groups could still be considered maladjusted, less so for the retained group. Since both
groups were underachievers at the end of the experiment, and less than optimally adjusted, the question of appropriate grade placement remains unanswered.

Pomplun (1988) investigated the effects of retention at an earlier grade versus a later grade. First, second, third, fourth, seventh, and eighth graders from a semirural area of west central Florida participated in a two-year study. The self-esteem component is reviewed here. Students were grouped primary (grades one and two), intermediate (grades three and four), and secondary (grades seven and eight). Each level contained three subgroups: retained (after first year of study), borderline (on retention list in spring of first year but eventually passed to next grade), and regular students (not retained or on retention list). After the first year, retained students were matched with the borderline group and the regular group for gender, age, self-concept, and motivation.

The Self-Concept and Motivation Inventory (SCAMIN) was used to measure self-concept and motivation. At the primary level, which is of interest for this study, all groups showed stable self-concept over the two year period. For motivation, regular students were stable, borderline students exhibited temporary decreases at the beginning of the second year, and retained students displayed a temporary increase. At the intermediate level, all groups demonstrated a significant decrease in self-concept, not just the retained group. Levels
of motivation for intermediate and secondary students did not reveal any significant group differences. Pomplun's conclusion, based on both achievement and self-concept findings, is that retention may be beneficial or at least not harmful in the primary grades, but counterproductive in intermediate and secondary grades. This finding relies more heavily on the achievement data which is not reported here.

Ferguson (1990) investigated outcome data obtained from pre-kindergarten screening through second grade test scores across six populations consisting of: a) 46 students from a transitional first grade developmental regular education school readiness program (SRP) for "at-risk" kindergartners, b) 20 non-placed but SRP recommended kindergarten students advanced directly into first grade, c) 31 kindergarten students judged ready for kindergarten promotion into regular first grade, d) 16 students held out of kindergarten, e) 24 students retained in kindergarten, first, or second grade, and f) a random sample of 18 second graders. Gender, chronological age at entrance to kindergarten, the Gesell School Readiness Test Scores, and a developmental delay statistic were used to compare the SRP group with the other five groups. The teacher rated students on the following affective domains: social, problematic, behavioral, motivation, success, self-esteem, classroom participation, and engagement. Teacher ratings were secured without knowledge of the purpose for the request.
Multivariate analysis did not indicate a main factor effect for either factor (gender or placement in SRP) nor an AxB interaction effect across other outcome domains except for the single main factor effect of aggressive problematic behavior for the SRP sample. For the affective domains, the only significant differences noted were in self-esteem [SRP (17.76) vs. Promoted (20.35) and SRP-NP (17.45) vs. Promoted, p<.05].

Ferguson concluded that readiness room placements do not reduce grade retention rates. Among the kindergarten retention/eligible students, 60% never were retained. It would follow that this same percentage would hold for those who were placed. Here again the numbers say that if you promote a child judged "not ready" for first grade, you stand a three in five chance of retaining needlessly. Certainly, others can and do argue that the retention is still of benefit.

Clinical interview studies note that early education teachers (K & 1) of a strong nativist-maturationist persuasion (based upon interview data), on average hold back around 30% of their students, while other teachers of a strong remediationists' view [interactionist in the terminology of this study] tended to hold back around 2 percent (p.38).

Ferguson further concluded that clinical interviews with retained SRP children (during the SRP year and in reflective first grade case studies) show patterns of consistent evidence of students subjective feelings of personal failure, "flunking", disappointed parents, self-doubt, being lost,
shame, punishment, humiliation, being teased, not being quite as good as others, not being good enough for first grade, etc.

Dolan (1982; see page 48) looked specifically at the affective measures of transitional students. On the School Attitude Measure in the case of fourth graders, little variation occurred among the four comparison groups. Though not statistically significant, TC2 students had the highest mean score and the PR had the lowest. In the sixth grade, differences were similar but the overall F-ratio was significant. Multiple comparisons revealed that the major discrepancy was between the parent refusal group and the rest of the sample. As is consistent with the Plummer & Graziano study (cited above) in regard to retention, transitional programs did not seem to impact negatively on the affective measures of students.

Reed (1987) studied the school attitude of a group of students who qualified for transitional first grade but instead attended the regular first grade (control); and a group of transitional first grade students (experimental). A pre-test/post-test format was used. The T-1 group received no special formal instruction which might have given them an advantage. The children were administered the Minnesota School Attitude Survey (MSAS). The data showed that the T-1 group had developed a more positive attitude toward school than the control group. When analysis of covariance was completed, a statistically significant (.05 level) positive
attitude toward school subjects was found. Also found at a very high level (.001) was a more positive attitude toward self and others as measured by the MSAS. Similarly, Raygor (1972) found that in the areas of school adjustment, it would appear that the children who were retained in kindergarten were perceived by their third grade teachers as having adequate social and emotional adjustment when compared with their classroom peers.

Carroll (1963) compared two groups of third graders on traits commonly considered criteria for school adjustment (see page 67). The traits of persistence, attention span, self-confidence, responsibility, initiative, independence, respect for rules, social acceptance, and attitude toward adults were rated. It was found that only attention span and independence revealed a significant difference (.05 level) in favor of the older group of third graders. Social maturity approached significance in the same direction. Carroll attributes the academic frustrations experienced by younger children as the reason for problems associated with social adjustment. Carroll credits administrative efforts made by schools to protect the child from failure (i.e. ability grouping, social promotion, and ungraded structures). "The impact of frustration upon the child's attitude toward himself, the school and the subject in which he encounters the difficulty may be serious and lasting, even though he is spared the hurt of being labeled a failure" (p.417).
Mantzicopoulos and Morrison (1990) administered the SNAP Rating Scale to the three groups involved in their study (see page 29). The SNAP provides quantification of the DSM-III criteria for attention deficit disorder with hyperactivity (American Psychological Association, 1980; cited in Mantzicopoulos & Morrison). It assesses problems in six dimensions: Inattention, Impulsivity, Hyperactivity, Peer Problems, Attention Deficit Disorder (comprising Inattention and Impulsivity items), and Attention Deficit Disorder with Hyperactivity (comprising Inattention, Impulsivity, and Hyperactivity items). Teacher ratings were also used where the teachers were asked to rate the child's popularity with peers on a scale from one (extremely popular) to five (extremely unpopular). Significant findings were obtained on all SNAP subscales, except the ones assessing Hyperactivity and Peer Problems. The transitional and promoted groups did not differ significantly on any of the behavioral dimensions assessed by the SNAP, but they both had a significantly lower incidence of behavior problems than did the retained group in the areas of Inattention, Impulsivity, and Attention Deficit Disorder. Both transitional children and retained children were rated by their teachers as less popular among their peers than their promoted counterparts. The authors concluded that the lack of behavior problems in the transitional group and the more positive teacher predictions may place the transitional children at an advantage, at least initially.
Bell (1972) found that the self-concept of children in the experimental group increased between the first and second year (as measured by the inventory used), while the self-concept of the children in the Readiness Room Program decreased significantly. Bell concluded from the results of this study that because of the lower level of success in the beginning reading of children and the lessening of the self-concept of the children involved, that it was quite possible that a self-fulfilling prophesy was at work for the transitional children in this study.

Based on parent interview data, children who had spent an extra year before first grade were not much different from those students deemed as "at-risk" but not retained, except that, on average, retained children had a slightly more negative attitude toward school. The study findings, as reported by Shepard & Smith (1987), are consistent with other available research on transitional programs that show a negative impact on social-emotional outcomes.

Summary of Conclusions—Self-Concept Effects

There are again positive, negative, and neutral findings in addressing the effects transitional programs have on self-concept. Plummer and Graziano found that retained children had higher self-concepts than non-retained children. This finding would be consistent with Carroll's conclusion that being able to handle the work better has a positive impact on
the way one feels about oneself. From Chansky's study, one can conclude that the total personal and social adjustment was not significantly different when comparing retained children with promoted children. Pomplun goes so far as to say that retention may even be beneficial in the early grades. Ferguson, more than any other researcher, points out the philosophical orientation of the teacher as it bears on the teacher's likelihood to support retention.

Other studies (Dolan, Reed, Raygor) indicated that there are positive self-esteem results, or at least no detrimental effects, from being in a transitional program. Bell and Shepard & Smith maintain that transitional programs have a negative impact on social-emotional outcomes. Carlson criticizes the methodology used by Shepard & Smith. "Asking teachers about the grade level appropriateness of social behaviors of retained students matched with non-retained supposedly like-matched students, begs the question about the effect of retention on social behavior" (p.17).

Based on these findings, it was hypothesized in the current study that there would be no significant difference in measures of self-esteem between transitional students, retained students, and regularly promoted students. Again, the type of transitional program plays a major role. A program sensitive to the child's emotional needs and academic frustrations will certainly have a more positive effect on measures of self-esteem than will a rigid academic program
which is primarily concerned with having the student meet grade level standards for which the student is developmentally unprepared.

**Birthdate Effects**

Chronicological age is the sole criterion for admission to school in most cases. This practice has been criticized for failing to take into account differences which children display in cognitive or emotional development which affects school performance and adjustment. The popular wisdom among parents and teachers today is that older children will have more success in kindergarten. It is for that reason many parents "red-shirt" or delay their child's entry into kindergarten for a year. Many school systems require entering children be five by September 1; some are even moving to summer cut-offs. Studies conducted over the past 40 years confirm that younger children are more likely to encounter early school difficulties. However, Shepard and Smith (1989) conclude that the detriment of being youngest in grade is slight and disappears by third grade if instruction is individualized.

Uphoff (1986) noted that there was a relationship between school entrance age and school readiness. Several studies were examined using achievement test scores, classroom grades, placement into classes for the learning disabled, leadership traits, and physical-athletic skills as the dependent
variable. The youngest children in kindergarten tended to have the most difficulty achieving academic, social, emotional, and physical success throughout their school careers. Uphoff stated that readiness and transitional classes help children overcome age-related school problems by providing an extra year of appropriate learning experiences prior to kindergarten or first grade. Uphoff (1990b) claims that there has been an orchestrated campaign opposed to readiness programs which have depended on absolutely inaccurate data.

Kinard and Reinherz (1986) conducted a study in a predominantly white working-class community near a major northeast city. From the original population, 488 students remained in the public school system through the fourth grade. At the time of data collection, 432 students remained on grade level (4th).

Parent questionnaires provided information about the child’s birthdate, gender, and other sociodemographic characteristics. The Preschool Screening System (Hainsworth & Hainsworth, 1974) was used to assess cognitive skills in the areas of information processing and verbal reasoning. Third grade school performance was rated by both parent and teacher on a five-point scale from very good to poor. Fourth grade aptitude and achievement was measured by the Short Form Test of Academic Aptitude (Sullivan, Clark, & Tiegs, 1974) and the California Achievement Test-70 (Tiegs & Clark, 1974). The
Simmons Behavior Checklist (SBCL) (Reinherz & Gracey, 1983) was used to collect parent ratings of their child's behavioral and emotional functioning. School adjustment was obtained at the end of kindergarten with the Preschool Behavior Questionnaire (Behar & Stringfield, 1974). At the end of third grade, both the SBCL and the Child and Adolescent Adjustment Profile (Ellsworth, 1977) was completed to measure school adjustment. At the end of each year from kindergarten through fourth grade, information was collected concerning the use of guidance (psychological) and special needs (academic) services.

In this study, information-processing skills at school entry was significantly correlated (p<.001) with all measures of school performance, parent ratings of overall achievement at third grade, teacher ratings of reading, arithmetic, and overall academic achievement. This held true for nonlanguage aptitude test scores at fourth grade. Children with low scores on information-processing skills were likely to be rated as low in achievement in the third grade by parents and teachers and to have low scores on fourth grade aptitude and achievement tests. Information-processing skills were significantly correlated with nearly all measures of school adjustment, as well as the need for special services.

The findings showed that the youngest age groups had the lowest scores on information-processing skills and the oldest groups had the highest. As reported above, information-
processing skills are significantly related to virtually all areas of school performance and adjustment. The authors suggest that the use of chronological age as the only eligibility criterion for school entry may result in some children being admitted to school who are not cognitively or emotionally ready. When information-processing was controlled, no differences on school performance and adjustment were found for school age entry. In other words, it is the information-processing skills that made the critical difference; however, the fact remains that the older the child the better the chance that these skills will be developed. There were also gender differences which revealed that boys were more likely to receive special services and have more school performance and adjustment deficits. Again, these differences were not related to age. The authors recommend that schools expand entry requirements to consider children's level of functioning as well as their chronological age. It is surmised by the researchers that although this policy might be difficult to implement, it could reduce the need for retentions, special services, and other school-related difficulties. This argument sounds quite similar to that put forth by proponents of transitional programs.

The Sweetland and De Simone Study (1987) consisted of 152 students born in 1970 and residing in an upper-middle class suburban school district. Children who had been retained or accelerated were excluded from the study. These students had
been in the school district from kindergarten to sixth grade. Since scores on every subtest of the Comprehensive Test of Basic Skills (CTBS) for each year were available, it is likely that this group consisted of relatively healthy children. There were 78 males and 74 females in the study.

National percentile rankings from the CTBS were recorded for each subject in the areas of total language, total reading, total math, and total battery. Subjects were divided into four groups based on birthdate. There were 42 students born in the first quartile, 35 in the second, 40 in the third, and 35 in the fourth. The extremely low occurrence of retentions and accelerations prevented this category from being analyzed. Intelligence Quotient (IQ) was measured with an abbreviated Binet type instrument administered to each child prior to kindergarten. Scores on this test have been shown to be highly correlated with the full Binet IQ scores (Nagler, 1966; cited in Sweetland and De Simone).

A 2x4 (sex by birth quartile) analysis of variance, with IQ as the dependent variable, was conducted to determine if there were any significant IQ differences. There was a significant main effect for birth quartile (p<.05). Children in the fourth quartile revealed significantly higher IQ scores than children in the first quartile. No other significant differences (for IQ) were found. All future analyses were thus conducted with IQ as a covariate. There was a significant main effect for birth quartile for each dependent
measure. In addition, sex by grade interaction revealed a significant difference for the language scores. Separate 2x4 (sex by birth quartile) analyses of covariance were conducted for each dependent measure at each grade level. The second and third grades were the only two grades (for language in favor of females) where significant F-ratios were found (p<.018 and .002, respectively). No other significant differences were found with sex as a variable. Birth quartile significant differences were found in reading (grades 2,3,4,6); language (grades 1,2); mathematics (grades 1-4); and total CTBS (grades 1-4).

The results of this study indicated that early entry into school seems to be associated with lower academic performance in all areas through grade four. In terms of national norms, the younger children still achieved well, but relatively less well when compared to their older peers. This birthdate effect is less pronounced in grades five and six. The researchers conjecture that this fourth quartile group may display a maturational lag in neurological or psychological processes that becomes less pronounced in later grades because of physical maturation or because of the proportionately smaller age differences that exist as children become older. While birth quartile is a good predictor of academic success in grades one through four, chronological age per se is not generally a good predictor of academic performance. The effect seems to manifest only for younger (fourth quartile)
students. These findings suggest that mental age may be the
best criterion for determining which children born in the
fourth quartile may be the best candidates for admission to
school at a relatively young age. These results, according to
the authors, also indicate the importance of screening
relatively younger children before entry is decided.
"Piagetian, or other developmental models might serve the
screening process better than criterion based solely on
chronological age" (p.412).

One hundred and fifty-two children (grades 3-6) from a
suburban school district were identified by May and Welch
(1986) on the basis of having complete cumulative records and
having taken the Gesell kindergarten screening. There were 73
males and 79 females in the study. The students were put into
one of four groups based on month of birth: Group 1 (December,
January, February); Group 2 (March, April, May); Group 3
(June, July, August); Group 4 (September, October, November).
Four pieces of data were collected from the school records: 1)
the Developmental Age (DA) as determined by the Gesell
Screening Test (GST) administered in May prior to entering
kindergarten; 2) DA as determined by the full Gesell School
Readiness Test (GSRT) administered at the end of kindergarten;
3) DA determined by the GSRT at the end of first grade; and 4)
Scaled complete batteries from the Stanford Achievement Test
(SAT) administered second semester in grades two, four, and
six.
Analysis of the four birthdate groups revealed significant differences (p<.05) on the GST between group 1 and all other groups, groups 2 and 4, and 3 and 4. On the GSRT-K, there were significant differences (p<.05) between groups 1 and 4, and 2 and 4. On the GSRT-1, only groups 1 and 4 were significantly different (p<.05). There were no significant differences among any of the birthdate groups on the SAT. Only for the GST did analysis of data by gender reveal any significant difference (p,>05; in favor of females). When the interaction of birthdate group by gender was analyzed, no significant differences were found.

The results showed that the three Gesell measures were sensitive to birthdate effects, but this effect lessened each succeeding year. Since the GST-K and the GST-1 were the same test, it would appear that the change was due to the child’s development and not test variation. The authors concluded that the recommendation to delay school entry for boys is not supported from the results of this study. Girls scored significantly higher than boys on only one measure (GST-K), and there were no significant interactions between the birthdate group and gender. Of the 60 students who would have been in the mature Gesell group, 88% were from the three oldest birthdate groups and 12% were from the youngest. Of the 92 students scoring in the immature Gesell group, only 22% were from the youngest birthdate group; 78% were from the oldest three groups. The authors determined that placement
recommendations for mature children would have been quite similar to using chronological age for grouping, but the recommendations for immature children would have varied greatly. Using these different measures would have produced some false positives and false negatives.

Davidson (1986) reported that Vigo County, Indiana, established local birthdate norms for each quarter of the year and compared children in different areas against these norms. The students were compared in the areas of grade retention, referrals for psychoeducational evaluation, enrollment in classes for learning disabilities, Chapter I, and academically talented classes. Since September 30 of the school year was used as the school entrance cut-off date, students born in the October, November, December quarter were the oldest students, and those born in the July, August, September quarter were the youngest.

Data were collected each year from 1978-79 to 1982-83. Of the total number of students retained (n=1,592), 18.1% of the students were born in the first quarter, 21.0% in the second, 26.5% in the third, and 34.4% in the last. The percentages do not correspond to the norms. The younger children were consistently retained more frequently and the older children were consistently promoted more frequently.

There were 2482 psychoeducational referrals during the five-year study. The first quarter birthdates accounted for 23.1% of the referrals, 22.4% for the second quarter, 24.1%
for the third quarter, and 30.4% for the fourth. The fourth quarter consistently accounted for the greatest number of children referred for testing. These younger children exhibited problems coping with school which prompted the referrals. As of February 8, 1984, 551 students were enrolled in a learning disabilities class. Twenty-one percent of the students were born in the first quarter, 22.5% were born in the second, 24.9% were born in the third, and 31.6% were born in the last quarter. The criteria used to place a child in a learning disabilities program is dependent on Chronological Age. Therefore, the expectations of a younger child would be lower and thus it would be more difficult to meet the criteria for placement. If two children in the same grade had the same low scores, it is conceivable that the older child would qualify for the program, but not the younger. However, the statistics show that a greater percentage of younger children have met the guidelines for placement in Vigo County.

The data also showed the younger children upon entering school are more likely to receive remedial Chapter I services (19% vs. 33.5%, n=1,073). Of the 211 students in the academically talented program, the students born in the third and fourth quarters do not appear nearly as frequently as the older children (first quarter- 32.7%, second quarter- 25.6%, third quarter-19%, fourth quarter-22.7%; 1983-84). In summary, the results indicated that younger children had more difficulty meeting with success in school than older
classmates. The focus of this study was relatively specific; however, the results could be projected to offer insight regarding a wide range of concerns.

A related study by Carroll (1963) investigated the effect age has on achievement. This study has implications for readiness programs. Carroll looked at the reading and math achievement of two distinct groups of third graders. His study compared students who entered first grade prior to their sixth birthday with students who entered after their sixth birthday. Twenty-nine pairs of children, selected from the third grades in five public elementary schools in four different school systems in upstate New York, participated in this study. Four different systems were used to minimize the effect of educational philosophy and practice. Students were matched on the basis of sex, intelligence quotient, and socioeconomic status. The variable criterion for matching was age of entrance into first grade. Using scores on the California Reading and Arithmetic Achievement Tests, the researcher conducted an analysis of variance to determine any significant differences between the two groups. The findings of this analysis revealed that the older children did significantly better than the younger children in the tested areas of vocabulary, reading comprehension, arithmetic fundamentals, and reasoning.

Baer (1958) compared a younger and older group of entering kindergarten students matched on IQ, gender, and
school attended. Comparisons from kindergarten through grade 10 were made on academic and behavioral measures. In general, the older group had higher grades and achievement scores than the younger group, but these differences diminished after eighth grade. On measures of teacher-rated behavior, older students scored higher in grades 3 through 8. Despite these differences, Baer noted that the performance of the younger group was adequate and did not reflect failure.

Janson (1974) divided first graders into two birthdate groups (above or below five years two months at school entry). The older group scored higher than the younger group on all subtests of a prekindergarten screening instrument, but only on arithmetic achievement at the end of first grade. There were no significant differences found between the two groups on measures of emotional functioning.

DiPasquale, Moule, and Flewelling (1980) examined the effects birthdate had on referrals for psychological services for children in all grades. Six birthdate groups (two-month intervals) were used for this purpose. It was found that with respect to academic referrals for boys in the primary grades, the younger age children were referred significantly more often.

Eads (1990) stated that to some extent, age is a factor in transitional program placement. In his study of extra-year kindergarten students, it was found that the average date of birth for regularly promoted students was May 26th. This
compares to an average date of birth of July 30th for children in the extra-year programs.

**Summary of Conclusions- Birthdate Effects**

From all the evidence presented in the research, it is quite apparent that younger children initially have more problems in school. Also, it is the very youngest group or the very oldest group that is measurably different from the rest (Kinard & Reinherz, 1986; May & Welch, 1986). How long do these differences last? On this point there is some disagreement, but the detrimental effects of being youngest does not appear to be permanent. Certainly, successful adults in our society are representative of every age. May and Welch and Janson put the "catch-up" age around second grade, Sweetland and De Simone (1987) after fourth grade, and Baer (1958) after eighth grade.

There are many variables which affect entry decisions. Chronological Age (CA) has been and continues to be the most common criteria. Currently, 44 states and the District of Columbia, have state-mandated entry dates. Twenty-eight of those require that children turn five on or before October 1. Twenty-one states have changed to an earlier date within the past 10 years (Siegel & Hanson, 1990). Virginia, which once had a December 31 cut-off date (with a requirement that October, November, and December children be screened) is currently rolling back its entry age to September 31 (no
screening requirements). Some feel that developmental age (DA), or a combination of CA and DA should be used. Sweetland and De Simone recommended using mental age in conjunction with the youngest quartile kindergarten students to determine entry. The fact that IQ is a better predictor of school success than birthdate has been used as ammunition to include this information in making entry decisions.

Twenty-five years ago the Educational Policies Commission stated:

A growing body of research and experience demonstrates that by age 6 most children have already developed a considerable part of the intellectual ability that they will possess as adults. Six is now generally accepted as the normal age of entrance to school. We believe that this practice is obsolete. All children should have the opportunity to go to school at public expense—beginning at age 4 (cited in Siegel & Hanson).

Attendance Effects

Former Secretary of Education William Bennett (1987) attributes school absences as being a major problem at all levels of schooling. He blames too many missed opportunities to learn as one reason for failure, dropping out, or both. Educational researchers have investigated school attendance and other measures of quantity of schooling. However, very little evidence is found in the literature regarding how this variable is specifically related to transitional programs. Carroll’s (1963) model of school learning is postulated to be a function of the amount of time actually spent in learning and the time needed to learn (cited in Easton & Engelhard,
Rosenshine and Berliner (1978) have focused on academic engaged time in the classroom and found time on task to be positively correlated with student achievement. Rozelle (1968) found relatively low correlations between students' grades and their absentee rates after looking at a variety of high school courses. In general, researchers believe that school attendance and student time on task are both significantly related to measures of student outcome and deserve careful scrutiny.

In regard to transitional programs, it was hypothesized in this current study that attendance did not affect achievement to any significant degree. The fact that these children are very young puts the decision (for the most part) to attend school out of their control and into their parent's control. From evidence presented in the previous sections, it appears that other variables—such as maturation, intelligence, social economic status, self-esteem, and birthdate have more of an effect on the probability of a child being placed in a transitional program or being retained than does attendance.

Binkley, Brown, and Hooper (1989) did collect attendance data when studying the transitional first grade program in the Nashville, Tennessee Public School System. The researchers followed two cohorts—1985-86 and 1986-87. The attendance rate for transitional students remained about the same for the 1985-86 cohort: 93.4% for transitional students, 93.7% as
first graders, to 93.8% as second graders. This compared to Metro attendance rates of 93.2%, 94.4%, and 94.8% for kindergartners, first graders, and second graders for the same period of time. Likewise, the 1986-87 cohort did not reveal any difference or discrepancy when comparing transitional students to other students on attendance.

Easton and Engelhard (1982) collected longitudinal elementary school attendance, enrollment, and reading achievement data from the cumulative school records of a large sample (n=617) in an urban school district. The average number of days absent per week of enrollment was calculated for each of the nine years of elementary school by dividing the number of days absent each year by the number of weeks of enrollment for each student. These absence values were broken down by gender of student and by year of elementary school graduation (1976, 1977, 1978, or 1979) to create a 2x4 factorial design for the multivariate analysis of absence rates. Achievement data consisted of teacher-assigned reading grades in first through eighth grades and reading comprehension grade equivalent scores (GE) from the Iowa Test of Basic Skills for grades four through eight. Reading grades were coded on a zero to four scale (four being highest).

The results of the analysis indicated that girls and boys do not significantly differ in the number of days absent; although, girls did have higher rates of absenteeism in all but one grade (sixth). The data were subjected to standardized
multiple regression after controlling for three variables: 1) gender, 2) number of transfers (a rough gauge of socioeconomic status), and 3) the previous year's teacher-assigned reading grade. As expected, the previous year's reading grades highly correlated with the current year's reading grade (.428 to .528). Gender and the number of school transfers had low but often significant correlations to teacher-assigned grades. In four cases (grade 2, grade 6, grade 7, and grade 8), a significant correlation between days absent and teacher-assigned grades resulted after controlling for the other variables indicating that reading achievement can be improved by better attendance.

The same type of analysis was done for Reading GE scores from a standardized test (as a more objective measure). All grades (4-8) revealed significant (p<.05) standardized regression coefficients (with no controls). With three controls (as reported above), the seventh and eighth grades had significant standardized regression coefficients. In both analyses, the prediction of absence rates affecting reading achievement occurred in higher elementary grades and not in the earlier grades where most reading instruction occurs.

The researchers concluded that the effect of absence on reading achievement remains significant after controlling for previous achievement, a variable highly correlated to current achievement. It was further concluded that during the latter elementary years, the students' home environment had less
influence on achievement than in earlier years. "This finding also indicates that the school can have a powerful effect and change earlier patterns of achievement during the last two years of elementary school" (p. 273). The Easton and Englehard study does not present any evidence to indicate that attendance rates in the early grades have a significant impact on reading achievement.

Entwisle, Alexander, Cadigan, and Pallas (1987) looked at a large representative sample of first graders in the city of Baltimore to examine the effect of the amount of children's kindergarten experience on their first grade performance. This study focused on how kindergarten experience affected children's standardized achievement test scores in the verbal and math domains at the time they began first grade. A secondary purpose was to evaluate the effect of kindergarten on different kinds of groups (i.e. blacks, whites, boys, girls).

The major finding of this study clearly indicated that the cognitive variables as measured by the California Achievement Test (reading and math) were improved in proportion to the amount of children's kindergarten experience. Evidence of a cognitive "spurt" was associated with more kindergarten, but appeared to be short-lived. The amount of kindergarten did not affect children's expectations, marks in conduct, personal maturity level, or peer popularity.
Lower rates of first grade absenteeism in every group is associated with more kindergarten experience.

It was noteworthy that blacks appeared to benefit most from increased kindergarten experience. "If more kindergarten for blacks would prevent some of the initial gap in marks associated with race, this might be a long step toward improving achievement levels of black children relative to white children over first grade" (p.360).

Summary of Conclusions—Attendance Effects

These studies establish the importance of attendance, but the question (as stated in this current study) remains as to whether transitional students or retained students are absent more frequently than regularly promoted students. Binkley, Brown, and Hooper's research did not uncover any significant differences in attendance rates for the various cohorts used in their study. Easton and Englehard indicated that attendance rates for younger children did not affect achievement. It was the intention of the present study to investigate whether attendance is a major variable which contributes to the need for a student to be placed in transitional first grade or to be retained. The research on this question is extremely scarce, but the results of related studies and common sense evince that absenteeism in kindergarten is an unlikely cause for children to be "not ready" for first grade. There were no studies found in the
literature which investigated the effects of absenteeism on kindergarten students due to reasons of sickness or neglect.

Chapter Summary

The review of literature presents many conflicting and ambiguous answers to the question as to whether transitional programs are effective. This chapter has looked at four areas: achievement effects, self-esteem effects, birthdate effects, and attendance effects. The area which presents the most abstruseness is that of achievement. The best argument presented from the literature appears to be that when one looks at transitional program studies one is comparing different types of programs, different types of populations, and different types of research methodology. When classifying studies by these categories, one begins to recognize the qualities of more successful programs.

Although the literature on self-esteem is also somewhat contradictory, it too is dependent on the type of program, parental and school support provided the student, and general personality of the student placed in the program. The synthesis of conclusions from the studies reviewed indicates that transitional programs do not appear to have much effect on the students' self-esteem. There have even been positive results presented in this regard.

There does appear to be a birthdate effect, but it seems to be short-lived. Other more important factors are reported
as affecting measures of school success and adjustment. Transitional programs have been used as one option for dealing with the birthdate effect. Others include "redshirting", retention, or organizational patterns advocating continuous progress.

Finally, attendance does emerge as a variable which affects school achievement. The fact that there is a positive relationship between attendance and school achievement does not mean that students placed in transitional programs have poorer attendance records. In fact, only one study (Binkley, Brown, & Hooper) even collected attendance data in studying transitional programs. From that study and professional observation, it was hypothesized that transitional students have attendance profiles resembling those of other students.
Chapter 3: Procedures

Hypotheses

It was hypothesized that the differing conclusions found from related studies on transitional programs resulted from lumping various types of transitional programs together. This study investigated only one type of transitional program, the interactionist. Based on a review of literature, the following hypotheses were generated:

Hypothesis 1. At the conclusion of second grade, there will be no significant difference between students previously served in a transitional first grade program (T1) and students previously retained in grade (RG) on achievement scores. The students who were never retained (NR) will score significantly higher than either the T1 or RG group on achievement test scores.

Hypothesis 2. There will be no significant difference on self-concept scores among the T1, RG, and the NR groups as measured during the beginning of third grade.

Hypothesis 3. Older children in each of the three groups will score significantly higher than the younger children in their respective group on measures of achievement.

Hypothesis 4. Younger children in the NR Group will score higher than children from either the T1 or RG Group, regardless of age, on measures of achievement. Older children in the T1 Group will score higher than younger children in the
RG Group, and older children in the RG Group will score higher than younger children in the T1 group on measures of achievement.

Hypothesis 5: There will be no significant difference in ability scores among the three groups as measured during the first grade.

Hypothesis 6: There will be no significant difference in the number of days missed from school among these three groups.

**Design**

This study was a posttest-only control-group design. In this study, students served in the transitional first-grade program (T1) were considered members of the experimental group. Students who were retained in one of the first three grades (RG) were members of the comparison group. Randomly selected students, who had never been retained (NR), served as members of the control group. The students from these three groups were examined in terms of achievement test scores, self-concept scores, ability scores, attendance profiles, and age. Certain subgroups were compared as stated below.
Subjects

1. (T1) group (n=39): consisted of 13 students served in a transitional first grade program from School A; 10 students served in School B; and 15 students served in School C. Because of students moving and later retentions, one student from School A was eliminated from the study, as well as five from School B. The sample consisted of 31 black students and 8 white students. There were 24 boys and 15 girls in the T1 group. These students were served in a transitional first grade class during the 1988-89 school year.

2. (RG) group (n=39): consisted of students who had been retained at sometime during the first three years in school. There were 18 retainees from school A; 10 retainees from School B; and 11 retainees from School C. The RG group had 31 black students and 8 white students. Twenty-one of the retainees were boys and 18 were girls.

3. (NR) group (n=47): consisted of students who have never been retained in grade. These students were randomly selected by school in numbers proportional to the number of students originally served in the transitional program at each school. The NR sample had a majority of boys and better than a 2:1 ratio (blacks to white) to approximate the other two groups. The birthdate of the students was also considered when randomly assigning them to the NR group. Because of the different sample sizes and racial composition of students eligible for each of the three groups, a totally matched
sample was not possible. There were 16 NR students from Schools A and C, and 15 from School B. Thirty-three of the students from this group were black and 14 white. There were 24 boys and 23 girls in the NR group.

**Instrumentation**

1. Achievement measures: The Iowa Test of Basic Skills, (Riverside Publishing Company), administered by the school divisions, was used to compare achievement scores. The Total Reading, Total Language, and Total Math scores were used for this purpose. The Iowa Test of Basic Skills (ITBS), Forms G and H, was reviewed in the *Tenth Mental Measurements Yearbook* by Linn and Willson. Willson calls the ITBS "the state of the art in multi-level comprehension test batteries" (p.395). The reviewer states that the physical aspects of the test are excellent. Line drawings are professionally done, practice tests are available, and administration instructions are clear and straightforward. Norm tables are oriented toward grade equivalents. The authors have also included a Developmental Scale Score (DSS). Percentile rankings and stanines are also available. Machine scoring can provide a wealth of data, including frequency distributions, individual profiles, class profiles, district profiles, and information about special populations. Norms were established with those of the CogAT (see below).
Internal consistency reliabilities are provided within level at two testing times. Reliabilities are mostly in the .70s. Stability reliabilities are provided for intervals of one to five years. Internal magnitudes for this period of time predominate in the .7 to .9 range. The ITBS presents extensive item information which allows it to be used either as a norm-reference test or a criterion-reference test. Criterion-related validity is supported by reports of correlations between ITBS and CogAT. Correlations are all moderately high but show little differentiation among verbal, quantitative, and nonverbal components of the CogAT. The reviewer speculates that this is probably an indication of the limitation of achievement tests to measure more difficult outcomes of schooling related to reasoning, problem solving, and creativity. Using careful and elaborate procedures, the authors have demonstrated freedom from overt racial and gender bias. These procedures included content evaluation, differential item function (item bias) analysis, and other research studies.

The reviewer concludes:

The ITBS is not a perfect battery, but it represents the best that modern educational measurement can produce. More is being demanded of all kinds of tests in modern culture, and more will be demanded of ITBS, particularly in the instruction-testing interface. For users who want an excellent cross-level achievement battery and whose instructional objectives are reasonably reflected in ITBS's content, these tests can be recommended (p.398).
2. Self-concept measures: The SCAMIN: A Self-Concept and Motivational Inventory: Later Elementary (Milchus, Farrah, & Reitz, 1968) was administered. The SCAMIN provides a face-valid measure of school-related self-concept and motivation. A 48-item paper-pencil test measures achievement needs, achievement investment, role expectations, and self-adequacy. Shepard (1978), reviewing the inventory for The Eighth Mental Measurements Yearbook (1978), reports a reliability coefficient of .83. This is considered adequate for group data. No validity data accompanies the test. Shepard states that the authors clearly attach their confidence in the measure of logical validity of their scheme for generating items.

They created a logical matrix in which the four main scales are crossed with sources of support climate, e.g., parents. Additional factors of immediate-intrinsic orientation and fulfillment orientation are crossed with these in a balanced, incomplete design. Such a systematic approach to the construction of items is commendable and usually should enhance validity (p. 670).

The Mental Measurements Yearbook concludes that the many-face format for administration probably provides sufficient stability in scores for group assessment. Further, in the absence of representative norms or validated healthy profiles, one can still make meaningful statements about improvements over time or comparisons between treated and untreated groups. The reviewer concludes that the inventories are appropriate for program evaluation or research.
Milchus (1968), in an undated review of research studies involving the SCAMIN, states that the inventory was normed from approximately 1000 students. The stanines were read from the percentile distributions rather than the standard deviation to correct to a normal distribution curve. Students were drawn from ghetto, urban, and suburban areas where no unusual programming was directed toward self-concept.

3. Ability measures: The Cognitive Abilities Test (CogAT), administered in first grade as part of the state assessment program, was used to compare the mean ability scores for each group. According to the Tenth Mental Measurements Yearbook, the purpose of the CogAT, Form 4, is to assess the development of cognitive abilities related to verbal, quantitative and nonverbal reasoning and problem solving. The test was reviewed by Anastasi.

Standardization and Norms. In its present form, CogAT has been jointly normed with two achievement batteries, the Iowa Test of Basic Skills and the Tests of Achievement and Proficiency. The standardization sample consisted of over 160,000 students which comprised three subsamples representative of the national student population in public schools. Normative tables are provided to convert raw scores into Standard Age Scores (SAS) with the mean equal to 100 and a standard deviation of six within age groups. Also available are percentiles and stanines for both within-age and within grade comparisons.
Item Analysis. In 1983, a national item tryout was conducted. The sample included approximately 47,000 students in 38 states and was designed to oversample minority students in order to provide sufficient data to analyze group differences in performance. Potentially, unfair items were identified by using both traditional and item response theory. Both gender and ethnic bias were reviewed, including final reviews by independent experts selected on the basis of geographic region and ethnic composition.

Reliability. K R 20 reliability coefficients for Verbal, Quantitative, and Nonverbal batteries cluster around the low .90s. Stability over time data for the three areas tested come from earlier CogAT manuals, and may be viewed as indicative of the long-term stability of the CogAT, Form 4.

Validity. Currently, the CogAt, Form 4 has scant validity data. Raw score intercorrelations among Verbal, Quantitative, and Nonverbal areas range from .53 to .84 and are presented as the test's construct validity. However, there is no interpretation of the correlational coefficients, and the practical or theoretical importance of these coefficients are never explained. The author's do not discuss the test's content validity, concurrent validity or predictive validity. As a predictor of achievement and school success, the Verbal and Quantitative scores are better predictors than Nonverbal scores. Nonverbal scores are recommended for
possible usefulness with foreign-language students or children with poor verbal skills or learning disabilities.

Overview. The Tenth Mental Measurements Yearbook summarizes: "this well-established, group administered measure of educationally relevant aptitude areas has undergone some moderate content revisions and complete restandardization. The changes are such as to improve the technical quality and practical usefulness of the instrument" (p.193).

Teacher's Philosophical Orientation

Transitional programs are established, for the most part, without consideration as to whether they follow a behaviorist, maturationist, or interactionist philosophy. The extensive review of literature, although alluding to certain components of the transitional program, rarely labels programs as to type. The generic designation transitional program can therefore include many models or variations.

As an alternative to direct observation, the teacher's philosophical orientation was used to classify the type of transitional program. This was necessary since two of the transitional programs used in this study were discontinued by the time of data collection. This method of classification was selected based on the research of Good, Biddle, and Brophy (1975) who determined that the teacher given enough autonomy will create a classroom environment in which he/she feels comfortable.
A field tested instrument to ascertain the philosophical orientation of teachers does not exist. However, there does exist a questionnaire developed specifically for this purpose. This questionnaire has been used at early childhood conferences presented by the State of Virginia. When permission to use this instrument was sought, the Kindergarten Supervisor in the State Department stated that this questionnaire was not copyrighted and its administration for educational purposes was permissible. The developers of this questionnaire do not include any information as to the its validity and reliability. However, looking at the instrument itself reveals a high degree of content validity. The questions were designed to determine the degree of conviction (on a four-point Likert-type scale) for certain theoretical or philosophical positions based on the three types orientations under investigation.

A total of 24 questions are presented. Each question presents one of the philosophical or ideological positions or definitions associated with either maturationism, behaviorism, or interactionism. There are eight questions for each philosophical orientation. Questions are presented randomly, but grouped by type on a scoring sheet and responses are summed (see appendix 1).

An example of a behaviorist position would be: Learning occurs best in a highly structured environment; or Formal training in the academic areas should begin during the early
years of childhood. A maturationist might strongly agree with the statement: Children learn as natural growth occurs sufficiently for them to engage in particular learning activities; or Teachers should provide learning centers or areas which include materials and tasks related to children's genetic growth stage or level. A teacher with an interactionist philosophy would be expected to agree with the view that: Teachers should provide choices of learning activities but should also stimulate and guide children in directions that insure learning will be fostered; or Skills should not be taught as isolated lessons, but rather provisions should be made for children to synthesize the learning into the whole as it is related to their learning.

The results of these questionnaires indicated that all three teachers scored highest in the interactionist category. Teacher 1 scored 22 points in the interactionist category, and only 10 points in the maturationist category and 12 in the behaviorist. Teacher 2 scored 21 points in the interactionist category, 16 in the maturationist and 11 in the behaviorist. Teacher 3 had a much more balanced profile scoring 22 for interactionism, 16 for maturationism, and 15 for behaviorism.
Demographics

Students from three school systems in eastern Virginia, selected on the basis of having employed a transitional first grade during the 1988-89 school year and instructed by a teacher with an interactionist philosophy, were used in this study. Demographic information used in this study was obtained from the individual county administration offices. In addition, the Self-Study of two of the three schools also served as a source of information. The three counties involved in this study each had one participating elementary school. The three counties are all adjoining and border a large river. The counties are rural, and are located approximately 60 miles from a metropolitan area. The population of the counties range from 7,500 to 15,000. The counties have a large black population ranging from 30% to 50% of the total population. One school in the study has a predominantly black school population (68%). School populations vary from 430 to 630 students.

The main industries of this region are agriculture, fishing, and manufacturing. From one-third to nearly one-half of the counties' land is devoted to agriculture. Proximity to abundant fishing also provides many jobs. The occupations of the parents of children in the schools are approximately 25% skilled, 20% unskilled, and 15% professional. The remainder of the parents are basically involved in agriculture, fishing, or clerical work. The unemployment rate ranges from 5.8% to
7.2%. The per capita income of this area is approximately $12,500 and the median family income about $29,000.

**Procedures**

Statistical analysis. The data collected in this study was analyzed by using analysis of variance (ANOVA). Where significant differences among the means occurred, those means were compared to determine which groups differed from each other.

Achievement. The Reading Comprehension, Total Language, and Total Math scores from the spring 1991 administration of the Iowa Test of Basic Skills were analyzed. Reported Standard Scores (SS) were subjected to analysis. All students were completing the second grade.

Self-concept and Motivation. The SCAMIN was administered in the fall of 1991 to all students in the study. Students were beginning the third grade. Norms are available for two self-concept factors: Role Expectations (RE) and Self-Adequacy (SA); and two motivation factors: Goal and Achievement Needs (GAN) and Achievement Investment [or Failure Avoidance] (FA). Self-concept (SC) equals RE + SA. Motivation (MOT) equals GAN plus FA. A summative score was computed by adding the stanine scores which were assigned based on grade level and total raw scores within each of the concept factors. These summative scores were used to determine if there were any significant differences among the three groups. The method
for deriving summative scores from the SCAMIN was reported by
the authors of this inventory (Milchus, et al., 1968).

Ability. The Verbal, Quantitative, and Nonverbal scores
from the Cognitive Abilities Test were analyzed. Scores for
this test were reported as grade-percentiles and age-percentiles. These percentiles were converted into normal curve
equivalents before analysis. This test was given in the
spring semester of the first-grade year. Since transitional
students and possibly retained students were older than
regularly promoted students, both grade and age percentiles
were examined.

Birthdate. In the case of birthdate-effect, only achieve­
ment test scores were compared. Each of the three groups (T1,
RG, NR) were subgrouped by birthdate: 1) January-April, 2)
May-August, and 3) September-December. It was decided to form
three subgroups in order to create subgroup sample sizes large
enough to provide a degree of statistical power. In this
manner, nine subgroups were formed. These nine subgroups were
compared both within each of the three main groups and between
the three main groups in such a way as to compare every
subgroup with every other subgroup.

Attendance. The total number of days absent during the
1989-90 school year was obtained from student records. The
group means for days absent were compared.
Summary

This study compared third grade students who had been placed in an interactionist transitional first grade program with students who had been retained and regularly promoted students on the variables of achievement, self-concept, ability, and attendance. This study attempted to describe the typical transitional student on the variables stated above. The many relationships which existed between the interaction of achievement with the students' group and birthdate have been investigated. The study of school retention has also been adequately researched. The main focus of this study was to investigate how the introduction of a transitional program instructed by a teacher with an interactionist philosophy affects these same variables, if at all. If in fact some segments of the school population are found to benefit from transitional programs, it was the intention of this study to identify those segments.
Chapter 4: Analysis of Results

Introduction

Data from 125 students in this study were analyzed based on their placement into one of three groups: interactionist transitional first grade (Tl), previously retained in grade (RG), or regularly promoted (NR). Due to absence during the time of testing, some students did not have achievement or ability scores, nor were attendance records available in two instances because of incomplete files. Other students had moved from the school prior to this current school year and self-esteem and motivation scores were not available.

Students were compared on the second semester scores from the Iowa Test of Basic Skills in the achievement areas of Reading Comprehension, Total Language, and Total Math. These same groups were further broken down into trimester birthdate subgroups and analyzed. Ability scores from the state administered Cognitive Abilities Test were analyzed. In the case of retained students having taken this test twice, the second administration was used for analysis. Both grade level and age norms were examined. Attendance records from the 1990-91 school year were used to obtain a record of student absences.

Analysis of variance was used to examine differences among group means. Where statistically significant differences were found (.05 level), the WSD Method was used to identify these means.
Hypothesis 1

It was hypothesized that at the conclusion of second grade, there would be no significant difference between students previously served in a transitional first grade program (T1) and students previously retained in grade (RG) on measures of achievement. It was further hypothesized that students who were never retained (NR) would score significantly higher than either the T1 group or the RG group on measures of achievement.

Findings

Achievement data from the spring 1991 Iowa Test of Basic Skills was collected on all subjects included in the study. For the area of Reading Comprehension, students in the T1 group (n=37) had a mean standard score (SS) of 84.38. This compares to a mean SS of 86.87 for the RG group (n=38) and 93.59 for the NR group (n=44). Results of Analysis of variances for achievement data on Reading Comprehension (RC) revealed that there were no significant differences among the three groups for birthdate (as independent variable), but the treatment itself made a difference. Applying the WSD Method, it was calculated that a difference in group means of 3.95 was significant. As hypothesized, the T1 group did not differ significantly from the RG group; however, the NR group did have a significantly higher Reading Comprehension score than either the T1 group or the NR group (see Table 1A).
Table 1A

**ANALYSIS OF VARIANCE (ACHIEVEMENT- READING COMPREHENSION)**

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>SUM-OF-SQUARES</th>
<th>DF</th>
<th>MEAN-SQUARE</th>
<th>F-RATIO</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIRTH</td>
<td>85.617</td>
<td>2</td>
<td>42.808</td>
<td>0.264</td>
<td>0.769</td>
</tr>
<tr>
<td>GROUP</td>
<td>2341.552</td>
<td>2</td>
<td>1170.776</td>
<td>7.213</td>
<td>0.001</td>
</tr>
<tr>
<td>BIRTH*GR</td>
<td>1139.365</td>
<td>4</td>
<td>284.841</td>
<td>1.755</td>
<td>0.143</td>
</tr>
<tr>
<td>ERROR</td>
<td>17854.684</td>
<td>110</td>
<td>162.315</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1B

**ANALYSIS OF VARIANCE (ACHIEVEMENT- TOTAL LANGUAGE)**

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>SUM-OF-SQUARES</th>
<th>DF</th>
<th>MEAN-SQUARE</th>
<th>F-RATIO</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIRTH</td>
<td>30.221</td>
<td>2</td>
<td>15.111</td>
<td>0.110</td>
<td>0.896</td>
</tr>
<tr>
<td>GROUP</td>
<td>2103.990</td>
<td>2</td>
<td>1051.995</td>
<td>7.625</td>
<td>0.001</td>
</tr>
<tr>
<td>BIRTH*GR</td>
<td>624.458</td>
<td>4</td>
<td>156.114</td>
<td>1.132</td>
<td>0.346</td>
</tr>
<tr>
<td>ERROR</td>
<td>15038.466</td>
<td>109</td>
<td>137.968</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 1C

**ANALYSIS OF VARIANCE (ACHIEVEMENT- TOTAL MATH)**

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>SUM-OF-SQUARES</th>
<th>DF</th>
<th>MEAN-SQUARE</th>
<th>F-RATIO</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIRTH</td>
<td>5.845</td>
<td>2</td>
<td>2.923</td>
<td>0.044</td>
<td>0.957</td>
</tr>
<tr>
<td>GROUP</td>
<td>1241.222</td>
<td>2</td>
<td>620.611</td>
<td>9.418</td>
<td>0.000</td>
</tr>
<tr>
<td>BIRTH*GR</td>
<td>329.622</td>
<td>4</td>
<td>82.405</td>
<td>1.251</td>
<td>0.294</td>
</tr>
<tr>
<td>ERROR</td>
<td>7182.476</td>
<td>109</td>
<td>65.894</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 1D

**ACHIEVEMENT MEANS AND STANDARD DEVIATIONS**

<table>
<thead>
<tr>
<th></th>
<th>T1 (N=37)</th>
<th>RG (N=38)</th>
<th>NR (N=44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC MEAN</td>
<td>84.378</td>
<td>86.868</td>
<td>93.591</td>
</tr>
<tr>
<td>STAND DEV</td>
<td>12.354</td>
<td>11.553</td>
<td>14.497</td>
</tr>
<tr>
<td>TL MEAN</td>
<td>89.722</td>
<td>91.000</td>
<td>98.886</td>
</tr>
<tr>
<td>STAND DEV</td>
<td>10.311</td>
<td>10.457</td>
<td>13.960</td>
</tr>
<tr>
<td>TM MEAN</td>
<td>88.351</td>
<td>91.054</td>
<td>96.136</td>
</tr>
<tr>
<td>STAND DEV</td>
<td>8.223</td>
<td>7.375</td>
<td>8.517</td>
</tr>
</tbody>
</table>
For the Total Language (TL) area, the T1 group had a mean standard score of 89.72 and the RG group had a mean standard score of 91.00. This compares to a mean standard score of 98.89 for the NR group. Analysis of variance indicated that there was a significant difference for these three means. It was calculated that a difference in mean scores of 3.65 would be significant. As hypothesized, the T1 group did not significantly differ from the RG group. The students in the NR group had a significantly higher score than either the T1 or RG groups (see Table 1B).

For the Total Math (TM) area, the T1 group had a mean standard score of 88.35 and the RG group had a mean standard score of 91.05. This compares to a mean standard score of 96.14 for the NR group. Analysis of variance indicated that there was a significant difference for these three means. As was true for the other two areas, the NR group was significantly higher than either the T1 group or the RG group.

Hypothesis 1, which stated that the NR group would be significantly higher than either the T1 or RG groups, was confirmed for all areas of achievement measured. There was no significant difference between the T1 group and the RG group.
Hypothesis 2

It was hypothesized that there would be no significant difference on self-concept scores among the T1, RG, and NR groups as measured during the beginning of third grade.

Measures of self-concept were calculated by assigning a stanine to the raw score on four concept factors: role expectations, self-adequacy, goal and achievement needs, and achievement investment. The label self-concept is attached for simplicity, but this inventory is actually measuring both self-concept and motivation. These stanines are based on the grade level (third) that the subjects were in at the time this instrument was administered. A summative score, which is a total of the four separate stanines, was analyzed as prescribed by the authors of the SCAMIN (Milchus, Farrah, & Reitz, 1968).

Findings

The T1 group ranged from 10 to 29 with a mean of 21.32. The RG group ranged from 12 to 30 with a mean of 21.20, and the NR group ranged from 12 to 31 with a mean of 20.21. In all three cases, the scores fell within the middle of the average range (17-23) as presented by the inventory's authors. Analysis of variance revealed that there were no significant differences among these groups on measures of motivation and self-esteem.
Table 2A

ANALYSIS OF VARIANCE (SELF-CONCEPT AND MOTIVATION)

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>SUM-OF-SQUARES</th>
<th>DF</th>
<th>MEAN-SQUARE</th>
<th>F-RATIO</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIRTH</td>
<td>24.586</td>
<td>2</td>
<td>12.293</td>
<td>0.565</td>
<td>0.570</td>
</tr>
<tr>
<td>GROUP</td>
<td>58.153</td>
<td>2</td>
<td>29.076</td>
<td>1.336</td>
<td>0.267</td>
</tr>
<tr>
<td>BIRTH*GR</td>
<td>176.864</td>
<td>4</td>
<td>44.216</td>
<td>2.032</td>
<td>0.095</td>
</tr>
<tr>
<td>ERROR</td>
<td>2284.950</td>
<td>105</td>
<td>21.761</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2B

SELF-CONCEPT AND MOTIVATION (MEAN SCORES)

<table>
<thead>
<tr>
<th></th>
<th>T1 GROUP</th>
<th>RG GROUP</th>
<th>NR GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>N OF CASES</td>
<td>37</td>
<td>35</td>
<td>42</td>
</tr>
<tr>
<td>MINIMUM</td>
<td>10</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>MAXIMUM</td>
<td>29</td>
<td>30</td>
<td>31</td>
</tr>
<tr>
<td>MEAN</td>
<td>21.32</td>
<td>21.20</td>
<td>20.21</td>
</tr>
<tr>
<td>STANDARD DEV</td>
<td>4.44</td>
<td>4.50</td>
<td>5.21</td>
</tr>
</tbody>
</table>
Hypothesis 3

It was hypothesized that the older children in each of the three groups would score higher on achievement than the younger children. Subgroups were formed by separating students by birthday: January-April, May-August, and September-December. The areas of Reading Comprehension, Total Language, and Total Math were analyzed.

Findings

We must reject the hypothesis that older children in each group will do better than younger children in each group for two reasons. One, this was not the case for the T1 and the RG. Surprisingly, the younger children in the T1 group consistently scored higher than the older children for all measured areas of achievement. This same trend occurred for the RG group in Reading Comprehension with mixed results found when comparing the three birthdate groups for Total Language and Total Math. The NR group did follow (for the most part) the expected trend. In short, no conclusions about birthdate effects can be drawn from these results (See Table 3A).
Table 3A

**SUBGROUP MEANS (ACHIEVEMENT (SS))**

<table>
<thead>
<tr>
<th>Group</th>
<th>RC</th>
<th>TL</th>
<th>TM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>T1 (Jan-Apr)</strong></td>
<td>Mean (n=10)</td>
<td>78.40</td>
<td>87.44</td>
</tr>
<tr>
<td></td>
<td>Stand Dev</td>
<td>10.07</td>
<td>7.59</td>
</tr>
<tr>
<td><strong>T1 (May-Aug)</strong></td>
<td>Mean (n=16)</td>
<td>83.94</td>
<td>88.00</td>
</tr>
<tr>
<td></td>
<td>Stand Dev</td>
<td>11.73</td>
<td>11.44</td>
</tr>
<tr>
<td><strong>T1 (Sept-Dec)</strong></td>
<td>Mean (n=11)</td>
<td>90.46</td>
<td>93.27</td>
</tr>
<tr>
<td></td>
<td>Stand Dev</td>
<td>13.23</td>
<td>11.09</td>
</tr>
<tr>
<td><strong>RG (Jan-Apr)</strong></td>
<td>Mean (n=18)</td>
<td>85.89</td>
<td>91.06</td>
</tr>
<tr>
<td></td>
<td>Stand Dev</td>
<td>11.65</td>
<td>8.40</td>
</tr>
<tr>
<td><strong>RG (May-Aug)</strong></td>
<td>Mean (n=9)</td>
<td>87.67</td>
<td>89.89</td>
</tr>
<tr>
<td></td>
<td>Stand Dev</td>
<td>8.60</td>
<td>12.20</td>
</tr>
<tr>
<td><strong>RG (Sept-Dec)</strong></td>
<td>Mean (n=11)</td>
<td>88.91</td>
<td>93.00</td>
</tr>
<tr>
<td></td>
<td>Stand Dev</td>
<td>12.99</td>
<td>11.18</td>
</tr>
<tr>
<td><strong>NR (Jan-Apr)</strong></td>
<td>Mean (n=10)</td>
<td>98.50</td>
<td>102.40</td>
</tr>
<tr>
<td></td>
<td>Stand Dev</td>
<td>13.89</td>
<td>17.78</td>
</tr>
<tr>
<td><strong>NR (May-Aug)</strong></td>
<td>Mean (n=17)</td>
<td>90.41</td>
<td>99.29</td>
</tr>
<tr>
<td></td>
<td>Stand Dev</td>
<td>13.00</td>
<td>12.54</td>
</tr>
<tr>
<td><strong>NR (Sept-Dec)</strong></td>
<td>Mean (n=17)</td>
<td>93.88</td>
<td>96.41</td>
</tr>
<tr>
<td></td>
<td>Stand Dev</td>
<td>16.17</td>
<td>13.20</td>
</tr>
</tbody>
</table>
Secondly, besides the common sense conclusions based on group means, statistically, there is no significant F-ratio for Birthdate by Group interaction (see Tables 1A-1C). The risk of a Type I error is very slight. This leaves many other factors which account for the differences in these group means. Past research indicates that individual student ability significantly correlates to achievement and this may be the case here. Since gender, race, and school system were all considered in the random selection of samples, it is unlikely that these factors are affecting the results to any significant degree. With small subgroup sample sizes, the issue of statistical power comes into play. If these means resulted from very large sample sizes, we might be to able find that these means are significantly different. As it stands, the finding of no significant different is the appropriate conclusion.
**Hypothesis 4**

It was hypothesized that the children in the NR group would score higher than children from either the T1 or RG group on measures of achievement, regardless of age. It was also hypothesized that the older children from the T1 group would score higher than the younger children in the RG group and older children in the RG group would score higher than younger children in the T1 group on measures of achievement.

**Findings**

Hypothesis 4 is closely related to Hypothesis 3, and also had to be rejected. In this situation, we are looking at subgroup means among groups. As revealed on Tables 1A-1C, there were no birthdate effects for the dependent variables concerned with achievement. With \( p = .957 \) for Reading Comprehension, it is highly unlikely that birthdate had any effect on this area. Likewise, Total Language (\( p = .896 \)) and Total Math (\( p = .767 \)) were not affected by birthdate. It has been found (Hypothesis 1) that significant group differences did exist. Looking at the interaction between the group and the birthdate revealed no significance. In other words, being older (or younger) in the Transitional Group will not result in any difference in the probability of higher (or lower) achievement scores when compared with older or younger students in the other two groups. Therefore, the fact that older children in the Regularly Promoted Group achieved higher
than younger children in that group can not be attributed to any interaction of that group with birthdate. This is true even though the opposite results were found for the Transitional Group. These findings resulted for reasons other than group and birthdate interaction. In cases involving comparisons between the T1 or RG groups with the NR group, the NR students do compare favorably. In no instance, was a T1 subgroup mean higher than that of an NR subgroup mean for achievement areas. Likewise, in no instance did a RG subgroup mean exceed that of an NR subgroup mean. Of the 27 comparisons involving the T1 and NR groups, most favored the NR subgroups. Except for the September-December T1 subgroup, which appeared to be a surprisingly strong group (comparatively), students in the RG subgroups scored higher on measures of achievement than did students in the T1 subgroups. Although these are interesting observations and intuitively revealing, as discussed above, no conclusions based on birthdate and group interaction (p=.143 for RC; p=.346 for TL; p=.294 for TM) can be made.
Hypothesis 5

It was hypothesized that there would be no significant difference in ability scores among the three groups as measured during the first grade. From the review of literature, there were no indications that transitional students or retained students had less ability than regularly promoted students.

Findings

Two perspectives on ability scores were examined. Whereas true intelligence quotients depend on chronological age, ability scores used in this study were normed by both age and by grade. Therefore, students who had been served in a transitional program and students who had been retained would naturally compare more favorably to their grade cohorts than their age cohorts (most of whom were now in the next grade). Three types of ability were examined: verbal, quantitative, and non-verbal. At the .05, one can accept the hypothesis that there were no differences among the three groups in verbal ability, quantitative ability, and non-verbal ability normed by grade.
<table>
<thead>
<tr>
<th></th>
<th>AV</th>
<th>AQ</th>
<th>ANV</th>
<th>GV</th>
<th>GQ</th>
<th>GNV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>T1 GROUP (N=39)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
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<td>1</td>
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<td>6</td>
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<tr>
<td>Maximum</td>
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<td>74</td>
<td>86</td>
<td>90</td>
<td>61</td>
<td>86</td>
</tr>
<tr>
<td>Mean</td>
<td>36.95</td>
<td>26.69</td>
<td>45.80</td>
<td>43.31</td>
<td>36.72</td>
<td>52.64</td>
</tr>
<tr>
<td>Stand Dev</td>
<td>14.05</td>
<td>14.89</td>
<td>17.01</td>
<td>17.31</td>
<td>12.75</td>
<td>16.04</td>
</tr>
<tr>
<td><strong>RG GROUP (N=39)</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>1</td>
<td>1</td>
<td>19</td>
<td>1</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Maximum</td>
<td>73</td>
<td>71</td>
<td>99</td>
<td>83</td>
<td>90</td>
<td>90</td>
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<tr>
<td>Mean</td>
<td>36.95</td>
<td>30.13</td>
<td>46.97</td>
<td>42.05</td>
<td>39.33</td>
<td>51.77</td>
</tr>
<tr>
<td>Stand Dev</td>
<td>13.71</td>
<td>16.21</td>
<td>18.55</td>
<td>17.78</td>
<td>16.95</td>
<td>19.19</td>
</tr>
<tr>
<td><strong>NR GROUP (N=47)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>9</td>
<td>1</td>
<td>29</td>
<td>1</td>
<td>12</td>
<td>26</td>
</tr>
<tr>
<td>Maximum</td>
<td>99</td>
<td>99</td>
<td>99</td>
<td>99</td>
<td>83</td>
<td>99</td>
</tr>
<tr>
<td>Mean</td>
<td>50.20</td>
<td>49.17</td>
<td>65.48</td>
<td>43.79</td>
<td>41.43</td>
<td>60.43</td>
</tr>
<tr>
<td>Stand Dev</td>
<td>16.16</td>
<td>18.80</td>
<td>18.33</td>
<td>19.42</td>
<td>17.63</td>
<td>20.13</td>
</tr>
</tbody>
</table>

A=AGE  G=GRADE  V=VERBAL  Q=QUANTITATIVE  NV=NON-VERBAL
Table 5B

**ANALYSIS OF VARIANCE (GRADE-NORMED ABILITY SCORES)**

<table>
<thead>
<tr>
<th>DEP VAR = GV</th>
<th>N = 125</th>
<th>MULTIPLE R: 0.040</th>
<th>SQUARED MULTIPLE R: 0.002</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOURCE</td>
<td>SUM-OF-SQUARES</td>
<td>DF</td>
<td>MEAN-SQUARE</td>
</tr>
<tr>
<td>GROUP</td>
<td>66.771</td>
<td>2</td>
<td>33.385</td>
</tr>
<tr>
<td>ERROR</td>
<td>40738.077</td>
<td>122</td>
<td>333.919</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEP VAR = GQ</th>
<th>N = 125</th>
<th>MULTIPLE R: 0.122</th>
<th>SQUARED MULTIPLE R: 0.015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOURCE</td>
<td>SUM-OF-SQUARES</td>
<td>DF</td>
<td>MEAN-SQUARE</td>
</tr>
<tr>
<td>GROUP</td>
<td>472.395</td>
<td>2</td>
<td>236.197</td>
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<td>ERROR</td>
<td>31390.053</td>
<td>122</td>
<td>257.296</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEP VAR = GNV</th>
<th>N = 125</th>
<th>MULTIPLE R: 0.212</th>
<th>SQUARED MULTIPLE R: 0.045</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOURCE</td>
<td>SUM-OF-SQUARES</td>
<td>DF</td>
<td>MEAN-SQUARE</td>
</tr>
<tr>
<td>GROUP</td>
<td>1996.661</td>
<td>2</td>
<td>998.331</td>
</tr>
<tr>
<td>ERROR</td>
<td>42395.387</td>
<td>122</td>
<td>347.503</td>
</tr>
</tbody>
</table>
Unlike the grade-level norms, all the age-normed ability scores were significantly different. This indicates that although the ability levels of T1 students and RG students resembled those of other students in their grade, those students who were the same age as T1 students and RG students but were now in the next grade level, had higher ability scores.

For verbal ability (age-normed), the T1 group and the RG group remarkably had the exact same mean score (36.949). This compares to 50.196 for the NR group. Applying the WSD Method, it was found that a difference in mean scores of 5.52 was significant. One can conclude that the NR group had a significantly higher age-normed ability score on the verbal battery of this test than either the T1 group or the RG group.

For quantitative ability (age-normed), the T1 group had a mean of 26.692. This compares to an RG group mean of 30.128 and an NR group mean of 49.174. Applying the WSD Method, it was found that a difference between mean scores of 4.85 was significant. Therefore, the T1 group did not significantly differ from the RG group; however, both the T1 group and the RG group significantly differed from the NR group.

The last ability test analyzed was for non-verbal ability (age-normed). The T1 group had a mean score of 45.795. This compares to a mean score of 46.974 for the RG group, and 65.478 for the NR group. Applying the WSD Method, it was found that a difference in mean scores of 5.64 was
significant. Again, the T1 group did not significantly differ from the RG group, but both the T1 and RG groups significantly differed from the NG group.

Table 5C

ANALYSIS OF VARIANCE (AGE-NORMED VERBAL ABILITY)

<table>
<thead>
<tr>
<th>DEP VAR=AV</th>
<th>N=124</th>
<th>MULTIPLE R: 0.402</th>
<th>SQUARED MULTIPLE R: 0.161</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOURCE</td>
<td>SUM-OF-SQUARES</td>
<td>DF</td>
<td>MEAN-SQUARE</td>
</tr>
<tr>
<td>GROUP</td>
<td>5077.635</td>
<td>2</td>
<td>2538.818</td>
</tr>
<tr>
<td>ERROR</td>
<td>26387.034</td>
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<th>SQUARED MULTIPLE R: 0.270</th>
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Hypothesis 6

It was hypothesized that there would be no significant difference in the number of days missed from school among these three groups. From the review of literature, there was no indication that transitional students tended to be absent any more or less than retained or regularly promoted students.

Findings

Attendance data was collected at the individual school site. A frequency distribution chart was created to display this data (see Table 6A). Analysis of variance was used to compare the three groups on attendance. There was no difference among the three groups in comparing the mean number of days missed for each group (see Table 6C). The students in the T1 Group missed an average of 6.9 days per school year. This compares with an average of days missed of 6.8 days for the RG group and 6.0 for the NR group (see Table 6B). As hypothesized, the average number of days missed from school did not differ significantly for the three groups. It is interesting to note that although the means were approximately the same, there was a much wider variance and standard deviation for the T1 group. Individual students in the T1 group were absent an excessive number of days (i.e., 40, 28, 22). At the other extreme, over one-fourth of the T1 students missed either no days or one day from school.
Table 6A
Frequency Distribution of Attendance

<table>
<thead>
<tr>
<th># of Days Absent</th>
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<th>RG Group f</th>
<th>NR Group f</th>
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<td>3</td>
<td>2</td>
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<td>9</td>
<td>1</td>
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<tr>
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<td>0</td>
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<td>5</td>
<td>4</td>
</tr>
<tr>
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<td>0</td>
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<td>21</td>
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<td>22</td>
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<td>0</td>
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<td>28</td>
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<tr>
<td>40</td>
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n = 39  38  46
Table 6B

Attendance Profile (Days Missed from School)

<table>
<thead>
<tr>
<th></th>
<th>Transitional Group</th>
<th>Retained Group</th>
<th>Regularly Promoted Group</th>
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<tbody>
<tr>
<td>Mean</td>
<td>6.95</td>
<td>6.81</td>
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<tr>
<td>Minimum</td>
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<td>0</td>
</tr>
<tr>
<td>Maximum</td>
<td>40</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>Stand. Dev.</td>
<td>8.03</td>
<td>4.81</td>
<td>4.63</td>
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<tr>
<td>Variance</td>
<td>64.63</td>
<td>23.13</td>
<td>21.46</td>
</tr>
</tbody>
</table>

Table 6C

ANALYSIS OF VARIANCE (DAYS ABSENT FROM SCHOOL)

<table>
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<th>SOURCE</th>
<th>SUM-OF-SQUARES</th>
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<th>MEAN-SQUARE</th>
<th>F-RATIO</th>
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<tr>
<td>GROUP</td>
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<td>2</td>
<td>21.870</td>
<td>0.620</td>
<td>0.540</td>
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<tr>
<td>BIRTH*GR</td>
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<td>60.293</td>
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<td>35.295</td>
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</table>
Summary

It was evident from the analysis of data that children instructed in a transitional first grade program by a teacher with an interactionist philosophy closely resembled students who had been retained for measures of Reading Comprehension, Total Language, and Total Math. The Regularly Promoted Students scored higher on measures of achievement than students in the other two groups. This was as hypothesized.

On measures of self-esteem and motivation, there were no significant differences among the three groups. This was as hypothesized. Therefore, having been in a transitional first grade program or having been retained, did not have a negative effect on student self-esteem and motivation. This finding is based on results taken early in the third grade.

The hypotheses which were not supported in this study applied to birthdate effect and group with birthdate interaction effect. There were no significant findings for these areas. It is interesting to note that the younger group (NR students) followed the expected pattern with older children scoring higher than younger children. However, this pattern could not be attributed to any interaction of this group with birthdate.

It was hypothesized that the three groups being compared would not differ in ability. Though this was the case for ability normed by grade, it was not the case when groups were compared to each other on ability normed by age. It is especially revealing that the largest discrepancy appears to be in the area of non-verbal
ability. It is this battery of the ability test which the authors of the test consider valuable for predicting the student's potential for learning (i.e. success in school).

Finally, as predicted, these three groups did not significantly differ on attendance profiles. There were some slight differences in frequencies and variance, but these differences cannot be attributed to anything other than sampling error.
Chapter 5: Conclusions

Introduction

The purpose of this study was to compare students who were served in a transitional first grade program by a teacher with an interactionist philosophy (self-reported) with students who had one retention in grade and with a random sample of regularly promoted students. This study used the philosophical orientation of the teacher as the indicator of the type of transitional program (independent variable). The age of the student (birthdate) was also used as an independent variable. The dependent variables used to make these comparisons were ability scores, achievement scores, self-esteem scores, and attendance.

Further, it was the intent of this study to determine whether placement into a transitional first grade program instructed by a teacher with an interactionist philosophy would result in student profiles for achievement, self-esteem, ability, and attendance which were similar to those of regularly promoted students. It was also the intent of this study to determine whether placement into these transitional programs was more beneficial than retaining students in grade. It is recognized that the entire field of early education has been involved in constant revision. Greater concern for early intervention for children identified as "at-risk" is evident. Teaching strategies including whole-language approaches to
instruction, greater use of play, manipulatives, and discovery learning are now being advocated. Also, continuous progress of instruction, which rejects the notion of student retention, is regaining popularity as a movement. The use of transitional programs, including pre-kindergarten programs for five year olds, is currently being used as an alternative to retention or continuous progress in approximately 17% of the nation's schools, according to Stroud and Williams (1990).

The results, discussion, and conclusions of this study should be interpreted in light of the following limitations:

1. The question as to whether the different transitional programs used in this study resemble each other, even though the teacher has an interactionist philosophy;

2. The fact that the transitional students and the retained students identified in this study may not represent all transitional and retained students;

3. A third limitation was sample size. Statistical power increases automatically with sample size (Borg & Gall, p.378). This was more evident in examining subgroups than for the three main treatment groups; and

4. The method of identifying transitional classes as maturationist, behaviorist, or interactionist was a limitation. The identification was based on the self-reported philosophy of the classroom teacher. This was not verified through direct classroom observation.
The conclusions from this study are presented and discussed as they relate to the research questions stated in chapter one. Because of this, some conclusions pertaining to achievement and self-esteem will appear in both research questions one and two.

Research Question #1

Do students who were served in a transitional program described as interactionist parallel their third grade classmates who had never been retained as measured by achievement test scores and self-concept scores?

Discussion-Achievement

The results of this study indicated that students who had never been retained had significantly higher Reading Comprehension, Total Language, and Total Math scores than students instructed by a teacher with an interactionist philosophy in a transitional first grade class. This finding, though not altogether surprising based on the review of the literature, is nevertheless disheartening in light of the fact that these students are already one year older (as early as third grade) and still not achieving at the same level as regularly promoted students.

This finding that transitional students do not compare favorably to students who are not lacking readiness skills was also found in Matthews' study (1977). For the most part, the
results of this present study resemble the findings of other studies which found that being served in a transitional first grade does not result in increased achievement. The studies of Bell (1973), Leinhardt (1980), and Wilson (1979) suggested that transitional placement was less effective than regular first grade instruction in fostering academic achievement.

It could not be established from this study that interactionist transitional programs are effective or ineffective. If we use the operational definition of effectiveness as having transitional students achieve at the same level as regularly promoted students, this clearly did not occur. If we define success in terms of motivation and self-esteem, the two groups were comparable.

Too often, teachers are confronted with students completing first grade whom they feel are doomed to failure were they to advance. The cruel prospect of retention is replaced by the more palatable alternative of transitional first grade. In theory, it sounds as if this is the solution to the problem. Parents are led to believe that this extra year will give their child time to grow and develop. In truth, these programs do little more than provide a slower, more deliberate pace of instruction if left unchecked (Gredler, 1984). These programs segregate children from other more intellectually, socially, physically, and emotionally mature children who may actually serve as better role models (Leinhardt, 1980).
It is a natural reaction for teachers to want to remove the less ready students from their classroom. It is certainly much easier to provide instruction to a group of students who are clearly capable of handling the expected standards of the grade. Likewise, it is clearly easier to handle a homogeneous group of "slower" students, particularly with a smaller class size. The problem, as these findings clearly indicate, is that the program is ineffective for increasing achievement.

The question must be considered, will anything help this type of student? This leads to implications for further research in the area of achievement. It is the conclusion of this researcher that having a teacher with an interactionist philosophy instruct a transitional first grade, in itself, is not enough to assure improved student achievement on a par with that of regularly promoted students. Will transitional programs specifically designed to reflect the learning theories of Piaget (interactionist) improve student achievement? The studies from Matthews and Dolan would seem to give credence to this theory. Would "at-risk" students be better served in specifically designed transitional programs or in integrated heterogeneous classes of the same design?
Discussion—Self-Concept

The results of this study indicated that there were no significant differences in self-concept and motivation between students served in a transitional class and regularly promoted students. In general, this finding is consistent with those findings of other studies. Ferguson (1990) and Shepard and Smith (1987) did report that transitional programs had a negative effect on self-esteem. However, most findings reviewed did not support the contention that being placed in a transitional program negatively affected feelings of self-esteem and motivation (Dolan, 1982; Reed, 1987; Raygor, 1972; Uphoff, 1990a).

One can only speculate as to why these students do not suffer bruised egos and decreased motivation as a result of being placed in a transitional program. Children may find that being in a class which is on their level and less stressful is a more enjoyable place to be. Mantzicopoulos and Morrison (1990) reported that transitional teachers rate their children higher because the homogeneity of the group precludes comparisons with other types of children, or immature behaviors are better tolerated in transitional programs and are more likely to be regarded as appropriate given the child’s developmental stage. This more positive attitude by the teacher can have a beneficial effect on the child’s own self-esteem. Finally, educators may be overestimating the traumatic effects on students being separated from their
former classmates. As new classes are formed, students under the guidance of sensitive teachers and parents would, in all likelihood, avoid suffering any emotional damage from being placed in a transitional program.

More probable, since the time of testing for this current study was third grade, the effects of being placed in transitional first grade were two years old and no longer a cause of concern. Certainly, any negative feelings over being placed in the transitional program had vanished and new friendships had formed.

Research Question #2

Do students who were served in a transitional program described as interactionist exceed their third grade classmates who had been retained in a grade prior to or including third grade as measured by achievement test scores and self-concept scores?

Discussion-Achievement

The results of this study indicated that there was no significant difference between students served in a transitional first grade and students who had been retained on achievement measures. Therefore, it can be concluded that students in interactionist transitional programs did not exceed students who had been retained on measures of achievement. This finding may have resulted more from
similarities in ability levels than differences in program treatment.

Since increasing student achievement is a primary reason for having a transitional program, continuing its use comes into question. Having a transitional program would create the administrative problems of housing, extra staffing, and supplying additional materials for an additional program. Whereas, retaining students would result in the slightly less demanding problem of increased numbers of students in grade. If all grades had similar retention rates, the class sizes would remain relatively consistent, albeit larger.

It was also found that regularly promoted students outperformed the retained students on measures of achievement. Since retention did not have the effect of "catching" these students up to their regularly promoted cohorts, some implications are suggested. What alternatives can be offered to retention? Unquestionably, transitional programs were one such alternative which, as the results from this study indicated, did not improve achievement to the level of regularly promoted students. Will retention, coupled with an individualized educational plan, result in higher levels of achievement? Future research measuring the effects of individualized instruction (tutoring), differentiated instruction based on the child's learning style, and monitored parental involvement in the educational process while the
child is repeating the grade could conceivably result in more gain than simply repeating the grade.

**Discussion-Self-Concept**

The results of this study indicated there were no differences between students served in a transitional program and retained students on measures of self-concept and motivation. Holmes and Matthews (1984) did a meta-analysis on the effects of nonpromotion on elementary and junior high school students. They reported on nine studies which examined self-concept. Their findings revealed that for self-concept measures, the promoted pupils outscored the retained pupils by .19 standard deviation units (p<.05). It was not reported in the conclusions how many of these studies (if any) dealt with primary students.

The belief that a retained group regresses or suffers in personality adjustment was not supported (Chansky, 1964). Carroll (1963) found that teachers' ratings of adjustment, which for the most part were not significantly different, tended to be more favorable to the overage children. Plummer and Graziano (1987) found, contrary to prediction, that retained children had higher self-esteem than nonretained children. Pomplun (1988) found no significant differences between first and second grade students who were retained and those who were served in a transitional program. These last
four findings are more closely aligned with the findings uncovered in this present study.

Many of the same reasons as to why transitional students did not suffer loss of self-esteem applies to the retained group. As suggested, these two groups parallel each other. In addition, Plummer and Graziano recounted that some children noted that the retained children had more experiences with academic tasks, and were therefore more often chosen as partners for school-related activities. Finally, this researcher agrees with the conclusions of Diener and Dweck (1980) that not all children interpret failure in terms of personal inadequacies. Rather, some children regard failure as surmountable and can be overcome with greater effort and more experience.

Research Question #3

Does birthdate affect achievement test scores when comparing students served in a transitional program described as interactionist with retained students and students who were never retained? Does this effect apply for comparisons within each of the three groups?

Discussion

The results of this study indicated that birthdate did not affect achievement as measured during the spring semester of the second grade. Therefore, it can be concluded that
there was no birthdate effect on achievement. It was further concluded that there was no birthdate by group interaction.

It was found that the youngest subgroup in the transitional class outscored the oldest and middle subgroups in all areas of achievement. This same occurrence also resulted for the retained group, although the range of scores was not as wide. The opposite finding occurred when the regularly promoted group was examined. As predicted, the older subgroups did outperform the younger subgroups on all areas of achievement. Therefore, it was not the birthdate that influenced the youngest subgroup (or the oldest in the case of regularly promoted students) to score higher on areas of achievement.

The fact that the youngest of the three groups, the regularly promoted group, followed the anticipated pattern of older subgroups outperforming younger subgroups, led to the possibility that there was an existing interaction between birthdate and group. But as the analysis revealed, this was not the case. However, the pattern is still apparent and enough doubt remains to suspect some undiscovered interaction. Further research using larger sample sizes and controlling for ability levels would give a clearer picture of what is occurring.

The reality that the younger children outscored the older children in the transitional and retained groups is not easily reconciled. The most likely explanation is that with small
sample sizes (ranging from 9 to 18), scores were greatly influenced by individual students within these groups scoring particularly high or low. In fact, it can be seen from the raw data that very low scores and relatively high scores did occur. Crosser (1991) stated one criteria used for her evaluation of studies examining birthdate effect included studies with sample sizes large enough to reasonably support the conclusions. This point has previously been noted as a limitation of the present study.

Another aspect to consider is the possibility that the birthdate effect may be eroding for the transitional and retained students, but not yet for the regularly promoted students. The latter group was completing their third year in school at the time of testing. The former two groups were completing their fourth year in school.

The question must be raised, what are the possible ramifications of definitively determining that birthdate does in fact play a significant role in achievement scores? The arguments are already being used by some educators (Uphoff, Gilmore, & Huber, 1986) to delay school entry into kindergarten or to make pre-kindergarten programs available to "less ready" five-year olds. Shepard and Smith (cited in the Harvard News Letter, 1989) state:

...that whatever the cutoff date, some children will be up to a year younger than others and hence at a relative disadvantage—especially if the academic demands of kindergarten continue to escalate to reflect the presumed capabilities of an older age group (p.1).
Uphoff, Gilmore, and Huber counter:

If one measures success using the old normal curve, then by definition there will always be winners and losers; and the "new" youngest group is most likely to be represented in the latter group. However, this ignores the fact that as the entire class gains in developmental readiness and maturity, all will be better able to cope and learn. The class's average scores will increase and fewer children will need special help or remediation. In short, the gap between highs and lows has been found to narrow when the total group is more ready for school (p.97).

It is the position of this researcher to side with those advocating early entrance into kindergarten. This support is contingent upon having an appropriate developmental kindergarten in place, instructed by teachers trained in early childhood education. It is recognized that these conditions are rarely met in today's public schools and for that reason the opponents of early entry-age have a valid and pragmatic basis for their opposition. The recommendations of Siegal and Hanson (1991) call for full support of the practice of admitting children to school who are four years old by December 1. Those four-year olds deemed "at-risk" should be required to attend. If this is not possible, conditional support should be given to the practice of admitting children to school who are five by December 31. These recommendations were made recognizing that "the trend towards a later school entry age for our nation's children does not represent the most advantageous approach either in terms of our current knowledge of child development or contemporary family structure" (p.8).
The findings from this current study in regard to birthdate effect are not totally inexplicable, nor are they unique. Shepard and Smith (1989) found that achievement differences between the oldest and youngest first graders are small, on the order of seven or eight percentile points. Also, "the disadvantage of achievement experienced by some younger children in relation to older classmates may more likely be a combination of youngness and low ability" (p. 79). Again, this control for ability has surfaced as an implication for further research. Finally, Shepard and Smith conclude that even the small disadvantage of youngness eventually disappears, usually by third grade. May and Welch (1986) and Janson (1974) put the "catch-up" age around second grade. These results are consistent with the findings from this present study.

Research Question #4

Does an overall ability effect exist among these groups as measured by the Cognitive Abilities Test? Do transitional children differ from retained children and regularly promoted children on measures of ability?

Discussion

The findings from this study indicated that there were significant differences in the ability levels of these
students (normed by age); however, there were no significant differences in ability levels normed by grade.

Herein lies what may be the most telling information of the study. The children who are placed in transitional programs, or who are retained, lack the level of ability comparable to the regularly promoted students. This conclusion must be made with a degree of caution. The fact must be considered that ability is being defined as a score on the Cognitive Abilities Test taken in the beginning of first grade. Achievement scores were taken at the end of second grade. These ability scores are not static and conclusions based upon them must be made with circumspection.

Whereas, this lack of program effect for low ability students may not be a shocking revelation to those who work in the school setting, one risks the mistake of concluding that transitional programs or retentions are ineffective because it fails to help these types of students. It is quite possible that transitional programs and/or retention are useful interventions for dealing with average or above average students.

This examiner has noticed that there are individual students who have been retained or who have been served in a transitional program and continue to do quite well. Not surprisingly, these same students had moderate to high ability levels from the start and only required time to develop. If transitional programs are to serve any group of children, it
is speculated that it should be these types of students. Notwithstanding, in practice, placement decisions for transitional programs are based primarily on previous classroom performance which typically reflects deficient skill development. Less often, the socially, emotionally, or physically immature child is placed in a transitional program because evidence of this immaturity hampers academic performance.

Another interesting aspect of this question relates to the two ability scores, age and grade. It is understood that retained and transitional children taking this test at the beginning of first grade scored comparatively lower than regularly promoted students because their norm-reference group would be other children their age who are now mostly in the second grade. However, when these same students are normed by grade, they are compared to other first graders, most of whom are younger than they are. For this comparison, there were no significant differences. Yet, with comparable abilities, the achievement levels of transitional and retained students were lower than the regularly promoted students. A possible explanation for this requires a knowledge of the Cognitive Abilities Test. The authors of the test claim that verbal ability is predictive of school success in the language arts areas and quantitative ability is predictive of success in the mathematics areas. Nonverbal ability is more predictive of learning potential. Foreign-speaking children or children
from homes lacking a rich language foundation who score high on the nonverbal section of this test are said to possess the skills needed to succeed in school. It is naturally the responsibility of the school to be aware of that potential and provide the appropriate instruction.

It is interesting to note that even if grade level norms are examined, those norms which did not reveal any significant group differences, there was a 94% probability (below the .05 confidence level) that true differences existed in the nonverbal ability of these groups. The point made is that the transitional group and the retained group have a much higher chance of being in academic jeopardy than the regularly promoted group. This manifests itself very early, even in first and second grade. Many of these students will continue to be slow learners and candidates for additional retentions. Without digressing too far, additional retentions will likely result in a higher probability of dropping out of school and manifest itself in other school-related problems.

The purpose of this study was not to recommend further strategies to handle children who find themselves in this position. Every school faces this problem. Suffice it to say that as a result of this study, it is clearly evident that real differences in ability levels were present among regularly promoted students, transitional students, and retained students (these latter two resembling each other). Implications for further research suggest that alternatives to
transitional programs and retaining children be explored to deal with children of low academic ability. This does not include the special education child, many of whom come from these same ranks. The related problem of overidentifying children for placement into classes for the mentally retarded or learning disabled is sometimes used as a solution for want of needed alternatives.

The conclusion that students in transitional programs have lower ability levels than regularly promoted students was also made by May and Welch (1985). It was concluded in that study based on the OTIS Lennon Mental Ability Test, that traditional students (TR) had significantly higher ability scores than "Buy-A-Year" (BAY) students. May and Welch found that even after having had an extra year of school, BAY students did not score as well as the TR children on measures of achievement.

The finding in the present study that ability scores were significantly different between the NR group and the other two groups was not anticipated. It is the opinion of this researcher that in order for transitional programs to be beneficial, the administrators of such programs need to be selective about placing children. Furthermore, it is the opinion of this researcher that transitional programs and retention are not a solution for addressing the needs of students with low ability levels. Unfortunately, too few
alternatives are in place to deal with these students and their needs.

**Research Question #5**

Do any differences exist among the three groups in regard to school attendance. Are students in an interactionist transitional program or formerly retained students absent more frequently than regularly promoted students?

**Discussion**

The findings from this study indicated that there were no significant differences among the three groups examined for the number of days missed from school. If there had been any significant differences, it would have been appropriate to test whether there was any interaction between attendance and achievement. The hypothesis made concerning school attendance was confirmed by the analysis of attendance data. The only other study found in the literature which addressed the issue of attendance and transitional schools was that of Binkley, Brown, and Hooper (1989). Those results are consistent with the findings in this current study.

Children in the primary grades basically enjoy school. When attendance problems do occur, they usually revolve around issues of neglect or extended medical problems. These issues do not particularly target one group more than another. More
revealing, attendance in general at the three schools used in this study routinely exceeded 96% for the school as a whole.

Other related attendance issues which were discovered in the review of literature, but were not investigated, merit further research. Entwisle, Alexander, Cadigan, and Pallas (1987) found positive effects for preschool attendance. The research from Headstart and the Ypsilanti Perry Preschool Project supports the continued use of preschools. The High/Scope Educational Research Foundation reports:

High quality early childhood education enables families and communities to improve the life chances of their children. Long-term research shows that young adults, now 19 years old, who attended a high quality preschool program made greater gains in education, employment, and social responsibility than similar young adults who did not attend preschool.

The related issue of instructional time has been investigated on a limited basis and requires further research. Rosenshine and Berliner (1963) focused on academic engaged time in the classroom and found it to be positively correlated to student achievement. Gredler (1984) reported that less time is devoted to academic activities in the transitional class. Leinhardt (1980) acknowledged that transitional students averaged 21% less reading instruction than "regular" students, received 50% less test-relevant instruction in reading, and reviewed half the sight vocabulary words.

As alternatives are sought to address the needs of the low ability students discussed in the previous section, these issues, related to time, are offered as ones requiring further
research: effects of summer school on achievement for primary students, effects of extended day instruction on achievement for primary students, effects of increased school year on achievement for primary students, and the amount of actual engaged academic time in transitional classrooms as compared to the traditional classroom. Intuitively, additional time for learning would seem to translate into greater academic gains. One criticism of American schools relates to how poorly they are doing in comparison to Japanese and European schools. This issue of time in school is in the forefront. This gift of time would seem particularly valuable to those further behind. If only "at-risk" students were required to attend school for longer periods of time, the issue of fairness and equity would soon follow. If all were required to attend school for longer periods of time, then presumably all would benefit; however, the academic disparities are likely to continue or even exacerbate. The question still remains as to whether this country is financially willing to increase the time it spends on education. Another hurdle to overcome concerns itself with the traditional concept of school year which has existed since the United States was an agrarian society.
Implications for Further Research

Those implications for further research which were discussed in the chapter are summarized and listed:

1) Will transitional programs specifically designed to reflect the theories of Piaget (interactionist) improve student achievement?

2) Will larger subgroups of treatment by birthdate result in significant main effects (birthdate) and/or interaction effects (treatment x birthdate) for the dependent variable achievement?

3) What are the program effects on achievement when controlling for initial ability levels?

4) Do children of average or above average ability served in a transitional program compare favorably to students in the regular program?

5) What alternative strategies to transitional programs and retention result in increased academic performance for students of low ability levels?

6) How does the engaged academic time for students served in a transitional program compare to students served in a traditional program?

7) What is the effect of summer school, extended school day, and extended school year on achievement for primary "at-risk" students?

In addition, further studies delineating those characteristics of students who would most benefit from transitional
placement are needed. Also, large-scale studies of the different types of transitional programs and their effectiveness is necessary.

Summary

The evidence presented in this study does not support the contention that transitional programs are effective. In fact, there seems to be very little difference on the variables measured in this study between the students selected for transitional programs and students who were retained.

This study identified three types of transitional programs: maturationist, behaviorist, and interactionist. Studies cited in the review of literature rarely made any attempt to label the type of program. Most likely, not enough consideration was given to designing specified programs. It is felt by this researcher that transitional programs are not very well planned. Typically, a need exists to help keep retentions down and a transitional program is established for students not ready to advance to first grade. A compassionate teacher who is sensitive to the developmental needs of these young students is the likely candidate to take on the responsibility of such a program.

Small class size is the norm in transitional classes in order to provide as much individualized instruction as possible. However, questions remain unanswered as to how the curriculum is developed and what the actual learning objec-
tives of the program are. Questions are also raised as to the amount of time students are actively engaged in learning and the degree to which teachers expect their students to achieve in transitional programs.

It has been concluded that a teacher with an interactionist philosophy, in and of itself, is not enough to produce student results comparable to those of regular students. It could not be determined from this study whether a teacher with an interactionist philosophy does indeed create a program which is interactionist. However, one assumption going into this study was that the program would "take on the appearance" of an interactionist program because of the teacher's philosophy.

Where successful studies have been reported from the literature, their description closely resembles those characteristics of an interactionist program. Before it can be said conclusively that transitional programs should be abandoned, the reason for these inconsistencies should be revisited. The only feasible way to do this is to purposely set out to design transitional programs based on the theories of Piaget and study student outcomes. Enough evidence has been presented in the literature to conclude that the effectiveness of maturationalist and behaviorist programs are doubtful. However, any researcher wishing to establish a pure experimental design using one or more of these programs as treatment groups would be making a contribution to this field of inquiry. This
researcher faults the lack of carefully designed programs and proper evaluation for the ambiguity which currently exists in regard to transitional programs.

Another major conclusion derived from this study is that children with low ability placed in a transitional program will not benefit academically. Placing low ability students in transitional programs does nothing more than give license to the teacher to pursue a slow pace of instruction with decreased demands on the students. When these students leave the program, it would not be unusual to find them still in the lower quartile of the class. It is suggested that prescriptive programs, one-on-one instruction, more instructional time, teaching strategies utilizing the concepts of learning styles, and cooperative learning be utilized.

No evidence was uncovered to determine that placement in a transitional program results in lowered self-concept or reduced motivation. Students in a transitional class were not found to have attendance profiles unlike those of students who had been retained or who had never been retained.

The continued popularity of transitional programs precludes the likelihood that they will disappear anytime soon. The proponents of transitional programs have a valid point when they argue that until alternatives are in place, transitional placements will continue to serve a need. But, even they would argue for quality programs and not just "dumping grounds" for students with special needs.
Appendix

THEORIES/PHILOSOPHIES

Mark the following statements according to how strongly you agree with them.

0- I do not agree at all.
1- I agree somewhat.
2- I agree.
3- I strongly agree.

0 1 2 3 1. Supervised free play, creative and exploratory activities, and physical and discovery experiences are essential to children’s learning.

0 1 2 3 2. Teachers should provide choices of learning activities but should also stimulate and guide children in directions that insure learning will be fostered.

0 1 2 3 3. A child’s experiences, rather than development per se, are the key to readiness.

0 1 2 3 4. Learning progresses from simple to complex and from parts to the whole: successful completion of each state is prerequisite to moving on to the next stage.

0 1 2 3 5. Children learn as natural growth occurs sufficiently for them to engage in particular learning activities.

0 1 2 3 6. A child can be taught almost anything if the task is broken into simple steps and one proceeds slowly enough for the child to fully master each step.

0 1 2 3 7. Readiness for formal learning of skills may be reached by individual children at different points in time.
8. Teachers should provide a wide variety of activities in reading, mathematics, and handwriting preskills that provide many opportunities for learning and practice in many contexts rather than try to move children along a program involving higher and higher levels of achievement.

9. Lessons will be designed which focus on readiness skills; visual and auditory memory, discrimination, listening, attending, enumeration, and so forth.

10. Learning occurs best in a highly structured environment.

11. When children are ready to learn, they will also be motivated to learn.

12. Skills should not be taught in isolated lessons. Provisions should be made for children to synthesize the learning into the whole as it is related to their learning.

13. Consistent errors indicate a child is not ready to engage in that particular learning.

14. Teachers should provide multisensory, concrete activities to insure that children develop cognitive maps or schemes which provide a basis for skill-learning experiences.

15. Teachers should provide learning centers or areas which include materials and tasks related to children's genetic growth stage or level.

16. Teachers should reinforce appropriate behaviors in order to promote the emergence of intrinsic motivation.

17. Consistent errors indicate improper presentation of material. Return to simpler learning.
18. Children create knowledge through their interactions with the environment.

19. Specific mental and physical structures, which develop according to a genetic timetable, enable children to learn and set limits upon the amount of ability which can be reached.

20. Attempts to force development of one area of a child's development might lead to harmful effects upon other areas of development.

21. Formal training in academic areas should begin during the early years of childhood.

22. In teaching, stress should be placed upon verbal presentations by the teacher accompanied by displays, demonstrations, and manipulative materials.

23. Consistent errors indicate the beginning stages knowing in which the child's thought and behavior is qualitatively different from that of the adult.

24. Motivation for a specific area of learning emerges from interaction between the child's needs and interests and external experiences which involve both novel and familiar elements.
Write the rating (0,1,2,3) you assigned to each item in the blank next to the item.

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TOTAL X =
TOTAL Y =
TOTAL Z =

X is Maturationist
Y is Behaviorist
Z is Interactionist
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