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# The relationship between flexible reading groups and reading achievement in elementary school students

Gretchen E. H. Schlag  
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Gretchen Schlag

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the review committee have been made.

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2009

ABSTRACT

The Relationship between Flexible Reading Groups and Reading Achievement in  
Elementary School Students

By

Gretchen E.H. Schlag

M.S., [Troy State University], 2000  
B.S., [Valdosta State University], 1998

Doctoral Study Submitted in Partial Fulfillment  
Of the Requirements for the Degree of  
Doctor of Education  
Teacher Leadership

Walden University  
May 2008

## ABSTRACT

Despite the current emphasis on differentiating instruction to accommodate individual student learning needs, most reading instruction is taught primarily in static small groups or whole group settings. However, the use of flexible reading groups for reading instruction allows students to be appropriately challenged and avoids labeling a student's reading readiness as stagnant. This study examines the relationship between flexible reading groups and reading achievement of 130 fifth grade students in one elementary school. The theoretical base for the research is grounded in the constructivist theory as supported by Vygotsky and Bruner. In this quasi-experimental quantitative research study, the effect of flexible reading groups on reading achievement was examined using a within-subject pretest and posttest single group design to compare gain scores using the Standardized Test of Achievement in Reading. The scores compared an eight week period of whole group instruction to an eight week period of flexible group instruction on the reading assessment. Data from the gain scores of the groups were statistically analyzed using a paired samples  $t$  test to determine whether or not the flexible reading groups had a positive effect on reading achievement. Statistical analysis yielded a statistically significant difference  $t(129) = 3.82, p < .05$  which was interpreted to mean that flexible reading groups significantly enhanced student learning. This study will contribute to the most recent research on flexible grouping and reading instruction by focusing on the implementation of flexible reading groups and establishing data to support the research on flexible group instruction. This study contributes to social change by providing educators with knowledge on differentiated instruction through the implementation of flexible groups as it relates to reading achievement.



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UMI Number: 3344456

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## DEDICATION PAGE

This doctoral study is dedicated to my loving, supportive husband, David. Over the past ten years you have not wavered in support of anything I chose to do and for the past four years we have worked side by side through this program. David you have supported me through two children, a cross country move, two job assignment changes and this four year endeavor. Throughout the past four years you have put up with my stress, anxiety, and over zealous attitudes and yet we are still going strong! Thank you for your undying dedication to our marriage, our children and our careers!

To Olivia and Margaret, you two have heard mommy say “not now I am busy with college work” many times and you still smile and get to “work” on your laptops doing your “college work”. This degree and study is dedicated to you two as well in hopes that you will one day understand that anything worth doing takes hard work and dedication. Thank you for sharing mommy with the computer.



## ACKNOWLEDGMENTS

I would like to acknowledge the hard work of my committee members Dr. Roberta Liebler and Dr. Pamela Warrick. Their steadfast dedication to higher education and my pursuit of this doctoral degree is noteworthy. Throughout the trials and successes of this process both of you have responded in a supportive manner; thank you.

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## SECTION 1:

### INTRODUCTION TO THE STUDY

#### Introduction

When students enter their classrooms, they arrive with varying background knowledge, readiness, levels of motivation, languages, preferences in learning, and interests, and they react differently to types of instruction (Hall, 2005). The Cognition and Technology Group (1994) offered an important statement regarding the 1983 publication *A Nation At Risk*, “the major problem with American schools was that they had not kept pace with societies expectations for the rapidly changing world of the twenty first century” (p.23). Again in 2001 the *No Child Left Behind Act* was enacted, mandating that every teacher throughout the country become highly qualified and requiring that all students would be able to read by third grade. In addition, students regardless of their differing backgrounds would be successful in each grade they attempted.

Teachers are faced with the challenge of educating every child in their classrooms despite the differing backgrounds of their children. In an effort to promote cognitive learning, Hargreaves (2003), states that teachers are encouraged to be committed to continuous professional learning, and work and learn in collegial teams. Additionally, they need to foster trust, draw on student collective intelligence, and build a capacity for change and risk taking.

Education has seen many different forms of grouping concepts come and go as the paradigm shifts from one theory to another. Over the past 30 years, educators have implemented homogenous grouping, ability grouping, tracking with ability grouping, and presently flexible grouping. The research on each of these grouping strategies is quite

extensive with the exception of flexible grouping. Although flexible grouping has been a form of instruction since the 1970's, only a limited number of research studies have been conducted regarding its efficacy.

Small group instruction that occurs today is considered to be flexible. That is, the groups are set up under the idea that students learn differently. The current implementation of flexible small groups in classrooms is driven by a shift in philosophical and theoretical thinking. Instruction through the use of small groups has been influenced by the constructivist approach of Vygotsky (Caldwell & Ford, 2002). "Groups are flexible according to observed performances, instruction is built through scaffolding experiences, strategic questions follow the reader's lead, independent practice means practice with real reading and writing, and assessment is an ongoing, never ending process" (Caldwell & Ford, p23. ). Students are constantly moving between learning groups as their knowledge base changes. "The foundation for flexible grouping lies in the building of a sense of community. Realizing that they are valued and have a common purpose, students are better able to work with each other" (Gunning, as cited in Optiz, 1998). When the classroom environment is set up with students understanding that everyone learns differently and each student has his or her own learning gifts then the grouping structure works effectively (Optiz, 1998).

Wren (2005) stated that flexible groups provide a variety of purposes. The use of flexible groups allows students to work with classmates of various skills and interests. Students work collaboratively to solve real problems and students are not given a label which classifies them according to a perceived ability. Students involved in flexible grouping receive more time getting instruction where they need the most support from

the teacher. Teachers are able to give attention to students' specific needs because they are constantly doing assessments of their students. Young children are constantly growing cognitively, therefore the teacher must assess continuously for new acquisition of skills and concepts as well as areas that have not been acquired (Wren, 2005). Flexible grouping based on student skills and across age grouping allows students performing at various levels to share their combined areas of knowledge and strength. If utilized effectively and in a sensitive manner, the method of flexible grouping does not have to carry a negative stigma for the learner (Marzano, Pickering, & Pollock, 2001).

#### Problem Statement

Teachers are faced with the challenge of ensuring success for every child in their classroom. In an effort to reach each student, teachers are being trained in different instructional strategies. One of the instructional strategies teachers are implementing is flexible grouping. Flexible grouping is defined as permitting students to move between learning groups as their readiness for a subject changes. Teachers must be cognizant of the fact that students may be behind in one subject at the same time as being above grade level in another subject. Therefore, student groups need to remain flexible to meet the students' individual needs (Hall, 2005).

The problem with most reading instruction is that it is taught primarily in static small groups or whole group settings. Flexible grouping within reading instruction allows students to be appropriately challenged and avoids labeling a student's readiness as static. Flexible grouping "engages students more deeply in their learning, provides for more constant growth and development and provides for a stimulating and exciting classroom" (Theroux, 2005). According to Wiggins (1994), "Educators have great difficulty letting

go of traditional practices despite the fact that they may no longer meet our needs” (p. 450). Flexible grouping within reading instruction allows students to be appropriately challenged and avoids labeling a student's readiness as static (Hess, 2005).

### *Purpose of the Study*

The purpose of this study was to measure the relationship of flexible reading groups on reading achievement and contribute to the research that currently exists on flexible grouping. This strategy may reveal that flexible reading groups are crucial to improving reading achievement.

### Research Question and Hypothesis

Is there a relationship between flexible small reading groups and reading achievement?

### *Hypotheses*

Null: There is no relationship between reading achievement and flexible group instruction.

Alternative: There is a relationship between reading achievement and flexible group instruction.

### *Theoretical Base*

To assist in training educators, researchers have turned to educational theorists who have served as catalysts in the development of educational pedagogies and practices throughout the history of education. Vygotsky (1978) is attributed with connecting his theory of social development to education. Vygotsky's social constructivist approach has influenced education by stating the theory that student's knowledge and skills brought to a situation depend upon the past participation of the individual within their cultural

background (Rozycki & Goldfarb, 2000). Vygotsky's research unveiled the thought that cognitive skills and patterns of thinking are not necessarily determined by innate factors, rather they are products of the activities one has practiced in his or her social institutions and within the culture one grows. This theory is contrasted by previous learning theories such as those approaches which focus on internal or subjective experiences or behaviorist approaches which focus on external experiences (John-Steiner & Mahn, 1996).

Consequently, the society in which children are reared and their personal history is a crucial determinant of the way they will think and learn (Rozycki & Goldfarb, 2000).

“An essential feature of learning is that it awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment” (Rozycki & Goldfarb, p1.). John-Steiner and Mahn commented that learners assume more responsibility for their learning over time as they learn from their peers.

Constructivism is a philosophy that learning is founded on the premise that, by reflecting on their own experiences, people construct their own understanding of the world in which they live. Individuals generate their own rules and mental models, which they use to make sense of their experiences. Learning, therefore, is simply the process of adjusting mental models to accommodate new experiences. It is important for students to understand the purpose behind their learning and to identify with it. When teachers reach their students on an individual level they help their students to make connections between curriculum and prior knowledge. As teachers focus on making connections between the curriculum and students' prior knowledge, students begin to foster a greater



understanding of the skills or concepts being taught and are able to internalize their learning (Learning Focused Schools, 2005).

Vygotsky theorized that human development is a life long process which is dependent upon social interactions and that social learning actually leads to cognitive development (Riddle, 1999). Vygotsky's theory of social development presents the idea that child development is the result of the interactions between children and their parents, and teachers, playmates, and classmates, and brothers and sisters (Leong & Bodrova, 2001.). Vygotsky focused his studies on connections between people and their cultural context from which they primarily interact in shared experiences. He stated that people use tools (language, spoken and written) found in their culture to build their cognitive foundation. Beginning in the early stages of life, babies and young infants use these tools in a social context as a way to communicate their needs; however as development continues these tools transform from a social context toward an internalization of knowledge and higher thinking skills. "Vygotsky viewed egocentric speech as a transition from social speech to internalized thoughts" (Riddle as stated by Driscoll, 1994, p.1). Therefore, according to Vygotsky, thought and language cannot function without each other.

Vygotsky theorized development occurred when others provided a culture of learning through modeling, problem solving, and shared experiences with their peers.

According to John-Steiner and Mahn (1996),

Ecology, history, culture, and family organization play roles in patterning experience and events on the creation of knowledge. The tasks confronting children, such as learning to talk, to walk, and to attach meaning to their experiences, are reflected in cognitive strategies derived in part from the culturally patterned environment in which they are born. (p.191)

The constructivist theory views knowledge as the natural consequence of the constructive process, learning as an active process of constructing knowledge, and instruction as the process of supporting construction of knowledge (Bichelmeyer & Hsu, 1999). Constructivism comes from the learners own perspective, understanding and experiences. Understanding is constructed by the learner's own beliefs, ideas, events, and activities. Constructivism comes from within the learner and is an interaction between what is taught and what the learner already knows (Noel, 1993).

Learning is a social developmental activity where children are active participants within their educational environment. Children construct knowledge, skills, and attitudes through their relationships with books, toys, and culturally specific practices of the home and on the playground as they interact with peers and teachers (Leong & Bodrova, 2001). Within the classroom, the student plays an active role by constantly communicating with the teacher. According to John-Steiner and Mahn (as cited in Chang-Wells & Wells, 1993, p. 59), "There needs to be extended opportunity for discussion and problem-solving in the context of shared activities, in which meaning and action are collaboratively constructed and negotiated."

One aspect of Vygotsky's theory that has received a great deal of attention in the educational realm is his *zone of proximal development*. The zone of proximal development (ZPD) is the "difference between the child's capacity to solve problems on his own, and his capacity to solve them with assistance" (Rozycki & Goldfarb, 2000, p. 4). In other words, it is the range of skill that can be developed with adult guidance or peer collaboration. The notion of ZPD supports the teaching theory that cognitive

development is limited to a certain cognitive range at any given age and full cognitive development requires social interaction along with mediation. Brown (1993) suggested that the

Active agents within the zone of proximal development can include people, adults and children with various degrees of expertise, but it can also include artifacts, such as books, videos, wall displays, scientific equipment and a computer environment intended to support intentional learning. (p.191)

Brown continued to state that “divergent classrooms can become learning communities in which each participant makes significant contributions to the emergent understandings of all members, despite having unequal knowledge concerning the topic under study” (p. 191). Teachers have a changing role within the classroom where they share the teaching and learning with the students through the use of well defined questioning, clarifying, summarizing, and predicting in order to construct text-based knowledge (Brown, 1993).

Considering the zone of proximal development, teaching is most effective when it is based on the child’s next stage of development and the instructor provides educational materials and content which go beyond the child’s current capabilities (Rozycki & Goldfarb, 2000). The teacher’s role is not to simplify the material, rather provide unfamiliar material to learners to encourage them to step up from their current cognitive level to a higher level of understanding (Rozycki & Goldfarb, 2000). “Learning involves everyday conflict-generating problem solving. Inferentially, instruction should provide opportunities for resolving conflicts” (Rozycki & Goldfarb,2000, p.4).

“Traditionally, schools have not promoted environments in which the students play an active role in their own education as well as their peers. Vygotsky’s theory, however, requires the teacher and students to play untraditional roles as they collaborate with each other” (Riddle, 1999, p.1).

The physical classroom, based on Vygotsky's theory would have clusters of desks or tables and work space for peer collaboration and small group instruction. The instruction and physical arrangement of the room would work together to promote and encourage student learning. According to John-Steiner and Mahn (1996), "In classrooms where there is coparticipation, cooperative learning, and joint discovery, environments are created in which students are able to build upon the culturally shaped knowledge and value systems they bring to school" (p.192) The challenge for teachers is to value the differences that each child brings to the classroom and recognize that each student will make a unique contribution to the learning process (John-Steiner & Mahn).

Vygotsky's social learning theory not only applies within the classroom for the students' learning, it can also be applied to professional development for teachers. According to Rozycki and Goldfarb (2000), patterns of thinking are not primarily determined by innate factors, but are the products of the activities practiced in the social institutions of the culture in which the individual grows up. Additionally, interaction with the culture is the agent of change allowing development of higher level thinking (Rozycki & Goldfarb). When educators come together and converse, they are learning in a social context. When they observe one another and provide feedback and when they collaborate during peer coaching they are interacting in a social context and learning new knowledge.

Bruner has been a leader in cognitive psychology for 47 years. His cognitive approach with childhood learning is an alternative to the behaviorist theories which dominated educational and childhood psychology for the first half of the 20<sup>th</sup> century (Hollyman, 2005). Bruner (1960) suggested that people remember facts "With a view

towards meaning and signification, not toward the end of somehow preserving the facts themselves” (p. 58). This theory of cognition is consistent with the constructivist theory which he is most closely associated.

Bruner’s constructivist theory is a general framework for education based upon the study of cognition. He likened much of his theory to child development theorist Jean Piaget and Cultural-Historical theorist Lev Vygotsky (Hollyman, 2005). Bruner (1966), states that a theory of instruction should address four major aspects:

(a) Predisposition towards learning, (b) the ways in which a body of knowledge can be structured so that it can be most readily grasped by the learner, (c) the most effective sequences in which to present material, and (d) the nature and pacing of rewards and punishments. Good methods for structuring knowledge should result in simplifying, generating new propositions, and increasing the manipulation of information. (p.58)

Similar to Vygotsky, Bruner insisted that the instructor and the student should engage in an active dialogue with the instructor and the student communicating freely and consistently throughout the lesson or task. The task of the instructor is to translate information to be learned into a format appropriate to the learner’s current state of understanding (Hollyman, 2005). Bruner (1960) contended that learning is an active process in which learners construct new ideas or concepts based upon their current or past knowledge. The learner constructs hypotheses, and makes decisions, relying on a cognitive structure to do so. According to Hollyman (2005), Bruner suggested the instructor should try and encourage students to discover principals themselves; that education is a process of discovery. Information or knowledge is most effectively gained by personal discovery, and then classified inactively, iconically or symbolically. Bruner

advocated that if students were allowed to pursue concepts on their own they would gain a better understanding.

Bruner's theory of how children construct knowledge involves three basic modes of instruction (Hollyman, 2005). During the early childhood years, infants rely extensively upon inactive models to learn. As they learn to roll over, sit up, and walk, they are learning to do so through their own actions. As children grow, iconic representation becomes dominant. Children begin to understand what pictures and diagrams are and how to do mathematical equations without counting objects. Throughout adolescence, the symbolic mode of learning becomes dominant and children begin to think and act more abstractly. According to Bruner (1960), developmental growth involves mastering each of the increasingly more complex modes- inactive to iconic to symbolic. An implication of Bruner's developmental theories is that children should be provided with study materials, activities, and tools that are matched to and capitalize on their developing cognitive capabilities (Hollyman, 2005). "Curriculum should be organized in a spiral manner so that the student continually builds upon what they have already learned" (Bruner, 1960, p.60).

In addition to Vygotsky and Bruner's constructivist approach to learning, instructional learning theory also has an impact on student achievement. According to Chung and Davies (1995), "Learners should be able to optimize their potential and to hold their own in any setting" (p.73). In addition, learners should feel in control of their instruction and empowered to influence and interact with challenges in their life (Chung & Davies, 1995). The major variables that influence the instructional learning theory and its effects on student learning are: the experience of a learner, the importance of the task,

a learner's role in self-management, and the role of the educator as a facilitator (Chung & Davies, 1995).

Gagne is credited with his extensive work on the instructional learning theory. The instructional learning theory is defined as “an integrated set of principals, based upon learning theory, other relevant theories, and sound replicable research, that permits one to predict the effects of specific instructional conditions on a learner's cognitive processing and the resulting learned capabilities” (Smith & Ragan, 1996, p.728 ).

The instructional theory takes part in the classroom when the teachers are creating their lessons for the students. Educators need to be aware of what they are going to teach, how they will teach it, why they are teaching it, and what they want their students to learn.

Gagne's theory relates to the lesson planning portion of teaching by encompassing several components. The components of the instructional theory are: description of desired end states of instruction, description of goal-relevant initial states of learners prior to instruction, explication of the transmission process from initial to desired states, specification of instructional conditions that promote transition and assessment of performance and instructional effects (Smith & Ragan, 1996). Gagne is attributed with the idea that instruction must be matched to a set of objectives; teachers need to classify objectives as knowledge, skills, development, disposition, and experience prior to teaching the lesson.

Gagne's contribution to education in large has been his defining the learning hierarchies and description of guidance thinking. He has ascertained that “instruction must not necessarily include all events on all occasions, as learners are often able to

supply the processing that the events evoke without external prompting” (Smith & Ragan, 1996, p.728).

### *Nature of the Study*

The proposed study employed a quasi-experimental design to test the theory of flexible grouping which compares flexible reading groups to traditional whole group instruction and its relationship to reading achievement. The results of this study may be generalizable to other grade levels due to the nature of the implementation of the process. The implementation of flexible groups enables the educator to meet the needs of the students at their instructional level. The grouping structure enables educators to meet all developmental needs regardless of grade level or readiness (Fountas & Pinnell, 2000). The independent variable, flexible grouping, was defined as allowing students to move between groups as their readiness level changes. The dependent variable was reading achievement scores as tested by the standardized test of achievement in reading (STAR) test. The control and intervening variable was teacher implementation of groups.

This quantitative study is termed a pretest, posttest quasi-experimental design. The researcher did not randomly assign the participants to the classrooms because of convenience cluster sampling. Student participants were given the STAR test prior to receiving any treatment. After the pretest data had been gathered, the treatment was initiated for the next 8 weeks. At the close of the study, the researcher gathered posttest data. Statistical analyses were conducted to determine differences in reading achievement scores between the students in the two instructional method groups.

The population of the study involved fifth grade students and teachers in Camden County, Georgia. The students and teachers were in the school district where the



researcher works. There are approximately 900 elementary students and 270 elementary teachers.

The researcher used convenience cluster sampling because the classes had already been formed prior to the study taking place. The sample was taken from one elementary school in the county and comprised about 130 students from four homerooms and one reading teacher. The researcher chose this sample because she works at the school in which the study was conducted, however the researcher does not have any interaction with the students or the pedagogy of the teacher. The rationale for this sample construction is founded upon the researcher having already spoken with the administration about the pending study and they had agreed to let the study take place.

The researcher utilized one form of data collection, the STAR test, to measure for student reading achievement. The STAR test has been tested for reliability and validity by the company. Four direct methods were used to estimate the reliability of the STAR reading computer-adaptive test: the split-half method, the test-retest method, the alternate forms method, and the estimation of generic reliability. The STAR reading test correlates with several standardized tests which provide support for STAR Reading construct validity.

Internal validity could be a concern in the study. Teachers will have students with differing levels of intelligence within their classrooms with some classes having a greater mean intelligence than others. Therefore, the pretest and the posttest may be skewed by natural causes (i.e., smarter students) and not necessarily by the program.

*Operational Definitions of Technical Terms*

1. Flexible Grouping- permitting students to move between learning groups as their readiness for a subject changes (Hall, 2005).
2. Traditional Direct Instruction- A teacher centered teaching style that allows the instructor to gather material from a variety of sources, present material to students in a lectured-condensed format, and move students from one point of understanding to another (Anderson & Adams, 1992).
3. Whole group instruction- Instruction that is used to introduce new materials and strategies to the entire class. Working with the whole class to introduce new concepts can build common experiences and provide a shared basis for further exploration, problem solving, and skill development.
4. Instructional Learning Theory- an integrated set of principals, based upon learning theory, other relevant theories, and sound replicable research, that permits one to predict the effects of specific instructional conditions on a learner's cognitive processing and the resulting learned capabilities
5. Constructivism- a philosophy that learning is founded on the premise that, by reflecting on our own experiences, we construct our own understanding of the world we live in (Rozycki, & Goldfarb, 2000).

*Assumptions, Limitations, and Scope*

Assumptions associated with this study include, but are not limited to the following:

1. The teacher involved in this study is competent; she has a strong grasp on reading instruction and is aware of the varying needs of students.
2. The teacher involved in this study is fully capable of conducting effective flexible reading groups if given the proper training.
3. The reading teacher involved fully implemented flexible reading groups and assessed student's needs on an ongoing basis.
4. The students involved in the study put forth their best effort during both the pretest and posttest and all students were motivated learners.
5. The length of the study (8 weeks) may serve as a limitation.
6. Parental involvement may serve as a limitation.

The assumption that the reading teacher will fully implement flexible reading groups will be verified by the researcher collecting the weekly reading lesson plans from the reading teacher. The reading teacher will have evidence of the varied groups on her plan and make note of student changes as they occur.

These assumptions may also be included as potential weaknesses of the proposed study. Behavior management, teacher attitude, and time management play important roles within the classroom and effect how much instruction is taught. When considering the study, a teacher's personality plays an important role. Each teacher is his or her own person and the 'withitness' of the teacher can impact the quality of instruction. An extremely 'withit' teacher will recognize the needs of the students much earlier than an inept teacher.

Weaknesses not controlled by the researcher are the students' motivation, the teacher's attitude toward the grouping, and the parental involvement at home. If the

student has a positive attitude toward his or her reading achievement, the amount of learning that will take place may increase. Similarly, if the student lacks motivation for learning, the outcome may not be positive. If the teacher has a negative attitude toward the grouping strategy, he or she may not implement it correctly or use the strategy on a daily basis. The degree of implementation may skew the results of the study tremendously. Finally, the amount of parental support at home can make an enormous difference in the final outcome of learning growth. Students who have parents who will work with them at home, provide tutoring or go the extra mile to increase their learning have an advantage over students who do not have this support.

Utilizing only one type of teaching methodology for this study presented a limitation. This study was confined to flexible reading groups. If other teaching strategies are employed, such as differentiated instruction, collaboration, peer tutoring, and a reading resource teacher for this study, would the students overall reading fluency improve at a greater rate in conjunction with flexible reading groups?

This study may be generalized to other elementary schools and fifth grade classes because it implements a teaching strategy that is adaptable to any reading curriculum. Flexible grouping strategy is a teaching method, not a restructuring of the curriculum. The researcher did not control for the assignment of classes, however, the classes were bound in the same grade level and were both heterogeneously grouped by ethnicity, academic ability, gender, and socioeconomic status.

### *Significance of the Study*

The significance of this study was to determine whether a relationship was present between flexible reading groups and reading achievement. This study contributes to the

most recent research on flexible grouping and reading instruction by focusing on the implementation of flexible reading groups and establishing data to support the importance of the extension of this research. Providing this research will enable other teacher leaders and administrators to examine their current reading instruction, teaching pedagogy, and student expectations; this research will assist teachers in making a decision of whether or not flexible grouping has made an impact on student reading achievement thus increasing reading fluency, comprehension, and vocabulary. It will provide educators with knowledge of reading achievement, the flexible grouping structure, and teaching to the individual needs of the students rather than the class as a whole. Flexible reading groups should therefore be viewed as a methodology to help teachers stream line their instruction and meet the needs of all learners, rather than another program that has been mandated from the administration.

The amount of research available on flexible groups as it pertains to reading fluency is limited and further research is recommended in this area. This study is significant to elementary and remedial teachers who are attempting to individualize reading instruction and improve reading achievement.

This study will contribute to social change by providing educators with further understanding of the diverse needs of students. When considering the theories of Vygotsky, Bruner, Gagne, and Lewin, educators will be able to consider the varying cultural, educational, and linguistic backgrounds of each child in their classroom. These considerations may enable them to further develop lessons which should ignite active participation from each child and provide them an education that meets their individual needs. In addition, this study instigates social change by possibly causing educators to

become more aware of the extreme diversity in our nation. The new awareness will hopefully promote a greater understanding of the need to know each student in the classroom; not just in an academic matter, yet in a personal manner as well. By meeting the needs of students, each child can have the opportunity to become successful in some manner and will hopefully become a positive contributing member of society.

*Transition Statement*

This study was conducted to determine whether or not flexible reading groups improved reading achievement among fifth grade students. Flexible reading groups are one of the ways to meet students individual reading needs. Learning opportunities are provided based upon student needs, interests, and purposes. Flexibility is a key term when determining what a student needs and how he or she will learn (Ediger, 2001).

Teachers need to make connections between curriculum and students prior knowledge. When teachers focus on making connections between the curriculum and students prior knowledge, students begin to foster a greater understanding of the skills or concepts being taught and are able to internalize their learning (Learning Focused Schools, 2005).

## SECTION 2

### REVIEW OF THE LITERATURE

#### Introduction

The establishment of the No Child Left behind Act (NCLB, 2002) has endorsed a national goal that seems almost unobtainable. The act stipulates that all students, regardless of their learning abilities, will meet annual standards of achievement by being proficient readers by the year 2014 (Samuels & Farstrup, 2006). Given this challenging goal, educators are looking for ways to improve student achievement and create life long learners. When considering reading achievement, educators are aware that, if students can become fluent readers, attaining the national goal will be slightly easier (Samuels & Farstrup). In an attempt to increase reading achievement, educators need to leave traditional practices of reading instruction and implement authentic teaching practices that will meet individual student needs; among these authentic teaching practices is flexible grouping (Wiggins, 1994).

Comprehension strategy instruction is a current form of instruction that will aide teachers in improving reading achievement (Keene & Zimmermann, 2007). Instruction that actively engages students in asking questions, summarizing and synthesizing text, and identifying important ideas improves comprehension (Keene & Zimmermann). Using background knowledge, inferring, creating mental images, and monitoring comprehension also contribute to active and engaged reading. Combined with explicit instruction in decoding, fluency, word analysis, text structures, and vocabulary students will begin to become proficient readers, shifting from one strategy to another in a somewhat effortless manner.

Fluency and student learning have long been a topic of discussion among educators. Reading fluency research is traceable back for a century, and student learning research is evident as early as the first school house was introduced (Samuels & Farstrup, 2006). Reading fluency is defined as the “ability to decode and comprehend at the same time” (Samuels & Farstrup, p.24). Two significant factors influence student gains with reading fluency: the readability of the text and the topic of the text. With regard to readability of the text, students may be able to read fluently at one level (e.g., third grade), but not be fluent on another level (e.g., fifth grade). In addition to readability, the topic of the text is important because the more interested or familiar a student is with the text, the more fluently the student will read. In addition to readability and topic of text, oral reading speed, accuracy, and expression are indicators of fluency.

Education has seen many different forms of grouping concepts come and go as the paradigm shifts from one theory to another. Over the past 20 years, education has seen homogeneous grouping, ability grouping, tracking, and now flexible grouping. “Classroom reading instruction has been characterized by ability groups; instructional groups of children sorted out by their teachers’ assessments of their reading achievement—since World War I. However, a great deal of research conducted during the past two decades has concluded that ability grouping can create serious problems for students that are social in nature, but cognitive in effect” (Barr, as cited in Flood, Flood, Lapp, & Nagel, 1992, p.608). As a result of the research, an alternative grouping structure has given rise within the classroom: flexible groups.

Flexible grouping allows students to work in mixed groups depending on the goal of the learning task at hand (Optiz, 1999). Flexible grouping is utilized when the teacher



reads a story aloud and extends the story through guided reading instruction, or a shared reading lesson (Optiz). While instructing through the flexible group model, teachers will employ a variety of grouping patterns to enhance student learning.

### Fluency Research

Oral reading has been a part of the American schools and culture since the colonial times. Very few homes had books and usually only one person within the household could read; therefore, when reading occurred, someone in the house had to read it aloud. Expressive oral reading was a focus in the classroom because of its prominence in people's lives for entertainment and sharing information (Samuels & Farstrup, 2006).

By the end of the 19<sup>th</sup> century, oral reading instruction began to fall by the wayside. Reading material was more accessible, and silent reading became a common way of life. Researchers such as Francis Parker (Hyatt, as cited in Samuel & Farstrup, 2006) began to challenge the effectiveness of oral reading fluency instruction by arguing that "oral reading in schools placed inappropriate emphasis on elocution over understanding" (Samuel & Farstrup, 2006, p. 7). Edmund Huey (as cited in Samuels & Farstrup, 2006, p. 8) also noted that although oral reading was an activity founded in the schools, silent reading predominated in real life). Throughout the 20<sup>th</sup> century, silent reading with an emphasis on comprehension was the dominant instructional force within America's classrooms. According to Smith (2002) "schools seemed to become obsessed with the notion of silent reading for improving comprehension" (p.9) Silent reading became such a dominant focus of instruction that new reading programs began to emerge. These programs focused exclusively on silent reading while neglecting fluency

instruction of any sort. Beginning readers were taught to associate the meaning directly from the printed words, without making an oral representation of the words. Even silent reading that involved internal sounding of words was discouraged (Rasinski, 2006). According to Rasinski and Zutell (1996), training for teachers in reading instruction provided little, if any in-depth focus on defining, teaching, or assessing reading fluency.

As research continued, it began to reveal that even with all the efforts to exclude oral reading from reading instruction, it continued to be the mainstay for educators. Round-robin reading was the dominant force of reading instruction from the middle of the 20<sup>th</sup> century initiating in the early 1950s and continuing through to the present. The primary format for this form of reading instruction is oral reading; with the change from reading for expression to reading for word recognition (Rasinski, 2006).

“Over the past three decades, significant advances in our understanding of reading have caused reading scholars to look more closely at reading fluency” (Rasinski, 2006, p. 11). One of the most important milestones in reading fluency research was the theory of automatic information processing in reading by LaBerge and Samuels (1974). They argued that the “surface-level processing of words in reading (visual perception, sounding, phrasing words together, etc.) should ideally be done at an automatic level. In doing so, they can reserve their finite cognitive resources for the more important task in reading; comprehension” (Rasinski, 2006, p 12). LaBerge and Samuels hypothesized that “to many readers, poor comprehension could be explained by too much investment in their cognitive resources in the surface-level aspects of reading- slow, laborious, conscious-filled decoding of words. This investment of resources could be invested in making sense of what they read” (Rasinski, 2006, p.12). LaBerge and Samuels used a

variety of testing instruments to measure independent reading and time on task. They found that lower ability students (who spent more time reading) did not necessarily achieve greater gains. In fact, they found they stayed about the same due to inattention to text and lack of motivation to continually read for an extended period of time. In contrast, LaBerge and Samuels found that high achieving students had to read independently for at least 40 minutes to make gains. LaBerge and Samuels found that extra independent reading does make a difference in student reading fluency; however the time spent needs to match the students' readability.

Stanovich refined LaBerge and Samuels's theory and called it the interactive compensatory explanation of reading fluency. He contended the difference between good and poor readers was in the way they processed text. Poor readers are less efficient at employing the automatic, attention-free, bottom-up processes in decoding reading. Poor readers use automatic word decoding processes that employ context bound strategies which use significant amounts of cognitive resources. When this occurs, there are little cognitive resources available for comprehension. Whereas good readers are able to use automatic, attention-free, bottom-up processes for word decoding; therefore, reserving their limited top-down, contextually dependent processes for comprehending (Rasinski, 2006).

During the same time that LaBerge and Samuels were working on their automatic information processing theory, Chomsky was testing a method for improving reading. Her method included repeated reading just as LaBerge and Samuel's did, however her method went a step further to include an approach called the "Neurological Impress Method." Chomsky's method is referred to today as *assisted reading* or *reading while*

*listening* (Rasinski, 2006). In the study, “Chomsky asked struggling readers to repeatedly read texts while simultaneously listening to audiotaped versions of the same text read fluently to them until they thought they could read the text fluently” (Rasinski, p.13).

In 1980, Schreiber offered yet another alternative to the automatic information processing theory. Schreiber argued that “through practice students were developing a greater awareness of the prosodic features of oral reading and speech” (Rasinski, 2006, p.13). He stated that “dysfluent readers tend to read word-by-word which does not lend itself to prosodic and syntactically appropriate phrased reading that carries meaning” (Rasinski, 2006, p. 14). Through repeated readings, even dysfluent readers are able to read with more prose and syntactic essence; therefore, their level of surface-level processing improves.

Routes to improved reading fluency are few. LaBerge and Samuels (1974), Stanovich (1980), Chomsky (1976), and Schreiber (1980) have noted that one route appears to be repeated reading. According to Samuels (2006), “there is an abundance of correlational evidence in support of this observation that students who read a lot are good readers and those who do not read a lot tend to be poor readers” (p.15) Dowhower, (1989, 1994) has reported studies of the repeated reading method and stated that through this method, “students’ reading rates, word recognition, and comprehension of both literal and higher level information improved” (Rasinski, 2006, p. 15).

Repeated reading methods have become the basis for fluency instruction. The most common approach to teaching the repeated reading model is for the teacher to read the story aloud, modeling fluent and expressive reading. Students then read the story or

passage independently once, and then reread it three more times as either partner reads, reading to someone at home, or to another student at school. Samuels (2006) noted that the students who participate in this form of fluency instruction have significant gains in their reading rate, accuracy, and word recognition.

In addition to the repeated reading method, other instructional methods have arose which specifically aim at improving fluency. Holdaway introduced the shared-book experience (SBE), or more commonly known as shared reading. This form of instruction is widely used both as a fluency improvement strategy and for improving comprehension. In SBE, the teacher introduces the book, reads it aloud to the students and then the students re-read it again with the teacher either individually or in a small group (Rasinski, 2006).

Hoffman has been credited with the oral recitation lesson (ORL) as a substitute for a traditional basal reading lesson. The teacher reads the story to the class then discusses the story including a variety of instructional aides. The students then reread a section of the story with the teacher. Following the rereading with the teacher, the students then continue to practice the particular passage along with previously read passages and stories. The teacher checks periodically to ensure the students are improving their accuracy and fluency.

Stahl and Heubach (2005) created a modified version of Hoffman's ORL. They have named it Fluency-Oriented Reading Instruction (FORI). The FORI method works with the basal reading program and lessons begin with the teacher reading a passage aloud to the students. Following the story, the teacher enriches the lesson with a number of instructional aides for comprehension and vocabulary development. The students then

take the passage home and reread it with someone at home, and then they bring the passage back to school and reread it with a partner.

One final form of fluency instruction is the Fluency Development Lesson (FDL) created by Rasinski, Padak, Linek, and Sturttvantz (1994). The FDL is considered a supplement to the basal reading program and employs the use of poetry. The teacher reads and discusses a poem with the class. The class then choral reads the poem with the teacher several times. Students then pair up and practice reading the poem together three more times. Following the paired reading exercise, the partners have to perform the text to the class.

Each of these conceptualizations of reading fluency: automatic information processing, assisted reading and prosodic reading are compelling and have added to the body of research on reading fluency. Each theory can be considered a persuasive central element of current reading research aimed at reading fluency and instruction. These studies have laid the foreground to developing a significant relationship between reading fluency and general measurements of reading achievement.

#### *Vocabulary Instruction Research*

Lubliner (2005) conducted a study on the effects of a multifaceted, metacognitive vocabulary intervention on the reading comprehension and vocabulary achievement of fifth graders. Although she focused on vocabulary and comprehension, it relates to reading fluency through the interconnectedness of fluency and comprehension. When students struggle with fluency, one of the stumbling blocks is a lack of developed vocabulary. Lubliner stated that limited vocabulary is an important factor in the underachievement of children from disadvantaged homes, “Children with larger

vocabularies find reading easier, read more widely, and do better in school.

Conversely, children who enter school with limited vocabulary find reading difficult, resist reading, learn fewer words, and consequently fall further behind” (Lubliner, p.1).

Lubliner suggested that a different approach to vocabulary instruction is needed to improve reading achievement. Therefore, Lubliner employed the cognitive strategy comprehensive vocabulary development. “The instruction focused on two types of metacognitive knowledge: self-monitoring and self-regulation. The intent of the instruction was to help children monitor comprehension of words and internalize and implement word-learning strategies to increase comprehension of natural texts” (Lubliner, 2005, p. 3). The comprehensive vocabulary development was designed and based on a convergence of the vocabulary research, which supported the effectiveness of mixed methods of instruction.

In addition to Lubliner’s extensive work with vocabulary instruction, Stahl’s work provides important and bountiful information on vocabulary acquisition and on effective methodologies and activities. Stahl (1999) argued that teachers need to follow three principals of word acquisition in order for learning to be considered authentic. His three principles of instruction are:

1. Provide definitional and contextual information about a word’s meaning.
2. Provide multiple exposures to meaningful information about words.
3. Actively involve children in learning word meanings.

Stahl (1999) expounded on his three principles by stating “When integrated into content and motivating curriculum, word learning is authentic and purposeful . . . . “It takes a child a least 12 experiences with a word to acquire it and own it” (p.8) Allowing

students to practice their words in multiple facets, such as writing, writing about reading, reading, and conversing students are moving the words into their long term memory where they will be able to utilize them on a regular basis.

### *Comprehension Instruction Research*

Students expand their reading repertoire with every text they read. Whether they are researching a topic on the internet, reading a poem, or delving into a novel they are improving their vocabulary, fluency, and comprehension with each word. Fountas and Pinnell (2001) stated that reading comprehension “involves using complex strategy systems to construct meaning. Strategies are both conscious and unconscious; they are used simultaneously; and they access, use, and modify the knowledge the reader already has” (p. 357).

The prior knowledge students bring to reading varies greatly and can influence their comprehension immensely (Fountas & Pinnell, 2001). This prior knowledge is organized and stored in the brain, so that readers can, as needed, seek, select, and use information (Fountas & Pinnell). This building block of reading can be described as schemata. According to Vacca and Vacca (1999),

Schemata influences reading comprehension in three ways:

1. Schemata provide a framework for learning that allows readers to seek and select information that is relevant to their purposes for reading.
2. Schema helps readers to organize text information.
3. Schema helps readers elaborate information. (p.315)

The concept of a schematic structure helps us think about the reader’s knowledge as an organized set of information (Fountas & Pinnell, 2001). The reader’s knowledge is organized in the mind according to the person’s current understanding; these mental models are accessed when the reader makes connections, and they are modified as the



reader takes on new knowledge (Fountas & Pinnell). As one reads, the connections he or she makes with his or her own sets of knowledge makes it possible to engage in higher-level comprehension strategies of connecting, inferring, summarizing, synthesizing, analyzing, and critiquing (Fountas & Pinnell).

While reading, readers process information from the text. This processing allows for connections to evolve. Making connections to the text sets the scene for higher levels of comprehension. Readers begin to draw on their personal experiences, their knowledge of the world, and their previous experiences with text as a basis for connecting, inferring, summarizing, synthesizing, analyzing, and critiquing. “If readers approach the reading of each text as an isolated experience, one of processing words or trying to remember facts without making connections to other information, they will not be able to engage in these complex cognitive activities, all of which require the application of previous knowledge” (Fountas & Pinnell, 2001, p. 358).

“Inferring involves going beyond the literal meaning of a text to derive what is not there but is implied” (Fountas & Pinnell, 2001, p. 360). When readers infer, they use the connections they made and information they have extracted from the text to form tentative theories and create sensory images. Readers can determine meanings of unknown words by using their schema, paying attention to textual and picture clues, rereading, and engaging in conversations with others. Inferring encourages readers to make predictions about the text and confirm or contradict their predictions as they read. Inferring also initiates unique interpretations of the text and lets readers know they need to look beyond the words into the meaning when the answer is not explicitly stated in the text (Miller, 2002).

When readers summarize text, they are putting information together while they read. “The reader identifies information, extracts it from print, and forms an ongoing summary of what it means” (Fountas & Pinnell, 2001, 361). While reading, it is important for readers to remember important ideas, events, details, or other information. “The organizing and reorganizing process not only supports memory but also helps readers sort ideas into useful categories that can be connected” (Fountas & Pinnell, p.361). Summarizing is an in the head strategy that helps the reader comprehend the text. Readers should be able to abstract important ideas and carry them forward as tools for thought.

Synthesizing requires bringing together information from the text and from personal, world, and literary knowledge to create new understanding (Fountas & Pinnell, 2001). While synthesizing, students are getting the big picture; they are creating newly organized and formed understandings that are different from the text and also different from the reader’s previous understandings (Fountas & Pinnell). The reader begins to see the relationship between ideas and they expand their personal understandings; they begin to link literary themes to both their personal life and the world. According to Miller (2002), while synthesizing readers monitor overall meaning, important concepts, and themes in text as they read. They will capitalize on opportunities to share, recommend, and criticize books they have read and extend their synthesis of the literal meaning of the text to an inferential level. In analyzing, readers adopt the role of the examiner. Fountas and Pinnell (2001) stated,

They are not simply experiencing the text or gaining information from it, but they are:

- 1) Standing back and looking carefully at the text.

- 2) Determining how the text is organized, how it “works”.
  - 3) Discovering how the literary elements of the text work together to convey meaning and emotion.
  - 4) Thinking about how writing, graphic features, illustrations, and format work together.
- Through analyzing, readers gain a deeper understanding of a text by looking at the elements and how they fit together (p. 363).

### *Flexible Group Research*

Teachers have faced the dilemma of working with students with differing abilities, home lives, and school preparation since the days of the one room school house. Considering the varying backgrounds of students “Various sorts of instructional groups have been considered good and effective at different times throughout the history of reading instruction” (Flood, Lapp, Flood, & Nagel, 1992, p. 608).

With the advent of standardized tests and IQ testing, students were often grouped into levels of ability (ability grouping) which only reflected a students’ overall reading achievement and remained stagnant throughout the entire year regardless of the student’s progress or lack thereof (Optiz, 2005). Opinions have varied over the years as to the effectiveness of ability grouping. In the 1940’s, ability groups were seen as a good form of instruction for the ‘slow’ students, but bad for the ‘bright’ students (Flood et al., 1992). Twenty years later, ability grouping was seen as a good strategy for teaching the gifted students and some educational leaders still attain to this concept even today (Feldhusen as cited in Flood et al., 1992).

According to Barr (as cited in Flood et al., 1992), ability groups have used a variety of methodologies, yet continue to have a negative impact on student achievement. This negative impact is accounted for by the notion that students have labels attached to them and it sorts them into a hierarchy within the classroom.

When the groups are formed, each reading group is treated differently depending on the perceived level of the students. Students in different groups read from different primers and follow a different curriculum throughout the year. Unfortunately, the thought was that low achieving students could not think critically and were often given low task skills to accomplish. Ability grouping also ignored the reasons behind why students were struggling or why they were excelling (Caldwell & Ford, 2002). If students struggled in reading, they were all placed in the same group regardless of strengths or weaknesses within your reading. This also held true for the high achievers, if you read well, then you were all placed in the same group regardless of what your strengths and weaknesses were. In addition, the small groups were driven by a skills based model of reading, instruction followed a delivery model, questioning was defined by the teachers manual, independent practice meant workbook pages, and assessment meant waiting until the end of the unit (Caldwell & Ford).

Tracking with ability grouping has also played a large part in the classrooms throughout the past. According to the National Association of School Psychologists (NASP, 2005), tracking is a permanent approach in which students are assessed and placed into specific classrooms with peers of similar ability. It is a form of whole group instruction which designates a particular curriculum that is delivered for all students within the classroom at the same pace. This form of grouping has been shown through research (Marzano et al., 2001) as being a negative experience for many students and has also demonstrated that it disproportionately impacts minority students (NASP).

A solution for the teachers is flexible grouping and differentiated instruction. According to Tomlinson (as cited by Hess, 2005), true differentiation requires the

realization that every learner is different in their readiness, interests, and learning profiles. Teachers can set up classrooms where every one works on the same essential skills, but uses different content, processes, and products to get there.

Differentiated instruction holds the theory that not all students are alike; therefore, instruction applies an approach to teaching and learning where students have multiple options for taking in information and making sense of ideas (Hall, 2005). The theory of differentiated instruction stresses the importance that “instructional approaches should vary and be adapted in relation to the individual and diverse students in the classroom” (Hall, p. 1). Differentiated instruction “requires teachers to be flexible in their approach to teaching and adjusting the curriculum and presentation of information to learners rather than expecting students to modify themselves for the curriculum” (Hall, p 1).

The intent of differentiated instruction is to maximize classroom instruction by emphasizing each student’s growth and individual success by meeting the student where he or she is and assisting him or her in their learning process (Hall, 2005). Teachers must become flexible when implementing differentiated instruction and realize that it requires them to respond to the individual needs of all the learners in their classroom. This practice ensures equal access to curriculum for all students and meets the students’ individual learning needs. Differentiation is a common sense approach to addressing the needs of all learners while continuing to focus on best practices in instruction, promote equity, and sustain high expectations. This concept is the solution to the age old “teach to the middle and hope for the best” concept.

According to Hall (2005), within differentiated classrooms, teachers are leaders who establish learning goals for their students. However, the teachers are cognizant of the

individual needs of their students. Therefore, invite the learners to become involved in the process and ask for their insight to the learning goals.

Embedded within differentiated instruction are the concepts of scaffolding and flexible grouping. The scaffolding process matches the activity to the learners needs for both guided and independent practice while providing insight to the more difficult concepts in an effort to constantly push the student toward the next level. This concept builds a bridge between where students are and where they are heading (Hall, 2005).

Lewin's field theory suggests looking to the nature of the group task in an attempt to understand the groups' behavior. "Lewin was able to argue that people may come to a group with very different dispositions, but if they share a common objective, they are likely to act together to achieve it" (Smith, 2001, p. 4). When considering the environment of the classroom and the student make-up, the teacher needs to consider the total situation as interdependent factors. Lewin (1936) described a person's life space as being differentiated into two levels: general life situation and momentary situation. "One's general life situation encompasses a broader sphere of one's experience and disposition. It is more constant and serves as background which affects the state of the person and thus the reactions in the momentary situation" (Chak, 2002, p.79). However, the teacher will not be successful with instruction if he or she does not understand the psychological world in which the child lives (Chak, 2002). Lewin (1951/1997) stated that a prerequisite for guiding a child is to differentiate between how an adult sees a situation and that situation which exists for the child. "The concept of total situation allows for the inclusion of multiple factors in the mutually influencing dynamic relation between the

child and his or her environment. Moreover, it takes into account simultaneously both background information and situational information” (Chak, p 79).

When designing flexible small groups for differentiated instruction, the teacher may form the groups based on student interests, skill or strategy needs and their ability to work collaboratively and cooperatively with others. The most popular form of differentiated instruction with flexible grouping used today is in the form of guided reading groups. The reading groups contain students who are on a similar reading level and are working on the same or similar concepts. Students come together in their group and receive a focused reading lesson using a text on the instructional level which is within their reach of success. The text should provide some form of higher order thinking and opportunities for problem solving. The teacher acts as a facilitator and assists the students to become more confident sophisticated readers by using questioning strategies and on going assessment techniques.

The reading groups may also serve the purpose of skill intervention, keeping in mind these groups are only temporary; and, as the students’ cognitive levels change, so too must the group’s. Reading groups are not limited to reading for understanding, but can be differentiated in the sense that some groups may be fluent readers and would benefit more from a shared reading literature circle where they compare and contrast genres or rewrite the story with a different ending. The teacher may choose to use flexible groups to study a particular theme for science or social studies.

Dividing the students into their flexible groups allows the teacher to teach the same objective while meeting each group’s needs. One group can read nonfiction books on the topic and write a book review while another group uses graphic organizers to

categorize items and yet a third group may read fictional stories and compare and contrast their findings to the group who had the nonfiction readers. Everyone is working on the same topic however they are acquiring their knowledge in different ways (Tomlinson, as cited in Hess, 2005).

Small group instruction that occurs today is considered to be flexible. The current implementation of flexible small groups in classrooms is driven by a shift in philosophical and theoretical thinking. Instruction through the use of small groups has been influenced by the constructivist approach of Vygotsky. “Groups are flexible according to observed performances, instruction is built through scaffolding experiences, strategic questions follow the reader’s lead, independent practice means practice with real reading and writing, and assessment is an ongoing, never ending process” (Caldwell & Ford, 2002, p. 25). Students are constantly moving in and out of their groups according to the lesson or skill being taught. Small groups today do not look or feel like the small groups of the past.

“The foundation for flexible grouping lies in the building of a sense of community; Realizing that they are valued and have a common purpose, students are better able to work with each other” (Gunning, as cited in Optiz, 1998, p.10). Flexible groups provide a variety of purposes. The use of flexible groups allows students to work with classmates of various skills and interests, students are working collaboratively to solve real problems and students are not given a label which classifies them according to a perceived ability. Students are grouped in a variety of ways so the teacher can provide appropriate instruction depending on the purpose of the group, the groups are fluid, all



groups receive higher order thinking activities, and deliberate efforts are made to treat all groups similarly (Opitz, 1998).

Students involved in flexible grouping receive more time getting instruction where they need the most support from the teacher. The reason for this is that the teacher is constantly performing on going assessments of his or her students. Young children are constantly growing cognitively; therefore, the teacher must assess continuously for new acquisition of skills and concepts as well as areas that have not been acquired (Wren, 2005).

According to Marzano et al. (2001), when not overused, flexible grouping can be a positive learning strategy. This type of homogeneous grouping by skill level has been demonstrated to be effective for instruction in the areas of mathematics and reading. The key to making flexible grouping a positive experience is to monitor student progress closely and allow for remixing of the groups. When teachers monitor and change groups regularly, they remove the negative stigma that is often associated with grouping structures. “Flexible grouping surrounding student skills and across age grouping allows students performing at various levels to share their combined areas of knowledge and strength. If utilized effectively and in a sensitive manner, the method of flexible grouping does not have to carry a negative stigma for the learner” (Marzano et al., p.3).

A variety of variables exist for the implementation of flexible groups. The groups may vary “in terms of why they were established and who they will contain, how large they will be, and what materials will be used, but they should always encourage interactions among students as well as between the teacher and students” (Flood et al., 1992, p.25). Effective flexible groups involve a menagerie of learning patterns as well.

The patterns include: working individually, cooperative groups, partner pairs, homogeneous small groups, and heterogeneous small groups.

The basis for the grouping needs to be determined. Certain students have a need for direct instruction in a skill that relates to a particular lesson. Students who share the same interests and have similar work habits may be placed together; often because of modeling provided by some students. Knowledge of content and strategies may place students in the same group and cause them to enter into a discussion because of the modeling they provide. The task criterion may dictate that certain students work together because they succeed best through certain types of projects, and social reasons help place leaders or followers in groups together. In addition to the above grouping structures, two other group formations are random selection and student choice (Flood et al., 1992).

Once the groups are formed, the next sets of variables include the formats for the groups. Although the teachers interact with the students in all situations they are not needed in a directive position. The four usual groups include: (a) individuals, (b) dyads, (c) groups of three or four, and (d) large groups of seven to ten (Flood et al., 1992).

When implementing flexible groups, the teacher's role will vary according to the individual groups needs. The teacher will act as a facilitator with some groups; he or she will be a coach in other groups and provide direct instruction with other groups. Regardless of the particular role the teacher initiates with each group, it is of utmost importance that the teacher remembers that he or she is not always teaching for mastery, he or she is attempting to expose all the students to the same grade level content in a variety of ways (Optiz, 1999). In essence, "You are giving all students the opportunity to

learn to read by reading with necessary support from others, you are teaching the reader rather than the reading” (Optiz, 1999, p. 10).

Despite the shift in paradigms and methodologies, flexible group instruction does not provide the best education for all students (Fiedler, Lange, & Winebrenner, 2002). Fiedler et al. (2002) contended that the anti-tracking movement has suddenly become anti-ability grouping resulting in serious side effects for gifted students. They asserted that ability grouping and tracking does not imply “permanently locking students out settings that are appropriately challenging them; it means placing them with others whose learning needs are similar to theirs for whatever length of time works best” (Fiedler et al., p.108). When gifted or high achieving students are placed together in the same setting (i.e. classroom or group), their intellectual experience is actually enriched because they are not the only one with “right” answer all the time. “There is nothing quite so humbling to bright individuals as discovering that there are other students in the group who are equally capable or even more knowledgeable about given topics than they are” (Fiedler et al., p.108).

Over the years, the claim that tracking and ability grouping have negative effects on students has been publicized with an emphasis placed on the inequitable use of assessment procedures that resulted in minority and economically disadvantaged students being underrepresented in high ability classes. However according to Fiedler et al. (2002), to eliminate these strategies because of claims of inequitable procedures is “tantamount to throwing the baby out with the bath water.” (p. 108) Furthermore, signaling out racial and ethnic minority students as the only disenfranchised group is misleading. Fiedler et al. concluded by stating while the educational community moves

toward heterogeneity for students who would benefit more from working in mixed ability groups, it should not deny gifted students the right to educational arrangements that maximize their learning.

Fiedler et al. (2002) are not the only researchers who oppose flexible grouping or homogeneous grouping. Hallinan (1994) asserted that most of the negative characteristics of tracking can be attributed to the school environment. Schools that fail to provide support needed to make tracking effective usually fail at providing a positive environment (Hallinan). "Tracking itself is not designed to be a political tool, nor is it meant to influence the normative climate of a school. To assert that tracking is a failure because it is associated with a set of negative norms or a discriminatory political or social climate is a misplaced criticism" (Hallinan, p.89). Tracking can be a positive tool if the school climate is set up to provide support and the teachers and administrators work collaboratively to provide the students with helpful, positive environment (Hallinan).

Marlow Ediger (1998) took a stance against homogeneous grouping by asserting that "Pupils of different ability levels should be evidence in any classroom. Pupils of different ability levels learn from each other. They may work together in peer groups to assist each other in reading for a variety of purposes." (p.4) He continued to argue the point that heterogeneous grouping is a positive move in education because it provides an environment similar to a work environment. Ediger (1998) stated, "People interact with each other regardless of ability levels; pupils in school too should have the opportunities to interact with individuals who are different from others" (p. 6)

*Transition Statement*

With the shift in philosophical and theoretical concepts, instruction and student learning have changed dramatically. Educators are taking the constructivist viewpoint on the way they think and learn and are using that theory to construct their lessons. Educators have found that students learn through social interactions, working collaboratively with peers to problem solve and answer higher order questions. They come to the classrooms with differing abilities, different levels of prior knowledge and cultural influences; each of these attributes creates a unique individual who has his or her own interests, learning styles, strengths and weaknesses. In an effort to facilitate instruction based upon the vast differences in students, teachers have been trained in flexible grouping strategies, and differentiated instruction.

By implementing these methodologies into the classrooms teachers will no longer teach to the middle, rather they will teach every student where he or she is at for any particular skill or concept. According to Flood et al. (1992), small groups need to be flexible to reach the needs of all students. By providing for flexible groups student learning does not become stagnant instead it continues to flourish and the self-concept of the student remains intact.

“The key to effective flexible small group instruction is to reorganize, revise, and regroup based upon careful teacher assessment of student knowledge and performance” (Caldwell & Ford, 2002, p.26). Flexibility in grouping allows the teacher to enhance student self-esteem and to promote interaction between diverse students while always being cognizant of the individual needs of the students and providing alternative instruction when ability, interests, strengths and weaknesses change (Caldwell & Ford).

## SECTION 3

### METHODOLOGY

#### *Introduction*

This researcher intended to determine whether or not flexible reading groups had an impact on reading achievement. The study occurred at an elementary school in southeast Georgia and the participants were fifth grade students. The researcher has spoken with the fifth grade reading teacher and she was willing to implement the flexible group structure. The researcher prepared the teacher on how to implement and teach through the use of the flexible group strategy. This study lasted for duration of 8 weeks. During this time participants were administered a pretest using the *Student Test for Achievement in Reading (STAR)* computer assessment, participated in the flexible group strategy during their regular reading block, and then completed a posttest using the STAR computer assessment at the close of the study.

This study was a quasi-experimental design with convenience cluster sampling because the students had already been assigned to their classes. The same sample of students was used for both the pretest and the posttest for the before treatment and after treatment tests. The researcher measured the difference scores between the two forms of instruction using a paired samples *t* test.

#### *Research Design and Approach*

This quasi-experimental study was a pretest, posttest design intended to test the theory of flexible grouping and its influence reading achievement. The researcher chose the quasi-experimental approach as a relevant form of research based upon studies found in *Reading Research Quarterly* and *the Report of the National Reading Panel*. More

specifically, a text by Schwanenflugel, et al. (2006) titled, *Becoming a fluent and automatic reader in the early elementary school years*, a text by Hall (2006) titled, *Anything but lazy: New understanding about struggling readers, teachers, and text*, and the National Reading Panel (1999) *Report to the National Reading Panel on Fluency* formed the basis for this researcher's study. Each of these studies used a pretest and posttest quasi-experimental design which involved flexible grouping. The studies also found relationships between reading achievement, reading programs and reading assessments.

The independent variable, flexible grouping, was defined as allowing students to move between groups as their readiness level changes. Flexible grouping within reading instruction allows students to be appropriately challenged and avoids labeling a student's readiness as static. Flexible grouping "engages students more deeply in their learning, provides for more constant growth and development and provides for a stimulating and exciting classroom" (Theroux, 2005).

The dependent variable was reading achievement scores measured by the *Standardized Test of Achievement in Reading* (STAR) test. Student participants were administered the STAR test during the second week of the year when they were receiving whole group instruction. Following eight weeks of whole group reading instruction, the posttest STAR was administered to the students in each of the four homerooms. The researcher decided to give a pretest STAR to each student following the posttest STAR because there was a two week laps in instruction between the whole group instructional period and the flexible group instructional period. The teacher wanted to train her students in classroom expectations for flexible group instruction prior to the model being

implemented. She took two weeks with the students having them practice working in groups while she met with a small group. Once the classes were prepared, behaviorally, for the flexible group model, the pretest STAR was administered to each of the students and the treatment of flexible reading groups was implemented for the following eight weeks. After the eight week instruction of flexible groups, the posttest STAR was administered.

### *Setting and Sample*

The population of the study was comprised of fifth grade students in the southeast. There were approximately 3,800 elementary students in the district. The sample consisted of 130 fifth grade students from four homeroom classrooms and a reading teacher, who are found in the school where the researcher works.

The researcher did not randomly assign the participants to the classrooms because of convenience cluster sampling. The sampling was a convenience sample because randomization was not used in either the selection of the sample nor the assignment to the clusters. The sampling was a cluster sample due to the classes had already been formed prior to the study taking place. All four homerooms of students participated in the flexible grouping strategy as well as whole group instruction. The 130 students were divided among four homerooms. The students began their day with their assigned homeroom teacher and stayed with that teacher for the first period of the morning. At the end of the first period, each class moved to another classroom with a different teacher and subject area; the students remained together throughout the day as they rotated through each of the three classrooms. Of the four homeroom teachers, one teacher taught math, one taught language arts, one taught science and social studies and the fourth taught



reading. The students remained in each subject area for one hour and 15 minutes and were given three minutes to rotate to the next classroom and settle in. The same sample was used for the study and was given both the pretest and the posttest. The researcher chose this sample because she works at the school in which the study was conducted. The researcher does not teach fifth grade and had no contact with the students or the reading teacher during their reading block time and the researcher had the computer lab teacher administer the STAR test to the students in an effort to control for bias.

The rationale for this sample is the researcher had already spoken with the administration about the pending study and they had agreed to let the study take place. Participants were considered eligible for this study due to the implementation of flexible groups being considered by the district and school to be a normal instructional strategy application requiring no parental permission.

The selected sample of fifth grade students resided in a rural community in the southeast. The county consisted of less than 60,000 residents. The students in this particular study came from primarily middle-class families. The majority of the students in this sample had involved parents who worked with their children at home when needs arose. These parents attended parent conferences regularly and the student attendance was regular. The reading ability of this group of students was primarily on or above grade level with a few exceptions.

#### *Data Collection and Data Analysis*

The researcher utilized one form of data collection, the STAR test, to measure for reading achievement. Although the STAR test has several subscales, the researcher chose to focus on the grade equivalent score for the purpose of this study. The grade equivalent

score is one of many scores reported on the STAR test report. At the beginning of the year, the pretest STAR was given to the students in each of the four homerooms. Following eight weeks of whole group reading instruction, the posttest STAR was administered to the students in each of the four homerooms. The pretest and posttest were both administered by the computer lab teacher during the students' computer lab time. The researcher collected the STAR test results in collaboration with the school media specialist. The difference in the pretest and posttest scores showed what type of growth occurred with the students during whole group instruction. The scores also served to compare to the difference scores with the flexible group instruction.

Whole group instruction is defined as instruction that is used to introduce new materials and strategies to the entire class. Working with the whole class to introduce new concepts can build common experiences and provide a shared basis for further exploration, problem solving, and skill development. The reading teacher began whole group instruction at the beginning of the school year and continued for ten weeks. The students were sitting in desk groupings of four or five each with a novel which had been selected by the teacher. The teacher would ask a specific student to read a selection of the text and expect everyone to follow along. She would stop along the way and ask questions pertaining to the text. The text which was selected may or may not be the reading level of the student who is reading and or answering the questions and not all of the students were engaged in the text. The instruction may have been meaningful for some of the students, but was missing others. The focus of the instruction was based on who ever answered the questions, not on meeting individual instructional needs.

The STAR test was administered during week one of the study implementation to the same students who participated in the whole group instruction. Once the pretest data had been gathered and the teacher inservice on flexible grouping had occurred, the treatment began. The treatment continued for 8 weeks. Following the implementation of the treatment, the computer lab teacher administered the posttest STAR test and gathered the posttest data.

Flexible groups are defined as permitting students to move between learning groups as their readiness for a subject changes (Hall, 2005). This form of instruction meant that the teacher had a variety of novels at different levels of readability. Based on the pretest STAR scores, she grouped her students by grade equivalent scores and proceeded to find novels that were appropriate for each of the different groups. Each day the students came to reading, the teacher would work with the different groups for about 15 minutes each. She would listen to them read, ask questions, facilitate group discussion, and work on reading comprehension strategies with the students. As the students began to show either regression in skill or growth in their skills, the teacher would move them to a different group. Since the teacher was the group facilitator in each of the leveled groups, the students were able to ease into the new chapter book or novel with little difficulty. This fluidity of grouping kept the students engaged in their learning since each of them had a chance to participate in the discussions and could participate successfully since the book was at their level of readiness.

Scores on the STAR test have been tested for reliability and validity by the company. Internal validity could be a concern in the study. The students may or may not put forth their best effort when taking the pretest and the posttest. Therefore, the pretest

and the posttest may be skewed by natural causes not necessarily by the grouping structure.

The data collection took place during the reading block for all fifth grade students at an elementary school in the southeast. The researcher used the same students for both the whole group instruction and the flexible group instruction. The pretest and posttest for both whole group instruction and flexible group instruction were administered to the same fifth grade students. The STAR test data were gathered by the researcher in collaboration with the school media specialist. The media specialist downloaded the test scores from the database of the STAR program. The score report that was downloaded was the same one used for reporting purposes to the district board of education and contains no identifying information. This procedure occurred for both the pretest and the posttest. The statistical test used to measure the data was the paired samples  $t$  test. The paired samples  $t$  test evaluated the mean differences between the pretest and the posttest STAR scores for whole group and flexible group instruction.

#### *Instrumentation and Materials*

The instrument used for this study was the *Student Test for Achievement in Reading* (STAR). The STAR reading test is a computer-adaptive, norm-referenced reading test and database that provides accurate reading scores for students in Grades 1 through 12 along with a periodic progress-monitoring system which incorporates state-of-the-art testing technology, including item response theory (Renaissance Learning, 2008, p.2)

The STAR Reading software provides both criterion-referenced and norm-referenced scores. The Instructional Reading Level (IRL) is a criterion-referenced score. It provides an estimate of the grade level of written material with which the

student can most effectively be taught. The IRL is estimated based on the student's pattern of responses to the STAR Reading items. The IRL references each student's STAR Reading performance to the difficulty of written material appropriate for instruction.

The Grade Equivalent (GE) is a norm-referenced score. It provides a comparison of a student's performance with that of other students around the nation. Both scores are estimates of a student's current level of reading achievement. They simply provide two ways of interpreting this performance—relative to a national sample of students (GE) or relative to the level of written material the student can read successfully (IRL). (¶3)

Each participant took the Renaissance Learning® Star Reading test in the computer lab under the administration of the trained computer lab teacher. The teacher instructed each student to login with his or her password and username (both of which have been previously assigned by the computer lab teacher). Once the students were logged in, the test began. The examination took approximately 10 minutes, after the students completed the test it gave a "readability level" for each student. The readability level was comprised of a comprehension and fluency score which will be used to determine whether or not the treatment of flexible reading groups made an improvement on reading achievement.

### *Reliability*

Four direct methods were used to estimate the reliability of the STAR reading computer-adaptive test: the split-half method, the test-retest method, the alternate forms method, and the estimation of generic reliability.

Estimates of generic reliability are derived from an Item Response Theory (IRT) based feature of the STAR Reading test; individual estimates of measurement error, which are computed along with each student's IRT ability estimate (Renaissance Learning, 2007, p. 3) "It is possible to estimate the classical reliability coefficient using the conditional standard error of measurement and the variance of the IRT based

observed scores. The concept of reliability can be defined as *error variance/ total score variance*. Using this technique with the STAR reading norming data resulted in the generic reliability estimates. The generic reliability estimates range from .89 to .92” (Renaissance Learning, 2007, p. 3).

Split-half scores were based on the first 24 items of the STAR Reading 2.0 norming test; scores based on the odd- and the even-numbered items were calculated. The correlations between the two sets of scores were corrected to a length of 25 items, yielding the split-half reliability estimates of .90 (Renaissance Learning, 2007, p. 4) The STAR Reading 2.0 test-retest study administered two different tests by avoiding during the second test the use of any items the student had encountered in the first test. All other aspects of the two tests were identical. The correlation coefficient between the scores on the two tests was taken as the reliability estimate. The test-retest reliability estimated over all 12 grades was .94 (Renaissance Learning, 2007, p. 4)

The linking study provided an opportunity to develop estimates of STAR Reading alternate forms reliability. Students in this study took both a STAR reading 2.0 norming test and an original STAR Reading 1.x test, with an interval of days between tests. Order of administration was counterbalanced, with some students taking the STAR Reading 1.x test first, and the others taking the STAR reading 2.0 norming test first. The correlations between scores on the two tests were taken as estimates of alternate forms reliability with a reliability estimate of .95 (Renaissance Learning, 2007, p. 5)

### *Validity*

During the STAR reading 2.0 norming study, schools submitted data on how their students performed on several other popular standardized test instruments along with

their students' STAR reading results. These data included more than 12,000 student test results from such tests as the *California Achievement Test (CAT)*, the *Comprehensive Test of Basic Skills (CTBS)*, the *Iowa Test of Basic Skills (ITBS)*, the *Metropolitan Achievement Test (MAT)*, the *Stanford Achievement Test, 9th Edition (SAT-9)*, and several statewide tests (Renaissance Learning, 2007, p. 2). The extent that the STAR Reading test correlated with these tests provides support for STAR Reading construct validity. The overall averages of the correlations of the combined tests are .72 (Renaissance Learning, 2007, p. 2)

#### *Hypothesis*

$$H_0: \mu_D = 0$$

The null hypothesis states that there is no significant gain in reading achievement when implementing flexible group reading instruction.

$$H_1: \mu_D \neq 0$$

The alternative hypothesis states that there is significant gain in reading achievement when implementing flexible group reading instruction.

#### *Data Analysis*

The researcher used a paired samples *t* test to measure mean differences between the pretest and the posttest STAR results of reading achievement. The paired samples *t*-test was used for the data analysis because the study consisted of a single sample of individuals which was tested more than once on the same dependent measure. The same subjects were used in all treatment conditions (Gravetter & Wallnau, 2005). The researcher ran a paired samples *t*-test on the mean difference score for whole group instruction and flexible group instruction.

Table 1 details the results for the difference scores between the mean of flexible group instruction and the mean for whole group instruction. The same group of students participated and was tested in both whole group and flexible group instruction.

### *Confidentiality*

The researcher obtained the results of the pretest and posttest from the media specialist at the elementary school. The test results are required to be pulled three times a year by the district and sent to the district office without identifying information. The researcher used the identical data for the study as the district uses for accountability checks. Therefore, the researcher did not have the names or any other identifying information of the students in the study. Results were displayed in a table format which used only the means and standard deviation for the pretest and the posttest.

### *Summary*

The purpose of this study was to measure the effects of flexible grouping on reading achievement. According to Rasinski (2006), independent reading is one of the pathways to increasing comprehension and overall reading achievement. The researcher attempted to measure reading achievement with the implementation of flexible reading groups using the STAR test; which has been tested for reliability and validity. The data were analyzed and displayed in Chapter 4 with a summary of the findings and suggestions for further research detailed in Chapter 5.



## SECTION 4: PRESENTATION AND ANALYSIS OF DATA

### Research Question and Hypotheses

This researcher examined the relationship between flexible reading groups and reading achievement of fifth grade students in a rural school district in the United States. The study addressed the question: Is there a relationship between flexible small reading groups and reading achievement? Data were collected to determine whether or not the flexible reading groups affected reading achievement.

The null hypothesis for this study was that there was no significant gain in reading achievement when implementing flexible group reading instruction. The alternative hypothesis stated that there was a significant gain in reading achievement when implementing flexible group reading instruction was implemented.

### *Data Collection*

The researcher used the STAR reading test which is a computer-adaptive, norm-referenced reading test and database that provides accurate reading scores for students in Grades 1 through 12 along with a periodic progress-monitoring system which incorporates state-of-the-art testing technology, including item response theory test to determine the students' grade equivalent for reading. The researcher is the reading specialist for the school and has extensive training and experience using this instrument. The school is an elementary school grades kindergarten through fifth grade with approximately 630 students. The students are primarily middle class with less than 50 percent of the population receiving free and or reduced lunch. There are 30 classroom

teachers with an additional six specialist including music, art, P.E., computer, a reading specialist, and one speech and language pathologist.

Prior to implementing the treatment of flexible small groups, the students participated in whole group reading instruction and the researcher collected pretest and posttest data based upon this methodology. At the start of the study, each fifth grade student was given the STAR pretest following eight weeks of flexible group reading instruction. At the end of the eight week instructional period, the STAR test was given again as a posttest to the same fifth grade students.

#### *Analysis and Outcomes*

Data were collected to address the research question: Is there a relationship between flexible small reading groups and reading achievement? The hypothesis for this study was tested through data analysis. The statistical significance of the data was measured using the paired samples *t* test with a critical region determined at  $\alpha = .05$ . The researcher used the Statistical Package for the Social Sciences software program (SPSS, Microsoft Corp., 2005) to assist with data analysis. The pretest and posttest difference scores for before treatment and during treatment were compared and the difference scores for both were analyzed. The data are displayed in Table 1.

Table 1 illustrates the descriptive statistics for the difference scores of flexible group instruction and whole group instruction. The variables are the two types of instruction that the students received flexible groups and whole group. There were 130 students involved in the study ( $n=130$ ). The mean difference scores were calculated for both types of instruction. The mean difference score for flexible group instruction is 0.90 with a standard deviation (SD) of 0.93. The mean difference score for whole group

instruction is 0.49 with a SD of 0.72. In addition to calculating the mean difference scores for the two forms of instruction, the researcher also conducted a paired samples  $t$  test. The paired difference M score is 0.40 with a SD of 1.19 and a  $t$  score of 3.82.

Table 1

*Descriptive Statistics for the Difference Scores of Flexible Group Instruction and Whole Group Instruction*

Variable	n	M	Standard deviation
Flexible Group Instruction	130	0.90	0.93
Whole Group Instruction	130	0.49	0.72
Paired Differences	130	0.40	1.19

*Interpretation of the Data*

According to the results of the paired samples  $t$  test, a statistically significant relationship was present in reading achievement, when comparing difference scores between flexible group instruction and whole group instruction  $t(129) = 3.82, p < .05$ . Thus, a statistically significant difference was yielded in student reading achievement when students are involved in flexible reading groups. Interpretation of this statistical analysis was that the null hypothesis should be rejected and the alternate hypothesis is supported; there is a relationship in student reading achievement when students are instructed with a flexible reading group method.

Literature supports the results of the data analysis (Tomlinson, 2005, Hall, 2005, Caldwell and Ford, 2002, Marzano, 2001, Gunning, 1998). Small group instruction that occurs today is considered to be flexible (Hall, 2005). The current implementation of flexible small groups in classrooms is driven by a shift in philosophical and theoretical thinking. Instruction through the use of small groups has been influenced by the constructivist approach of Vygotsky. Groups are flexible according to observed performances, instruction is built through scaffolding experiences, strategic questions follow the reader's lead, independent practice means practice with real reading and writing, and assessment is an ongoing, never ending process (Caldwell & Ford, 2002).

Differentiated instruction is based on the theory that not all students are alike; therefore, instruction applies an approach to teaching and learning where students have multiple options for taking in information and making sense of ideas (Hall, 2005). The theory of differentiated instruction stresses the importance that instructional approaches should vary and be adapted in relation to the individual and diverse students in the classroom" (Hall, 2005). Differentiated instruction "requires teachers to be flexible in their approach to teaching and adjusting the curriculum and presentation of information to learners rather than expecting students to modify themselves for the curriculum" (Hall, p.4).

#### *Possible Alternative Interpretations of the Findings*

The STAR test (Renaissance Learning, 2007, p. 2) is a valid and reliable assessment of student reading achievement. It is a multiple choice timed test which increases in difficulty as the student progresses through the test. When reviewing the

difference scores of the individual tests, some of the students made little to no growth whereas others made significant academic gains with flexible group instruction.

Another possibility for the findings that should be considered is how motivated the students were when they took the assessment. According to Marzano (2003, p. 144), “If students are motivated to learn the content in a given subject, their achievement in that subject will most likely be good. If students are not motivated to learn the content, their achievement will likely be limited” When the students take the STAR test, they may or may not put forth their best effort, therefore their grade equivalent score could be higher or lower than what is reported.

Collection and analysis of the data for this study revealed, a significant difference in pretest and posttest scores before flexible group instruction was implemented and after flexible group instruction was implemented,  $t(129) = 3.82, p < .05$ . Analysis and interpretation of this statistical finding provided evidence to reject the null hypothesis: There is no significant difference between the pretest and the posttest reading achievement test scores when flexible group instruction is used. The statistical analysis of the data supported the alternative hypothesis: There is a significant difference between flexible group instruction and traditional reading instruction as it relates to reading achievement test scores when flexible group instruction is used. The data also helped to answer the research question: Is there a relationship between flexible small reading groups and reading achievement? The findings suggested that flexible reading groups have a positive impact on student reading achievement and there is a relationship between flexible reading groups and reading achievement.

## SECTION 5

## SUMMARY, CONCLUSION, AND RECOMMENDATIONS

*Overview*

This study was conducted to determine the relationship between flexible reading groups and reading achievement among fifth grade students as measured by the STAR test. This study will contribute to the most recent research on flexible grouping and reading instruction by focusing on the implementation of flexible reading groups and establishing data to support the importance of the extension of this research. This study was designed to address the concerns in reading education surrounding the NCLB act of 2003 (Department of Education, 2002) and teaching methodologies within the domain of reading. According to Wiggins (1994), “Educators have great difficulty letting go of traditional practices despite the fact that they may no longer meet our needs” (p.450) Flexible grouping within reading instruction allows students to be appropriately challenged and avoids labeling a student's readiness as static (Hess, 2005). This research will enable other teacher leaders and administrators to examine their current reading instruction, teaching pedagogy, and student expectations; and assist teachers in making a decision of whether or not flexible grouping has made an impact on student reading achievement.

The research question addressed by this study was: Is there a relationship between flexible reading groups and reading achievement?

The null hypothesis stated: there was no significant gain in reading achievement when implementing flexible group reading instruction. The alternative hypothesis stated that

there was a significant gain in reading achievement when implementing flexible group reading instruction was implemented.

### *Methodology*

A quasi-experimental pretest, posttest research design was implemented to determine the relationship between flexible reading groups and reading achievement. The study was implemented for 8 weeks and used the STAR test to determine the students reading achievement. The participants were a cluster sample of 130 fifth grade students in the southeast. The significance was measured with the assistance of the SPSS statistical program using the paired samples  $t$  test with a critical region of  $\alpha = .05$ .

### *Findings*

Analysis of the data addressed the research question and revealed that there was a relationship between flexible reading groups and reading achievement ( $t(129) = 3.82, p < .05$ ) as measured by the STAR test. The null hypothesis was rejected: There is no relationship between the pretest and the posttest reading achievement test scores when flexible group instruction is used. The alternative hypothesis was accepted: There is a relationship between the pretest and the posttest reading achievement test scores when flexible group instruction is used.

With the apex of high stakes testing and teacher accountability, the methodology of flexible grouping allows for teachers to meet the needs of their students on a more individual level. Flexible groups allow the teacher to build upon prior knowledge, deepen student understanding of the skill, and help students attain learning goals. Flexible grouping “engages students more deeply in their learning, provides for more constant growth and development and provides for a stimulating and exciting classroom”

(Theroux, 2005, Anchoring Activities, ¶ 3) Flexible groups permit students to move between learning groups as their readiness for a subject changes (Hall, 2005). As stated earlier in Section II, flexible grouping is a form of differentiated instruction which according to Tomlinson (as cited by Hess, 2005), true differentiation requires the realization that every learner is different in their readiness, interests, and learning profiles. Teachers can set up classrooms where everyone works on the same essential skills, but uses different content, processes, and products to get there.

The treatment of flexible groups allowed for multiple learning opportunities within the classroom. When the teacher implemented the grouping structure, the participants were required to work independently during their reading block; unlike the instruction prior to the implementation of the treatment. Prior to the treatment the teacher was giving direct, whole group reading instruction which did not provide for any small group work. Once the treatment of the grouping structure was fully implemented, the students were able to take more ownership of their learning and the teacher indicated to the researcher that she had a better grasp concerning where the students were in their learning. The procedure is to meet with two small groups each day; with a total of four groups; meeting with groups A and B on Monday and Wednesday and groups C and D on Tuesday and Thursday. The instruction was tailored to the ability levels of each of the groups. During the groups she would take anecdotal notes about each student and would change her groups as she felt the individual student's reading abilities changed. Her group changes were driven by the performance of individual students and informed not only on her notes, but on class work as well. The reason for this is that the teacher is constantly performing on going assessments of his or her students. Individual students are



moved into different groups according to their individual skill needs. The teacher is able to move the students between the groups based upon her data that was collected from her assessments. Once students are moved into a new group, the teacher may continue to work on skills that were already in place with other members of the group or she may change the group focus entirely depending on the needs of the group. Young children are constantly growing cognitively; therefore, the teacher assesses continuously for new acquisition of skills and concepts as well as areas that have not been acquired (Wren, 2005). The intent of differentiated instruction is to maximize classroom instruction by emphasizing each student's growth and individual success by meeting the student where he or she is and assisting him or her in their learning process (Hall, 2005).

#### *Interpretation of the Findings*

There is a positive relationship between flexible reading groups and reading achievement of fifth grade students compared to the static, whole group direct instruction that was taught prior to the study. According to the statistical analysis, a statistically significant relationship resulted between flexible reading groups and reading achievement. There is a relationship in student reading achievement when students are involved in flexible reading groups,  $t(129) = 3.82$  at the critical region of  $\alpha = .05$ .

The flexible grouping structure allowed for the teacher to meet the needs of her students in a consistent and ongoing manner. She had a better grasp of their strengths and weaknesses and knew how to tailor her instruction. According to Marzano et al. (2001), when not overused, flexible grouping can be a positive learning strategy. This type of homogeneous grouping by skill level has been demonstrated to be effective for instruction in the areas of mathematics and reading. The key to making flexible grouping

a positive experience is to monitor student progress closely and allow for remixing of the groups.

*Addressing the research question*

Analysis of the data addressed the research question: Is there a relationship between flexible small reading groups and reading achievement? The data suggested that there is a relationship between flexible reading groups and reading achievement as measured by the STAR test. Specific details are discussed in section four of the study.

*Supported by literature*

The constructivist theory developed by Vygotsky was used for the theoretical base of this study. Constructivism is a philosophy that learning is founded on the premise that, by reflecting on our own experiences, we construct our own understanding of the world we live in. Each of us generates our own “rules” and “mental models”, which we use to make sense of our experiences. Learning, therefore, is the process of adjusting our mental models to accommodate new experiences (Learning Focused Schools, 2005). Additionally, within the classroom, the student plays an active role by constantly communicating with the teacher. According to John-Steiner and Mahn (as cited in Chang-Wells & Wells, 1993, p.59), “There needs to be extended opportunity for discussion and problem-solving in the context of shared activities, in which meaning and action are collaboratively constructed and negotiated.” The constructivist theory implies that flexible grouping could assist students in reading achievement by providing them with opportunities that are tailored to their current learning needs. The students are grouped in a variety of ways so the teacher can provide appropriate instruction depending on the purpose of the group. The groups are fluid and all groups receive higher order

thinking activities, and deliberate efforts are made to treat all groups similarly (Opitz, 1998).

This form of instruction allows the teacher to understand her students on an intimate level and tap their prior knowledge with each reading lesson. Students also have the ability to converse within their small groups providing them with opportunities of social interaction with both the teacher and their peers. “An essential feature of learning is that it awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment” (Rozycki & Goldfarb, p1.). John-Steiner and Mahn commented that learners assume more responsibility for their learning over time as they learn from their peers.

#### *Implications for Social Change*

This study encourages social change by raising an awareness of the extreme academic differences in our nation. Although the academic differences change constantly, classrooms are filled with students who have varying needs; there are students who are English Language Learners, students who are considered gifted in one or more areas, students who qualify for special education services, high achievers, slow learners, average learners, and students of poverty. The awareness will encourage a greater understanding of the need to know where the students are with reading achievement, what type of background the students have which may influence their understanding of instruction, and what excites each of the children with reading. While working with students in small groups, the teacher is able to go deeper into literature discussions with her students and therefore, discussions of tolerance, diversity, and acceptance may have a greater impact. The findings from this study support conclusions from other research by

the following: “Flexibility in grouping allows the teacher to enhance student self-esteem and to promote interaction between diverse students while always being cognizant of the individual needs of the students” Caldwell and Ford (2003). “Teachers must become flexible when implementing differentiated instruction and realize that differentiation requires them to respond to the individual needs of all the learners in their classroom” Hall (2005). “Flexible grouping surrounding student skills allows students performing at various levels to share their combined areas of knowledge and strength” Marzano, Pickering, and Pollock (2001). Optiz (1998) “When implementing flexible groups the teacher’s role will vary according to the individual groups needs.” Wren (2005) “Students involved in flexible grouping receive more time getting instruction where they need the most support from the teacher.” The analysis of the data collected from the study as discussed in section four indicates that flexible reading groups do have a positive impact on reading achievement. If teachers choose to implement this methodology they will be have the opportunity to understand their students’ backgrounds which in turn may improve reading achievement.

#### *Steps to Useful Action*

The results of this study may be interpreted to mean that flexible reading groups have a positive relationship to reading achievement. These findings have value for reading achievement, especially with the national stipulations set by NCLB (U.S. Department of Education, 2002). These results may be beneficial to reading teachers, classroom teachers of grades kindergarten through fifth, and administrators, both building level and district level.

The first step to useful action will be to share the results of this study with the administrators of the school in which the study took place. The results will then be shared with the faculty of the school during a faculty meeting.

Once the study has been shared with the faculty of the school, the researcher will provide a district-wide meeting and invite the local reading teachers and Kindergarten through fifth grade teachers to share this information. The meeting would take place at the district office in two sessions, one for Kindergarten teachers through second grade teachers and the other for third grade through fifth grade teachers. The reading specialists may attend the session that meets their needs.

#### *A Need for Future Research*

This researcher focused on the relationship between flexible reading groups and reading achievement, using 130 fifth grade students from one school in southeast Georgia. This study may be generalized to other fifth grade classes and grade levels however, if the study were enlarged to multiple schools or school districts it would provide a broader sense of reading achievement and flexible grouping.

Additionally, the amount of research on flexible groups is sparse. With the ever changing dynamics of education and student learning, research needs to be conducted on small groups, flexible groups, and their relationship to reading achievement. There is a plethora of research on differentiated instruction and reading methodologies, yet the amount of research dedicated to flexible grouping is minute.

#### *Conclusion*

According to this study, there is a positive relationship between flexible reading groups and reading achievement as opposed to the traditional whole group, direct

instruction method. Flexible groups have the potential of ensuring some level of success in reading which in turn may positively affect reading achievement. This study brings more evidence that flexible grouping can improve reading achievement and supports best practices among teaching methodologies. Vygotsky's social development theory is the driving force behind flexible small group instruction. He attested that students are individual learners with individual learning styles, backgrounds, home lives, and life experiences; learning skills are not necessarily determined by innate factors, rather they are products of the activities they have been involved in during their lives (Rozycki & Goldfarb, 2000). When teachers are able to let go of traditional teaching practices by implementing the flexible grouping structure, they can meet the needs of their learners individual learning styles. Teachers will know each of their students' reading abilities and can create lessons to better meet student needs. Students who are involved in the flexible grouping model have ample opportunities to converse with their peers about the topic at hand, create projects, involve themselves in literature discussions, and receive additional support from the teacher.

Bruner's (1960) learning theory supports the study findings of a relationship between flexible grouping and reading achievement by contending that learning is a process in which learners construct new ideas or concepts based upon their current or past knowledge. Bruner, (1960) continues to attend to this theory by stating that the learner and the teacher should engage in active dialogue throughout the lesson and should communicate freely and consistently. Through the method of flexible grouping, teachers have the ability to tap into the past experiences of students easily, they can engage in

conversation with each student and they can use a variety of reading strategies to improve student reading achievement.

Today's classrooms are vastly diverse including students with varying learning needs, English as a Second Language students, and students who excel in all subject areas. Vygotsky's social constructivist theory (Vygotsky, 1978) contends that students learn through interaction with their peers. Learning is doing and interacting. Students also create knowledge by accessing their past experiences from their cultures. LaBerge and Samuels (1974) found that repeated readings improve reading fluency as long as the length of time in text matched student readability since their initial study, multiple researchers have studied repeated readings and found that time in text continues to improve reading achievement. Vocabulary instruction has also been shown to improve reading achievement as cited by Lubliner (2005) in her study of vocabulary intervention on reading comprehension and vocabulary achievement of fifth graders. This study is supported by the theories of Vygotsky (1978), LaBerge and Samuels (1974), and Lubliner (2005) by finding a relationship between the flexible grouping model of reading instruction and reading achievement.

This study has added to the body of reading research by finding a relationship between flexible reading groups and reading achievement. Considering the body of research that is in place, this study has shown that when teachers are able to tap into students prior knowledge, engage them in consistent conversation, use repeated readings, allow for more time in text, and increase vocabulary instruction, reading achievement improves.

Because teachers are responsible for ensuring reading success for every child in their classroom, flexible groups are one instructional method which allows teachers to engage their students in deeper conversation and assess for constant growth and development. Flexible grouping will also allow learning in the classroom to remain flexible as students' cognitive growth and needs change. Thus, flexible grouping encourages success of all students in the classroom.



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### **Career Summary**

- Elementary School Educator with nine years professional experience
- Master's Degree in Foundations of Education with an Emphasis in Leadership
- Presenter for Professional development on a district and building level
- Excellent organizational and management skills as team leader for two years
- Teacher of the Year, Mary Lee Clark Elementary, 2004.
- Outstanding communication with parents

### **Teaching Experience**

**Elementary Teacher, Instructional Coach** 2008-Present

- Provide resources for teachers to aide them in their instruction.
- Model lessons
- Observe in a non evaluative format
- Provide feedback on a lesson or concern identified by the teacher
- A liaison between the teachers and the administration
- Assist in lesson planning and teaching
- Provide staff development for teachers
- Analyze data
- Order and organize curriculum and materials
- Facilitate data teams for grade level teams

**Elementary Teacher, Reading Specialist** 2007-2008

**Mckinley Elementary School, Beaverton School District, Beaverton, Oregon**

- Implement Oregon Learning Targets in reading and writing for grades one through five.
- Collaborate with classroom teachers and English as Second Language teachers on curriculum, assessments, intervention strategies, and current classroom and intervention data.
- Attend data teams with each grade level and assist with developing instructional strategies to meet the needs of struggling students.
- Implement a variety of interventions for struggling students while working within the Response to Intervention model.
- Serve as the building level testing coordinator for Oregon State Testing.
- Serve as a member of the district's Equity Leadership Team.

**Elementary Teacher, Early Intervention Program teacher** 2006-2007

**Mary Lee Clark Elementary School, Camden County Public Schools, St. Mary's, Georgia**

- Implemented Georgia Professional Standards in reading for grades one through five.
- Collaborated with classroom teachers on curriculum, assessment, instruction and student needs.
- Provided building level faculty with professional development on guided reading, reading strategies, and intervention strategies for struggling students.
- Redelivered Learning focused training seminars on vocabulary, reading comprehension, and acceleration.

- Devised comprehensive units of instruction for first and fourth grades.
- Served as a peer coach to teachers; assisting with SST's, classroom management, parent communication, and lesson implementation.
- Proficiently used the DIBELS, running records, STAR test and Fry's reading inventory to assess students and determine the level of intervention.
- Work with administration on teacher budgets outside of regular classroom responsibilities.
- Created and implemented a school wide leveled book room.
- Served on the administrative team for Tiers of Intervention.

**Elementary Teacher, First grade** 2003-2006  
**Kindergarten** 1998-2003

- Differentiated instruction to meet needs of wide range of student abilities.
- Participated in three years of Whole Faculty Study Groups concentrating on writing initiatives, differentiated instruction, and unit development for Georgia Performance Standards.
- Served on Relay for Life Committee (Chair for 4 years), Language Arts Budget Committee (Chair), Safety Committee, Accelerated Reading Committee.
- Served on the Southern Accreditation of Colleges and Schools steering committee.
- Served on the Board of Education Kindergarten Report Card committee for revising the Kindergarten report card.
- Served on the Board of Education Appeals board for promotion and retention appeals.

### **Education and Certification**

Walden University, Minneapolis, Minnesota  
 Ed.D Teacher Leadership  
 Currently enrolled all but dissertation  
 Will be completed 2009

Troy State University  
 Masters Degree  
 Teacher Leadership  
 July 2000

Valdosta State University  
 Bachelor degree  
 Early Childhood Education (P-5)  
 June 1998

### **Teaching Certification**

Oregon Initial teaching License  
 ELE and ECE endorsements

### **Affiliations**

Professional Association for Georgia Educators (PAGE)  
 International Reading Association