To the Graduate Council:

I am submitting herewith a dissertation written by Janet Berrier Bledsoe entitled "A Quasi-Experimental Study of Reading Achievement and Reading Attitudes in Multiage and Traditional Student Groupings." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Education.

Lester Knight, Major Professor

We have read this dissertation and recommend its acceptance:

Accepted for the Council:

Associate Vice Chancellor
and Dean of the Graduate School

A Quasi-Experimental Study of Reading Achievement and Reading Attitudes in Multiage and Traditional Student Groupings

A Dissertation

Presented for the

Doctor of Philosophy Degree

The University of Tennessee, Knoxville

Janet Berrier Bledsoe

August 1994

Copyright c Janet Berrier Bledsoe, 1994
All rights reserved

Dedication

This work is dedicated to my parents, Joyce Alexander Berrier and Ellis Rankin Berrier. Each of these people have taught me that education is a priviledge to be taken seriously. They encouraged perseverance by helping me to focus only on the reasons why I could, not allowing me to dwell on why I couldn't. There are no words which describe my gratitude.

Acknowledgements

I am forever indebted to many people who offered their assistance and support throughout the completion of this endeavor. I am particularly grateful for the professionalism exhibited by my committee members Dr. Estill Alexander, Dr. Michael Johnson, Dr. Lester Knight and Dr. John Ray. These people offered encouragement, patience and guidance for which I will always be grateful.

I offer a special thanks to Dr. William Symons, Dr. Robert DeLozier and the Board of Education for Alcoa City Schools. Their support as administrators and as friends during my lengthy time of juggling student, teacher and parent responsibilites will never be forgotten. Their colleageal support was above and beyond my expectation. I only hope that other administrators will model their support of professional growth which allowed my dream to come true.

Last, and most importantly, I would like to thank my husband, Loren Bledsoe, and my children, Derek, Brooke and Hope,

for their unconditional faith and patience. Their belief in me, at a time when I questioned my belief in myself, sustained and served as my lifeline through a high anxiety time for all. Their love is truly unconditional. Thanks to all.

ABSTRACT

Historically, parents and educators have emphasized the need for learning to read as having priority over any other skill acquisition during the primary grades. Young students spend a large portion of their day participating in a variety of activities designed to enhance reading performance. Educators realize the impact of a variety of factors which may complicate or strengthen reading achievement. Attitude toward reading has emerged as one of those factors. The complexity of the relationship between attitude and the reading process may be compounded when other correlates are considered. The question raised in this study concentrated on the influence of student grouping strategies on the development of reading achievement and attitudes toward reading.

This study focused specifically on the traditional chronological student grouping strategy and the multiage student grouping strategy to examine whether or not differences and/or relationships existed between reading achievement and reading attitudes of students which have participated in each of these grouping strategies for no less than a consecutive three year period. First grade and third grade total reading achievement test scores served as pre- and posttest measures on each student. The Heathington Primary Reading Attitude Scale was used to measure reading attitudes for each student.

Data were collected from a total of 46 students in a

Tennessee elementary school which offers a choice for parents of either student grouping strategy. Analysis of the data using a one way analysis of variance, an analysis of covariance and the Pearson r rendered the following: 1) There was no significant difference between the total reading achievement test scores of students participating in either a traditional or multiage setting, 2) There was no significant difference between the attitudes toward reading of students participating in either a traditional or multiage setting, 3) There was no significant relationship between the total reading achievement score and the reading attitude score of students participating in a traditional setting and 4) There was a modest positive relationship between the total reading achievement and the reading attitude score of students participating in a multiage setting.

It was concluded that, for this particular sample, there are no significant differences in reading achievement and reading attitude of students that have participated in a multiage setting with students that have participated in a traditional setting for a three year period. A discussion of the conclusions, study limitations, and implications for teachers as well as future research were discussed.

TABLE OF CONTENTS

CHAPTER PAGE

I. INTRODUCTION 1
Statement of Problem 2
Purpose of the Study 4
Background 5
Rationale for the Study 6
Hypotheses 8
Questions 10
Assumptions 11
Limitations 11
Delimitations 12
Definitions 13
Organization of the Study 15
Summary 16
II. REVIEW OF LITERATURE 17
Reading Attitudes 17
Introduction 17
Defining Attitude 20
Assessment of Attitudes 24
Instructional Factors Which Impact Attitudes 34
History and Cognitive Justification
for the Multiage Grouping Strategy 40
Early Precedents 41
Society vs. Nature 44
Cognitive Justification for Multiage Grouping . . . 48

The Debate Continues 53
Comparative Studies Between Multiage and Traditional Programs 55
Summary 62
III. METHODS AND PROCEDURES 64
Description of the Traditional Chronological Student Grouping Pattern 64
Description of the Multiage Student Grouping Pattern 66
Selection of Instruments 71
Selection of the Sample 73
Design 76
Treatment of the Data 77
IV. ANALYSIS OF DATA 80
Hypotheses 81
Parental Survey Results 85
Summary 93
V. SUMMARY, FINDINGS, CONCLUSIONS AND IMPLICATIONS 95
Summary 95
Findings 97
Conclusions 98
Implications 102
REFERENCES 106
APPENDICES 114
Appendix A 115
Appendix B 120
Appendix C 122
Appendix D 124

Appendix E 127
Appendix F 130
VITA 133

CHAPTER I

INTRODUCTION

Historically, parents and educators have emphasized the need for learning to read in the early primary grades. First, second and third graders tend to spend a large portion of their day participating in a variety of activities designed to enhance reading performance. Teachers of these early grades are aware that learning to read is not an easy process for many children. There are numerous factors interacting within the teaching-learning process which may complicate reading acquisition for some children. Williams (1980) lists such possibilities as vision, hearing, learning disabilities, low motivation and use of inappropriate materials. Educators have also begun to recognize the impact and interaction of student attitudes within the reading process. Reading attitudes may be shaped via student participation in the teaching-learning process while simultaneously dealing with one or more of the previously listed influential areas. Quandt (1976) emphasizes the intricacy between attitudes and reading when he states:

> It is one thing to be aware that reading attitudes are important. To understand in what ways attitudes affect reading instruction is quite another matter, and to build strategies for dealing with attitudes becomes even more complex.

The complexity of the relationship between attitudes and the reading process may be compounded when other correlates such as instructional techniques, teacher personalities and school facilities are considered. The question raised in this study was concerned with still another possibly influential factor: How can student grouping strategies have an impact on the development of reading achievement and attitudes toward reading?

This study was designed to analyze and describe the effects of traditional chronological age grouping and multiage grouping on the development of attitudes toward reading and reading achievement in primary grade students.

STATEMENT OF THE PROBLEM

Recently researchers have begun focusing more on the

relationship between attitudes and the reading process. Much of this effort has centered around instructional practices and programs utilized by classroom teachers followed by an assessment of students' reactions toward these particular strategies. Rasinski and DeFord (1985) studied three theoretically different first grade classrooms i.e.,: (1) a content-centered mastery learning program, (2) a traditional basal approach and (3) a child-centered literature program. These researchers found that the children from the child-centered program had the highest, most meaning based conceptions of what reading is. The results suggested that students' conceptions of what reading is can be significantly affected by instructional practices within which they engage in the classroom.

On the other hand, not all findings support the development of positive attitudes toward reading. Morgan (1985) found that a short-term recreational reading program, implemented in four schools and conducted mainly after school hours, had no significant affect in changing students' attitudes toward reading.

Instructional programs of any type are always going to be

teacher biased in some way, i.e., influenced by teacher interpretation, presentation, enthusiasm and/or knowledge base. This researcher has chosen to examine reading achievement and reading attitudinal development as it relates to grouping strategies rather than instructional techniques. This will contribute to the body of knowledge regarding the development of reading attitudes and the impact attitudes have on achievement, as well as considering the influence of student grouping strategies.

PURPOSE OF THE STUDY

The purpose of this study was to determine the effects of student grouping strategies on the development of attitudes toward reading and reading achievement in primary grades in a local elementary school which offered a choice for students concerning primary aged grouping.

More specifically, the particular program under study was designed and implemented by supervisory and teaching personnel in the Alcoa City School System in Alcoa, Tennessee. Both traditional

and multiaged first, second and third graders were housed in the one elementary school within the system.

BACKGROUND

For the school years of 1990-91, 1991-92, 1992-93 and 1993-94 a choice was provided for parents of children in grades one, two and three of a traditional, chronologically organized grade placement, **or** a multiage program where students of a variety of ages would be grouped together. Groupings, both traditional and multiage, have been determined by parent choice, not teacher/principal selection. Students finishing a third (or fourth) year in the primary multiage move to one of two choices: an intermediate multiage or a traditional fourth grade placement. It is at the end of the traditional third grade year, or after three years in a multiage classroom, that the researcher wanted to determine whether there appeared to be a significant relationship between a child's attitude toward reading and the type of grouping placement within which a child had participated during his/her primary years

in school.

RATIONALE FOR THE STUDY

Educators agree unequivocally that reading is one of **the** most important prerequisites for building a stronger knowledge base. Much has been written in recent years concerning the illiteracy and aliteracy rates in the United States. Authors such as Davis (1978) refer to the relationship between attitudes and self-concepts. In her evaluation of journal-published research on reading attitudes, she found that positive reading attitudes and positive self-concepts were related. Enhancing self-concepts may indeed improve attitudes toward reading. Researchers dealing with self-concept and attitudinal change recognize that change takes time. The way the current school year is structured, a teacher has only a nine month time frame within which to try and make a significant difference in skills and/or attitudes. With the current emphasis on skill instruction, little time is afforded to direct fostering of appropriate attitudes toward reading. As Alexander and Filler (1976) found,

attitude toward reading significantly affects the decision to read. This provides justification for the deliberate pursuit of correlates which impact reading attitudes. This researcher found much of the completed research to focus on measurement and instructional techniques (Anderson et al., 1985; Bunish, 1988; Davis, 1978; Estes, 1971; Gentile & McMillan, 1987; Madden, 1988; McKenna & Kear, 1990; Moore & Lemons, 1982; Morrow, 1987; Reed, 1979). There has been relatively little research concerning primary student grouping strategies and attitudes toward reading. Davis (1978), in her evaluation of reading attitude research from 1900-1977, found that classroom organization may influence attitudes in reading. Schrankler (1976) addressed the effect of multiage grouping on children's self-concepts, their attitudes toward reading and mathematics, and their achievement in reading and mathematics. Data supported the conclusion that the affective components improved and the acquisition of cognitive skills was not impaired as a result of the multiage grouping. Attention toward alternate grouping patterns, i.e., multiage grouping, has been limited (Pavan,

1993, p. 53). Observations concerning multiage grouping have resulted in definite affective differences among students participating in these programs (Pavan, 1993). This investigator has purported that assessment of reading attitudes of children from multiage groupings versus traditional chronological groupings may render differences which need addressing by educators.

HYPOTHESES

The researcher believes that student grouping patterns may have an impact on the development of attitudes toward reading and that attitudes toward reading, in turn, can influence overall achievement. Therefore, the following null and alternate hypotheses are proposed:

H_0: There is no significant difference in the reading achievement scores of students in a multiage or traditional classroom setting.

H_A: There is a significant difference in the reading achievement scores of students in a multiage or traditional classroom setting.

H_o: There is no significant difference in the attitudes toward reading of students in a multiage or traditional classroom setting.

H_A: There is a significant difference in the attitudes toward reading of students in a multiage or traditional classroom setting.

H_o: There is no significant relationship between the reading achievement scores and reading attitude scores of students in a multiage or traditional classroom setting.

H_A: There is a significant relationship between the reading achievement scores and reading attitude scores of

students in a multiage or traditional classroom setting.

QUESTIONS

Questions, therefore, to be answered during the study included the following:

1. Is there a significant difference between the total reading achievement test scores of students during the primary school years (grades one through three) participating in either a traditional or multiage setting (between groups) ?

2. Is there a significant difference between the attitudes toward reading of students during the primary school years participating in either a traditional or multiage setting (between groups) ?

3. Is there a significant relationship between reading achievement scores and reading attitudes of students during the primary school years participating in either a traditional or multiage setting (within groups) ?

ASSUMPTIONS

This study is based on several assumptions. These include the following:

1. The selected subjects adequately represent males and females from the population designated.

2. Subjects will be both accurate and honest in their reporting of attitudes on the measuring scale.

3. Subjects from both grouping strategies have received comparable reading instruction as both programs are whole language based.

LIMITATIONS

A number of limitations should be noted in considering the findings of this study. These include the following:

1. The children under study have been placed in student grouping arrangements according to parent preference. Teachers had no say in student placement.

2. Attitude measures tend to reflect the attitude of the

subject most accurately for the day of measurement only.

3. Reading attitudes may be affected by influences other than the student grouping patterns utilized by the school and these influences may be unknown to the researcher.

4. Reading achievement scores tend to reflect the abilities of a student on the particular day the test was given and may or may not adequately reflect a student's true ability in reading.

5. The sample was limited due to necessary parental permission for participation.

6. The sample was limited due to necessary test scores for **both** the first grade and third grade year in school.

DELIMITATIONS

Delimitations of this study include:

1. The subjects of the study represent only pupils who have attended grades K, 1, 2, and 3, or only grades 1, 2, and 3 in either the multiage grouping or the traditional chronological grouping at Alcoa Elementary in Alcoa, Tennessee. In other words, all students chosen

in the sample will have completed all of their primary grade schooling within the above named school.

2. Analysis of the data produced is generalizable only to the population designated by this study.

DEFINITIONS

A number of terms were used with particular meaning within this study. The following represents the intended definition by the researcher.

Reading Attitude- a system of feelings related to reading which causes the learner to approach or avoid a reading situation (Alexander and Filler, 1976, p.1). For the purpose of data analysis in this study, reading attitude is defined as a performance assessment as measured by the Heathington Primary Attitude Scale.

Heathington Primary Reading Attitude Scale- a scale developed by Dr. Betty Heathington (1975) which uses a Likert-type scale and statements made by children as she interviewed them. It is an instrument used to measure attitudes toward reading in primary

school-aged children.

Traditional Chronological Student Grouping- the typical way in which most schools group children according to chronological age and the typical pattern of promotion/retention based on performance or mastery of grade-level skill requirements. Each year students may or may not be with classmates from the previous year, and students are almost always guaranteed placement with a new teacher. This grouping pattern may also be referred to as single-age grouping or a graded program.

Multiage Student Grouping- this grouping pattern refers to the grouping of children of different chronological ages within the same classroom with the same teacher in order to attend to developmental differences among children of the same and/or different chronological ages. These children remain with the same teacher throughout their first, second and third grade years being assessed on developmental growth as well as skill attainment. This type of program may also be referred to as a mixed-age grouping , a non-graded or an ungraded program.

ORGANIZATION OF THE STUDY

Chapter I presents an introduction to the study including: (1) a statement of the problem, (2) the purpose of the study, (3) background information, (4) a rationale for the study, (5) hypotheses, (6) questions to be addressed, (7) assumptions, (8) limitations and delimitations and (9) definitions.

Chapter II presents an indepth view of significant related research addressing attitudes toward reading, the multiage concept, and comparative studies between traditional and multiage programs. The comparative research focuses on achievement and affective variables in each student grouping pattern.

Chapter III describes methods and techniques used in sampling, instrument selection, data collection and data analysis.

Chapter IV addresses the analysis of data in each student grouping setting in regard to total reading achievement and attitude toward reading.

Chapter V presents a summary of the study, findings, conclusions and implications for future research.

SUMMARY

In summary, the researcher has defined two areas which she believes have an impact on the reading process, i.e. attitudes toward reading and student grouping patterns. Each of these will be discussed independently in the following chapter. The conclusions of this study attempted to look at both factors simultaneously as they relate to the act of reading.

CHAPTER II

REVIEW OF LITERATURE

This review of literature is organized in three parts. The first review addresses the topic of reading attitudes. The second section reviews literature focused on the history and cognitive justification of the student grouping concept of multiage. The third section reviews comparative studies between traditional chronologically grouped programs and multiage programs.

READING ATTITUDES

Introduction:

Reading is indeed an extensive, complex process with a multiplicity of factors influencing and contributing to the procedure as well as the product. Substantial consideration must be given to all domains affecting the process and product such as cognitive functions, cultural influences, physical attributes, language development and affective variables. These domains permeate the

process even before neurological action begins. Prior to eye contact with print, several of these factors have already established influence upon and within the reading act and work continually until the final cognitive structure is formulated. The reader is analogous to the reading product. Both have been shaped by the experiential phenomena from which they have developed thus far. Reading is an extension of itself. It is a product of the process. In order to read print, one must comprehend. Comprehension of the written message, in turn, requires performance of the process.

The purpose of this review is to examine recent literature pertaining to the impact of affective features on the reading process, particularly attitudes. This correlate empowers (or disconcerts) the reader before contact with print becomes established. It is important for reading educators to realize the strength this factor exerts on the process. Teachers themselves must be conscious of the fact that they are purveyors of reading attitude formulations and it is their responsibility to steer the learner in a positive direction. Walberg and Tsai (1985) reported

that reading attitude was one of five variables which correlated highly with reading achievement. Although correlation does not imply causation, the impact of attitudes on the reading act cannot be ignored by conscientious educators of reading.

Recent literature concerning affect and the reading process is limited in comparison to the abundance of information on vocabulary, comprehension and strategies related to the teaching of reading skills. Of the literature which is available concerning affective variables, the notion of attitudes continually surfaced as a common thread among many authors. Although references are made throughout the literature concerning attitude, there are few attempts to pinpoint or define the term. Many investigators apparently make the assumption that the author and reader have developed the same schema for the term "attitude." This explains the lack of clear definitions of what authors mean when they refer to the term "attitude."

Defining Attitude:

Defining an attitude, as with any abstract construct, is difficult to do even among the experts. "Some writers have defined attitudes as a system of feelings related to reading that causes the learner to approach or avoid a reading situation" (Alexander and Filler 1976). Mathewson (1985) describes attitude in his affective model of reading as being "...capable of formation and change in a way not usually associated with [beliefs and values]." Mathewson also draws a distinction between affect and attitude. He theorizes that affect is itself a construct of attitude. Therefore in his explanation of components in his model, affect must be considered separately from attitude because affect can include moods and emotions which may or may not be reflective of attitudinal impact.

Mathewson also includes motivation as a separate, equally important variable in his model of reading. He quotes Cofer and Appley (1964) in terms of their conclusion that "it is largely an assertion of faith that it is useful to conceive of attitudes as motivational variables" (p. 805). The gist here is that attitudes can

drive motivation. Mathewson further supports this notion by referring to the definition of attitude given by Newcomb, Turner, and Converse (1965). These investigators defined attitude as " a state of readiness for motive arousal."

Lowell Madden (1988) suggests strategies for improving reading attitudes of remedial readers. In reference to work done by Glasser (1986), Madden states that "typical educational programs are designed to motivate students to learn more through externally applied techniques..., while ignoring students' internal motivation and biological needs". Madden suggests that attitudes are influenced or determined by motivation and biological processes. This is also supportive of Mathewson's view that motivation (or lack of) can be directly driven by attitudes.

Moore and Lemons (1982) offer a dimensional view of attitudes toward reading by categorizing these attitudes into three areas: general, academic and vocational reading attitudes. In their attempt to construct a valid reading attitude scale, they were also striving to identify attitudinal "items which would discriminate between

behaviors of fluent and poor readers." Statements were grouped under the appropriate headings represented by the three attitudinal areas. General reading attitude was defined as "reading... characteristic of most types of reading; readings which enhance personal growth and self-fulfillment." Moore and Lemons defined academic attitude toward reading as "reading for the acquisition of knowledge about content areas... ." Vocational attitude toward reading was defined as "reading... which has as its goal the preparation of readers for the world of work...[or] maintaining a job." Although Moore and Lemons targeted university students in reading improvement classes as their population for assessment, they may have specified their attitudinal areas yet overlapped with that of purpose for reading. Indeed separation of the two areas may be difficult, but purpose may or may not reflect the readers attitude toward the content or the reason for reading (motivation). The assumption that purpose and motivation are the same may also be inappropriate. A reader's purpose for reading may or may not be reflective of what motivates him/her to read. Motivation and

purpose may be equivalent when the reader's desire to read comes from within. If the reader's decision to read is activated extrinsically, the purpose may be fulfilled without regard to what truly motivates the reader from within.

Although it appears that a precise, clear definition of the term "attitude", or "reading attitude", has yet to be determined or agreed upon by experts, most educators do converse about attitudes and their influence in the area of instruction. A survey conducted by Alexander and Heathington (1984) showed that teachers rated attitudes second only to comprehension as the most important feature in relation to developing reading skills. Obviously there is a great awareness by teachers of the impact attitudes can have in the instructional setting. Unfortunately, though, the work by Alexander and Heathington revealed that teachers are either unable or choose to spend little class time to assess and develop those attitudes which they rated as being highly important. Reasons suggested included: 1) pressure to use time for skills instruction, 2) assuming that positive attitudes will develop as performance

improves and 3) lack of teacher training in the areas of attitude importance and assessment. If teacher training is guilty of lack of instruction about the importance of attitudes, teachers have apparently had their consciousness raised about the power of attitudes by their experience in the classroom. This is evident from the results of the Alexander and Heathington survey. If teachers were not aware of attitude impact before teaching (i.e. because of lack of instruction in teacher training programs), with one third of those surveyed having fifteen years or more teaching experience, they certainly realized the potency at some point during that fifteen year span. This was probably a classic case of "on the job training."

Assessment of Attitudes:

The assessment issue concerning attitudes in the survey was not surprising. If teacher training programs did indeed fail to focus on attitudinal development and its influence in instruction, it is easy to assume that teachers have not been exposed to assessment tools. Lack of training coupled with the lack of quality diagnostic

material has handicapped teachers in dealing with attitudes in the classroom.

Attitude assessment is an indicator of the emotional response a reader has to the written dialogue. There is a need for competent, pragmatic instruments to use in determining this emotional reaction. As indicated by the results of Alexander and Heathington (1984), teachers may not formally assess attitudes or spend a substantial amount of instructional time developing positive attitudes. But teachers know the importance of attitudes. This insight is apparently gained from informal observation, which may or may not be documented.

Literature available on current assessment techniques is somewhat limited. Some of the articles reviewed cited changes in attitudes due to various intervention strategies, and some reported these results without any formal documentation. Morrow (1987) reported changes in children's reading attitudes as a consequence of a program designed to promote voluntary reading during the summer. This information was gathered through routine observations by

program facilitators and teacher anecdotal records. Attitudinal related results included a high level of enthusiasm, less disciplinary problems, children choosing to read without being told, increased dialogue among children pertaining to books and taking more books home to read. Bunish (1988) reports positive results in improving students' attitude toward reading by implementing a "receptive vocabulary development program which utilizes a variety of quick -paced multisensory activities." The results are somewhat questionable because Bunish utilized a "writer-made" attitude survey interview which had no evidence of computed reliability or validity.

Gentile and McMillan (1987, p. 172-173) provide a "spectrum of fight or flight avoidant behavioral categories" which may be caused by stress and interfere with the reading process. Examples of the eleven fight reactions to reading include failure to complete reading tasks, only reading when forced to do so, not attending, remembering or following directions for reading activities, or acting out during reading instruction. Examples of the thirteen flight reactions to

reading include fear of reading in front of others, procrastinating during the reading process, lack of confidence to read, equating reading failure with rejection, or appearing apathetic and unwilling to try to overcome reading difficulities. These are appropriate indicators for attitudinal assessment as stress can influence attitude. These behaviors can be observed, subject to teacher interpretation.

Obviously attitude changes can be observed and recorded. Unfortunately, when it comes to justification, teachers' "word" is not enough. There is usually a need for some type of written proof. Many times administrators want documentation from a more sophisticated source. The more sophisticated measure is usually implicative of a commercially available instrument. Fortunately for teachers, the development of some fairly reliable scales, surveys, questionnaires, and inventories have been developed.

There have been attempts to develop scales which are appropriate for children and easy for teachers. One example was designed by McKenna and Kear (1990). Their instrument, the

Elementary Reading Attitude Survey (ERAS), purports to "enable teachers to estimate attitude level efficiently and reliably." The items of this test are designed to evaluate attitudes toward recreational reading and academic reading. It is designed for grades one through six with the comic strip character Garfield used in four poses ranging from very upset to very happy. Strengths and limitations are provided as well as hypothetical response patterns to show teachers how to use the results. This survey was published in a reproducible format for teachers to use immediately. By making the survey available for use promptly without having to purchase the materials, these authors have contributed to remedying some of the shortcomings teachers have in providing adequate attention to attitudes in the classroom. The authors of this scale referred to work done by Estes (1971) and Heathington (1979) as models for creation of their version.

Another study by Roettger (1980) with fourth, fifth and sixth graders made use of the Estes Attitude Scales: Elementary Form. This investigator examined the existing (if any) differences in

attitudes toward reading between good and poor readers. Noticeable differences were found in how low attitude/high performance and high attitude/low performance students viewed reading. The high attitude/low performance group viewed reading as a survival tool. They considered reading necessary to "gain success in a job." Reading was also important to their self concept; it made them "smarter." This group tended to name general topics of interest in reading. On the other hand, the low attitude/high performance students viewed reading as a skill to use or call on in order to accommodate a specific situation (i.e., do school work). This group used reading for specialized interests. They talked about specific things they learned or read about. At home, this group frequently spent time on sports, hobbies or other scheduled activities. Reading had not been incorporated into their lives other than inside the classroom. In this study the scale assessment also provided needed information about the likeness of attitudes in both groups. The most common response information gained from both groups was the need for students to be allowed more free reading time inside the

classroom even if assignments were not complete. In this situation, the assessment scale provided at least one clear teaching implication for educators of these students.

Another method used in assessing attitudes is the questionnaire. Anderson et al. (1985) developed the first instrument designed "for use with students in grades 1 through 12." The questionnaire developed for their study was unique because of its purpose. This measure was "designed for cross-sectional comparisons across educational levels." These investigators were looking for specific trends in attitudes toward reading among gifted students. The results of the questionnaire revealed that females had more positive attitudes toward reading and read as a hobby more frequently than males. Primary students had more positive attitudes than senior high students and reported reading more books per month than intermediate, junior high and senior high students. Senior high students reported reading fewer books per month than any other age group.

The results of the Anderson et al. (1985) study are comparable

with the Davis (1978) study. Davis found that content of textbooks and the instructional program may affect attitudes in reading. This may be a partial explanation for the apparent decline in interest in reading, particularly in reference to the males in the Anderson study. Davis also found some studies to report the same results as Anderson (i.e., females appear to have more positive attitudes than males). Yet, Davis also found evidence to support the contrary. The fact that the senior high students had less positive attitudes toward reading than the primary students in Anderson's study is also congruent with the Davis finding that there is a decline in positive attitudes toward reading with an increase in age. There is obviously a need for more study between attitude formation, age and gender before any conclusive results can be formulated.

Kathleen Reed (1979) discusses the need for a multi-measurement of attitudes. She is referring to two types of attitude evaluation, which she calls reactive and nonreactive. Reed defines reactive tools as those where "the participants are aware that the measurement is being taken." The survey by McKenna and Kear

(1990) and the Anderson et al. (1985) previously discussed are examples of reactive measures. Reed expands her suggestions for reactive assessment to include student diaries and/or journals about leisure time reading, and teacher-student interviews. She warns of one major concern in using reactive forms of data collection about attitudes and that is the fact that when subjects know their responses are being ascertained they are likely to alter those responses in some way. She makes the point that attitude measurement needs to become as commonplace as achievement measurement so educators will not have to be concerned about sensitizing their subjects. This notion fosters her suggestion that in order to effectively measure reading attitudes, educators must use nonreactive measures to supplement other measuring techniques.

Reed describes nonreactive methods as those which can take place without students being aware that they are being assessed. She describes one interesting realm of nonreactive measures as that of "physical evidence." This includes examination by the observer as

to what books and/or library areas receive the most wear and tear from use. Observation of replacement items (i.e., paperbacks, hardback books, magazines, etc...) is suggested as well as examination of library (or classroom) circulation figures concerning book type or content (interest areas). Reed also emphasizes other choices on nonreactive measures as systematic, planned observations (using checklists developed by Heathington and Alexander (1978), or Rowell (1972)), and archival records. Fredericks (1982) suggested a list of eight activities to promote positive attitudes in reading, several of which lend themselves to evaluation by nonreactive measures. These include producing class news reports, scheduling book parties, encouraging older students to read to younger students, having students write their own books, permitting creative book reports, using informal interest inventories, choosing reading topics based on students' interests and asking students to be experts. Reed emphasizes the need to control for possible sources of contamination to data in the use of nonreactive sources just as in reactive sources. As was referred to

earlier, Moore and Lemons (1982) defined three areas of reading attitudes as general, academic and vocational reading attitudes. Reed also described the need to assess different areas of reading attitudes. She described attitudes toward reading in terms of school type reading and leisure time reading. She continued to discuss the appropriate use of reactive and nonreactive measures for each area.

Instructional Factors Which Impact Attitudes:

The literature reveals the enigma in defining attitudes as well as assessing them. Though complex, educators cannot ignore the manipulative nature of attitudes on the reading process. Examination of school-related factors which produce disinterest and low reading motivation have also been identified as contributors to reading attitude formation. Lockledge and Matheny (1987) reported that adult "infrequent readers" generally attribute their negative feelings toward reading to childhood experiences, most of which occurred in school. Some subjects defined school as a negative

experience and reading, by association, was also viewed negatively. Some of the unpleasant school memories cited by subjects were threatening, embarrassing moments during reading instruction and lack of success. Subjects recalled being told they would never learn to read and were placed in classes designed for "failures."

Carlsen and Sherrill reviewed one-thousand reading autobiographies written by writers and scholars who disliked reading. Displeasing memories of events which occurred during the elementary school years of some of the subjects included parents trying to force children to read and impatient teachers embarrassing readers who were slow or inaccurate during oral reading practice. Most of the negative memories were associated with schooling. Oral reading practices during reading instruction in small groups remains a common phenomena. Alexander and Filler (1974) focused on the role of cohesiveness in reading groups. Cohesiveness was defined as intermember interaction or interpersonal liking (Lott, 1965). In reviewing the social psychology literature on cohesiveness, Alexander and Filler offered ten implications concerning teachers of

reading: 1) research suggests that ability grouping leads to cohesiveness only at high ability levels, and therefore more attention should be paid to individualized reading or grouping which cuts across ability group lines, 2) some kinds of similarity, such as interests, promote cohesiveness, 3) group members must see their work as being worthwhile, 4) reading instruction should be constructed so that all students have an opportunity to participate, not just a dominant few, 5) competition should be decreased and cooperation increased, 6) the teacher should not have unreasonable expectations for the child, 7) unpleasant experiences should be avoided, 8) other groups should view the work of a particular group as worthwhile, 9) group size will most likely need to be varied for different tasks, and 10) group participants should be included in the decision making when appropriate. The possibility exists that instructional practices which deviated from the promotion of group cohesiveness may have caused results similar to the Lockledge and Carlsen studies.

Synthesis of the Lockledge and Carlsen studies indicates early

experiences can have a strong impact on the development of attitudes toward reading. Antipathy toward reading appears to be more often associated with school experiences than with reading in other environments.

Barbara Cary (1990) in reviewing instructional approaches which negatively affect interest and motivation in reading, cites work authored by Decker (1985) concerning aliteracy and teacher practices. Cary states...

> Decker (1985) has complained that minimum competency testing, now required for academic advancement in most states, and the resulting push to teach state-mandated skills leads to a kind of instructional routine which leaves little time for discovering that reading can be pleasurable and exciting. Rather, instruction time is used to teach those decoding and structural analysis skills which are likely to be tested on state exams. Decker has observed that because those skills are typically presented on the exams in isolation from

meaningful context, that they are taught in the same way. Thus, drill worksheets and vocabulary controlled readers, rather than real books, are the instructional tools of choice.

According to Cary, Decker supported her thesis by contrasting schools in America and New Zealand. Cary continues with...

Decker drove home her point by contrasting current American practices with ones common in New Zealand schools, which according to an international study (Guthrie, 1981), produces students, who among those of all nations, read the greatest volume of material with the best comprehension. New Zealand schools, which employ a whole language approach, use a combination of basal readers and trade books. Decker mentioned Guthrie's (1983) observation that New Zealand classrooms were filled with attractive books which were constantly in use.

It appears that educators today are becoming increasingly aware of the impact and importance of attitudes on the development

of reading skills. Evidence is mounting in support of this recognition, but as Cary (1990) points out, there may be instructional practices and materials which need to be recognized in terms of the impact which they make on the formulation of early attitudes toward reading.

Findings by Knight and Hawes (1990) support Cary's notion concerning the influence of instructional strategies on reading attitudes. These researchers assessed 28 second graders' attitudes toward approximately thirty strategies frequently used during reading instruction. A Likert-type rating scale was used although no established reliability or validity was reported. The results of the study indicated a significant relationship at the .05 level between "the inventory and teacher ranking of students on general reading interest, between the inventory and the standardized reading score, and between the teacher ranking and the reading score." The researchers felt the inventory was a fair indicator of student attitudes. More interestingly, the most preferred instructional activities were reading a story, practicing reading at the computer,

and dramatization of stories. Practicing word cards, meeting in reading circle and doing workbook assignments were ranked the lowest by students. Variations of these same methodologies were also criticized by Decker, according to Cary (1990). Evidence suggests that these strategies remain prevalent in classrooms today. Implications from these findings suggest that teachers need to evaluate and address classroom activities that motivate children in positive ways. But results such as these may easily allow educators to develop "tunnel vision." The need to remain global in our evaluation of criteria which influences development of attitudes toward reading is of utmost importance. By targeting instructional practices alone, educators may disregard additional variables which are equally persuasive in attitude formulation.

HISTORY AND COGNITIVE JUSTIFICATION FOR THE MULTIAGE STRATEGY

According to David Tyack, an educational historian, the graded program typical of American schools today had its roots in the

reform movement leading to the urbanization of American education. Tyack (1974) describes the desire of urban school promotors to apply "the factory model to the systematization of schools" (p. 41). Tyack explained that promoters of systematization would be enhanced because "schoolmen were seeking stable, predictable, reliable structures in which their own role as educational managers would be visible, secure and prestigious" (p. 42).

Early Precedents:

During the late 1800's, communication between leaders of the urban school supporters was improved by organizational meetings of superintendents throughout the land. Prestigious groups were formed within the National Education Association which assumed the role of deciding that which was educationally important. These men wrote for influential educational periodicals which were distributed nationwide. According to Tyack, these new organizational patterns spread rapidly due to these "informal and formal networks of communication" between superintendents and

schoolmen nationwide (p. 42,43).

Tyack uses William T. Harris, superintendent of St. Louis schools in 1871 and later to become U.S. Commissioner of Education, as one example depicting the philosophical views of schoolmen at that time. Harris, according to Tyack, stated the reasoning behind standardizing schools was one of "order: each student must be taught first and foremost to conform his behavior to a general standard" (p. 43). Harris reasoned that in an industrialized society, " 'conformity to the time of the train, to the starting of work in the manufactory', and to other characteristic activities of the city require absolute precision and regularity" (p. 43).

Tyack contended that schoolmen needed to reconstruct village schools into unified urban systems in order to achieve the desired status of order and discipline within the schools. One structural alteration which was crucial to fostering this desire to run schools like "well-oiled machine[s]" (p. 41) was "the objective and efficient classification, or 'grading', of pupils" (p. 44). Tyack made reference to Henry Banard who gave his first lecture on "Gradation of Public

Schools, with Special Reference to Cities and Large Villages." Barnard repeated this lecture throughout the country while he "maintained that a classroom containing students of widely varying ages and attainment was not only inefficient but also inhumane" (p. 44). The social trend of industrialization accelerated the graded program. As the need for efficiency and precision permeated the rhetoric of the urban school crusaders, this also necessitated an architectural representation that supported their philosophical views. Thus, a new kind of building dubbed "the egg-crate school" (p. 44) was designed to accommodate the needed classification of students under a single roof. Thus was born the graded school. It is interesting to note that all reasoning for this type of systematized educational format was based on efficiency and order. Tyack refers to this urbanization era as "...an age of consolidation" (p. 143). According to David Rothman, "the nineteenth century was an age of institutionalization" (Tyack, p. 72). Schools were only one of many agencies old and new to go through change which supposedly brought order to people's lives. The basis for change was the assumption

that what had worked for businesses would prevail for educational purposes as well. Urban school leaders did not have educational research upon which to base their beliefs. Their belief system was construed based on what they thought to be driving forces behind a successful industrialization era. Educators of today need to be made aware that the current graded program does not have a foundation based on research. Rather, it is a system based on what might best feed into an industrialized society.

Society vs. Nature:

Today's society is beyond that of industrialization, moving even beyond technology into an information-based society. Concerning support for the traditional chronological graded program, Goodlad (1987) states "If the advocates of gradedness were to stake their professional reputations on research, or even on responsible commentary in the literature, they would all be unemployed educators within a few hours" (p. XXVIII). The passive acceptance of an out-dated organizational plan may be more costly than we

realize. Unfortunately, as Gaustad (1992) acknowledges, "the greatest force supporting the continuation of graded education is simply the fact that it has existed for well over a century" (p. 7). Goodlad (1987) acknowledges the efficiency of the graded system in classifying the thousands and thousands of students infiltrating the elementary schools during a period of rapid educational expansion.

> It is convenient to use grades still as a ready means of accounting for tremendous numbers of children-so convenient, in fact, that any new system will have difficulty replacing the old, however well the new may reflect current educational thought. But efficiency takes on proper meaning only in relation to the job that *should* be done. To recognize that something is easy does not justify our doing it. Nongrading will grow because of its appropriateness to an accepted educational viewpoint (p. 56).

The idea of cost may very well be behind the continued structuring of twentieth century schools based on nineteenth century business philosophy. Current educational research is

accumulating concerning the benefits to children which multiage grouping may offer, yet shift in grouping strategies is slow. It appears the pedagogical community must continue to educate itself and the public in order to gather support for change. Not only is there growing support in educational research concerning multiage grouping, but areas of research outside the field of education also lend endorsement of the idea. Pratt (1983) reviewed research from anthropology, educational history and research and ethnology which indicated that age segregation is neither natural or necessary. He reviewed several studies concerning primates and simple societies. In summarizing his review of primate studies he says:

> In the wild, almost all of the 193 living species of monkeys and apes grow up in a society in which all ages are represented. Social experience with other young monkeys appears to be essential for normal social life as adults. In most, but not in all species, the infant and juvenile play group is heterogeneous in age. For socially living species, the generalization appears to hold that, as creatures move up the

evolutionary scale, the age composition of the infant play group is increasingly heterogeneous (p. 3-4).

Concerning age relations in simple societies such as Australian aboriginies, Mbuti pygmies and bushmen of the Kalahari Desert, Pratt, referring to summary work done by La Barre (1954), and a variety of others said:

> Life is communal, and the infant's experience is of interaction with all ages. The upbringing of children is shared among the adults of each group, . . . older children naturally and informally watch out for younger ones (p. 4).

Pratt also referred to work done by Whiting and Whiting (1975) involving several farming societies in New England. "They found that in all cultures aggression was more frequent among age mates than among non-age mates..." (p. 6). Pratt concludes from his study on age segregation that student grouping by chronological age deviates from social patterns which have existed in nature for millions of years.

Cognitive Justification for Multiage Grouping:

Not only does age segregation seem unnatural, reputable psychologists such as Piaget and Vygotsky provide justification as to why heterogeneous age groupings may be cognitively beneficial. According to Flavell (1965), Piaget emphasizes the need for a tendency toward repeated application in order for schema to develop. Patterns which occur over and over in the course of cognitive functioning are conceptualized as schema via the processes of assimilation and accommodation (p. 55). Schemas which are more adequate replace less adequate ones through corrective contacts with reality itself (p. 74). Combining younger and older students provides an environment with models which use correct language, behaviors and skills. Young children have the advantage of performing at their individual developmental level yet being continually exposed to older developmental behaviors. Schemas for language, behaviors and skills are constantly being modified and replaced whereas in a group of same-aged children the repertoire of modeled behaviors can be much more limited with

fewer models.

Flavell also discusses Piaget's firm belief that thought becomes aware of itself, and able to justify itself only through repeated interpersonal interactions. Piaget discusses the role of arguments and disagreements in which the child is actually forced again and again to take cognizance of the role of the other (p. 156). These conflicts are a necessary component for learning. Children of various developmental levels provide cognitive conflict for one another which in turn contributes to the intellectual growth of each child. Children functioning at the same developmental level do not provide the same range of cognitive challenges for one another as do children of various levels.

Piaget also says there is much inner turmoil occurring during the preoperational stage of development, ages 5 years through 7 years. The child at this level is unable to accommodate and assimilate smoothly in a coherent, rational way. Flavell describes the child as a slave rather than a master of changes in the configuration; the successive mental changes pull him this way and

that.

> He is drawn into flagrant contradictions with earlier cognitions and in general this destroys any momentary assimilation or accommodation equilibrium he may have just attained. The child has no stable, enduring and internally consistent cognitive organization, no system-in-equilibrium, with an order to relate to and make coherent the world around him. His cognitive life, like his affective life, tends to be an unstable, discontinuous moment-to-moment one (p. 158).

Considering this continuous state of unrest, remaining with the same teacher and a relatively stable peer group will provide at least a thread of consistency and predictability during this disequilibrated period.

Vygotsky (1978) also addresses the cognitive functioning of the child when describing his concept of the zone of proximal development (p. 84). According to Vygotsky, each child has an actual developmental level, a level of independent functioning. This level represents mature cognitive functions. In addition, each individual

also possesses a potential level of development. This level includes cognitive functions acquired in the actual level of development plus those that are in the process of maturing. Mental functions in the process of maturing are those which can be performed with minimal assistance. The difference between these levels is what Vygotsky defines as the zone of proximal development. Vygotsky stresses the relationship between this zone and learning when he says:

> . . . an essential feature for learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers (p. 90).

Another important point Vygotsky addresses is the difference in the rates of advancement of developmental processes and learning processes. He says:

> . . . the most essential feature of [his] hypothesis is the notion that developmental processes do not coincide with learning processes. . .the developmental process lags behind the

learning process; this sequence then results in zones of proximal development (p. 90).

A traditional graded program provides the same general curriculum for every child in each particular grade. Therefore, the actual level of development desired is the same for each child. Hopefully, each child will master the given content. If the curriculum is developmentally inappropriate for the child, unreasonable demands may cause intense feelings of failure. Alexander and Filler (1974), in their review of the social psychological literature found that unreasonable demands and feelings of failure contribute to a decrease in group cohesiveness. The advantage of the span of ages in a multiage program is that the zone of proximal development for some children has already become the actual or independent level of development for others. Children with mental functions that are in the process of developing can see others perform independently. This provides more opportunity for Piaget's processes of assimilation and accommodation to transpire. The act of explaining an actual level of development function by an

older child to someone in need of assistance allows for Piaget's repeated application which is necessary for schema development. By providing students an environment laced with a variety of developmental levels, they are ensured of continual cognitive challenge among themselves.

The Debate Continues:

Cognitive justification is not the only evidence to be used in support of mixed-age grouping. Donna Connell (1987) goes so far as to question the constitutionality of the idea of age segregation and school entry year being based on birthday. She raises a compelling argument as she defends the civil rights of young children. She maintains:

> The Supreme Court has emphatically stated that it is unconstitutional to segregate children by sex, race, ethnic or socioeconomic differences. Young children have no control over these, or over their own month of conception or birth. If their accumulated months of life have an effect on their future

> success in school, then should it not also be unconstitutional to continue a system in our schools whereby month of birth gives some children a distinct advantage and some a definite disadvantage? It is a break in our national code of civil rights (p. 33).

Evangelou (1990) also questions the separation of children by age in early childhood settings. She states that this grouping practice is based on the assumption that chronological age is the single most reliable developmental index and has led to the heavy emphasis on testing and screening during kindergarten entrance. Evangelou feels that other indicators such as cognitive, social and emotional level of maturity should be used and serve more value than chronological age alone.

Gaustad (1992) describes the drawbacks of graded education as being the very assumptions upon which it is based. Again, the misuse of chronological age as the determining factor for learning readiness is emphasized. She states "Graded education is based on the assumptions that students of the same chronological age are

basically at the same level of development, can be taught in the same way, and will progress at the same rate" (p. 5). She further describes forces which foster the continuation of the graded system. These include the textbook industry, standardized testing (also an industry), and tradition.

Goodlad (1987) elaborates more indepth concerning the considerable influence of the textbook industry on the graded structure. He states:

> Textbooks series. . . came to be rigorously ordered by grades. The work considered appropriate for a given grade level determined the content of the textbook, and then the content of the textbook came to be regarded as appropriate for the grade. In time, more fundamental procedures for determining the curriculum were scarcely considered. Teachers and parents alike came to equate adequacy of pupil performance with ability to use the book designated for the child's grade level (p. 47).

Goodlad continues to explain how any new procedures which might

question the power which the text has come to own is typically viewed with suspicion, and uninformed educators are partly at fault.

COMPARATIVE STUDIES BETWEEN MULTIAGE AND TRADITIONAL PROGRAMS
(Achievement and Affect)

Results of research addressing the effects of cognitive development and achievement in multiage classrooms provides mixed conclusions. Some researchers have found no significant differences in reading and mathematics achievement scores when comparing traditional and multiage programs (Drier (1949), Adams (1953), Finley and Thompson (1963), and Way (1981)). Several doctoral dissertations have been completed in the field of multiage, beginning with Foshay (1948). Foshay's study indicated there were social advantages for the multiage group, but most other findings were esentially in favor of the graded group. Other studies have found significant gains in both social and academic areas for

multiage students (Rehwoldt and Hamilton (1956), Chace (1961)). Gajadharsingh and Melvin (1987), gathered achievement data on 4,407 subjects, grades 3 through 6, who were enrolled in a graded or multi-grade classroom throughout their school career. The overall results of the study clearly suggested that the achievement of multi grade students on the six variables tested (vocabulary, reading, mathematics concepts, mathematics problem solving, mathematics total and language) was significantly higher than that of single-grade students. Gajadharsingh (1991) also conducted a survey of over 5,000 multi-grade classrooms and over 27,000 single-grade classrooms in Canada. Teachers and principals of these classrooms viewed the cognitive development of students in the multi-grade classrooms comparable or superior to that of the single-grade students. Eighty-five percent of the teachers and 87% of the principals as a group agreed that the achievement of multi-grade students on teacher-made tests and standardized achievement tests was as good as or better than those scores of students in single-grade classrooms. Content areas considered in this survey included

language arts, mathematics, science and social studies.

Pavan (1977) did a comprehensive review of all research literature (37 studies) reported between January 1968 and August 1976 comparing the achievement of students in graded classrooms with those in nongraded classrooms. Only studies comparing graded and nongraded by using some form of standardized objective instrument were included in this review. Pavan acknowledged that the degree of implementation of nongradedness is an important factor influencing student performance and this needs to be researched further. Analysis of the studies led to three conclusions favorable toward nongradedness and achievement. Those conclusions were: 1) comparisons of graded and nongraded schools using standardized achievement tests favored nongraded groupings, 2) longitudinal studies indicate that the longer students are in a nongraded program, the more likely they will have better academic achievement and positive attitudes toward school and 3) a nongraded environment is particularly beneficial for blacks, boys, underachievers, and students of lower socioeconomic status in

terms of academic achievement. Included in the 37 studies were 51 comparisons of graded and nongraded programs. Twenty-nine comparisons favored nongradedness. Twenty comparisons found that graded and nongraded groups performed in a similar manner. Two comparisons found that the nongraded groups did not perform as well as the graded groups.

Pavan (1993) continued her review of the literature through December 1990, using a set of ten criteria by which to determine inclusion of comparative studies of nongraded and traditional groupings. This increased the number of studies reviewed to 64, including the afore mentioned 37 studies. Within these 64 studies there were ninety-four achievement comparisons between nongraded and traditional groups. Of those, only 9 favored the graded traditional program. Ninety-one percent of the achievement studies indicated that the nongraded program did as well as or better than the graded program. Nine percent favored the graded program. Of these same 64 studies, there were eighty-one comparisons of some type of mental health component. Of these, forty studies favored

nongradedness, thirty-one found both groups to perform similarly, and only ten found that graded students performed better. Pavan's summary indicated that students from nongraded programs were more likely to have positive self-concepts, high self-esteem and good attitudes toward school than students in graded programs.

Pavan also reviewed the longitudinal study results. She reviewed seventeen studies which made fifty-eight comparisons in achievement and affect. Her findings indicate:

> Of the fifty-eight comparisons made, only two (3%) favored the graded schools, while sixteen (28%) were similar, and forty (69%) comparisons favored the nongraded schools. Apparently, the longer a student is in a nongraded school, the more likely it is that good things will happen: more favorable school attitude, less chance of retention, and better academic achievement (p. 49).

Seven of these longitudinal studies compared students that had spent their entire elementary school years in the same graded or nongraded school. Five of these studies compared achievement and

found that nongraded students had superior performance (Ramayya, 1972; Yarborough, 1976; Riciotti, 1982; Milburn, 1981 and Schmitt, 1983). Five studies also addressed mental health and attitude measures (Carter, 1974; Ramayya, 1972; Junnell, 1971; Yarborough, 1976 and Milburn, 1981). Students in the nongraded programs felt more positive or the same as students from graded programs. These longitudinal studies measured students that had been in their perspective program either five or six years.

Pratt (1983) summarized 27 studies in multiage grouping in the United States and Canada from 1948 to 1981. He concluded there was no consistent relationship between multiage grouping and academic achievement, but found a favorable effect on social and emotional development. Same-age groups were found to create increased competition and aggression whereas multiage groups promoted harmony and nurturance. It was also found that companionship patterns outside the multiage classroom were also healthier. Younger members benefited the most, although many observers in the studies found that the multiage offered more

opportunities for leadership and mentoring for older students.

SUMMARY

In summary, the historical foundations for grouping students were appropriate in their own day and time but have lost ground based on the sophistication of teaching today. Old habits are hard to change and traditional grouping strategies are one of the oldest educational traditions. Research has pointed to many areas of weakness which need to be addressed by educators such as instructional strategies, grading systems and curriculum. Most of these are areas in which the teacher in the classroom can implement change with few structural alterations being necessary. Student grouping however, is one of those areas which must be approved from the top down, with administrative support, involvement, and understanding being crucial. This type of change involves not only a structural change, but a philosophical change as well concerning how children learn best. Philosophies are a part of our individual belief system, a system which can be changed only from within.

Until beliefs are congruent with research findings, change in grouping strategies may remain difficult.

The belief that there is indeed a relationship between reading attitude and achievement must also be recognized. Although Piaget's emphasis was on cognition, even he acknowledged the importance of the affective domain in relation to cognition when he stated "... affect and cognition can be separated for discussion purposes, but are indissociable in real life; both . . . are necessarily involved in all human adaptation" (Flavell,1963,p. 81). Learning to read is certainly a human adaptation.

CHAPTER III

METHODS AND PROCEDURES

This chapter will describe the methods and procedures followed by the researcher to determine the differences and relationships existing between the attitudes students have toward reading, reading achievement and the type of student grouping patterns in which they had participated during their primary school years. In this chapter are descriptions of the traditional and multiage groupings, the selection of the sample and the selection of the instruments used to measure achievement and attitudes. A description of the procedures employed to collect and analyze data are also included.

DESCRIPTION OF THE TRADITIONAL CHRONOLOGICAL STUDENT GROUPING PATTERN

The traditional (sometimes referred to as "graded") strategy used by many American schools is one of two choices for parents of students at Alcoa Elementary School in Alcoa, Tennessee. The

traditional program groups students by chronological age into the various grade levels (thus, the term "graded" program). This places most students in any grade level within a twelve month age span of his/her peers. During the September through May school year, students are expected to master the designated content for their particular grade level before moving to the next grade the following school term. Each September students begin a new year with a new team of teachers. Children may or may not be in the same class as peers from the previous year. Many times this depends on whether schools group homogeneously or heterogeneously. Alcoa Elementary groups heterogeneously in the traditional grouping pattern. Third graders, like each of the other traditional grade levels, are taught simultaneously by a team of teachers within the same open pod. If a child does not master the content, or basic skills, for a specific grade level, he/she is normally retained or held back in that same grade level for another one year period in order to repeat the subject content and pass the mastery criteria during the second year. The act of retention

allows some children a four year span to complete three grades. The idea of retention is seen by most children as being separated or singled out from peers. Children who are held back may or may not have the same teacher(s) and/or fellow students in their class the second year in any given grade level.

DESCRIPTION OF THE MULTIAGE STUDENT GROUPING PATTERN

The multiage grouping pattern (sometimes called "non-graded" or "ungraded") existed prior to the traditional grouping strategy which has become commonplace in today's schools. Multiage was the only means by which early colonial educators could group students, due to numbers. There simply were not enough children in any given one year age range to constitute formation of homogeneous-aged classes. Children of a variety of ages were educated simultaneously in the same classroom by the same teacher.

The multiage groupings at Alcoa Elementary are analogous to the colonial "one room schoolhouses", yet much more sophisticated.

Multiage groupings are based on developmental theory, i.e, the idea that not all children grow and develop at the same rate although chronological ages may be equivalent. First, second and third graders are taught simultaneously by a team of teachers within the same open pod. Goodlad (1987) says "it is probable that the most valid examples of nongradedness are to be found within multi-aged, team-taught situations" (p. XXVI). This is indicative of the program at Alcoa Elementary School. Ratios of each age level in multiage classes are not equated as this program is by parent choice, but every effort is made to keep the cross-ages proportional with approximately one-third of each class being six, seven or eight years old. Parents are given the opportunity each year to place their child in a multiage or traditional program. Teachers simply take what they get concerning ages of the children involved. Students move into a traditional fourth grade or an intermediate multiage program when they are developmentally ready. Some children may become ready in three years, for others it may take a four year period. There is no failure, as students

move to the next level according to their individual readiness. Returning to the same teacher and basically the same peer composition each year allows students to remain comfortable with very little change in the structural make-up of the class. Each year a few students move on with a few new (younger) ones taking their places. Students are evaluated by the same teacher for a three (or four) year period, unlike the traditional program where the students are evaluated by a new teacher each year. A major concern of Goodlad (1987) concerning research in the area of nongradedness and traditional programs is the degree to which "the procedures of the two units [are] in fact different from each other and correspond with their labels" (p. XIV). He stressed that the need for a "precise operational definition of nongradedness" was imperative to the validity of the research. His guard was directed at the practice in education of changing a label without changing the operational style. Barbara Pavan's dissertation (1972) aimed at developing a set of criteria which can be used to determine whether or not a nongraded program is in operation. Based on input

from many well known educators in the nongraded literature, Pavan derived 36 principles divided into the following categories: (1) goals of schooling, (2) administrative organizational framework, (3) materials, (4) curriculum, (5) evaluation and reporting and (6) methods. This set of guiding principles defining nongradedness was used to evaluate the multiage program at Alcoa Elementary in order to validate the fact that the procedures of the multiage and traditional graded program are in fact different from each other.

The researcher addressed Pavan's 36 assumptions with the primary multiage team, which consists of the researcher and four other teachers. This team was in agreement that the multiage operates on 35 of the 36 assumptions. This assures a difference does exist in the multiage and traditional programs.

Anderson and Pavan (1993) state that the degree of implementation, strength of teachers' commitment and length of time a program has been in operation are often not mentioned in research reports. The researcher has been involved in the development of the nongraded program at Alcoa Elementary School

since its implementation during the 1990-91 academic year. The program completed its fourth year of operation during spring 1994. Knowing each teacher on the teaching team personally, and comparing their teaching styles with Pavan's defining assumptions, the researcher feels the level of commitment by the teachers to be exceptionally high. Although this is a subjective assumption, the building principal and system superintendent agree that this team is totally committed to the nongraded philosophy.

Similarities between the programs are fewer, but important. Both are housed in an open-spaced, kindergarten through fifth grade elementary school containing approximately 750 students. Teachers of multiage and traditional classrooms have received training in whole language and use whole language based teaching techniques in reading instruction. Neither group of teachers use a basal as a **daily** reading program, but use it as a supplement to the content being studied. Each program is composed of approximately 100 children housed in an open space pod, with each group of students taught by a team of five teachers. Both programs are

choices offered to the parents of students at the primary level.

SELECTION OF THE INSTRUMENTS

Two instruments were selected for use in this study. The primary data collection instrument used in this study was the Tennessee Comprehensive Assessment Program (TCAP), total reading achievement scores. These scores, products of the yearly state testing program, were used in the intergroup analysis of differences between reading achievement.

The additional data source was the Heathington Primary Reading Attitude Scale (see appendix A). This instrument, designed to measure attitudes toward reading in young children, was selected for the following reasons:

1. This scale is easily administered and scored.
2. This scale requires no reading on the part of the subjects.
3. The Heathington scale has been established as reliable and valid. A reliability coefficient of .87 was found when checked by the test-retest method. An item analysis was

also done to determine if items discriminated between positive and negative responses.

4. Heathington designed the instrument based on interviews with children. Thus, it is highly likely that the twenty items on the scale are important to children (rather than adults).
5. The Heathington scale measures reading attitudes as they relate to a variety of environments where children might be prone to read.

An intragroup analysis of the relationship between reading attitude and reading achievement was also examined.

A parent survey scale was also distributed to the parents of each child participating in the study. This was used to collect information concerning why parents chose a specific type of student grouping strategy for their child, as well as their views of strengths and weaknesses of reading in the grouping pattern of their choice. Parents were also asked to respond to strengths and weaknesses unrelated to academics.

Anderson and Pavan (1993) point out that most instruments used to measure achievement and attitude are developed and/or standardized on students in traditionally structured schools, most likely a graded structure. This needs to be kept in mind when considering the findings and conclusions of this study.

SELECTION OF THE SAMPLE

The population for this study was primary aged students at Alcoa Elementary School in Alcoa, Tennessee that had participated during their first, second and third grade year in either a multiage or traditional graded program. Students selected in the sample of this study have remained in the same program, whether it be multiage or traditional graded, for the total three year span. From a population of 90 children who completed their third (or fourth) consecutive year in a **traditional** placement program, a sample of 23 students was selected. From a population of 34 children who completed their third (or fourth) consecutive year in a **multiage** placement, a sample of 23 students was utilized. The researcher

needs to emphasize the limitations placed on the sample used in this study based on: 1) required parental consent (see appendix D), 2) stability in placement over a three year period in the same program at the same school for each participant and 3) participation in the state testing program (TCAP) for both the first and third grade year in school. These limitations caused the elimination of several willing participants.

Sampling coincidentally provided for stratified representation of minorities within each total population. Eighteen percent of the total population for the traditional graded program was composed of minorities (Blacks and Asians). Twenty-one percent of the sample for the traditional graded program was composed of minorities. Fifteen percent of the total population for the multiage program was composed of the same minority mix. Thirteen percent of the sample for the multiage program was composed of minorities. The use of 23 students per grouping strategy was not a matched sample. It just happened to occur that there were 23 students from each sample that met all criteria for

inclusion in this study. Other details concerning the same are as follows:

Sample Information	Traditional	Multiage
Total Population	90	34
Returned Parental Consent	35	25
Eligible of Returned Consent	23	23
# of minority in population	16	5
% of minority in population	18%	15%
# of minority returned consent	5	3
% of minority in sample	21%	13%

Students in the process of completing their third (or fourth) year in each program were informed of the study. Letters of information and consent forms were sent home with these students explaining the purpose and importance of the study as well as requesting permission to use data collected by the Heathington Primary Reading Attitude Scale and reading achievement scores from the Tennessee Comprehensive Assessment Program (TCAP) to be analyzed for use in this study. Students not returning with consent forms signed by parents were not included in the sample. Students returning consent forms but not meeting time eligibility and testing requirements within the

programs were not used in the sample.

DESIGN

This quasi-experimental study employed the nonequivalent control group design because random assignment to groups was not possible. Children were assigned to groups by parents, not by teacher, principal, or researcher. Lack of random assignment to groups added sources of invalidity, possibly regression and interaction between selection variables such as maturation, history, and testing. The groups were similar in that they were of the same general age span, from similar socio-economic backgrounds, instructed in the same type of educational facility, i.e, open space, and received instruction from teachers operating from the same philosophical background, i.e., whole language instruction.

The independent variable was the grouping situation in which each child participated, either multiage or traditional. Dependent variables included achievement and attitude scores. Scores for

each subject were obtained for the first grade and third grade year as measured by the TCAPS total reading achievement score. These scores served as pretest and posttest measures. Scores from the Heathington Primary Reading Attitude Scale were also used to determine the significance of relationships within student grouping patterns.

TREATMENT OF THE DATA

Total reading achievement scores on the TCAP exam for the first grade and third grade year were collected for each child in the total sample from their school permanent record file. First grade scores were used as pretest measures. Third grade scores served as posttest measures. An analysis of covariance (ANCOVA) was computed to determine the difference between reading achievement and student grouping patterns. It is assumed that both traditional and multiage groups were administered the TCAP tests under the stringent guidelines issued by the Tennessee Department of Education.

A one way analysis of variance (ANOVA) was also computed using scores from the Heathington Attitude scale to determine whether or not a significant difference existed between traditional and multiage groups in attitudes toward reading. The attitude scale was administered individually to each child in the sample by the researcher. The attitude scale was administered prior to the achievement test to ensure that reading attitudes were not influenced by how students felt they performed on the achievement test. This was accomplished within a three day period during each data collection period to avoid the threat of historical internal validity. The scales were then scored manually by the researcher and verified by a second person. Total scores were obtained for each student by summing the scores of the items. Each item on the scale could receive a score between one and five.

A Pearson r correlation coefficient was used to determine the relationship within each group between reading achievement and reading attitudes.

In summary, the methodology and procedures followed in this study were used to enhance the body of knowledge pertaining to student attitudes toward reading, reading achievement and student grouping strategies. The treatment of data was employed to determine whether or not significant differences existed between reading achievement in each particular student grouping pattern. Reading attitude was also tested for significant differences between groups. Relationships between attitudes toward reading and reading achievement were also examined within each grouping strategy.

CHAPTER IV

ANALYSIS OF THE DATA

The data collected for this study were used to determine the effects of student grouping strategies, specifically graded and multiage, on student achievement and attitudes toward reading. The subjects of this study were 46 students having completed their first through third grade years at Alcoa Elementary School in either a traditional or multiage grouping situation. Student attitudes were measured using the Heathington Primary Attitude Scale. Total reading achievement scores were used from both the first and third grade years of each student, serving as a pretest and posttest measure.

The data were analyzed using parametric tests including ANOVA, ANCOVA and the Pearson r Correlation Coefficient. The statistical computer program KEYSTAT was used for computation. See appendices B and C for raw data used in calculations.

The research hypotheses and the results of these statistical tests are presented in this chapter.

HYPOTHESIS I

The null and alternate hypotheses tested using an analysis of covariance were as follows:

H_O: There is no significant difference in the reading achievement scores of students in a multiage or traditional classroom setting.

H_A: There is a significant difference in the reading achievement scores of students in a multiage or traditional classroom setting.

Using the .05 significance level, Tables 1 and 2 show a summary of the computed data:

Table 1
Computations Using Achievement Data

Treatment	Mean	Standard Deviation	N
Multiage	52.83	22.02	23
Traditional	48.91	24.91	23

Table 2
Covariance Summary Table

	Between	Within
Sum of Squares	176.09	24319.13
D. F. for Adjusted Sum of Squares	1	44
Variance Estimates	176.09	552.71
F value	0.32	

According to the results of the ANCOVA, $F = .32$, $p < .05$, there was no significant difference in the pretest and posttest total reading achievement scores for students in the traditional or multiage setting. The null hypothesis was not rejected. See appendix B for the first grade and third grade NCE scores used in this computation. NCE (normal curve equivalent) scores are equal-interval normalized scores. NCE's can be rank ordered (Wilkinson, 1980). These scores were gathered from the Tennessee Comprehensive Assessment Program in each child's school record.

HYPOTHESIS II

The null and alternate hypotheses tested using a one way analysis of variance were as follows:

H_o: There is no significant difference in the attitudes toward reading of students in a multiage or traditional classroom setting.

H_A: There is a significant difference in the attitudes toward reading of students in a multiage or traditional classroom setting.

Using the .05 significance level, Tables 3 and 4 show a summary of the computed data:

Table 3
Computations Using Attitude Data

Treatment	Mean	Standard Deviation	N
Multiage	79.91	11.22	23
Traditional	81.57	10.19	23

Table 4
Anova Summary Table

Source of Variation	S.S.	D.F.	Variance Estimates	F Value
Between	31.39	1	31.39	.27
Within	5053.48	44	114.85	
Total	5084.87	45		

According to the results of the ANOVA, $F = .27$, $p < .05$, there was no significant difference in the reading attitude scores of students in the traditional or multiage setting. The null hypothesis was not rejected. See appendix C for the scores used in this computation. These scores were obtained from the Heathington Primary Reading Attitude Scale.

HYPOTHESIS III

The null and alternate hypotheses tested using the Pearson r Correlation Coefficient were as follows:

H_o: There is no significant relationship between the reading achievement scores and reading attitude scores of students in a multiage or traditional classroom setting.

H_A: There is a significant relationship between the reading achievement scores and reading attitude scores of

students in a multiage or traditional classroom setting.

According to the results of the Pearson r correlation coefficient, there was no significant relationship between the total reading achievement scores and the reading attitude scores for students participating in the traditional setting ($r = .086$, $p < .05$). Therefore, the null hypothesis was not rejected. There was, however, a modest positive association between the attitudes toward reading and total reading achievement test scores of students having participated in a multiage setting ($r = .518$, $p < .05$). The null hypothesis was rejected and the alternative accepted. There is a significant relationship between these two factors for this particular sample, although this relationship appears moderate.

PARENT SURVEY RESULTS

The parental survey addressing why parents chose a particular grouping pattern, their perceptions of reading strengths and

weaknesses as well as strengths and weaknesses unrelated to academics revealed no strong emerging trends. This is most likely due to the limited sample size. The return rate in the multiage sample was 13. Ten surveys were returned in the traditional program. The parental survey was sent home with students four weeks before school was out. This is a hectic time during the school year which may have contributed to the low return rate in each program.

The researcher chose to group responses into categories relating to academic development, social development, affective development and other. Statements used as qualifiers for each of these categories are listed accordingly on the following pages.

The most prominent reason for choosing the multiage program appeared to be the academic benefits parents perceived their child would gain. Six responses, the largest of any statement, indicated that individualized instruction was the reason parents felt the multiage program was their best option. Ten responses in the multiage sample addressed some type of academic based reason for

that particular program of choice. The traditional sample, on the other hand, offered a variety of reasons for choosing this program based on academic, social and other reasons. It was interesting that lack of knowledge about the multiage program emerged. The school has offered a variety of workshops and observation times for parents to become educated concerning the multiage program. Many parents are reluctant to exert the extra effort to become educated and opt for choosing what they already know. The researcher believes that this reason might be more prominent had a larger sample response been available.

It was interesting that the strengths in reading for the traditional program were almost totally academic, while strengths in reading for the multiage program were more diverse, including affective benefits. This is supportive of Pavan's (1977) findings concerning affective benefits in multiage programs. Although her benefits were determined based on specific scores on particular affective instruments, these affective strengths have been observed by parents. If the researcher had measured other affective variables

rather than reading attitude alone, more significant findings might possibly have been found.

Some contradictions were noticed by the researcher among responses. For example, one parent in the traditional program designated as a particular weakness the need for more required memorization work by students, while a parent in the multiage program liked the fact that memorization was not heavily relied upon during instruction. One parent listed exposure to more than one teacher, or team teaching as a reading strength in the traditional program while two parents listed team teaching as an overall weakness of the traditional program. Team teaching, good teachers and remaining with the same teacher for three years were referred to only as strengths by three multiage parents.

Parents from each program indicated that lack of homework was perceived as a weak area. Parents from each program also viewed the hands-on approach to teaching content materials as a positive idea. Allowing students an element of choice in their reading materials was also addressed by parents from both

programs. Multiage parents viewed this as a strength. Traditional parents viewed this as a weakness because it was not allowed for in the reading program.

Another interesting observation concerning the data collected in the parent survey is the increase in comments addressing affective areas by multiage parents. They tended to respond to affective/social concerns more often than parents with students in the traditional program. This could reflect individual parent differences, but based on the affective research results found in multiage programs, the researcher was not surprised by this differientiation. The following contains the categorization and number of responses from parents in each program. Again, the researcher emphasizes the need for caution in interpretation based on the limited response rate.

CATEGORIES OF MULTIAGE PARENTAL RESPONSES TO SURVEY QUESTIONS, AND TYPICAL RESPONSES

(n = number of parents providing response)

Why did you select this type of program for your child?

Academic Development:

-More learning opportunites provided for child (n = 4)

-More individualized than a traditional program (n = 6)

Social Development:

-More exposure to a wide range of ages (n = 3)

-Child has a late birthday (n = 2)

-Imitates life (n = 1)

Other:

-Because it was recommended by another teacher (n = 1)

-Discussed it with parents of another child in multiage (n = 1)

-It was best for my child (n = 1)

What are the specific *strengths* in reading as you see them for your child in the program of your choice?

Academic Development:

-Comprehension is stressed (n = 1)

-Likes the way phonics is taught (n = 3)

-Likes the way spelling is taught (n = 1)

-Child is allowed to read at their own level (n = 4)

-Program allows more reading opportunities (n = 2)

Social Development:

-Less stigma for slower readers (n = 1)

-Likes the interaction for a young child with older readers (n = 1)

Affective Development:

-Provides interesting literature for readers (n = 1)

-Takes into account student interests (n = 2)

-Child is more motivated to read (n = 3)

Teaching Styles:

-Likes the whole language methodology (n = 1)

-Likes the hands-on activies in reading (n = 1)

What are the specific *weaknesses* in reading as you see them for your child in the program of your choice?

Academic Development:

-Need more direct language/spelling instruction (n = 2)
-Lack of foreign language instruction (n = 1)
-Need more challenging literature (n = 1)
-Not enough homework given (n = 1)

List and/or explain any other *strengths*, academic or otherwise, which you see in the program of your choice.

Academic Development:

-More varied academic opportunities (n = 3)
-Young students have greater opportunity for academic growth (n = 1)
-Older students learn from helping younger students (n = 2)
-There are higher academic expectations for students (n = 1)
-Strong science content (n = 1)
-Computer literacy being taught (n = 1)
-Writing (n = 1)
-Not learning by memorization (n = 1)

Social Development:

-Older students help younger students (n = 2)
-Quiet child has become a leader (n = 1)
-There are more varied social opportunities (n = 1)
-Young students have older role models (n = 2)

Affective Development:

-Child loves school (n = 1)
-Students are not ability grouped (n = 1)

Teaching Styles/Teachers:

-Good teachers (n = 1)
-Having same teacher for 3 years (n = 1)
-Team teaching (n = 1)
-Use of centers and hands on activities (n = 1)

List and/or explain any other *weaknesses*, academic or otherwise, which you see in the program of your choice.

Academic Development:

-Older students may not be as challenged (n = 1)
-It is difficult to know if your child is "on grade level" (n = 1)

Social Development:

-Older students may teach the younger students bad behaviors (n = 1)
-After being used to one teacher for 3 years, changing teachers is difficult (n = 1)

CATEGORIES OF TRADITIONAL PARENTAL RESPONSES TO SURVEY QUESTIONS, AND TYPICAL RESPONSES

(n = number of parents providing response)

Why did you select this type of program for your child?

Academic Development:

-Felt child would receive more one-on-one help (n = 1)
-Felt child would benefit more academically (n = 1)
-Wanted more structure for child (n = 1)

Social Development:

-Felt it was socially beneficial to remain with same-aged peers (n = 1)
-Thought multiage was for behavior problems (n = 1)
-Since child attended a traditional Kdg. setting, wanted to continue (n = 1)

Other:

-Parent had unpleasant multiage experience (n = 1)
-Parents unfamiliar with multiage concept (n = 2)

What are the specific *strengths* in reading as you see them for your child in the program of your choice?

Academic Development:

-Heavy emphasis on comprehension development (n = 4)
-Good literature choices (n = 2)
-Children are grouped according to reading ability (n = 2)
-Has specific reading achievements for the particular grade (n = 1)
-Child is ahead in understanding and ability (n = 1)
-Likes use of Daily Oral Language activities.(n = 1)

Other:

-Small study groups (n = 1)
-Attention from teachers (n = 1)
-Team teaching (n = 1)

What are the specific *weaknesses* in reading as you see them for your child in the program of your choice?

Academic Development:

-Weakness in comprehension instruction (n = 2)
-Vocabulary development (n = 1)
-Child needs more challenging reading material (n = 2)
-Children need to do more project work (n = 1)
-Parent feels that children reading easier books than their child does not deserve equal credit (n = 1)

Affective Development:

-Children should have more choice in what they read (n = 2)

List and/or explain any other *strengths*, academic or otherwise, which you see in the program of your choice.

Academic Development:

-Integration of subjects (Whole Language) (n = 1)
-Writing (n = 2)
-Hands-on activities (n = 1)

Affective Development:

-Positive atmosphere in which children learn (n = 1)
-Child's attitude toward school has improved (n = 1)

List and/or explain any other *weaknesses*, academic or otherwise, which you see in the program of your choice.

Academic Development:

-Children that are more advanced are limited academically by having to remain only on grade level (n = 3)
-Children should have to memorize multiplication tables (n = 1)
-Children need more homework (n = 1)

Other:

-Open space (n = 1)
-Team teaching (n = 2)
-Limited parent information about what child is doing (n = 1)
-Children that are not functioning on grade level should not be placed with children that are (n = 1)

SUMMARY

The data analyzed in this chapter indicate that there was no significant difference in the total reading performance of students participating in a traditional or multiage setting over a three year period. The data showed no significant difference in the attitudes toward reading of students participating in a traditional or multiage setting. Within the traditional grouping pattern, there was no

significant relationship between reading attitude and total reading achievement scores. The multiage group data did reveal that there was a significant relationship between reading attitudes and reading achievement, although this was a modest positive correlation. Similarities as well as differences in parental views were also addressed.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND IMPLICATIONS

SUMMARY

The purpose of this study was to determine the effects, if any, of student grouping strategies on the development of attitudes toward reading and reading achievement in primary grades in a local school system which offered a choice for students and parents concerning primary aged students.

The particular program under study was designed and implemented by supervisory and teaching personnel in the Alcoa City School System in Alcoa, Tennessee. Both traditional and multiage first, second and third graders were housed in the one elementary school within the system. The study attempted to answer the following questions:

1. Is there a significant difference between the total reading achievement test scores of students during the primary school years (grades one through three) participating in either a traditional or

multiage setting (between groups) ?

2. Is there a significant difference between the attitudes toward reading of students during the primary school years participating in either a traditional or multiage setting (between groups) ?

3. Is there a significant relationship between reading achievement scores and reading attitudes of students during the primary school years participating in either a traditional or multiage setting (within groups) ?

The sample for this study was 46 students having completed their first, second and third grade years in either the traditional or multiage program at Alcoa Elementary School. Each participant also had to have TCAPS scores for both the first and third grades as well as parental consent.

The researcher used the total reading scores from the Tennessee Comprehensive Assessment Program (TCAP). A reading attitude score for each child was obtained using the Heathington Primary Reading Attitude Scale. A parent survey

was also distributed to each child in the sample.

Parametric statistical tests were used to compute all data in this study. The ANCOVA was used to analyze the total reading scores of students in each grouping strategy, using the first grade scores as a pretest and the third grade scores as posttest. Reading attitudes were also analyzed between groups using an ANOVA. Achievement and attitude scores were also examined within each group, using the Pearson r correlation coefficient, to determine whether or not a relationship existed between reading attitudes and reading achievement.

FINDINGS

The findings of this study include the following:

1. There was no significant difference between the total reading achievement test scores of students participating in either a traditional or multiage setting.

2. There was no significant difference between the attitudes

toward reading of students participating in either a traditional or multiage setting.

3. There was no significant relationship between the total reading achievement score and the reading attitude score of students participating in a traditional setting.

4. There was a modest positive relationship between the total reading achievement score and the reading attitude score of students participating in a multiage setting.

CONCLUSIONS

The purpose of the study was to gain information concerning the effects of student grouping strategies on the development of attitudes toward reading and reading achievement. From the findings, it was concluded that, for this particular sample, there are no significant differences in reading achievement and reading attitude of students that have

participated in a traditional setting with those of students having participated in a multiage setting for a three year period. No correlation was found between the reading achievement and reading attitudes of students participating in a traditional graded program. A modest but positive correlation was found between the reading achievement and reading attitudes of students in the multiage program.

Students in a program of choice at Alcoa Elementary School are apparently receiving consistent reading instruction regardless of which student grouping pattern they are participating in. Although the mean achievement score was higher for multiage than for traditional students, the difference was not significant. The mean achievement scores of each group indicate that performance is very similar in each program (multiage = 52.83, traditional = 48.91).

Although the mean reading attitude score for the traditional grouping pattern was higher than the multiage, the difference was not significant (multiage = 79.91, traditional =

81.57). It appears that attitudes toward reading in each setting have been fostered in a positive direction. This may be attributed to the expertise of reading teachers to attend to positive attitude development. Whole language instructional methodology may have influenced positive attitude and achievement development. As was noted earlier, each teacher at Alcoa Elementary School has been immersed in the whole language philosophy and has adapted instructional approaches accordingly.

Another influential circumstance surrounding the close proximity of achievement and attitude scores concerns teachers participating in each program. Traditional and multiage teachers at Alcoa Elementary School were teaching in their program of choice. Teachers, like parents, were given the choice as to which program in which they preferred to teach. The fact that teachers were pleased with their teaching assignments may have influenced achievement and attitude development. Happy teachers may have produced positive

results in students, regardless of the student grouping strategy.

Multiage skeptics have generally expressed concern that achievement would suffer in mixed-age groups. The results of this study indicate that such concern may be unwarranted. Achievement as well as attitude development appear to be no different for students in the traditional or multiage setting.

The higher correlation between reading achievement and reading attitude indicates that a positive relationship exists between the two for multiage students. This is congruent with the findings of Walberg and Tsai (1985). Apparently the multiage environment is a climate which positively influences the development of reading achievement and reading attitudes. As has been suggested by much of the comparative data, the multiage benefits may be found largely in the affective domain.

Another explanation for the lack of differences found in the traditional and multiage programs may be due to time. Gajadharsingh (1981) found no significant difference in the achievement test data of students in traditional (third grade) or

multiage classrooms in the areas of vocabulary, reading, mathematics concepts, mathematics problem solving and mathematics total. The following academic year, fourth grade, showed similar results on each of the tested variables for both settings. Achievement in grade five, however, showed significant differences in the two groups. It may be that the longer a child remains in a multiage program, the more beneficial the academic gains.

The researcher cautions any generalization of the above data to any population sample other than that of Alcoa Elementary School. The sample of this study was limited due to necessary parental consent, time eligibility and required test scores.

IMPLICATIONS

Achievement and attitude comparative studies between multiage and traditional programs need continued study. The amount of research in this area is nominal when compared to

achievement and/or attitude research in traditional programs alone. A larger data base needs to be established before any conclusive evidence can be formulated. The contents and results of this study suggest several points of departure for continued study.

Further attempts are needed to establish more credibility to the assumption that a relationship does indeed exist between achievement and attitude. As a result of this study, no relationship between achievement and attitude was established in the traditional program, yet there was a relationship between the two variables in the multiage program. More support is needed in this area to clarify the existence of a relationship, if any, between the two.

Follow up studies on this sample within the next two years might reveal trends in reading achievement and attitude development that develop over a period of time **after** total mastery of the reading process has been more readily attained by a larger majority of the population. The fourth year of

school, or third grade, is still a bridging time in the development of total fluency for many children. It may be that differences or relationships are more apt to become prominent when the reading process has reached mastery.

A larger return rate of the parent survey may have revealed more concerning the true feelings of parents in general concerning the strengths and weaknesses of each program. If parents knew they were going to be surveyed on a regular basis, they might be more likely to pay closer attention to their own perceptions and beliefs about what **they** feel is important in their child's educational program. One benefit in offering programs of choice for parents is that an increasing number of parents are taking the time to come to the school, ask their questions, observe and make a rational decision concerning the placement of their child. Choice forces involvement. It puts the responsibility back on the parent to become informed. Although choice makes parents nervous because the decision rests on their shoulders, it also allows them input and reduces the

acceptance of status quo in education. It is also interesting to note that many parents oppose this kind of change in the educational setting because they are uncomfortable with the "not knowing" of a new program. The irony lies in the cry across our country concerning the failure of public education, yet changes make people uncomfortable and suspicious. Many parents want change, so long as it is something that they experienced in their own childhood educational experience.

In summary, the findings, conclusions and implications of this study are to be added to the limited but growing body of research literature addressing comparisons between the multiage and traditional student grouping strategies. Because of the limited sample and degree of limitations placed on this sample, generalization can only apply to the Alcoa Elementary School population. The continuation of research will help determine the value of this study and its place within the total scheme of educational findings.

REFERENCES

REFERENCES

Adams, J. J. (1953). Achievement and social adjustment of pupils in combination classes enrolling pupils of more than one grade level. Journal of Educational Research, 47, 151-155.

Alexander, J. E., and Filler, R.C. (1974). Group cohesiveness and reading instruction. The Reading Teacher, , 446-450.

Alexander, J. E., and Filler, R. C. (1976). Attitudes and reading. Newark, Delaware: International Reading Association.

Alexander, J. E., and Heathington, B. S. (1984). Do classroom teachers emphasize attitudes toward reading?. The Reading Teacher , 37 , 484-488.

Anderson, R.H. and Pavan, B.N. (1993) Nongradedness: Helping it to happen. Pennsylvania, Technomic.

Anderson, M. A., Tollefson, N. A., and Gilbert, E. C. (1985). Giftedness and reading: A cross-sectional view of differences in reading attitudes and behaviors. Gifted Child Quarterly , 29,186-189.

Bunish, N. T. (1988). Using vocabulary acquisition to improve the performance in reading and attitude of students in second grade. Ed.D. Practicum paper, Nova University.

Carlsen, G.R., and Sherrilll, A. (1988). Voices of readers: How we come to love books . Urbana, Il. National Council of Teachers of English.

Cary, B. P. (1990). A quasi-phenomenological exploration of the engaged reading experience in bibliophilic children. Unpublished doctoral dissertation, University of Tennessee, Knoxville.

Carter, J.B. (1974). A study of the effects of multi-grade grouping on the attitudes toward self, others and school of selected third and fifth grade students. Dissertation Abstracts, 34:5469A.

Chace, E.S. (1961). An analysis of some effects of multiple-grade grouping in an elementary school. Unpublished doctoral dissertation, University of Tennessee, Knoxville.

Cofer, C.N., and Appley, M.H. (1964.) Motivation: Theory and research. New York: John Wiley and Sons.

Connell, D. R. (1987). The first 30 years were the fairest: Notes from the kindergarten and ungraded primary (K-1-2). Young Children . July,30-39.

Davis, P. M. (1978). An evaluation of journal-published research on attitudes in reading, 1900-1977 . Unpublished doctoral dissertation, University of Tennessee, Knoxville.

Drier, W. H. (1949). The differential achievement of rural graded and ungraded school pupils. Journal of Educational Research, 175-186.

Estes, T.H. (1971). A scale to measure attitudes toward reading. Journal of Reading, 15 , 135-138.

Ferguson, G.A. and Takane, Y. (1989). Statistical analysis in psychology and education. McGraw-Hill.

Finley, C.J. and Thompson, J.M. (1963). A comparison of the achievement of multigraded and single-graded rural elementary school children. The Journal of Educational Research, 56, 471-475.

Flavell, J. (1963). Developmental psychology of Jean Piaget. Princeton: D. Van Nostrand.

Foshay, A.W. (1948). Interage grouping in the elementary school. Unpublished doctoral dissertation, Teachers College, Columbia University, New York.

Fredericks, A. D. (1982). Developing positive reading attitudes. The Reading Teacher , October, 38-40.

Gajadharsingh, J. L. andBany, B. (1981). The multi-grade classroom in Saskatchewan: An exploratory study. College of Education, University of Saskatchewan.

Gajadharsingh, J. and Melvin, C. (1987). The multi-grade classroom and student achievement. The School Trustee, 21-24.

Gajadharsingh, J. (1991). The Multi-grade Classroom: Myth and Reality. A Canadian study (A Canadian Education Association Report: ISBN: 0-920315-48-8). Toronto, Ontario.

Gaustad, J. (1992). Nongraded education: mixed-age, integrated and developmentally appropriate education for primary children. Oregon School Study Council (OSSC) Bulletin, 35, University of Oregon.

Gay, L.R. (1987). Educational research: Competencies for analysis and application. Third Edition, Merrill Publishing Company.

Gentile, L. M. and McMillan, M. M. (1987). Stress and reading difficulties: Teaching students self regulating skills. The Reading Teacher , November, 170-178.

Goodlad, J.I. and Anderson, R.H. (1987). The nongraded elementary school (revised edition). Teachers College Press, New York.

Heathington, B.S. (1975). The development of scales to measure attitudes toward reading. Unpublished doctoral dissertation, The University of Tennessee, Knoxville.

Junell, J.S. (1971). An analysis of the effects of multigrading on a number of noncognitive variables. Dissertation Abstracts 32:94A.

Knight, J. S. and Hawes, K. (1990). Student attitude toward selected instructional strategies . Paper presented at Annual Meeting of the College Reading Association, Nashville, Tennessee.

Lockledge, A. and Matheny, C. (1987). Looking toward the family. Paper presented at the Annual National Convention of the International Reading Association.

Madden, L. (1988). Improve reading attitudes of poor readers through cooperative reading teams. The Reading Teacher , December, 194-199.

Mathewson, G. C. (1985). Toward a comprehensive model of affect in the reading process. In H. Singer and R. Ruddell (Eds.), Theoretical models and processes of reading (pp. 841-856). Newark, Delaware: International Reading Association.

McKenna, M. C. and Kear, D. J. (1990). Measuring attitude toward reading: A new tool for teachers. The Reading Teacher May, 626-639.

Milburn, D. (1981). A study of multi-age or family-grouped classrooms. Phi Delta Kappan, 62 , 513-514.

Moore, S. C. and Lemons, R. (1982). Measuring reading attitudes: Three dimensions. Reading World , 22 , 48-57.

Morgan, S. G. (1985). The effects of a volunteer recreational reading program that utilizes a self-report measure and pupil incentives on the attitude toward reading of selected pupils in grades one,two and three . Unpublished doctoral dissertation, University of Tennessee, Knoxville.

Morrow, L. M. (1987). Promoting innercity children's recreational reading. The Reading Teacher . December, 266-274.

Newcomb, T.M. and Turner, R.H., and Converse, P.E. (1965). Social psychology . New York: Holt, Rinehart, and Winston.

Pavan, B.N. (1972). Moving elementary schools toward nongradedness: Commitment, assessment, and tactics. Unpublished doctoral dissertation, Harvard University.

Pavan, B.N. (1977). The nongraded school: Research on academic achievement and mental health. Texas Tech. Journal of Education, 4, 91-107.

Pratt, D. (1983). Age segregation in schools . Paper presented at the Annual Meeting of the American Educational Research Association. Montreal, Quebec, Canada.

Quandt, I. (1976). Forwar, In J.E. Alexander and R.C. Filler, Attitudes and reading. (p. V). Newark, DE: International Reading Association.

Ramayya, D.P. (1972). Achievement skills, personality variables and classroom climate in graded and nongraded elementary schools. Psychology in the Schools, 9, 88-92.

Rasinski, T. and DeFord, D. E. (1985). Learning within a classroom context: First grader's conceptions of literacy . Paper presented at the Annual Meeting of the National Association for the Education of Young Children. New Orleans, Louisiana.

Reed, K. (1979). Assessing affective responses to reading: A multi-measurement model. Reading World , 19 , 149-156.

Rehwoldt, W. and Hamilton, W.W. (1956). An analysis of some of the effects of interage and intergrade grouping in an elementary school. Doctoral dissertation, University of Southern California.

Ricciotti, J.A. (1982). School organizational patterns and reading achievement. Doctoral dissertation, Columbia University Teachers College.

Roettger, D. (1980). Elementary student's attitudes toward reading. The Reading Teacher , 33 , 451-453.

Rowell, C. G. (1972). An attitude scale for reading. The Reading Teacher , 25 , 442-447.

Schmitt, R.T. (1983). The achievement and adjustment of children from open and traditional elementary schools in grade six of traditional middle schools. Doctoral dissertation, Temple University.

Schrankler, W.J. (1976). Family groupings and the affective domain. Elementary School Journal, 76, 432-439.

Strang, H.R. and Innes, A.H. (1982). Keystat: A statistical system for microcomputers., Brooks/Cole Publishing Company.

Tyack, D. (1974). The one best system: A history of American urban education . Harvard University Press.

Vygotsky, L.S. (1978). Mind in society: The development of higher psychological processes.

Walberg, H. J. and Tsai, S. (1985). Correlates of reading achievement and attitude: A national assessment study. Journal of Educational Research , 78 , 159-167.

Way, J. W. (1981). Achievement and self-concept in multiage classrooms. Educational Research Quarterly, 6, 69-75.

Wilkinson, J.C. (1980). Understanding and using N.C.E.'s: A guide for non-statisticians., Metra Intermountain Publishing.

Williams, C. K. (1980). A procedure to evaluate cognitive requirements of beginning reading materials . Unpublished doctoral dissertation, University of Knoxville, Tennessee.

Yarborough, B.H. et al. (1976). A study of the relative effectiveness of nongraded and graded instruction in the first six years of elementary schooling. Norfolk, VA: Old Dominion University, ED 143 669.

APPENDICES

APPENDIX A

Directions for the Heathington Primary Attitude Scale

Your answer sheet is made up of two pages. Page one goes from number 1 to number 10. Page two goes from number 11 to number 20. Beside each number are five faces:

-a very unhappy face,
-an unhappy face,
-a face that's neither happy or unhappy,
-a happy face and
-a very happy face.

I will ask you how you feel about certain things and you will put an X on the face that shows how you feel. Suppose I said, How do you feel when you eat chocolate candy? Which face shows how you feel? Someone may have chosen an unhappy face because he doesn't like chocolate candy; someone else may have chosen a happy face because he likes chocolate candy. Now I'll read some questions to you and you mark the face that shows how you feel about what I read. Remember to mark how **you** feel because everyone does not feel the same about certain things. I'll read each question two times. Mark only one face for each number. Are there any questions?

Now listen carefully. Number 1.....

Heathington Primary Attitude Scale

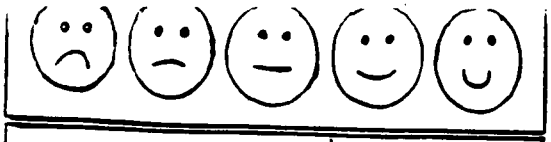
The scale items are:

****

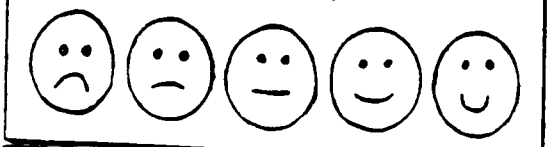
How do you feel . . . . .

1. when you go to the library?
2. when you read instead of playing outside?
3. when you read a book in free time?
4. when you are in reading group?
5. when you read instead of watching TV?
6. when you read to someone at home?
7. about the stories in your reading book?
8. when you read out loud in class?
9. when you read with a friend after school?
10. when you read stories in books?
11. when you read in a quiet place?
12. when you read a story at bedtime?
13. when it's time for reading group?
14. when you read on a trip?
15. when you have lots of books at home?
16. when you read outside when it's warm?
17. when you read at your desk at school?
18. when you find a book at the library?
19. when you read in your room at home?
20. when you read instead of coloring?

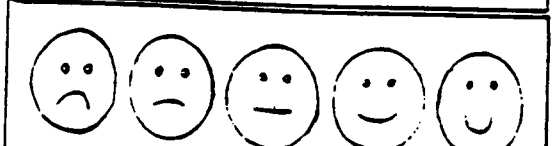
1.



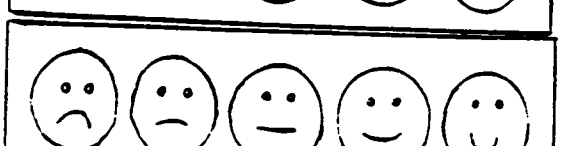
2.



3.



4.



5.



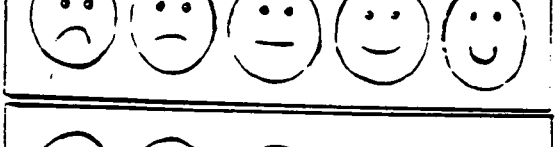
6.



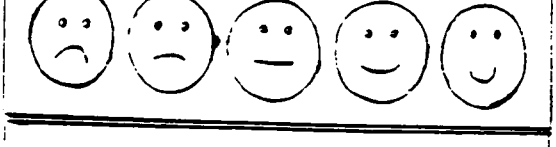
7.



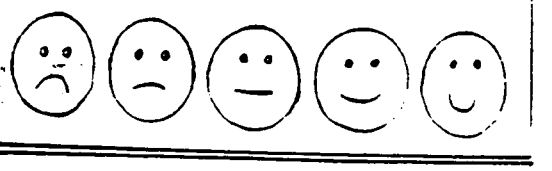
8.



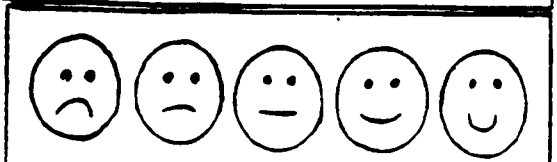
9.

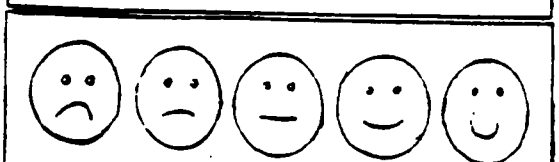


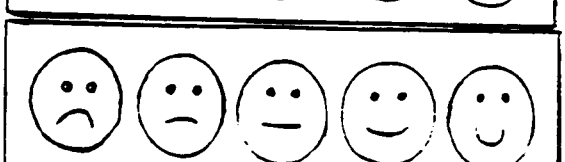
10.

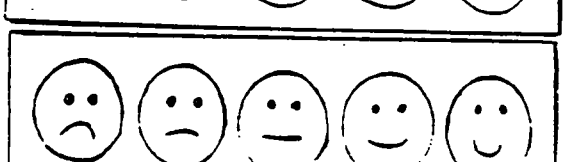


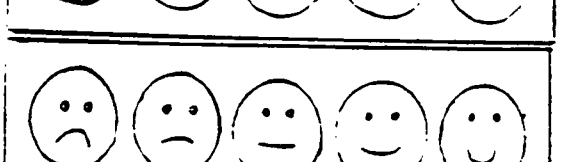
11. 

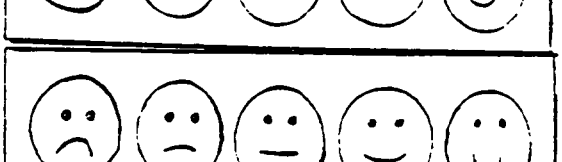
12. 

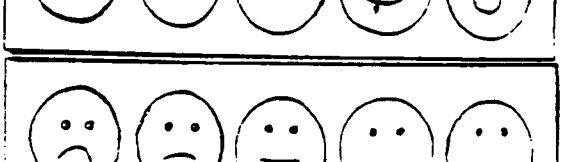
13. 

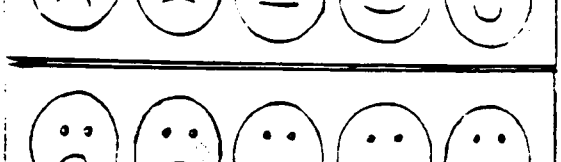
14. 

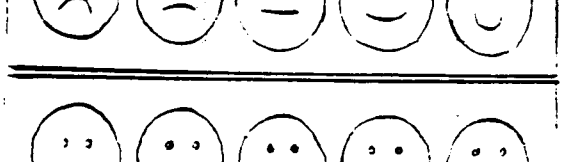
15. 

16. 

17. 

18. 

19. 

20. 

APPENDIX B

Appendix B

First and Third Grade Total Reading Achievement Scores (NCE)

Traditional Student Grouping		Multiage Student Grouping	
1st grade	3rd grade	1st grade	3rd grade
62	97	17	55
21	34	23	9
25	27	55	70
2	28	80	63
54	46	33	50
13	56	57	49
58	63	68	64
12	11	28	63
55	54	62	53
58	55	66	64
56	66	43	74
51	43	69	56
99	78	55	72
51	56	29	58
55	55	28	24
55	66	73	73
35	45	75	99
47	59	52	66
31	45	33	34
50	42	81	99
99	68	28	27
86	82	64	76
50	74	96	97

APPENDIX C

Appendix C

Heathington Primary Reading Attitude Scale Scores

Traditional Student Grouping	Multiage Student Grouping
77	
87	72
87	76
84	73
57	82
82	65
88	84
85	64
64	81
82	64
92	81
93	97
85	87
80	88
86	78
89	75
55	70
85	90
82	93
80	82
81	84
95	58
80	97
	97

APPENDIX D

PARTICIPANT CONSENT FORM

INFORMED CONSENT FORM

My signature below indicates that I have agreed to allow Mrs. Bledsoe to view my first grade and third grade TCAPs total reading achievement scores. I also agree to complete a reading attitude inventory with Mrs. Bledsoe in the school library. I understand that this information is going to be used to help school personnel in evaluating the multiage and traditional grouping situations and will be used to make decisions based on what is best for Alcoa Elementary students.

I further understand that I can withdraw from participation in the study at any time without penalty. My participation in or withdrawal from the study will have no affect on my grades in my class at school.

_____

Child's name

_____

Signature of child

_____

Date

PARENTAL CONSENT FORM

Dear Parents/Guardians:

During spring 1994, Janet Bledsoe, a primary multiage teacher and doctoral student at the University of Tennessee, will implement a research study to determine the effects of student grouping strategies on reading achievement and reading attitudes. The purpose of this study is to satisfy a doctoral research requirement for Mrs. Bledsoe as well as add to our knowledge concerning programs which serve the best interests of our students at Alcoa Elementary School. Our students benefit as we attempt to refine the programs offered to children at Alcoa Elementary School. Parental input is considered an invaluable resource and is beneficial in the ongoing evaluation of programs and processes affecting their children.

Students which have spent first, second and third grade at Alcoa Elementary School in either a traditional or multiage setting will be used as participants in this study. Each child's total reading achievement test score from the Tennessee Comprehensive Assessment Program (TCAP) for first **and** third grade will be used as data. Each child will also be asked to complete the Heathington Primary Attitude Scale, which will be done individually with the investigator, Janet Bledsoe, in the school library. This process will take approximately 15 minutes per child and will be completed before the administering of the TCAP achievement test during spring 1994. Each child will be assigned a number on his/her response sheet for the Heathington Attitude Scale to insure confidentiality. Only the primary investigator, Janet Bledsoe, will have access to the identification of each child's name and the number assigned to the name to insure confidentiality. All information will be kept strictly confidential, with no one having access to the names of the specific participants, with the exception of the investigator. All records containing test scores will be kept locked in the school vault as is normal school policy. Responses to the attitude scale will be kept locked in a secure file with no one but Mrs. Bledsoe having access to them. Parents of each participant will also be sent a questionnaire to provide feedback at a later time during the study. This will require approximately 10 minutes for you to complete. There are no foreseeable risks to anyone participating in this study. A copy of the results of this study will be made available in the elementary school library as soon as possible for anyone who wishes to review the results.

Your signature indicates that you as a parent/guardian have agreed to allow your child's data to be accessed and used by the investigator in order to pursue this research study. Your signature also indicates that you have agreed to allow the investigator to conduct a 15 minute survey with your child concerning his/her attitudes toward reading. This will be the total amount of time asked of your child for this study. Your signature further indicates your willingness to complete and return a ten-minute parent questionnaire which will be distributed during early April, 1994. If you have questions or need more clarification, you may contact Janet Bledsoe at Alcoa Elementary School during regular school hours at 982-3120. She will also be available in the school theatre on Monday, March 14, 6:30 p.m.-7:30 p.m. to answer any questions or provide clarification.

(OVER)

APPENDIX E

1. What type of student grouping pattern has your child participated in at Alcoa Elementary?

_____ traditional _____ multiage

2. Why did you select this type of program for your child?

3. What are the specific **strengths** in reading as you see them for your child in the program of your choice?

4. What are the specific **weaknesses** in reading as you see them for your child in the program of your choice?

5. List and/or explain any other **strengths**, academic or otherwise, which you see in the program of your choice.

6. List and/or explain any other **weaknesses**, academic or otherwise, which you see in the program of your choice.

(0VER)

Please fill out the following information about yourself:

Race: _____ Black _____ White _____ Other

Gender: _____ Male _____ Female

Age: _____ under 25 years

_____ 26 - 34 years

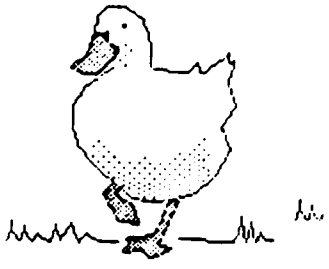
_____ 35 - 44 years

_____ 45 - 54 years

_____ 55 and over

List any other comments you may have below:

APPENDIX F



Alcoa Elementary School

1200 Springbrook Road
Alcoa, Tennessee 37701-2056

Telephone
982-3120
Dr. Robert C. DeLozier, Princip

November 12, 1993

To Whom It May Concern

This is to verify that , as Principal of the Alcoa Elementary School, I give permission for Janet Bledsoe to conduct the research needed in order to complete the necessary requirements for the Ph.D. degree in Education within our school. I understand that she will administer the Heathington Primary Reading Attitude Scale as well as analyze the total reading scores on the Tennessee Comprehensive Assessment Program (TCAP) for students completing the first through third grades in both the traditional graded program and the multiage program at the Alcoa Elementary School. This research will start during the spring semester of 1994 and be completed during the summer semester of 1994

Sincerely,

Robert C. DeLozier,
Principal

ALCOA CITY SCHOOLS

Alcoa City Education Building
524 Faraday Street
Alcoa, Tennessee 37701
(615) 984-0531

"committed to excellence through comprehensive education"

November 3, 1993

To Whom It May Concern

This is to verify that I, as Superintendent of Alcoa City Schools, give permission for Janet Bledsoe to conduct the research needed in order to complete the necessary requirements for her Ph.D. in Education within our school system. I understand that she will administer the Heathington Primary Reading Attitude Scale as well as analyze the total reading scores on the Tennessee Comprehensive Assessment Program (TCAP) for students completing the first through third grades in both our traditional graded program and our multiage program at Alcoa Elementary School. This research is to begin during spring semester of 1994 and will be completed during summer semester of 1994.

I welcome this collaborative effort between the University of Tennessee and Alcoa City Schools in order to better our understanding of the programs we offer students at Alcoa Elementary as well as satisfying University requirements.

Sincerely,

William C. Symons, Jr.
Superintendent of Schools

WCS:sb

VITA

Janet Berrier Bledsoe was born in Maryville, Tennessee, on October 3, 1956. She grew up in Alcoa, Tennessee where she attended Alcoa City Schools. Upon her graduation from Alcoa High School in 1974, she enrolled in The University of Tennessee/Knoxville the following fall as an undergraduate. She received a Bachelor of Science degree in Education in 1978. She accepted a kindergarten teaching position with Blount County Schools in fall 1978.

She enrolled as a graduate student at the University of Tennessee Knoxville in fall 1978 as an evening school student while teaching full time. She completed her Master of Science degree in Education in 1982. During her nine years of employment with Blount County she taught kindergarten, first grade, second grade and Chapter I reading. In 1987 she accepted a teaching position with Alcoa City Schools where she taught first grade for three years. She was instrumental in the design and implementation of the current primary

multiage program in which she has taught and served as team leader. She returned to UTK as a graduate student while teaching full time to pursue a Doctor of Philosophy degree in education which was completed in 1994.

She is currently a member of the International Reading Association, Tennessee Reading Association and Smoky Mountain Reading Association.