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GUIDED READING AND NEEDS-BASED INSTRUCTION:

A COMPARISON STUDY

by

Brooke M. Henriksen

A creative project submitted in partial fulfillment

of the requirements for the degree

of

MASTER OF EDUCATION

in

Elementary Education

Approved:

_____

Cindy D. Jones, Ph.D.

Committee Chair

_____ _____

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Committee Member Committee Member

UTAH STATE UNIVERSITY

Logan, Utah

2011

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ABSTRACT

Guided Reading and Needs-Based Instruction:

A Comparison Study

by

Brooke M. Henriksen

Utah State University, 2011

Major Professor: Cindy D. Jones, Ph.D. Department: Teacher Education and Leadership

Small group instruction is an important part of elementary literacy programs. Methods for forming small groups have often centered on ability level. However, grouping students by ability can have negative effects on students most at risk for failure. It was proposed that a method for forming small groups based on skill or strategy needs rather than ability level may have positive effects on student learning. During this study reading growth data in one first grade teacher's class was compared from 2008-09 and 2009-10 school years in which leveled ability groups was used to the 2010-11 school year when the experimental needs-based groups were implemented. The expected outcome was that students who were grouped by need would experience more consistent growth throughout the first two testing periods than students grouped by ability and that they would show flexible use of reading skills and strategies. Student data shows positive effects for some students at risk of failure but no statistically significant effect on student growth. Teacher notes provide some insights into possible effects on student use of strategies.

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Introduction

Effective reading instruction during the primary years is vital to student success. A longitudinal study of 54 children found that students who left first grade as below-average readers had an 88% chance of remaining below-average in the fourth grade (Juel, 1988). This problem, identified over 20 years ago, still persists today. The 2010 Condition of Education report found that though the average fourth grade reading score has gone up since 1992, just 67% of students scored within the basic level of reading competency (Aud, Hussar, Planty, Snyder, Bianco, Fox, Frohlich, Kemp, & Drake, 2010). The link between first grade reading readiness and fourth grade reading competency is strong. The number of fourth grade students who are only reading at a basic level indicates a need for improved primary grade instruction. One way that primary grade classroom teachers can address these shortfalls in student achievement is by implementing specific research-based instructional techniques. Small group instruction has been identified as one of the most effective early interventions that a student can experience (Pullen, Lane, Lloyd, Nowak, & Ryals, 2005). However, little is known about the effectiveness of grouping variations for first grade students. Thus, this project will compare a popular framework for small group instruction (guided reading) with an experimental grouping framework (needs-based grouping).

Purpose Statement

Guided reading focuses the teacher's attention on teaching homogeneously ability grouped students the strategies needed to read a single text at their reading level. Though the strategies may be needed by some in the group, not all students at a given reading

level need the same strategy instruction in order to improve as readers. Therefore, a new instructional framework which focuses instruction on each student's reading instructional need rather than reading level is needed to improve reading instruction in the primary grades. The purpose of this study was to compare guided reading ability grouping with needs-based grouping and to report the effects of grouping variation on first grade student reading growth.

Review of Literature

According to studies done in primary grade classrooms, small group instruction constitutes a large portion of the instructional time for the most effective teachers (Lou et al., 1996; Pullen, et al., 2005; Taylor, Pearson, Clark, & Walpole, 2000). In fact, the amount of time spent in small group instruction seems to be a common factor in the most effective classrooms. In one study of first and second grade classrooms, the ratio of whole group instruction to small group instruction in the most effective classrooms was 2:1 (Taylor, et al., 2000). These findings indicate the importance of utilizing small group instruction during a significant portion of the school day.

Reasons for Small Group Instruction

Research strongly suggests that small group instruction has a positive effect on students' reading abilities. During a recent study, students were grouped in three ways: one teacher to one student (1:1), one teacher to three students (1:3), and one teacher to ten students (1:10) (Vaughn, Linan-Thompson, Kouzekanani, Bryant, Dickson, & Blozis 2003). Students grouped 1:1 and 1:3 showed significantly higher aptitudes in reading comprehension and fluency as well as phoneme segmentation as compared to those in

groups of 1:10. Helf, Cooke, and Flowers (2009) confirmed these results even when placing tighter controls on the instructors by providing scripted lessons as well as using the same instructors for both the large and small group settings. These findings indicate that small group instruction is superior to larger group instruction. In the Vaughn et al. (2003) and Helf et al. (2009) studies, results indicated that 1:1 and 1:3 grouping were equally as effective in improving reading skills. When one considers the limitations of classroom resources, including the instructional time available to the teacher, results suggest that small groups are more time efficient in meeting the needs of students as compared to one to one grouping (Helf, et al, 2009; Vaughn et al., 2003). Small group instruction allows teachers to support and scaffold individual student needs while maintaining a more efficient instructional practice than one to one grouping.

Small group instruction of literacy strategies and skills gives the teacher the opportunity to offer an intensive form of instruction that supports the learning of each individual student (Vaughn, et al., 2003). The increased intensity is due to consistent and immediate feedback from the teacher who is better able to scaffold student learning (Ankrum & Bean, 2007; Helf, et al., 2009). This constant response and support for student learning allows students to work within their Zone of Proximal Development (ZPD). ZPD is defined as "*the distance between the actual developmental level [of the student] as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers*" (Vygotsky, 1978, p. 86, author's italics). Teaching in small groups allows teachers to work within the students' ZPD. Due to the smaller number of students, teachers can coach, scaffold, and model specific skills and

strategies that can be transferred outside the lesson while being sensitive to the individual needs of each student (Taylor, et al., 2000).

Instruction in small groups fundamentally gives teachers the opportunity to differentiate instruction to meet the needs of all students in the class. Differentiated instruction in small groups can be defined as the teacher's ability to create a unique and specific instructional focus for each group dependent on the distinctive needs of the students within the group (Ankrum & Bean, 2007). Centering instruction on the needs of the students provides learning opportunities for each individual within the group. A focus on differentiation supports grouping students for instruction in ways that meet their needs (Anderson & Algozzine, 2007). Organizing reading instruction in groups based on student needs accomplishes the goals of supporting student learning, while differentiating the instruction that each student requires to improve as a reader.

Approaches for Small Groups

Small group instruction is essential to the success of a primary grade classroom, but teachers need a framework for forming groups. How teachers form small groups is of great importance. The debate over whether to use homogenous or heterogeneous ability groups has fueled research in support of both grouping strategies (Saleh, Lazonder, & De Jong, 2005). Guided reading, a commonly used instructional framework in the primary grades, uses homogeneous ability grouping in an effort to allow teachers to more easily scaffold the learning of students by grouping students by their identified reading level as determined by Running Records assessments (Fountas & Pinnell, 1996). However, students who are most at-risk are adversely affected by homogenous ability grouping which calls into question its use. Low achieving students who are grouped with other

low achieving students learn substantially less than their average and high ability peers (Lleras & Rangel, 2009). Rather than grouping students by homogeneous reading levels, grouping students by reading instructional needs as determined by multiple assessments and teacher observations holds promise of offering the benefits of small group instruction while potentially eliminating the negative side effects caused by homogeneous ability grouping.

Homogenous and heterogeneous ability grouping. Within-class homogenous ability grouping is defined as the practice of forming "teacher creat[ed] homogeneous groups within their heterogeneous classes. Teachers divide their time among the subgroups, providing adaptive instruction sensitive to the needs and abilities of the group" (McCoach, O'Connell, & Levitt, 2006). Conversely, heterogeneous ability grouping is defined as the placement of students in mixed ability groups for instruction (McCoach, et al., 2006). While both of these grouping practices are based on ability, homogeneous ability grouping aims to group students of like ability together, and heterogeneous ability grouping attempts to mix abilities.

"Ability" is a word that is used to describe many aspects of reading. In studies discussing ability grouping, it is commonly defined as "relative ability or prior achievement." (Lou, et al., 1996) In a classroom setting, this typically translates into a crude grouping of students into high, medium, and low groups based on the particular class composition. Within the guided reading framework, students are grouped for reading instruction based on a scale from "A" through "Z" as determined by a Running Record assessment (Fountas & Pinnell, 1996). For the purpose of this study reading ability will be defined as the guided reading level of the student.

Some studies have shown little or no negative effects from the use of within class ability grouping (Lou, et al., 1996; McCoach, et al., 2006; Taylor, et al., 2000). In fact, language-minority (LM) students, that is students who speak a language other than English at home and have some level of aptitude in that language, show positive progress when placed in homogeneous ability groups as compared to infrequent ability grouping (Robinson, 2008). Average ability students also appear to have greater success using homogeneous ability groups when compared to heterogeneous grouping (Lou, et al., 1996; Robinson, 2008). Additionally, teachers have positive feelings about the use of homogeneous ability grouping because of the belief that it allows them to more easily and accurately meet the instructional needs of all students (Chorzempa & Graham, 2006).

In one study focusing on LM kindergarten students, there were significant positive outcomes using homogenous ability grouping (Robinson, 2008). One should note, however, that the positive outcomes in the LM students were not seen to the same degree among the rest of the students and the effects were not carried into the first grade if the ability grouping did not continue the following year. Additionally, the researchers who conducted the study clearly stated that they were not comparing heterogeneous and homogeneous ability grouping. They state that, "heterogeneous grouping practices could also produce the observed gains" (p. 174). Therefore, these findings show that homogeneous ability grouping offers positive outcomes for LM students but these effects may also be possible with the use of heterogeneous grouping.

Another benefit to homogenous ability grouping is its general popularity among teachers. In two different studies, results showed that teachers use homogenous ability groups because they believe it allows them to tailor instruction in a way that meets the

needs of their students (Chorzempa & Graham, 2006; Taylor, et al., 2000). For instance, using within class ability grouping gives teachers the opportunity to use instructional level text with each student (Taylor, et al., 2000). In summary, teachers use within-class homogenous ability grouping because it simplifies the instructional practice of teaching in small groups by focusing the lesson on a single text which is at the instructional level of the entire group.

In a study of 104 fourth grade students placed in either homogenous or heterogeneous ability groups, average ability students showed improved learning outcomes when placed in a homogenous setting (Saleh, et al., 2005). These findings are supported by a meta-analysis of 12 studies, which showed that average ability students had significantly improved outcomes when placed in homogenous ability groups rather than heterogeneous ability groups (Lou, et al., 1996). Therefore, homogenous ability groups offer students of average ability support that benefits their overall learning experience.

Conversely, previous research has shown that average ability students are negatively affected by heterogeneous grouping (Lou, et al., 1996; Saleh, et al., 2005). There is a predominantly accepted explanation for the average-ability students' positive outcomes when using homogeneous ability grouping and negative response to heterogeneous ability grouping. The explanation is based on the social dynamic created within small group work.

> "Learning in small groups depends on giving and receiving explanations. Giving explanations helps tutors clarify and organize their own learning better. Receiving elaborated explanations helps tutees correct misconceptions and learn appropriate learning strategies. … Medium-ability students, however, may act neither as tutor nor tutee and, therefore, neither give nor receive explanations." (Lou et. al., 1996, p. 449)

Saleh, et. al. (2005) proposed the same explanation that heterogeneously grouped average-ability students offered only 15% of the explanations in small group discussion. This barely exceeds the amount of explanations offered by low-ability students at 10%. With careful teacher guidance during small group instruction and grouping practices based on student need (independent of overall reading ability), the negative effects of mixed-ability grouping may be mitigated for average ability students.

Studies show mixed outcomes for the use of ability grouping with above-level learners (Lou, et al., 1996; Saleh, et al., 2005). In a meta-analysis of 12 studies that directly compared heterogeneous and homogeneous ability grouping, Lou et al. (1996) found that high ability students act as tutors when working in heterogeneous ability groups, allowing them to clarify their thinking. In homogeneous ability groups above-level learners are able to interact with equally competent peers, allowing them to collaborate without having to slow the pace of discussion for below-level learners (Lou, et al., 1996; Saleh, et al., 2005). Therefore, high level learners are positively affected by the use of both heterogeneous and homogeneous ability grouping.

Although there are some benefits to using homogenous ability grouping for small group instruction, low-achieving students do not benefit from its use (Lou, et al., 1996; Pallas, Entwisle, Alexander, & Stluka, 1994; Saleh, et al., 2005). Additionally, some studies show that students from racial minorities groups are disproportionally and negatively affected by this grouping practice (Lleras & Rangel, 2009). When low-achieving students were placed in homogenous ability groups, achievement scores decreased as compared to heterogeneous grouping situations (Saleh, et al., 2005). Because grouping practices affect the type of dialogue that occurs within the group, low-

achieving students who are placed with other low-achieving students participate in mostly superficial, surface level discussion. Though homogeneous ability grouping allows a teacher to tailor their teaching to the instructional ability of the students, this may cause the teacher to create an inherent bias. Teachers may believe that the students will achieve below grade level and therefore set their instructional goals too low producing perpetually underachieving students (Lou, et al., 1996). The negative effects of homogeneous ability grouping are not only seen in low-ability students but in some racial minority populations as well (Lleras & Rangel, 2009).

There is concern that homogenous ability grouping furthers the disparity between the reading capabilities of low and high ability students (Pallas, et al., 1994). This could be due to the "Matthew effect" coined by Stanovich (1986) to describe a cyclical problem in which high achieving students experience greater exposure to a wider range of vocabulary while low achieving students experience exposure to fewer vocabulary words. Exposure to a wide range of vocabulary boosts reading comprehension which then exposes students to more and wider ranging vocabulary. However, lower-achieving students, due to their limited vocabulary, are less capable readers and experience a more narrow exposure to new vocabulary. During the early years of education, the trajectory of a student's overall academic achievement should be considered when selecting instructional practices (Lleras & Rangel, 2009). Thus, previous research, which documents a negative impact on low achieving and minority students, should cause teachers to question the overall effectiveness of homogenous ability grouping.

Heterogeneous ability grouping, also known as mixed-ability grouping has shown positive effects on below-level students (Lou, et al., 1996; Saleh, et al., 2005). When

comparing heterogeneously and homogenously grouped students, Saleh (2005) found that below-level students who were placed in heterogeneous ability groups outperformed those placed in homogeneous ability groups. It is suggested that this is due to the peer mentoring and support that below-level students receive in heterogeneous groups (Lou, et al., 1996; Saleh, et al., 2005).

Homogeneous grouping does have advantages. It allows teachers to easily form groups because they are able use a single instructional text and has beneficial effects on LM and average ability students' academic achievement. High achieving students show positive outcomes when using either homogeneous or heterogeneous ability grouping. However, the use of homogeneous ability grouping raises concerns due to its negative effects on low achieving and minority students. Conversely, low achieving students show positive outcomes when placed in heterogeneous ability groups and possibilities exist for mitigating the negative effects of heterogeneous ability grouping on average ability students.

Guided reading groups. Guided reading is a commonly used grouping framework within a balanced literacy program for early-elementary grades (Iaquinta, 2006). According to Fountas & Pinnell (1996), "The ultimate goal of guided reading is to help children learn how to use independent reading strategies successfully," by teaching in small developmentally leveled groups with students who can read the same level of text (p. 2). The structure of a guided reading lesson includes three sections: before the reading, during the reading and after the reading (Fountas & Pinnell, 1996). Before the reading, the teacher selects a text at the instructional level of the group, then offers a short introduction of the text and engages students in a discussion of questions

and prior knowledge. During the reading, the teacher "listens in" on students reading and scaffolds strategy use (p. 7). After the reading, the teacher can then revisit specific portions of the text with the students in order to reinforce and extend the strategy used during the reading. During each part of the lesson, the teacher focuses on developing the skills and cognitive strategies typically associated with the given text. This translates into homogeneous ability groups in the majority of primary grade classrooms which use this framework (Ford & Opitz, 2008). Ability grouping in guided reading lessons allows the teacher to easily choose one text for use during instruction.

Guided reading groups are supposed to be flexible and dynamic so that students are able to move in and out of groups at their own pace (Fountas & Pinnell, 1996), but in a survey of 1500 teachers Ford & Opitz (2008) found that 58% of teachers surveyed changed group composition only once a month and 12% never did. Fears exist that below-level students experience mostly simple recall and decoding instruction while in homogeneous ability groups (Chorzempa & Graham, 2006; Elbaum, Schumm, & Vaughn, 1997). This causes significant concern when students are not moved into and out of below-level groups for long periods of time. A framework of flexible mixed-ability groups based on instructional need may improve the opportunity for below-level learners to engage in higher-level discussion of comprehension strategies on a consistent basis.

An alternate approach – needs-based grouping. According to a survey of 1500 primary teachers using the guided reading framework, 40% of teachers indicated that they grouped students based on need (Ford & Opitz, 2008). This type of grouping, also known as needs-based or skills-focused grouping, can affect positive growth in student

learning when carefully monitored using proper assessment (Ankrum & Bean, 2007). "It is with homogeneous, needs-based groups that the teacher can create lessons based on the evidence provided by assessments. Groups may change based on skill or strategy need" (p. 139). The Florida Center for Reading Research (FCRR) encourages classroom teachers to implement skills-focused grouping as a tool for improving student outcomes (Kosanovich, Ladinsky, Nelson, & Torgesen, n.d.). In these skills-focused groups instruction is focused on the mastery of reading skills and strategies such as phonemic decoding strategies, critical vocabulary, and comprehension strategies.

Needs-based grouping and guided reading groups have many similarities. Both share the objective of teaching reading skills and strategies through authentic reading experiences using text that is at the instructional level of the student (Fountas & Pinnell, 1996; Kosanovich, et al., n.d.). However, in guided reading the focus becomes the instructional text which is shared by the group of homogeneous ability students. In needs-based groups students are of different and/or similar ability, using different and/or same texts because the instructional focus is on a given strategy or skill that all of the students within the group need. Therefore, needs-based grouping will affect the format of previously used small group lesson formats. The "before the reading" section of the lesson that focuses specifically on one text would be impossible due to the varying instructional texts. The "during the reading" portion of the lesson might function very similarly to a guided reading lesson because the teacher would be guiding individual student reading. The "after reading" portion would look quite different, again due to the use of different texts among the students in the group.

There is a lack of published research on the topic of needs-based grouping. Searches were conducted using EBSCO, WilsonWeb, Academic Search Premier, Google Scholar, and the Utah State University library search utilizing search terms such as "needs-based grouping," "skill-based grouping," "student need" and "grouping." However, no published studies were located. The lack of published research comparing guided reading, where ability and a single text are the focus, to needs-based grouping, in which individual student instructional need is the focus, has led to the development of this study.

Conclusions

Small group instruction is a valuable part of effective primary grade literacy instruction. The question of how to form these small groups is an important one to consider. Though homogeneous ability grouping is a popular way of forming groups because it allows teachers to tailor instruction to the reading level of the students, studies show that students who are most at risk of failure are adversely affected by its use. Therefore, groups that are heterogeneous in reading level but homogeneous in instructional need may be the answer. This study directly compared the use of two competing grouping practices, guided reading and needs-based grouping, to investigate potential effects on student reading growth in first grade.

Introduction to Masters Project

Explicit instruction of reading skills and strategies is an important part of the primary grade curriculum. Small group instruction allows teachers to target the specific skill and strategy needs of students. Guided reading is a popular framework for

accomplishing these goals, but is based on two assumptions. First, that students who are at the same ability level require similar strategy instruction. Second, that teachers will be able to choose a single text that will meet all instructional needs of the group of students. The goals of small group explicit reading skill and strategy instruction might be better addressed by a grouping method that focuses on the skills and strategies needed by each student as the basis for grouping.

Problem Statement and Objectives

A method of grouping students for reading skill and strategy instruction which includes mixed ability groups/homogenous needs-based groups and allows for students within groups to use different texts during the lesson may have a positive effect on student learning. The purpose of this study was to compare reading level growth data from first grade students that received instruction in guided reading groups with first grade students that received instruction in needs-based reading groups.

The expected outcome was that students grouped by need would experience:

1. more consistent growth than students grouped by ability as measured by running record benchmark assessments and oral reading fluency benchmark assessments throughout the first two testing periods.
2. flexible use of reading skills and strategies as documented by teacher notes.

METHOD

Participants

Data was collected for three years (2008-09, 2009-10, 2010-11) for 75 first grade students within one teacher's classroom. Most students were middle class to upper-

middle class with 12% of students qualifying for free/reduced lunch. The majority population was Caucasian, with 9% of the total participating students identified as either Asian or Latin American and less than 5% of the total participating students identified as English Language Learners (Table 1). During the 2008-09 and 2009-10 school years, small group instruction followed the guided reading format using homogeneous ability grouping. During the 2010-11 school year, students experienced needs-based grouping.

Table 1

Student Demographics

	Year 1 2008-09		Year 2 2009-10		Year 3 2010-11	
Number of Participating Students	24		25		26	
Male	11	46%	11	44%	15	58%
Female	13	54%	14	56%	11	42%
Ethnicity						
% Caucasian	22	92%	24	96%	22	88%
% Asian	1	5%	1	4%	2	8%
% Latin American	1	5%	0	0%	2	8%
% ESL	1	4%	0	0%	2	8%

Description of Instruction

Guided Reading Groups.

Assessments and student initial placement in guided reading groups. After the third week of school, a running record assessment was conducted with each student. Testing was conducted after the third week as teachers at the school preferred for students to gain some autonomy with classroom routines as additional supervision of students was unavailable during testing.

Students were initially placed in small groups based only on reading level as measured by running record assessments six groups were formed for ten running record

reading levels (aa-J). Therefore, most groups included students from several running record reading levels; students were placed in groups with other students nearest their running record reading level. Tables 2 and 3 below provide an example of how students were placed into groups and how the groups were configured after the initial Running Record testing during the 2008-2009 school year.

Table 2

Example of data analysis for forming Guided Reading groups

	Student 2	Student 4	Student 8	Student 16	Student 5	Student 3
Running Record Level	A	B	D	E	G	J
Group Placement	1	2	3	4	5	6

Table 3

Initial group formation for Guided Reading groups

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Student Levels	aa, A	B, C	D	E, F	G, H	J
Number of students	5	3	4	5	5	2
Days met per week	3	3	2	2	2	1
Minutes of instruction per session	15-30	15-30	15-30	15-30	15-30	15-30

Reading instruction. During the 2008-09 and 2009-10 school years, students received whole group strategy and skill instruction based on the school's adopted basal program, *Harcourt Trophies* (2003). This instruction included simple sequencing and

summarizing of stories as well as main idea/supporting details and inferring additional information.

Small group instruction consisted of a vocabulary and/or a phonic pre-reading lesson based on the text which had been selected for the day. All groups had a similar instructional format, with the content of the instruction driven by the book chosen for the group that day. Therefore, each group had different instruction. For example, if the students were reading a level C book that was written in the past tense, the lesson might consist of a review of "–ed" word endings and the irregular past tense verbs that were found in the text. If a level K group were to read a book about plants, the lesson might begin by defining new vocabulary, looking at word parts to aid in the understanding of their meaning (photosynthesis, life cycle, etc.). Then, as a group, students talked about the illustrations and made predictions about the selection (Fountas & Pinnell, 1996). Students then whisper read as the teacher listened and supported decoding and meaning making. After students finished reading the text, there was a comprehension activity (graphic organizer, group discussion, quiz) or response to the reading in student reading journals. These activities were completed either as a group or individually depending on the level of the group (i.e. students preforming above grade level did more activities individually; students preforming low grade level received more scaffolding). In total, lessons lasted from fifteen to thirty minutes.

Instructional text for small groups was chosen from the school's leveled library by the teacher based on the running record reading level of the group. Attempts were made to match the text with the instructional needs of the students in the group. However, due to the varying needs of students within the group, the text often did not match the needs

of all students. For example, a group of four students who tested into level "F" as their instructional level may have received instruction on irregular past tense verbs and making connections to prior knowledge in order to read the guided reading text chosen for the lesson. Though two of the four students may have needed this instruction to improve as readers, one of the students may have needed fluency instruction while another may have needed instruction in decoding strategies in order to advance.

Progress monitoring and movement between guided reading groups. Running records were given by the teacher on a regular basis, every two to eight weeks, depending on the student's reading level. Students on levels A-D were assessed every two to four weeks. Students on levels E-J were assessed every four to six weeks. Students on levels K -M were assessed very six to eight weeks. This assessment schedule was determined by the school in which the study was conducted.

Groups were reconfigured whenever a student moved to a new reading level as determined by running record assessments. Therefore, after a student was reassessed and determined to have moved up a level on the running record assessment that student would move to a group reading text on that level. For example, if a student was on a level D and passed the level E assessment, that student would immediately be moved to the level E group independent of the other students in the level D group. Because students were assessed at regular intervals, most groups were reconfigured every four to six weeks.

AIMSweb assessments were given three times a year during the 2008-09 and 2009-10 school years (September, January, May) by the school's reading intervention team. These scores were not used for grouping purposes, but were analyzed to inform whole class instruction and track student progress. For example, if most students in the

class were struggling with accuracy, whole group instruction focused more on accuracy; if most of the students were struggling with rate, more emphasis during whole group instruction was given to rate.

Needs-Based Groups

Assessments and student initial placement in needs-based groups. Similar to guided reading groups, running records were conducted after the third week of school with all 26 students. Each student read a leveled book based on the level identified from the end of kindergarten (i.e. if a student ended kindergarten on a level B, the first running record for first grade was a level B). However, unlike previous years with guided reading groups, during running records assessments the teacher kept a record of student errors and.anecdotal notes on the types of miscues and use of strategies (e.g., if a student was already sounding out and blending sounds for words, using picture cues). Thus, running record data consisted of the number of errors a student made, anecdotal notes, and percentage of comprehension questions answered correctly Students were then placed into small groups based on the skill or strategy needed in order to advance as a reader as indicated by the running record assessments.

To futher monitor students for needs-based grouping, individual teacher-student conferences were held every two to six weeks. During conferences, the teacher listened to the students read a book of the their choice on their running record reading level. The teacher took notes of book choice and strategy use (or lack of use) during the reading and participated in a discussion of the book after the reading. Often the discussion centered on the strategies that the student used to read difficult words (i.e. “I liked how you chunked that big word into smaller bits!” “I noticed how you used the picture to help you

solve that word.") or what they learned from reading the text (i.e. "What did you learn from this book that you could use today?" "What was the most interesting thing about this book?"). Thus, conference data consisted of book choice and strategy use (or lack of use). Though in the past two years occasional conferences did occur no records were kept and the information was no used to inform group placement.

Running record and conference data was analyzed to determine which strategies students were using and which strategies students were still in need of instruction. For example, during Amy's (pseudonym) running records she maintained a 93% accuracy rate, often missing high frequency words and forgetting to chunk larger, more difficult words. Similarly, it was noted during her conferences that she struggled to read high frequency words and multisyllabic words accurately. Therefore, she was placed in a group focusing on reading multisyllabic words as whole class instruction included instruction on reading high frequency words.

One critical difference in creating groups based on student needs was the student's ability to answer varying forms of comprehension questions (which are included in the running record assessment), as well as his/her ability to decode phonetic words, fluency rate, and ability to interpret novel vocabulary; each of these factors was considered when forming the needs-based groups. The teacher used professional judgment in assigning students to groups based on the most important instructional need. For example, during Charlie's (pseudonym) running records at the beginning of the year he consistently struggled to meet the fluency benchmark for his running record assessment. During conferences with Charlie, teacher notes indicated choppy reading

and inattention to punctuation; therefore, he was placed in a small group whose focus was improving rate and prosody through rereading of simple text.

In other situations, assessments did not paint a clear picture of what the student's need was. If a student did not show a particular need in decoding, he/she was placed in a group focused on comprehension instruction. Table 4 gives an example of the placement for one student from each group as an example of how needs-based groups were formed.

Table 4

Example of data analysis for forming needs-based groups

	Student H	Student M	Student Z	Student D	Student S	Student J
Running Record Reading Level	B	B	A	E	D	D
Running Record Accuracy	93%	90%	88%	97%	93%	97%
Running Record Comprehension	NA*	NA*	NA*	100%	80%	100%
Conference Data	Inaccurate guessing at words	Cannot sound out multisyllabic words	Random guessing at words	Fluent reader!	Frequently skips lines	Very choppy!
Need identified	Accuracy Reading for meaning	Accuracy Chunking	Accuracy Beginning and ending sounds	Comprehension Back up and reread	Comprehension Check for understanding	Fluency Reread
Group Placement	1	2	3	4	5	6

*Student running record level was below a level C and did not yet include comprehension assessment questions.

Using the data from running records and teacher-student conferences, six instructional groups were formed. A brief description of each group follows with examples of student data used to form each group.

Group 1 focused on accuracy and reading for meaning (e.g., "Does the word look right? sound right? make sense?). This group consisted of five students. Running record

and conference data for each student in this group included notes such as “inaccurate guessing” and “does not correct for understanding.” Student running record reading levels for this group ranged from B – F.

Group 2 focused on accuracy and ‘chunking’ to read multisyllabic words. This group consisted of four students. Running record and conference data for each student in this group included notes such as “has no strategy for solving long words” and “guesses at words.” Student running record reading levels for this group ranged from B – D.

Group 3 focused on accuracy and checking the beginning and ending sounds of words to make sure they were read correctly. This group consisted of six students Running record and conference data for each student in this group included notes such as “random guessing at words” and “does not have a strategy for solving words.” Student running record reading levels ranged from A - F.

Group 4 focused on monitoring comprehension and rereading to fix understanding. This group consisted of four students. Running record and conference data for each student in this group included notes such as “does not adjust reading for meaning” and “good word solving but does not correct for meaning.” Student running record reading levels ranged from D – E.

Group 5 focused on the comprehension strategies of asking questions and summarizing. After reading a page or section in a book, this group worked on stopping to ask themselves “What is this story/book about?” and “What just happened/What did I just learn?” This group consisted of three students. Running records and conferences did not indicate a specific area of need. Student running record reading levels ranged from E - J.

Group 6 focused on fluency and rereading familiar text to improve rate. This group consisted of four students. Running record and conference data for each student in this group included notes such as "choppy" and "labored reading." Student running record reading levels ranged from D - I.

The information for student placement for initial groups (September 6, 2010) is compiled in Table 5.

Table 5

Initial group formation for needs-based groups

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Strategy	Accuracy Reading for meaning	Accuracy Chunking	Accuracy Beginning and ending sounds	Comprehension Back up and reread	Comprehension Check for understanding	Fluency Reread
Number of students	5	4	6	4	3	4
Days met per week	2	3	3	2	2	2
Minutes of instruction per session	15-30	15-30	15-30	15-30	15-30	15-30

Reading instruction. During the 2010-11school year, students received whole group strategy and skill instruction based in part from the same adopted basal program as the past two years (*Harcourt Trophies,* 2003) supplemented by lesson suggestions from *The CAFE Book: Engaging All Students in Daily Literacy Assessment & Instruction* by Gail Boushey and Joan Moser (2009) as well as *Reading with Meaning: Teaching Comprehension in the Primary Grades* by Debbie Miller (2002).

The texts used for small group instruction were chosen by the teacher and were based on each student's running record reading level, with each student in the group

potentially using a different text during the lesson. Both fiction and nonfiction text was used. The focus of the lessons was to explicitly teach a reading skill or strategy. This was followed by teacher guided practice using the student's individual texts.

Unlike the guided reading groups, needs-based small groups consisted of students with various reading levels who oftentimes were not working from the same text; thus, the lesson format would vary between the six needs-based groups because the focus was different (i.e. a group focusing on fluency might look quite different than a group focusing on chunking). In contrast, in a guided reading group, no matter what the reading level, the lesson format was the same for each group and the instructional focus was driven by the book choice for the lesson. A brief description each needs-based reading group follows.

Group 1 focused on accuracy and reading for meaning (i.e. "Does the word look right? sound right? make sense?). Lessons often began with the group working together on an example text. The teacher would read aloud a passage from a book or a piece of shared reading material (big book, passage copied for each student, etc), incorrectly reading words occasionally. The teacher would then model thinking aloud to fix the accuracy of words read (e.g., "Hmmm … that didn't sound right. I will go back and reread that sentence."). The teacher would also give examples of reading quickly and failing to fix words that were read incorrectly. Students would stop the teacher when they noticed this error and coach the teacher in correcting the misread words. Following this group practice, students were given text at their instructional level and asked to whisper read their text, using the strategies the teacher had just modeled. The teacher

listened to the students and guided students in using the strategy of slowing down and making sense of what they were reading.

Group 2 focused on accuracy and chunking multisyllabic words. This lesson also often included group work on a common text. The teacher would read aloud from a shared text while the students followed along. When the teacher came to a multisyllabic word she would stop and the students would assist in chunking the word in order to sound it out (e.g. point of word chunks that they already knew, break the large word into smaller and more manageable chunks to decode). After several opportunities to practice as a group, students were given text at their instructional level and asked to whisper read, using chunking when they came to a multisyllabic word. The teacher listened and guided students in reading multisyllabic words.

Group 3 focused on accuracy and checking the beginning and ending sounds of words to make sure they were read correctly. Lessons for this group also often began with a common text which the teacher read aloud while students followed along. When the teacher would come to a difficult word or a word that was unknown to the group, she would stop and have the students help her decode the word using the beginning and ending sound to check their accuracy. This was followed by student independent reading of instructional level text while the teacher listened and offered support in decoding using the beginning and ending sounds of the words.

Group 4 focused on monitoring comprehension and rereading to fix understanding. During small group instruction, this group focused on understanding what they read all of the time. If something did not make sense, they practiced rereading the section over again until they understood it. Most of the students in this group

struggled with "speed reading." Asking them to reread if something didn't make sense slowed them down enough to understand it. Lessons sometimes began with the teacher reading aloud a text and modeling rereading when something did not make sense. The teacher would use think alouds such as, "Hmmm … I don't remember what that page was even about. I should reread it," or "This did not make sense to me, I should reread." This would be followed by independent reading of instructional level text while the teacher monitored use of the rereading to improve understanding. Later in the year, this group lesson time would often begin with students reading from instructional level text and tallying how often they reread. During this time, the teacher would listen to the students reading and assist when needed. After the students had finished reading, the students would discuss the number of times they reread in order to understand what they were reading.

Group 5 focused on the comprehension strategy of asking questions and summarizing. At the end of each page or section of a book students practiced stopping and asking themselves "Who/what is this story/book about?" and "What just happened?" Lessons for this group often started with a short read aloud where the teacher would model stopping and asking the two questions, often inviting the students to answer the questions about the text. This was then followed by assigned buddy reading. Each student was given text at their instructional level. They read in a quiet section of the room; one student would read aloud and the other student would stop the reader at the end of each page or section in the book and ask "Who/what is this story/book about?" and "What just happened?" After one student finished reading the text, the other student would read while being coached by their reading buddy. As there were only three

students in this group, the teacher participated as a buddy reading partner with each of the students at different times.

Group 6 focused on fluency and rereading of familiar text to improve rate and prosody. Lessons for this group usually started with the choral reading of a selection from the basal book. This was followed by an assigned rereading of the text using whisper phones (small phone shaped tools which allow students to hear their own whisper amplified). Students chose one page to practice several times. When the group met for the second time each week, students would share their best reading of their favorite page with the group.

Progress monitoring and movement between needs-based groups. Running record assessments occurred at the same rate (every two to eight weeks) as in 2008-09 and 2009-10 school years. Individual conferences (previously not used to inform student placement in groups) occurred at a similar rate, every two to six weeks, depending on the instructional needs of the student, with struggling readers participating in more frequent conferences.

Students were moved out of one needs-based group and into another needs-based group when assessment and conference data suggested that a different instructional focus would be more helpful in improving student reading growth. For example, one student was initially placed in the group focused on chunking multisyllabic words. However, he was unable to pass the fluency portion of the next two running records assessments and was therefore moved to the rereading for fluency group. Only 12% of students stayed in the same needs-based group during the entire study. By the end of the study, a new fluency group focusing on sight words had been added and the rereading for fluency

group had changed its focus from rate to prosody. Students in accuracy groups were most likely to remain in their same needs-based group throughout the study because they continued to struggle with decoding accurately and fluently. All of the students in Group 2 continuing in that group at the end of the study with one additional student added to the group. The same comprehension groups were in place at the end of the study but only one student who began in group 5 remained in her same group and none of the students who began the year in Group 4 were the same at the end of the study.

Needs-based groups were flexible not only student movement between groups, but in creation of needs-based groups. Additional groups were created when assessment data, conferences or informal observations showed a need. For example, during initial assessments one student showed a need for instruction in reading multisyllabic words and was placed in the reading group which focused on 'chunking' multisyllabic words. Then during a social studies lesson it was observed that this student had a lack of vocabulary development in the topic of study: housing (i.e. they did not know the meaning of words such as apartment, tent, houseboat, hut,). A small group was formed for this student and two other students to work on social studies topic vocabulary during the one week that housing was studied. However, these students continued in their regular needs-based groups in addition to the vocabulary small group.

Similar to previous years, DIBELS assessments were administered in September and January by the school's reading intervention team. These scores were not used for grouping purposes, but were analyzed to inform instruction and track student progress. Similar to the first two years, this data was used to inform whole group instruction

Instruments

Student growth in reading was measured by running record assessments and oral reading fluency measures (AIMSweb/DIBELS). These instruments were chosen because the school in which the study was conducted required them.

The running record assessments were administered by the classroom teacher and leveled on a scale of A-Z. There were three components to the assessment: accuracy, comprehension and fluency words correct per minute (WCPM). Each level had an assessment that the student must pass to move up a level in the guided reading books.

The accuracy section included student oral reading of a leveled text while the teacher tracked how many words the student read incorrectly. In order to pass this segment of the assessment, students had to score between 95-100% accuracy. Therefore, if a student read a text with 105 words, and read 100 of the words correctly, he/she would pass the accuracy portion of the assessment. Self-corrections (i.e., when a student read a word incorrectly but then corrected themself) were not counted against the score.

Comprehension was measured by correctly answering oral scripted questions presented by the teacher based on the leveled text. A passing score was 85-100% of the questions answered correctly as determined by the teacher. These questions included text-based questions (e.g., “Name three buildings that were named in this book.”), inferential questions (e.g., “Did the girls enjoy visiting their grammy? What in the story makes you think that?”), and critical response questions (e.g., “In what ways is your neighborhood like any of the communities mentioned in this book?”). The assessment tool includes possible correct responses and student answers were judged as correct at the teacher’s discretion

The fluency component was comprised of a one minute WCPM (words correct per minute) assessment on a leveled fluency passage. In order to pass, students had to meet the WCPM benchmark for the level that they are being tested at. At a level F the fluency benchmark was fifty WCPM. Therefore, if a student testing on a level F read at least fifty words correctly in one minute they passed the fluency portion of the assessment.

Assessments for Running Record levels A-B only contain an accuracy component. Level C-E includes accuracy and comprehension components. Level F-Z assessments include all three components of the running record: accuracy, comprehension, and fluency. For the 2008-2009 and 2009-2010 school years, the school where this study took place used AIMSweb for school-wide benchmarking. First grade students were tested in the fall, winter and spring on the AIMSweb Test of Early Literacy by the school's reading tutors (paraprofessionals who received training from the schools reading program coordinator). This test includes letter naming fluency (LNF), letter sound fluency (LSF), phoneme segmentation fluency (PSF) and nonsense word fluency (NWF) ("AIMSweb: Assessment and Data Management for RTI," 2008). In addition, the school at which the study was conducted administered the AIMSweb Reading – Curriculum Based Assessment, an oral reading fluency (ORF) assessment to first grade students during the winter and spring assessments. The assessment schedule was as follows: fall included LNF, LSF, PSF, NWF; winter included PSF, NWF, ORF; and finally spring included NWF, ORF.

Due to changes in state requirements, during the 2010-2011 school year, first grade students received similar testing with the DIBELS Next assessment. It is a General

Outcome Measure (GOM) which tests whether a student is making progress toward the overall goals of literacy learning ("DIBELS Data Systems," 2008). Similar to AIMS, DIBELS Next is an ORF assessment which includes several different components for first grade. The assessment schedule was as follows: fall included PSF, NWF and winter will include NWF, ORF.

As an additional measure of needs-based grouping for the 2010-2011 school year anecdotal notes were taken by the teacher during every running record assessment, during individual conferences, and during small group lessons. Notes were coded for students' flexible use of strategies that had taught. Coding included, but was not limited to: student ability to metacognitively express use of specific strategies, student use of decoding strategies and techniques while reading, and student ability to identify strategies that could be used to accomplish student reading goals.

Materials

Materials needed for instructional purposes were:

- Leveled books from school leveled library and other text material
- *The CAFE Book: Engaging All Students in Daily Literacy Assessment & Instruction* by Boushey and Moser (2009)
- *Reading with Meaning: Teaching Comprehension in the Primary Grades* by Miller (2002)
- *Harcourt Trophies: A Harcourt Reading/Language Arts Program* (2003)
- Binder with teacher records of student reading data

Materials needed for assessment purposes were:

- Running record assessment materials

  - Record sheet for each student
  - Benchmark leveled text
  - Leveled fluency passages (for levels F – Z)
  - Scripted comprehension questions (for level C - Z)
- Binder with teacher records of student reading data

Evaluation

Results of the grouping formats were measured by a comparison of the growth shown on NWF and ORF tests as well as running records for the 2008-09, 2009-10, and 2010-11 school years. Student benchmark levels were graphed and compared, analyzed for improved growth rates for below-level learners and for steady growth rates for at- and above-level learners.

In addition to the benchmark data, teacher anecdotal notes were used to measure students' ability to flexibly use the strategies taught. During individual conferences, during running record assessments, and during reading outside of small group instruction, the teacher kept records of instances when students used reading strategies flexibly (i.e., without instructional support prior to reading, in-between genre, with text of a novel subject area) . At the end of the study, teacher notes were compiled and analyzed for rate of flexible strategy use over time.

RESULTS

Three measures were used to determine the effect of needs-based grouping on student progress: Running Record data, AIMSweb/DIBELS data, and teacher notes.

Running Records

Running record benchmarks can be organized into four categories: below benchmark, approaching benchmark, at benchmark, and above benchmark. When the 2008-09 and 2009-10 running record data were analyzed, the number of students classified at or above benchmark decreased as the year proceeded, causing the approaching and below benchmark categories to grow. Figures 1 and 2 show that the number of students categorized as below and approaching benchmark increased from the first quarter to the end of the school year. Nine of the forty-nine students in the 2008-09 and 2009-10 school years began the school year categorized as below or approaching benchmark. Of these nine, only one student achieved benchmark by the end of the school year. The other eight students maintained either approaching or below benchmark mark levels although half of them consistently maintained a grade level appropriate average growth rate of two reading levels per quarter ("TCRWP Benchmarks for Independent Reading Levels," 2008). These findings indicate that the level of student reading achievement decreased as the year progresses.

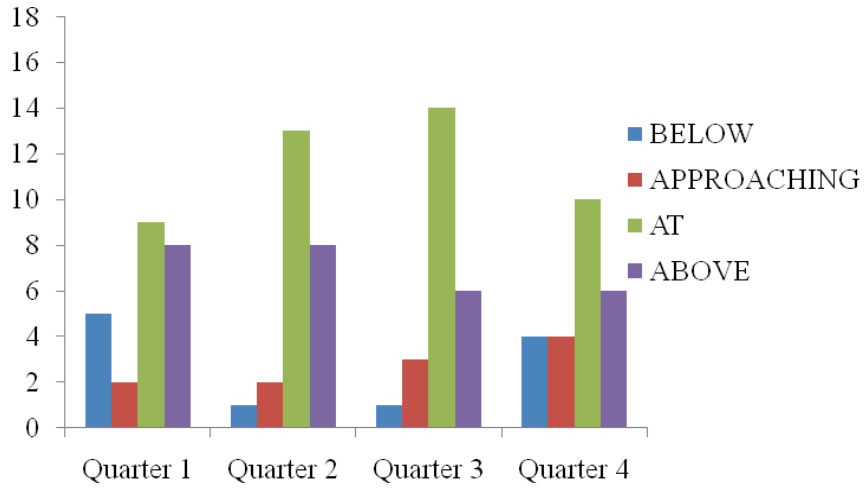

Figure 1. Running Record Data: Growth Toward Benchmark 2008-09

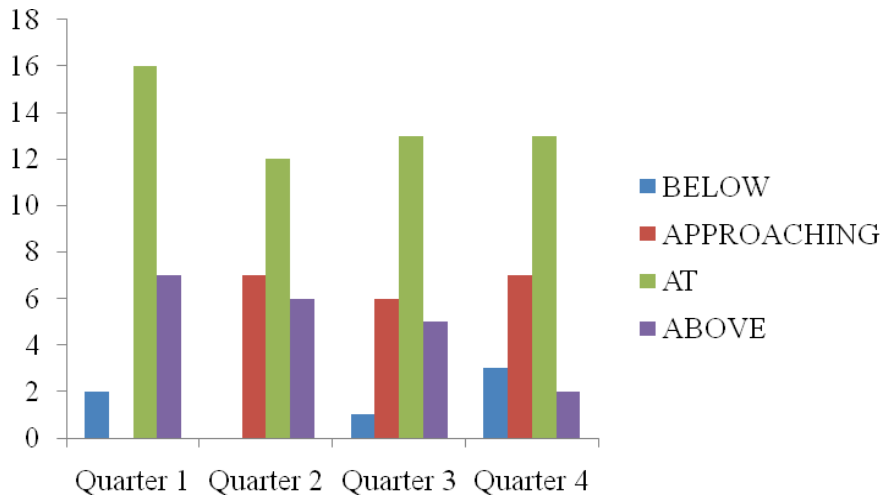

Figure 2. Running Record Data: Growth Toward Benchmark 2009-10

Twenty-five of forty-nine students began the 2008-09 and 2009-10 school years in the benchmark category (levels C-E). Fifteen of the twenty-five students who began the year at benchmark ended at benchmark leaving ten of these students approaching or below benchmark. Upon further analysis, seven of these ten students began the year on level C.

In order for a student who begins the year on a level C to stay at benchmark throughout the year, they must advance an average of two levels per quarter. Only two of the seven students who started their school year on level C made the appropriate amount of advancement between first and second quarter (Figure 3). This data would seem to indicate that students who begin on level C are the most at risk of insufficient growth during the year.

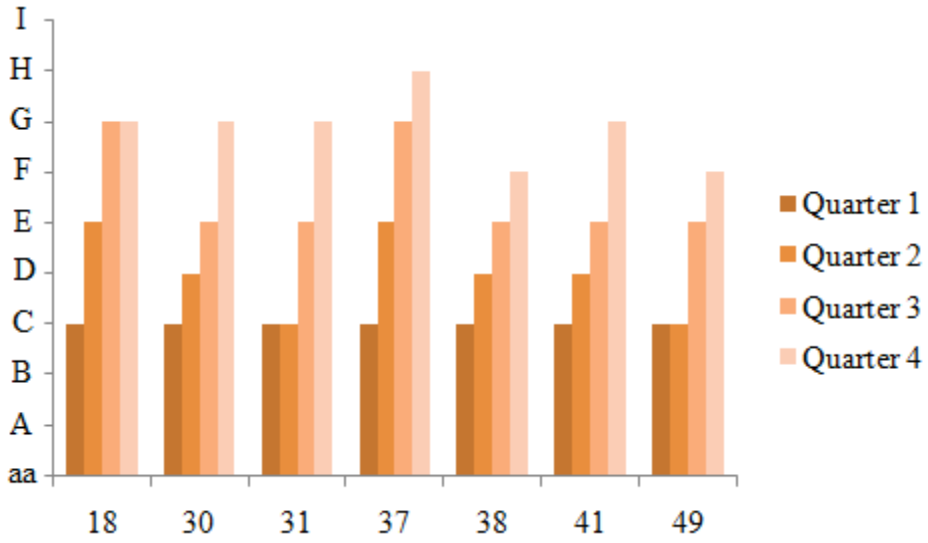

Figure 3. 2008-09 and 2009-10 Students Beginning the Year at Level C

Of the fifteen students who began the year classified as above benchmark (levels F or higher) in the 2008-09 and 2009-10 school years, only eight students maintained an above benchmark score by the end the school year (levels L or higher). This may be due to the fact that the nonfiction texts which are part of the assessment become much more challenging. Because these levels are technically second grade reading levels, the background knowledge that is required to pass the comprehension test is often beyond a first grader's capability.

During the 2010-11 school year, while using needs-based grouping, no students began the year in the below benchmark category. Of the two students who began the year in the approaching benchmark category, only one student was able to make sufficient growth between first and second quarter (Figure 4).

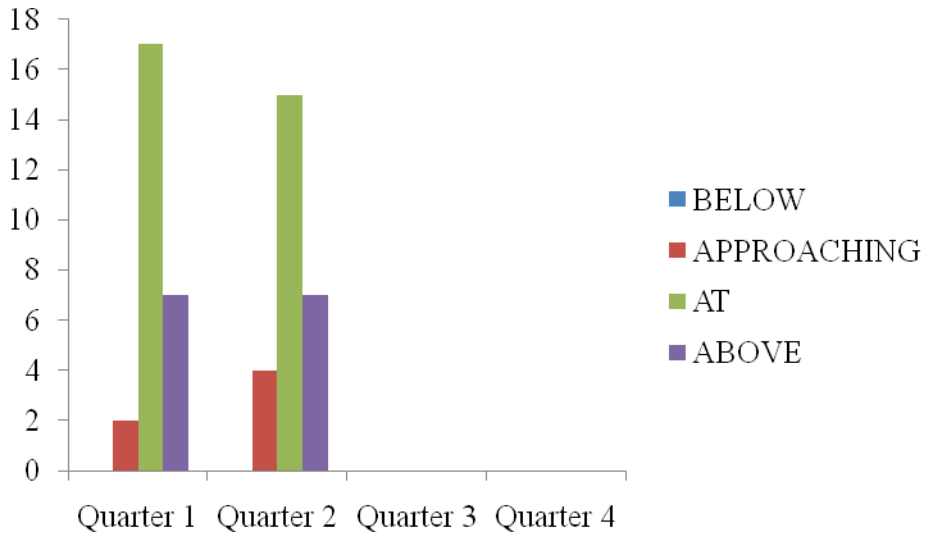

Figure 4. Running Record Data: Growth Toward Benchmark 2010-11

Of the sixteen students who began the year at benchmark (levels C-E), fourteen maintained benchmark through second quarter. Of the sixteen students, seven students began the year on level C. Only two of these seven students did not make the appropriate growth during the second quarter (a two level increase) but did move up at least one level (Figure 5).

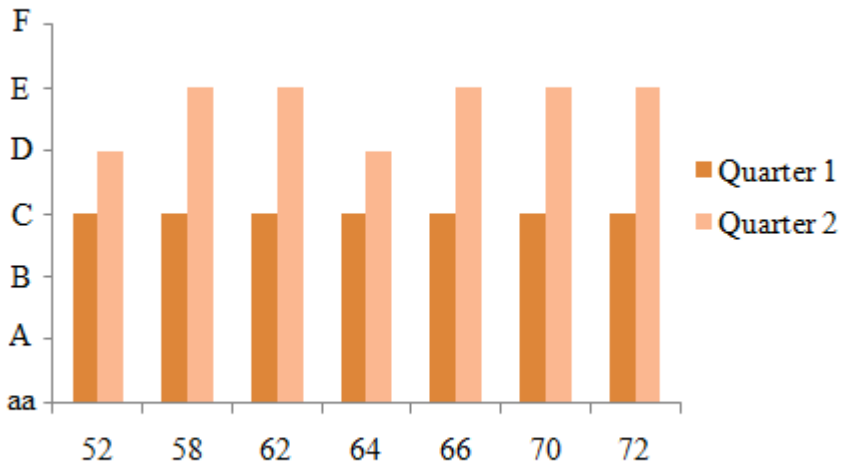

Figure 5. 2010-11 Students Beginning the Year at Level C

Students starting on level C during the 2008-09 and 2009-10 school years averaged a growth rate of one level from first quarter to second quarter, with individual growth rates of zero to two levels. During the 2010-11, school year students who began on level C grew an average of 1.7 levels with individual growth rates of one or two levels.

Two students began the 2010-11 school year in the approaching benchmark category. These students improved one or two levels during the second quarter. When compared to the 2008-09 and 2009-10 school years, these students made slightly less progress as students the previous years increased three levels each.

Students who scored in the above benchmark category during the 2010-11 school year varied from levels F –J. Of the seven students who began the year in this category, each grew an average of two levels. This growth rate is higher than the average growth rate students from the 2008-09 and 2009-10 with an average growth of one level during the first to second quarter.

Students who began the year above grade level improved as much or more than those in past years with only one student moving from above benchmark to at benchmark. However, one student was able to move from at benchmark to above benchmark during this same period.

When comparing the distribution of reading levels alone, the 2008-09 school year had the largest spread of levels with students starting on levels aa – J (Table 6). Both the 2009-10 and 2010-11 began with a high concentration of students in the C – E levels.

Table 6

Running Record Levels at Quarter 1

	Year 1 2008-09	Year 2 2009-10	Year 3 2010-11
Number of Participating Students	24	25	26
	Q1	Q1	Q1
aa – A	5	2	0
B	2	0	2
C – E	9	16	17
F – J	8	7	7

AIMSweb and DIBELS Next

Nonsense Word Fluency. Analysis of the nonsense word fluency (NWF) tests shows similar group mean scores for the three school years at the fall test date (Table 7). A *t*-test comparing the three groups indicated there was no significant difference between the three groups for nonsense word fluency at the fall test date (Table 8). At the winter test date however, the 2008-09 comparison group shows a significantly higher rate of growth than the 2009-10 comparison group and the 2010-11 experimental needs-based group.

Table 7

Descriptive Statistics for Nonsense Word Fluency

	Year 1 2008-09		Year 2 2009-10		Year 3 2010-11	
N	24		25		26	
	Fall	Winter	Fall	Winter	Fall	Winter
Mean	43.9	75.3	39.8	56.4	35.9	54.0
SD	27.9	38.8	15.6	26.7	20.7	28.9
Median	33	64	41	54	30	44.5
Range – Min	0	25	15	17	4	12
Range – Min	99	157	76	114	97	142
Mean gain score		31.4		16.6		18.2

Table 8

Significance Tests for Nonsense Word Fluency Comparing Groups over Time

	Fall		Winter	
Group Comparisons	*T*	*p*	*T*	*p*
Year 1 vs. Year 2	0.63	0.53	2.01	0.05
Year 1 vs. Year 3	1.17	0.25	2.23	0.03
Year 2 vs. Year 3	0.78	0.44	0.31	0.76

At the winter test date, students from the 2008-09 school year show a considerably higher mean gain score as compared to the 2009-10 and 2010-11 school years. Data analysis shows a statistical significant difference between groups for NWF at the winter test date between the 2008-09 comparison group and 2009-10 comparison group, $t(47)=2.01$, $p = 0.05$, and between the 2008-09 comparison group and 2010-11 treatment group, $t(48)=2.23$, $p = 0.03$. However, there was no difference on NWF scores between the 2009-10 comparison group and 2010-11 treatment group, $t(49)=0.31$, $p = 0.76$.

Oral Reading Fluency. Analysis of the winter test oral reading fluency (ORF) measures shows higher mean scores during the 2008-09 school year than in the following two years (Table 9). However, data analysis shows no statistically significant difference between the 2008-09 comparison group and the 2009-10 comparison group, $t(47)=1.23$, $p = 0.22$, between the 2008-09 comparison group and the 2010-11 treatment group, $t(49)=1.45$, $p = 0.15$, or between the 2009-10 comparison group and the 2010-11 treatment group, $t(48)=0.21$, $p = 0.83$ (Table 10).

Table 9

Descriptive Statistics for Oral Reading Fluency

	Year 1 2008-09	Year 2 2009-10	Year 3 2010-11
N	24 Winter	25 Winter	26 Winter
Mean	60.9	48.6	46.8
SD	38.3	31.1	30.2
Median	62.2	46	44
Range – Min	6	11	6
Range – Max	128	113	128

Table 10

Significance Tests for Oral Reading Fluency

	Winter	
Group Comparisons	*T*	*P*
Year 1 vs. Year 2	1.23	0.22
Year 1 vs. Year 3	1.45	0.15
Year 2 vs. Year 3	0.21	0.83

Teacher Notes

Teacher notes were taken during running record assessments as well as individual conferences and small group instruction. These notes were coded for strategies that had been taught in class and tracked student progress in applying the small group strategy lessons.

The composition of each reading group was surprisingly diverse. One group, whose focus was on chunking multisyllabic words into smaller words (an accuracy fix-up strategy), was composed of students from levels A-E. Another group working on re-reading the text to correct understanding (a comprehension fix-up strategy) was made up of students ranging from levels D-I.

It is true that students who were in levels A-E were more likely to be in decoding or accuracy fix-up focused groups, while students in levels I and above were more likely to be in groups working on comprehension strategies. It is also true that students in levels E-G were very likely to be in a fluency group. This grouping tendency may be due to the features of the running record tests themselves. At levels A-E students must pass only accuracy and simple comprehension questions. Levels F and above include a fluency component. At level I the comprehension questions increase from five questions to ten. The changing format of the test as students' progress through various levels may influence the teacher's placement of students into groups. If the assessment tool were more similar across all levels, diversity in groups may increase.

Small groups remained fluid during the two quarters with restructuring of all groups taking place at least once a quarter. Students temporarily joined other groups whenever needed. For example, if a student was in fluency group but was having difficulty decoding words during science, that student might be added to a decoding group for that week. However, once a month student assessment data was reviewed and groups were restructured as needed. This data included running record data (fluency rate, accuracy, comprehension) as well as teacher notes from individual conferences. Evidence of improvement as well as need for further was considered. Questions such as "What area (fluency, accuracy, comprehension) does this student struggle with most frequently?" "What skills will this student need in order to read the grade level materials during science and/or social studies?" and "Does this student belong in multiple groups?" were used to adjust groups. During the first month of the study, groups were much more

fluid due to the lack of knowledge about the students' needs and lack of experience with the instructional format.

On average, four out of six groups were focused on either decoding accuracy fix-up strategies or fluency strategies. For example, many groups focused on chunking larger words into smaller bits, blending sounds together, and rereading text to gain fluency. This may be due in large part to the grade level in which this study was conducted. Much of the first grade curriculum is focused on helping students decode and fluently read simple text. The needs-based groupings reflected this curricular focus.

Students' use of the strategies taught in small groups was, as expected, difficult to measure. Strategies that were most often recorded were accuracy fix-up strategies (chunking, blending, etc.). This may again be due to the grade level in which the study was conducted as first graders use these strategies more often because of their lack of automatic word recognition.

Teacher notes regarding one student from a "chunking group" included comments such as "Still needs chunking and beginning sound accuracy" and "Doesn't chunk or blend well (tries chunking but with small words which don't require this strategy)." Another student, who was placed in a fluency group, had comments such as "Very accurate but very slow," "knows sight words," and "reading is so labored he can't remember well." Teacher notes such as these where used to place students into groups.

The most beneficial needs-based groups, as seen in coded teacher's notes, were the chunking and rereading for fluency groups. Students who participated in a "chunking group" had an increased success rate at using this strategy to decode multisyllabic words

after instruction. These students, especially at the lowest levels, appear to have benefited from needs-based instruction based on teacher notes.

For example, one student who began the year with comments such as "Applies known phonics to solve new words" and "Doesn't chunk larger words," was placed into a chunking group. By the end of the 2010-11 study period, the teacher comments included statements such as "Good sight word recognition" and "Used chunking with prompting to read the word KERPLOP, but then used independently to read the word GURGLE."

Three students who participated in the "rereading for fluency group" saw great increases in fluency rate. John, Charlie, and Nathan (pseudonyms) were unable to pass running record assessments due to fluency rate. Though all were at or above grade level benchmark, they were placed in a group which focused on reading and rereading simple text to improve prosody and rate. John, who started the year reading 24 words correct per minute (wcpm), improved to 62 wcpm. Charlie began the year reading 51 wcpm and improved to 69 wcpm. Finally, Nathan increased his reading rate from 40 to 60 wcpm. By focusing on the specific skill that was lacking, these students improved their reading rate dramatically in a short amount of time.

DISCUSSION

Needs-based grouping has benefits and challenges for the classroom teacher. While using this grouping method, the first grade students in the study practiced and gained in-depth knowledge of a particular reading strategy. During running record assessments, students were able to use these strategies to support their reading. Growth among most students at risk for missing benchmark by the end of the year showed sufficient progress.

According to the AIMSweb and DIBELS Next NWF assessment, during the 2008-09 school year students appeared to have experienced tremendous growth from the fall to the winter test dates. A factor that may have contributed to this was a strong emphasis on phonemic awareness and phonics during that particular school year. During the 2008-09 school year, the first grade class as a whole began the year with a high percentage of students scoring well below benchmark. For this reason, as a grade level team, the teachers at the school where this study was conducted increased instructional emphasis on phonemic awareness and phonics during whole group instruction. This seems to have benefited both the low and high learners and should be considered during instructional planning.

However, there is not a statistically significant difference in growth for the ORF assessment between the guided reading comparison groups and the needs-based treatment group. The lack of difference may be due to three factors: a relative short study period, the use of only one classroom, and a lack of teacher training.

However, results of this study revealed some interesting and important findings. Running record data showed that during the 2008-09 and 2009-10 school years students who began the school year on level C where the most at risk of starting on benchmark but ending below benchmark. The 2010-11 experimental group showed improved growth rates over Level C students from previous years. Placing level C students in homogeneous ability groups may have allowed these students to act as mentor and/or mentee, developing a stronger understanding of the skill or strategy being taught.

An unanticipated effect of needs-based grouping was the impact the needs-based small group structure had on whole group instruction. The focus of reading instruction

became more strategy based. This may be due to the small group ownership of a particular strategy. Students from a chunking group for example often offered their strategy as a means for decoding an unknown word during whole group basal reading. During the daily chapter book read-aloud, students whose group was focusing on rereading to fix-up meaning counted the number of times the teacher reread to fix her understanding. Though the method of needs-based grouping with a specific instructional focus on strategy development may have created an atmosphere in which students more clearly understood the components of the reading process that they were developing.

Buddy reading was also affected by this focus on strategy use. When students were paired for reading, they stopped to offer fix-up strategies or to "check for understanding" as they read. The shared vocabulary allowed both low and high readers to offer their peers help in reading whatever text they had chosen.

For the classroom teacher, the most challenging part of this grouping method was the lack of a common instructional text. Without the vocabulary development and building of background knowledge components of the guided reading groups, the two ELL students struggled to access all of the reading material at their reading levels. Without a common text, it was difficult for the teacher to plan lessons because all of her training has been based on the use of a common text. Therefore, grade level passages were occasionally used for instruction, followed by guided reading of different leveled texts. This seemed to solve the instructional planning problem but the issue of vocabulary development still remains.

Another challenge was the lack of confidence the teacher had in her ability to accurately place students in appropriate groups. The skills and strategies that some

students lacked were very apparent, but some students did not seem to lack any one particular strategy. For example, one student passed all of their running record tests with good prosody, scored well on the DIBELS assessments, and applied all strategies that had been previously taught to the whole group. The inability to identify a specific instructional skill or strategy may be due to the teacher's lack of experience (as a fourth year teacher) or the teacher's developing understanding of how needs-based grouping should be structured.

Teacher training in heterogeneous small group instruction was limited. Though the teacher had received training on differentiating reading instruction, this training was focused on whole group lessons. All training that the teacher had received for small group instruction was based on homogenous ability groups. Teacher training on the use of heterogeneous small group instruction is an area that may need to be improved before the use of this grouping method will realize its full potential.

Results of this study have shown that needs-based grouping has benefits for reading instruction in the primary grades. Student ownership of reading progress, as well as improved growth rates for students most at-risk of slipping below benchmark, show that the 2010-11 group profited from the needs-based small group instruction they received. A lack of statistically significant growth reflects the need for refinement of this grouping practice and more extensive study.

LIMITATIONS

There are several limitations to this study. One limitation is that this study was conducted in one teacher's classroom only measuring growth from one fall test date to

one winter test date. Future studies may consider comparing growth patterns across an entire year and in multiple classrooms across multiple grade levels.

Reliability of the testing tools may have altered test results as well. Running records were used as one measure of student growth because running records are tool that the school in which the study was conducted required for classroom teacher use. However, these running records did not have high reliability because only one passage was used at each assessment (Fawson, Reutzel, Smith, Ludlow, & Sudweeks, 2006).

The statistical analysis of the AIMSweb and DIBELS Next data shows no significant benefit or detriment to student learning while using the experimental needs-based grouping method. The brevity of this study may contribute to these findings. Following studies should be conducted across an entire school year to gain a clearer picture of the potential for growth.

Another constraint in data analysis is the use of one test tool for the comparison groups (AIMSweb) and a different test tool for the experimental group (DIBELS Next). Though these two tests have strong correlations, the test materials are different. This factor may also have impacted results of the data analysis.

Finally, this study was conducted in a very homogenous population. Most students came from Caucasian upper-middle class families. The lack of diversity in the study population reduces the transferability of results. Nevertheless, results of this study indicate some benefits of needs-based grouping, some potential difficulties with implementation of needs-based grouping, and the need for additional research of small group instruction based on students' needs.

FUTURE STUDIES

In addition to a larger sample size, longer study period, and more diverse population, future studies should consider developing a framework for teachers to work within during the small group lessons. Because of the potential for increased success using homogeneous ability groups when compared to heterogeneous grouping for average ability students (Lou, et al., 1996; Robinson, 2008), future studies might consider a mixed approach to grouping with some students grouped by ability and some students grouped by need.

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