

TRANSCRIPT ANALYSIS AND TEACHER STUDY GROUP:
IMPROVING COMPREHENSION INSTRUCTION

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Connie Buskist

Certificate of Approval:

Edna Greene Brabham
Associate Professor
Curriculum and Teaching

Susan K. Villaume, Chair
Professor
Curriculum and Teaching

Anthony J. Guarino
Associate Professor
Educational Foundations, Leadership,
and Technology

Stephen L. McFarland
Dean
Graduate School

TRANSCRIPT ANALYSIS AND TEACHER STUDY GROUP:
IMPROVING COMPREHENSION INSTRUCTION

Connie Buskist

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Connie Buskist

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Signature of Author

December 16, 2005
Date of Graduation

VITA

Connie Hosick Buskist, daughter of Myron and Althea Hosick, was born in Lexington, Nebraska on January 13, 1953. She graduated from Lakewood High School in Lakewood, Colorado in 1971. She earned a Bachelor of Science degree in Sociology from Brigham Young University in 1976 and a Master of Education from Auburn University in 1991. She taught elementary school in Lee County, Alabama schools for fourteen years. During this time she entered the Reading Education doctoral program at Auburn University. She is married to Bill Buskist and they have five children: Tara, Colin, Caden, Kyle, and Cale.

DISSERTATON ABSTRACT

TRANSCRIPT ANALYSIS AND TEACHER STUDY GROUP: IMPROVING COMPREHENSION INSTRUCTION

Connie Buskist

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The purpose of this study was to determine if teachers' participation in a teacher study group and transcript analysis would have an effect on the reading comprehension scores of their students. The 6 teacher participants learned about classroom discussion and comprehension instruction through reading *Questioning the Author* (Beck, McKeown, Hamilton, & Kucan, 1997) and analyzing their classroom discussions. Students of the participating teachers and students of 6 matched control group teachers completed the Degrees of Reading Power comprehension assessment ($n = 171$). Treatment group students scored significantly higher than control group students when pre-test scores were held constant ($p = .001$). Teachers reported transcript analysis and

study groups as viable methods of improving their instruction and increasing student reading achievement.

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I. INTRODUCTION

In 2000, the National Reading Panel (NRP) published the results of its investigation into effective reading instruction. Congress commissioned the panel in 1997 to “assess the research on the effectiveness of various approaches to teaching children to read” (NRP, 2000, p. 1-1). The Panel identified five major components of reading acquisition and instruction and completed a meta-analysis of 30 years of experimental research conducted within each of the major components. Congress expected the report to be used to inform reading instruction in schools in an attempt to see that all children learned to read. In 2001, having taught elementary school for 10 years and having just received National Board Certification, I had never heard of the NRP’s report, nor was I familiar with research regarding reading education. My reading instruction was informed by my preservice reading classes, a limited amount of reading professional literature, the basal series adopted by my school, and, more than anything, my own experiences, reflections, and observations of my students. Professional development in my school did not focus on reading instruction. Inservice days were always “one-shot” workshops in which an expert instructed teachers in “foolproof” methods of doing some type of instruction. My school system’s adoption of a new reading program, which I felt was questionable, eventually prompted me to learn more about reading instruction. I enrolled in a doctoral reading education program and began a journey through which I learned

there was an abundance of information on reading and reading instruction that I never knew existed. As my new-found knowledge began to inform my own reading instruction, informal discussions with my colleagues led me to believe that I was certainly not alone in my initial ignorance of reading instruction, particularly in the area of reading comprehension instruction. The teachers with whom I worked indicated that they also struggled with reading comprehension instruction and felt unprepared to help their students in this area. Although reading comprehension and reading comprehension instruction have been the focus of considerable research in the last three decades (NRP, 2000), the teachers with whom I worked had never been exposed to this research—and that was 2004—four years after the NRP had published its findings. I began to understand firsthand why Pressley reported in 2002 that he and other researchers found relatively little, if any, research-based reading comprehension instruction occurring in classrooms.

Reading comprehension instruction is a complex process that requires extensive training and a deep understanding of the processes involved in reading comprehension (Duffy, 1993). Many teachers simply have not had the opportunity to acquire the knowledge and skills necessary to teach reading comprehension effectively. Although many schools now use basal readers containing comprehension skills lessons, few of these textbooks offer teachers the rationale and support for understanding the reading process in ways that prepare them to give effective comprehension instruction (Reutzel & Cooter, 1988). The NRP (2000) acknowledged the need for greater emphasis on the teaching of reading comprehension both at the preservice and inservice levels. Although

experimental research in this area is scarce, the few studies available suggest that teachers can be taught to be proficient at comprehension instruction and that such instruction can lead to greater student reading achievement (e.g., Bramlett, 1994; Duffy, 1993).

Statement of the Problem

Increased accountability requirements in reading instruction resulting from the passage of the No Child Left Behind Act caused many schools systems to seek programs or approaches to boost their reading achievement scores and to close achievement gaps between various segments of their student population. Much research indicates that one of the most important factors in student reading achievement is having highly effective teachers in the classroom (e.g., Duffy & Hoffman, 1999; Hawley & Valli, 1999; Lipson, Mosenthal, Mekkelsen, & Russ, 2004). Many experts argue that school systems should invest in high quality professional development for their teachers as the best way to raise student achievement (e.g., Darling-Hammond, 1997; Joyce & Showers, 1995).

These parallel lines of research and recommendations about links between teacher expertise and student achievement raise an important question about how to help inservice teachers become knowledgeable and skilled in delivering comprehension instruction. In many school systems, such as the one in which I taught, resources are scarce—both in money and in knowledgeable personnel who can provide instruction. In such systems, teachers usually have a limited amount of planning time during which they must take care of many other necessary tasks. Any professional development beyond the 2-3 day-long workshops each year has to be completed on teachers' own time. Often professional journals and other professional literature are not available to teachers, and

the administrative staff responsible for providing professional development opportunities lack the necessary knowledge to make informed decisions in that area. Dole (2003) concluded:

Regardless of how successful researchers are in understanding how, when, and where to teach comprehension, if educators fail to teach teachers to use and apply this knowledge effectively in their classrooms, the understandings we have gained are for naught. (p. 189)

School-based professional development personnel must examine the research base in teacher development and reading instruction to find ways to help teachers gain the knowledge and skills necessary to become effective reading teachers.

Purpose of the Study

The NRP (2000) found only a limited number of experimental or quasi-experimental studies that attempted to investigate how best to prepare inservice teachers to deliver effective comprehension instruction. Even fewer studies involved both teacher and student outcome measures, which are considered to be vital to substantiating the effects of teacher change on student achievement. Nonetheless, the NRP (2000) concluded that teachers can and do improve their attitudes and teaching practices when given extensive support and that these changes can improve student reading achievement. However, the NRP reported only on research that focused on teaching cognitive strategies to students. Strategy instruction is defined by the NRP as procedures that can aid students' comprehension as they read. These procedures include techniques for teaching strategies such as prediction, question generation, inference-making, and

summarization. Although teaching comprehension strategies to students is important, there are other effective ways to improve reading comprehension. For example, classroom discussion is one technique shown to help students improve their understanding of text (e.g., Beck & McKeown, Hamilton, & Kucan, 1997; Beck & McKeown, 2001; Dole, 2003; Goldenberg, 1992/1993).

Just as learning to teach comprehension strategies effectively takes considerable time and practice (Duffy, 1993), learning to conduct high level discussions also takes time and practice (Goldenberg, 1992/1993). One successful approach for improving discussion is for teachers to analyze their own classroom discourse in combination with receiving instruction in discussion techniques (Kucan, 2004). The present study tested the effectiveness of transcript analysis used within the context of a teacher study group in improving teachers' comprehension instruction and their students' reading comprehension achievement. I expected that teachers in the experimental group would increase their use of higher level discussion techniques and their students would make greater gains in reading comprehension achievement relative to the students in the control group. The significance of this study lies in its potential to provide evidence that professional development in the form of a teacher study group with transcript analysis can improve teachers' comprehension instruction and result in improved student reading comprehension achievement.

Research Questions

This investigation attempted to answer the following questions:

1. Are reading comprehension scores of second and third graders in classrooms in which teachers have participated in transcript analysis and a teacher study group higher than the scores of students of teachers who have not done so?
2. Does transcript analysis by teachers participating in a teacher study group positively affect the quality of literacy discussions they conduct with students?
3. What effect does participation in a study group and transcript analysis have on participating teachers' perceptions of comprehension instruction?

II. REVIEW OF THE LITERATURE

This study attempted to improve the reading comprehension of second and third graders by providing professional development for their teachers in the form of transcript analysis and a teacher study group. Reading comprehension, reading comprehension instruction, and professional development for teachers are well researched, but research on instructing teachers how to teach reading comprehension is limited. This literature review begins with an overview of reading comprehension, reading comprehension instruction, and the role of classroom discourse in instruction. It will then discuss effective teacher research and the significance of professional development in the preparation of effective teachers.

Reading Comprehension

Ask most people to define reading comprehension and they will tell you quite simply, “It is understanding what you read.” However, many people do not know that reading comprehension is a complex process that requires the reader to think actively and interact with the text in order to construct meaning (Durkin, 1993). Although reading is a very complicated process that requires myriad skills that must operate simultaneously, skilled readers process most texts so automatically that they are often not aware of these processes. Comprehending text requires one to be able to decode words quickly and accurately; understand the vocabulary that is being read; relate words to what one already knows about the subject; make inferences concerning the text; and make connections

across the text, between the text and the reader, and between the text and the world.

Comprehending what one reads means not only finding literal facts that are present in the text, but also to infer, summarize, synthesize, compare, and analyze: Skilled readers employ many cognitive strategies as they read.

A new conceptualization of reading comprehension began in the 1970s when researchers and theorists first began to view reading as a constructive process (Tierney, 1990). However, as far back as 1917, Thorndike (1917) theorized that readers create meaning rather than extract it directly from text. Two people can read the same text and come away with different meanings of it, and that understanding is influenced greatly by prior knowledge, perspective, and purpose for reading (Anderson & Pearson, 1984; Tierney, 1990). In the last 30 years considerable research on what skilled readers do as they read has guided our understanding of reading comprehension. For example, we know that good readers have a set purpose when they read, they make predictions, they ask questions, and they read selectively (Pressley & Wharton-McDonald, 1997).

The RAND Reading Study Group (RRSG) defined reading comprehension as “both extracting and constructing meaning from print” (Sweet & Snow, 2003, p. 1). This definition states that reading comprehension involves three elements: the reader, a text, and activity, all of which are set within the broader sociocultural context. Readers bring with them certain abilities, knowledge, and experience that affect comprehension. Texts—both print and electronic—contain features that may help or hinder comprehension. Activity refers to the purposes for reading, the processes that take place during reading, and the consequences that result (e.g., an increase in knowledge). The

sociocultural context in which the reader lives and in which the reading takes place shape the meaning that he or she derives from the reading experience. This context includes such issues as whether reading is valued; what texts are available; the learning environment at school; the economic resources of family, community, and school; and a student's self concept.

Thorndike (1917) called reading a thinking process. Readers must be thinkers, and they need to be equipped with the tools to find meaning in what they read (McLaughlin & Allen, 2002). Obviously, reading a text and finding meaning involves more than just being able to decode the words on a page, but, of course, one can not comprehend without being able to decode and understand most of those words. To construct meaning beyond the basic word level, readers must be able to use cognitive strategies such as those discussed earlier. In addition, research reveals that readers must be engaged in the reading process and be motivated to construct meaning from the words in the text (Almasi, McKeown, & Beck 1996). The role of literacy teachers is not only to develop well-rounded readers who can find meaning in many types of literature, but also to develop readers who enjoy reading.

Reading Comprehension Instruction

Although some readers discover how to comprehend text without specific instruction, many readers do not. Before 1976 little research examined how to teach students to understand text. In fact, Tovey (1976) concluded that comprehension could not be taught directly. Most instruction considered to be comprehension instruction was actually directed at helping students to understand at the word and sentence structure

level. The Directed Reading Activity lesson was prominent in classrooms from 1946 through the 1980s (Duffy, 2002; Gambrell, Block, & Pressley, 2002). In these lessons, teachers introduce students to a story that will be read, guide the students as the story is read, and then discuss the story with the students. However, this approach does not actually provide instruction for students in how to comprehend text—discussions usually center on literal level questioning (Gambrell et al., 2002). Durkin's (1979) study of comprehension instruction prompted a change in comprehension instruction research that now provides us with considerable knowledge about how to help students learn to comprehend text (Duffy, 2002).

When Durkin began her landmark studies of reading comprehension in 1976, she was unable to find a definition of comprehension instruction in the literature (Durkin, 1979). To study reading comprehension instruction, she found it necessary to first define the term. She defined reading comprehension instruction as “anything the teacher says or does to help children understand or work out the meaning of more than a single, isolated word” (p. 41). She also established categories of instruction and examples of instruction that fit within each category. In the category that she labeled “Comprehension: Instruction,” one example was:

Using a paragraph that describes a person, teacher asks children to read it and, as they do, to try to get a mental picture of the person. Once the person is discussed, the paragraph is reread in order to decide what details were omitted. Using additional paragraphs in a similar fashion, teacher encourages children to picture what is

described whenever they read (p. 43)

Although the categories and examples were quite broad, she found that less than 1% of instructional time in observed classrooms involved comprehension instruction categories. However, almost 18% of the instructional time was devoted to what was considered comprehension assessment—basically asking recall questions after a reading selection had been completed (Durkin, 1979). Teachers assessed, but did not teach comprehension.

In the years that followed, researchers looked more deeply into reading comprehension instruction. Reading comprehension instruction research soon began to be guided by a cognitive conceptualization of reading (NRP, 2000). Researchers began to identify what skilled readers did as they read and to design instruction that could teach less skilled readers how to do the same thing (Gambrell et al., 2002). According to Duffy (2002), four lines of research on reading comprehension instruction developed after 1980: (a) explicit teaching of comprehension strategies, (b) using prior knowledge to aid comprehension, (c) engaging students in metacognitive strategies; and (d) changing classroom discourse as a means to improve comprehension skills.

In explicit strategy instruction teachers explain and model a strategy and then help students use the strategy. Its ultimate goal is for students to be able to use the strategy independently when reading. Researchers studied many types of instruction in an attempt to learn what works best to increase comprehension. These studies include examinations of mental imagery, prediction, summarization, question generation, and questioning. Explicit instruction in comprehension strategies can benefit students who do not acquire

these skills informally, and it is important to teach students several strategies (e.g., Brown, Pressley, Van Meter, & Schuder, 1996; Dole, Duffy, Roehler, & Pearson, 1991).

Research on using prior knowledge to aid in reading comprehension is grounded in schema theory (Wong, 1985). Schema theorists and researchers examined how readers' prior knowledge influences their interpretation of a text. For example, Anderson and Pearson (1984) found that readers' background knowledge strongly influence their ability to understand text. However, even when a reader has the necessary background for comprehending text, comprehension may not occur if the reader does not activate and use that prior knowledge (Wong, 1985). Instructional practices such as using a K-W-L chart have been shown to be helpful in activating students' prior knowledge before reading (Ogle, 1986). On a K-W-L chart teachers help students list what they already *know* about the subject to be studied (K), what they *want* to learn about it (W), and then after reading what they *learned* (L).

Metacognitive theory assumes that good readers are aware of their cognitive processes and can self-regulate them (Wong, 1985). To make sense of the printed word, the reader must be aware of when things do and do not make sense. Metacognition is “thinking about one’s thinking” and it enables the skilled reader to know when there is a breakdown in the reading process and how do something about it (Duffy, 2002, p. 29). Good readers use metacognitive skills such as predicting, checking, monitoring, coordinating and controlling deliberate attempts to study, learn or solve problems (Wong, 1986).

The NRP (2000) reviewed the scientific literature investigating instructional techniques that fell into the first three lines of research—explicit strategy instruction, activating prior knowledge, and teaching students to be metacognitive—and concluded that when well-trained teachers provide these types of instruction, their student’s reading comprehension improves. Many educators now understand the importance of explicit explanation and instruction of these strategies. In a balanced literacy program, strategy instruction is just one part of developing well-rounded readers. Because of time constraints, however, the NRP did not investigate other types of research-based comprehension instruction. The reading-writing connection, engagement and motivation, content-area instruction, time spent on authentic reading, and class discussions are all areas that can contribute to student comprehension achievement (Fielding & Pearson, 1994; McLaughlin & Allen, 2002).

Classroom Discourse

The fourth line of research identified by Duffy (2002) is classroom discourse. The nature of classroom talk has been researched by sociolinguistics and reading education researchers for many years (Almasi, 1995, Beck et al., 1997; Cazden, 1986; Dillon, 1985; Mehan, 1979; Villaume & Hopkins, 1995). Interest in classroom discourse and its affect on reading comprehension is guided by sociocultural theories that emphasize the importance of social interaction in constructing knowledge (Gavelek & Raphael, 1996). In particular, discussion is couched in Vygotsky’s (1978) theory that cognitive development ultimately depends on social interaction with those who are more knowledgeable. Discussions provide an environment in which students can observe the

cognitive processes that learners use as they construct meaning and in which they can be supported in their own attempts at meaning making (Almasi, 1996). Discussions about books are also supported by transactional theory (Rosenblatt, 1978), which emphasizes that readers create meaning by interacting with a text. Each reader's interpretation of a text is personal, but can be enhanced through discussion about it.

Most teachers probably consider discussion to be a part of their classroom routine. However, the type of discussion considered most beneficial in instruction is not found in most classrooms (Alvermann, O'Brien, & Dillon, 1990; Goldenberg, 1993). Almasi (1996) drew a clear distinction between discussion and recitation. Recitation is a teacher-dominated event in which the teacher does most of the talking and student participation is limited. The initiate-respond-evaluate (IRE; Cazden, 1986; Mehan, 1979) format remains common in most classroom discourse. In this format, the teacher *initiates* a conversation by asking a question (I). A student *responds* (R), and the teacher then *evaluates* the correctness of the response (E). This type of interaction might look like this:

Teacher: So, where did she find the dog?

Student: In the grocery store.

Teacher: Right. What did she name the dog?

Student: Winn-Dixie.

Teacher: Good. Was her father happy that she brought the dog home?

Student: Yes.

Teacher: Are you sure about that? Did he want to keep the dog right away?

For each question, the teacher expects a specific response. Each student response is evaluated by the teacher (“Right,” “Good,” “Are you sure?”). This type of discussion does little to help students learn how to construct meaning or to think deeply about text. It does little to promote greater reading comprehension—it is nothing more than an evaluation of whether the students understand literal level facts about the text. In fact, research has shown that this type of question-and-answer format actually disengages students from the learning process and keeps deeper discussions from developing (Almasi, McKeown, & Beck, 1996; Dillon, 1985).

Good classroom conversations, on the other hand, “engage students in interactions to promote analysis, reflection, and critical thinking” (Goldenberg, 1992, p. 317). In these conversations, students are active participants and the teacher’s role moves from inquisitor to facilitator. Students learn to discuss their understanding of the text and to listen to the ideas of others. Teacher questions move from literal, fact-based questions that have one correct answer to open-ended questions that require students to use higher level thinking skills that may result in multiple interpretations. Students interact with each other as well as with the teacher, helping each other to reach an understanding of the text. For example:

Teacher: I wonder why she told that store manager that it was her dog?

Student 1: It was her dog.

Student 2: I just think she wanted a dog and saw it there.

Student 3: Maybe she didn’t want the dog to get into trouble.

Student 1: Yeah, the dog would have been in big trouble.

Teacher: What kind of trouble could a dog get into?

Student 1: Big trouble for knocking all that stuff over and being in a grocery store.

Student 2: Some dogs who get in trouble get taken to the pound and maybe she likes dogs and didn't want to see it go to the pound.

Teacher: Oh, so if she said it was her dog, it wouldn't go to the pound?

Student 1: Yeah, then it would be safe. But what if it has a real owner?

In this conversation, students play a role in developing an interpretation of the text. The teacher facilitates the conversation by modeling strategies that readers use (question generation) and clarifying student comments. Questions are open-ended and stimulate the students to think critically about the story.

Over the years, reading researchers and educators have created several approaches to developing good classroom conversations. Great Books (Dennis & Moldof, 1984), Grand Conversations (Eeds & Wells, 1989), Instructional Conversations (Goldenberg, 1992), Collaborative Reasoning (Chinn & Anderson, 1998), Book Club (McMahon & Raphael, 1997), Literature Circles (Daniels, 1994) and Questioning the Author (Beck et al., 1997) are well-researched approaches for engaging students in discussion and are used successfully in many classrooms. Each of these approaches provides a framework to assist teachers in implementing literacy discussions. Each approach varies in such things as when discussion takes place (during or after reading), types of grouping situations, teacher or student-led discussions, and guidelines for who has interpretative authority (Wilkinson, Soter, & Murphy, 2005).

The problem still remains, however, that implementing such approaches is difficult, and many teachers still do not employ good discussion techniques in their classrooms. Although it seems that classroom discussion would happen naturally, it is actually a challenging task (Beck et al. 1997; Goldenberg, 1992, Kucan, 2004). Discussion is ill-structured and teachers fear losing control of its direction. The need to teach certain skills or concepts can make teachers feel that they must direct the content of a discussion. High level discussion requires considerable preparation and a deep understanding of the text that will be read. Teachers must prepare for various possibilities in how the discussion may progress and anticipate problems that students may encounter as they read (Beck et al. 1997).

Effective Teacher Research

In recent years, standards for student achievement have increased and expectations of accountability have been pushed to the foreground with the passing of legislation such as the 2001 No Child Left Behind Act. For low performing schools in particular, the mandate to use research-based practices has school systems scrambling to adopt reading programs approved by state or federal governments. Often, these programs or basal readers are scripted or give teachers a guide to follow in delivering instruction. Programs such as Success For All or Reading Mastery are often considered to be a panacea for raising student achievement (Taylor, Pearson, Clark, & Walpole, 2000). However, it is not necessarily the adopted program that makes a difference. Of the effective schools studied by Taylor et al. (2000), none used a nationally recognized school reform program and all employed different approaches to reading instruction and

intervention. In a review of research on student achievement, Hawley and Rosenholtz (1984, p. 3) concluded that “in virtually every instance in which researchers have examined the factors that account for student performance, teachers prove to have a greater impact than program.”

Today, many reading researchers realize that the most important part of good reading instruction is a teacher who is both knowledgeable and thoughtfully adaptive in teaching reading (Duffy, 1993; Hoffman & Pearson, 2000, Villaume & Brabham, 2002). In their investigation of cognitive process instruction at Benchmark School, Gaskins, Anderson, Pressley, Cunicelli, and Satlow (1993) found that it is the instructional “moves” of responsive teachers that brings the curriculum to life rather than the other way around. They noted:

The instructional moves of teachers entail countless decisions about various classroom contingencies—decisions that no curriculum developer could be expected to envision. For this reason, a curriculum can only be an abstraction until it is realized in the instruction of a particular teacher in a particular classroom. Curriculum artifacts such as statement of purpose, scope and sequence charts, textbooks, teachers’ manuals, and lesson guides are by themselves lifeless; they are brought to life when teachers collaborate with students. (p. 277)

In studying why some schools are more successful than others, Lipson, Mosenthal, Mekkelsen, and Russ (2004) found that regardless of what type of reading program the schools they studied adopted, the teachers in the successful schools showed

commitment to student learning, possessed extensive knowledge of how and what to teach students, and displayed expertise in delivering their instruction. They clearly articulated their reasons for what and how they taught. They had excellent classroom management skills that allowed them to support and sustain multiple activities and grouping situations during their literacy instruction. All of these schools promoted extensive professional development. Teachers eagerly talked about their professional reading and learning. They asked many questions and indicated that they wanted to continue to learn more about teaching.

Taylor et al. (2000) found similar results in their study of effective schools and accomplished teachers. The most successful schools in their study had common elements at both the school (organizational) and classroom (instructional) levels. The most effective teachers knew how to coach students rather than telling them information, asked higher level questions and encouraged high level responses, knew how to help students apply new found knowledge, and utilized small group instruction.

Although research has shown various aspects of reading instruction that are important to student reading achievement (such as instruction in phonemic awareness, phonics, fluency, and comprehension strategies), Taylor, Peterson, Pearson, and Rodriguez (2002) found that how such instruction is delivered is extremely important. In a study involving eight high-poverty schools, they found strong evidence that certain teacher practices correlated with increased student achievement. Using a student-support stance was better than using a teacher-directed stance. More effective teachers did not tell students everything. They modeled and then coached students to use strategies to find

answers to questions. They asked higher level questions and encouraged students to be involved actively in discussions and learning.

In their synthesis of research on good teaching, Porter and Brophy (1988) concluded that the most effective teachers engaged in reflective activities about their practice and assumed responsibility for student learning and behavior. Effective teachers help students become independent learners by modeling and explaining the learning process and by teaching them strategies to monitor their own learning. Effective teachers know how to handle complex and often contradictory demands in the classroom.

Professional Development

Most teachers begin their careers feeling that they will be successful in their work-related endeavors. Unfortunately, even the best teacher education programs cannot completely prepare beginning teachers for the challenges they will encounter in the classroom. When one considers the many skills that effective reading teachers must possess, it seems unreasonable to believe that any teacher could be fully prepared upon entering the classroom for the first time.

Reading comprehension instruction is a complex process that requires extensive training and a deep understanding of the processes involved in reading comprehension (Duffy, 1993). This point is true whether one is attempting explicit instruction of comprehension strategies or to engage a class in a literacy discussion. Many teachers have not had the opportunity to develop these skills. Although many schools now use basal readers that contain comprehension skills lessons, few offer teachers the rationale, support, and understanding of the reading process that prepare them to deliver effective

comprehension instruction (Reutzel & Cooter, 1988). Following a basal reader or scripted program does not prepare a teacher to engage students thoughtfully in literacy discussions.

If preparing effective reading teachers is the cornerstone of raising student reading achievement, then it becomes the challenge of schools to continue the job colleges of education begin. The view that a teacher's education is complete upon graduation from college simply is not practical considering the nature of teaching. The student population in the United States is always changing and becoming more diverse. The curriculum changes as well, particularly in regard to technology (Hoffman & Pearson, 2000). Darling-Hammond and Sykes (1999) declared teaching as "The Learning Profession" because teaching requires continual learning. They contended that the key to developing highly effective teachers is to enhance their professional learning over the course of their careers.

Professional development has been a "neglected or shallow component" that "explains the chronic failure of school reform" (Speck & Knipe, 2005, pp. 2 & 4). Traditionally, the professional development model used most routinely is the service delivery model, which is also called the training model (Little, 1992; Sparks & Loucks-Horsley, 1990). In this model, teachers attend one-time workshops in which an expert delivers information teachers are then expected to put into practice. Generally, however, the new knowledge does not transfer into the classroom and does not affect student learning (Joyce & Showers, 1995). This model often encompasses the notion that teacher change and learning is a "necessary evil that is externally imposed, difficult, and painful

but needed for improvement in student learning” (Hoffman & Pearson, 2000, p. 37).

Teachers often perceive this model of professional development as an unnecessary mandate (Bacharach, Bauer, & Shedd, 1986). Not surprisingly, this type of professional development does not result in teacher change or increased student achievement (Joyce & Showers, 1995).

In this era of increased accountability, teachers and school administrators understand the need for more effective professional development (Dearman & Alber, 2005). The intent of research in professional development is to produce new models that are informed by adult learning theory and guided by principles that support meaningful learning (e.g., Hawley & Valli, 1995; Speck & Knipe, 2005). Optimally, professional development should result in not only new knowledge acquisition, but also consistent and appropriate application of that knowledge (Joyce & Showers, 1995).

Principles for Effective Professional Development

Hawley and Valli (1999) outlined seven principles for effective professional development.

1. It should focus is on *student performance*. Deciding where changes need to be made in order to raise student achievement should result in providing necessary and meaningful professional development experiences.
2. It should *involve teachers* in the process. Teachers set goals, plan activities, and evaluate their professional development. This involvement should result in increased motivation and commitment to learn, as well as a sense of empowerment.

3. It should be *school-based*. Job-embedded professional development should permit teachers to link their learning to their teaching practice. It should be linked to other school-wide efforts to increase student achievement.
4. It should allow teachers to work *collaboratively* to solve problems and learn from each other. Working together in teams or study groups should reduce the feelings of isolation that teachers often feel (Dole, 2003).
5. It should be *continuous and offer ongoing support* from others. Resources should be made available. Long-range goals should require long-term commitment on the part of teachers and leaders.
6. School administrators and teachers should *collect information* in various ways and from various sources. Multiple data sources should offer greater insights into student performance and teacher practices.
7. It should provide teachers with *a theoretical understanding* of knowledge and skills. Understanding the reasoning and research behind effective practices is necessary to sustain new practices. Changes in teacher practices are normally preceded by changed beliefs (see also Hoffman & Pearson, 2000).

Study groups, action research/inquiry groups, mentoring, peer coaching, and observation represent examples of research-based professional development opportunities that are meaningful and beneficial to teachers (Guskey, 2000). As schools develop programs of professional development, they must be mindful of the ultimate goals of staff development. Linking professional development activities to student achievement and teacher change is an important part of accountability (Guskey & Sparks, 1996).

Research on effective professional development specific to reading teachers is scarce (Anders, Hoffman, & Duffy, 2000; Dole, 2003). Hoffman and Pearson (2000) framed reading teacher education in a broader context of *training* and *teaching*. Training teachers helps them to develop specific skills required to carry out specific tasks. Some commercial reading programs involve training teachers in the exact way that the program can be successfully administered. In contrast to training, teaching is aimed at helping teachers “develop a personal and professional commitment to life long learning” (p. 36). Teaching teachers is directed at developing individuals who are reflective, empowered, confident, and engaged in inquiry. Although there remain many unsolved questions, some evidence suggests that effective professional development experiences can result in the development of knowledgeable, thoughtful, and responsive reading teachers. Continued research in this area is vital to improving our understanding of reading teacher education (Anders et al., 2000).

Teacher Study Groups

The need for teachers to participate actively in their own professional development has given rise to Professional Development and Inquiry Groups, better known as Teacher Study Groups (TSG; Clark, 2001). Research indicates that teachers need to create their own conditions for change by working collaboratively to solve problems in their schools and classrooms (Cochran-Smith & Lytle, 1990). TSGs are one way of creating a context in which teachers may make changes. Goldenberg and Gallimore (1991) noted:

These contexts should consist, preeminently, of engaging teachers in rigorous examination of teaching: The concrete challenges and problems they face, the range of possible solutions, and, most important, close examination of whether, over time, there is progress in addressing these challenges. (p. 69)

The development of TSGs is reflective of the new orientation toward a constructivist approach in professional development (Cochran-Smith & Lytle, 2001). Teachers form communities in which they learn through dialogue and inquiry. TSGs are characteristic of professional development that Cochran-Smith and Lytle (2001) call *knowledge-of-practice*. In this type of professional development, teachers examine classroom and school practices in ways that help them construct new knowledge about teaching and learning. TSGs are also representative of Richardson and Placier's (2001) conceptualization of professional development in which teachers voluntarily exercise control of the agenda by choosing topics and determining the action taken.

Teachers form study groups for various reasons and purposes. Some groups develop from a need to talk to colleagues about professional issues (Birchak et al., 1998). Other groups begin because of a common goal such as participating in the National Board for Professional Teaching Standards certification process or to offer support such as first year teachers and mentors studying together (Davis, Wilson, Moore, Kent, & Hopkins, 2003). Other TSGs are action-oriented research groups in which teachers investigate ways to solve problems that together they face in teaching. Although generally TSGs are voluntary, some schools implement them to focus on various topics.

Transcript Analysis

Helping teachers to improve the nature of their classroom discussion is a two-fold process. First, they must have a solid understanding of what constitutes good conversation and how it helps improve students' reading achievement. There are a variety of ways that teachers can learn about classroom discussion. Numerous research articles, teacher-oriented articles, and professional books have been written on the subject. University courses and professional development within the school are two other arenas in which teachers might learn about classroom discourse.

Second, teachers must have a clear picture of the discourse that is happening in their classrooms. They need to compare the type of discourse that should be happening with the actual discourse in order to decide what and how changes can be made. One approach to help teachers examine the nature of their own classroom discourse is transcript analysis. Analysis of classroom transcripts is used by many researchers to examine classroom discussion. Some research involves conceptualizing the types of talk that appear in classrooms, while other research tracks changes in talk that occur as a result of interventions (e.g., Kucan, 2004). In some studies, transcript analysis is completed and used solely by the researchers to inform their study (e.g., Almasi, O'Flahavan, & Arya, 2001; Alpert, 1987; Dillon, 1985). In other studies, researchers and teachers together examine the transcripts working toward the common goal of improving teacher practice (e.g., Goldenberg, 1992, Villaume, Worden, Williams, Hopkins, & Rosenblatt, 1994). In these studies, teachers enjoy the benefit of working with a more knowledgeable person (usually a university professor). Although working with a more

knowledgeable person is an established and perhaps preferable way of improving one's knowledge and skill (Goldenburg, 1992; Tharp & Gallimore, 1988), the reality in many schools is that teachers typically do not have this opportunity.

Another approach involves teachers analyzing transcripts and making decisions about instructional improvements independently (e.g., Jewell & Pratt, 1999; Kucan, 2003, 2004; Roskos, Boehlen, & Walker, 2000). Jewell and Pratt (1999) initiated a teacher research project in which they used transcript analysis to make improvements in their literature discussions. In studies conducted by Roskos et al. (2000) and Kucan (2003, 2004), teachers acquired self-assessment tools within the larger context of graduate classes in which they were enrolled. Roskos et al. (2000) trained teachers in the use of an assessment tool in which they transcribed and analyzed videotaped instruction and then interpreted the results in writing. Self-assessment took place in a reading clinic in which they trained teachers and then implemented a "Reading Recovery" type of instruction (see Clay, 1993). The teachers' transcript analysis did not change over the course of the five weeks and the teachers rated their discourse differently than it was rated by the researchers. However, the teachers' written interpretations of discourse developed positively over the course of the study. Using the assessment tool appeared to help them become more reflective and analytic in their interpretations of what happened in their classrooms.

Kucan (2003, 2004) engaged teachers in transcript analysis while reading and learning about discussion in a graduate class. Teachers read *Questioning the Author* (Beck et al., 1997) and attempted to follow this format as a way to improve literacy

discussions in their classrooms. At the beginning and again at the end of the class, teachers recorded themselves in a literacy discussion. They then transcribed and analyzed the discussion using a code book and analysis sheet provided by the researcher. Their analysis included tallying and generating percentages for the types of talk (student and teacher) that occurred in the discussions and types of questions and responses by the teacher. At the end of the class, teachers completed a reflection guide in which they responded to questions about text selection, text segmentation, kinds of questions, and kinds of responses. This guide asked them to reflect on the changes that they noticed during the study. Participants shifted their questioning from lower level recall type questions to higher level questions that asked students to explain, infer, or connect. Participants' responses to students moved toward probing and requesting additional information instead of merely repeating what the child had said. Teachers' reflections indicated that they put more thought into text selection and segmentation as they planned discussions.

Conclusions

Reading comprehension instruction is a challenge even for the most competent teacher. The literature indicates that there are several research-based ways to improve students' reading comprehension and that teachers can learn to implement these strategies. The literature also reveals the importance of effective teachers in raising student achievement. Helping teachers to become more knowledgeable, reflective, and thoughtfully adaptive in their instructional practices is the goal of both teacher educators and well-designed professional development programs. Providing high-quality

professional development to inservice teachers throughout their careers is a necessity if schools are to be successful in meeting the needs of an increasingly diverse student population. The RAND Study Group (2002) listed several questions that need to be answered about professional development. These questions include:

1. What are the critical components of professional development that lead to effective instruction and sustained change in teachers' practice?
2. What are various ways to support teachers so that they are willing to spend the time and cognitive energy necessary to improve their comprehension instruction? (p. 52)

III. METHODS

This study sought to determine if transcribing and analyzing classroom discussions while learning about discussion and comprehension instruction through a teacher study group would produce improvements in a teacher's ability to conduct high level discussions with students. In addition, the study examined student reading comprehension to determine if the comprehension scores made by students of teachers who participated in the study were significantly greater than those of students in the classes of nonparticipating teachers. Participants learned about classroom discussion by reading *Questioning the Author* (Beck, et al., 1997) and then using the techniques in their own classrooms. Teachers shared ideas and concerns about comprehension instruction during study group meetings. Participants also read other materials on reading comprehension theory, research, and practice.

Research Questions

This investigation attempted to answer the following questions:

1. Are reading comprehension scores of second and third graders taught by teachers who have participated in transcript analysis and a teacher study group focusing on comprehension instruction higher than the scores of students of teachers who have not done so?
2. Does transcript analysis by teachers participating in a teacher study group positively affect the quality of literacy discussions they conduct with their students?

3. What effect does participation in a study group and transcript analysis have on participating teachers' perceptions of comprehension instruction and classroom discourse?

Research Design

The study employed a mixed-method research design. To investigate Research Question 1 (Are reading comprehension scores of second and third graders taught by teachers who have participated in transcript analysis and a teacher study group focusing on comprehension instruction higher than the scores of students of teachers who have not done so?), a 2 (Group: treatment and control) X 2 (Time: pre and post) mixed analysis of variance was conducted. A nonrandomized control group design was used. This quasi-experimental design is often used in educational settings in which randomization is not possible (Stanley & Campbell, 1966). Students received no direct treatment during this study. Students in the classrooms of study group teachers comprised the treatment group. Students in classrooms of the matched, nonparticipating teachers comprised the control group.

Research Question 2 (Does transcript analysis by teachers participating in a teacher study group positively affect the quality of literacy discussions they conduct with their students?) included both quantitative and qualitative measures. Teacher outcomes did not include a control group, but involved both pre and post-treatment measurements. Each teacher's own analysis of a classroom literacy discussion served as the teacher outcomes for Question 2.

Outcomes for Question 3 (What effect does participation in a study group and transcript analysis have on participating teachers' perceptions of comprehension instruction and classroom discourse?) consisted of qualitative data which provided a better understanding of teacher change and perceptions as a result of the project. This method is theoretically grounded in the phenomenological approach that seeks to understand events from the viewpoint of the participants (Bogdan & Biklen, 1998).

Participants

Participants were two third grade and four second grade female teachers. Their teaching experience ranged from 4 to 24 years. Five of the teachers have master's degrees and three of the teachers have earned National Board Certification. Three of the teachers teach in self-contained classrooms and three teach in situations in which students are grouped by ability for language arts instruction. I invited these teachers to participate because of their interest in improving their teaching as well as their willingness to meet after school and to do the extra work that would be necessary to complete this study. Students of these teachers completed a reading comprehension test and participated in tape recorded classroom discussions, but they received no direct treatment.

The school principal assisted in selecting the control group because of her familiarity with all the teachers in the school. We attempted to match the control group teachers to participating teachers in order to make the students and teachers in both groups as equal as possible. We matched the six participating teachers with six nonparticipating teachers by grade level, number of years of teaching experience, type of grouping situation (self-contained classrooms or language arts grouping), and reading

level of students (for those that grouped for language arts). These matched teachers and their students received no treatment, but the students completed the reading comprehension test at the beginning and end of the study just like the students of the participating teachers.

A total of 171 students in 12 classrooms completed the comprehension tests. This sample included a wide ability range including special education students, English Language Learners, and gifted students.

Setting

The study took place during the second semester at a large second and third grade elementary school located in a small town in the southeastern United States. This school serves approximately 800 second and third graders. Approximately 45% of the students qualify for free lunch, 78% are white, 18% are black, and 2% are of other races.

There were 24 second grade teachers and 24 third grade teachers in the school. Teachers were teamed in groups of five or six. Each group of teachers chose to be either self-contained with a heterogeneous group of children or to group for language arts. The teams that group for language arts attempt to group children on similar reading levels together for language arts instruction.

The study group met after school in the classrooms of participating teachers. Each meeting lasted approximately 1 hr 30 min. Teachers recorded discussions within their own classrooms and did their own transcriptions of the discussions. Students were given a reading comprehension test in their own classrooms.

Instruments

Degrees of Reading Power

The Degrees of Reading Power test measured student reading comprehension. This criterion-referenced test measures how well students understand the surface meaning of what they read. The tests consist of nonfiction paragraphs with deleted words. For each deleted word, there is a set of multiple-choice words from which students may pick the correct answer. Although all of the words fit grammatically into the sentences, only one word is correct using the information in the paragraph. Second-grade students completed a 42-item test and third graders completed a 56-item test with no time limit to complete. Students completed two different, but comparable, forms of the test for the pretest and posttest. I scored the exams and then recorded the total correct for each student as a percentage.

Discussion Comparison and Analysis Forms

For analysis of classroom discussions, teachers used materials developed by Kucan (2004). These items included the Discussion Comparison and Analysis Form (see Appendix B) and a Code Book (see Appendix C). The Discussion Comparison and Analysis Form was used after recording and transcribing classroom discussions. It is a tally sheet to determine a basic count of teacher and student talk and the content of teacher talk. It has a column for Discussion 1 and a column for Discussion 2. Each time a teacher or student said anything, a tally mark is added to the appropriate column (Teacher Talk or Student Talk). A percentage of total talk is then generated for each category.

The Code Book is used to complete the second part of the Discussion Comparison and Analysis Form. The Code Book gives descriptions and examples of various types of questions and responses and is used as a reference in categorizing teacher talk. Teacher talk is placed into one of two tables—questions and responses. Questions are placed into one of eight question types: Retrieve, Relate, Think/Explain, Think/Infer, Think/Predict, Think/Connect, Think/Evaluate, and Think/Frame. Retrieve questions ask students to answer using information that comes directly from text, pictures, personal experience, or memory (What is Max holding? What does an alarm clock do?). Relate questions ask students to think and talk about personal experiences (So, what kinds of jobs do you do at home to earn money? How would you feel if that happened to you?). Think/Explain questions ask students to focus on explaining the meaning of a specific text segment (What’s going on here? How would that work?). Think/Infer questions ask students to consider information from more than one text segment of text or to infer information from what is given in one text segment (Why do you think that Mary did that? Why do you think Tom is acting that way?). Think/Predict questions ask students to use information from the text to make a prediction about what might happen next (Based on what we know, what do you think will happen to Mary now?). Think/Evaluate questions ask students to provide an evaluation or judgment about a situation in the text or to consider an alternative possibility (What do you think Brian should do: stay where he is, or start walking and hope he’ll find someone? Why do you think that?). Think/Connect questions ask students to make connections, comparisons, or to contrast one part of the text to another part of the text (How does what Ralph says here connect to what we found

out about his family?). With Think/Frame questions, teachers provide a framework for students to use in thinking about text information from more than one segment (Okay, so the scientist figured out how the elephant made sounds by putting several bits of information together. What did she use to figure out how elephants communicate?).

Teacher responses can be placed into one of four types: Collect, Probe, Connect, and Redirect. In Collect responses the teacher repeats or rephrases the student's words, acknowledges student responses, or just calls on students (OK, Good). With Probe responses the teacher requests additional information which may include giving a reason or evidence from the text (What do you mean? What makes you say that?). With Connect responses the teacher asks for an evaluation of a response by asking students if they agree or disagree with another student's comment or asks them to comment on what another student said (Do you agree with John that Brian doesn't have a chance of being fund if he leaves the area where the plane crashed?). With the Redirect responses a student asks a question, but the teacher redirects it to the group (Who would like to respond to Mary's question?).

After recording and transcribing their first discussion, teachers received the Discussion Comparison and Analysis form, the Code Book, and written directions (see Appendix C) for completing the analysis. They completed the First Discussion column and gave a copy to me before receiving the study group reading materials. They received written directions for Discussion 2 and then recorded, transcribed, and analyzed their second discussion at the end of the study. Teachers used the information on their Discussion Comparison and Analysis sheet to complete the Transcript Analysis Survey.

Transcript Analysis Survey

Teachers recorded their interpretations of their Discussion Comparison and Analysis Form on a survey that was adapted from Kucan (2004) and modified to fit the needs of this study (see Appendix B). Teachers completed this survey at the end of the study. This survey contains 11 open-ended questions that ask participants to compare their first and second discussions. One set of questions asks about the texts used in the discussions and how text selection affects discussion. Another set of questions asks about the affects of text segmenting in discussion. The final two sections ask participants to compare and analyze the kinds of questions and responses that took place in both discussions. The survey requires teachers to think critically about their recorded discussions and to identify areas they feel need to be improved.

Study Group Survey

I gathered teacher perceptions of comprehension instruction and participation in the study using surveys adapted from Kucan (2004) that were modified to fit the needs of this study (See Appendix B). I asked teachers to complete surveys before the study began and again at the end of the study. Survey #1 had 12 open-ended questions that fell into the general categories of their understanding of reading comprehension and instruction and their understandings and use of class discussions. Survey #2 had 16 open-ended and 3 ratings questions that fell into three general categories: (a) their understandings of reading comprehension and discussion, (b) participation in the Study Group, and (c) use of the book, *Questioning the Author* (Beck et al., 1997).

Materials

Other materials for the study included individual copies of *Questioning the Author*, loose leaf notebooks, copies of research articles and book chapters, professional books on various reading topics, tape recorders and tapes. See Appendix E for a sample of additional reading material used.

Procedures

This study began in February after receiving informed consent information from teacher and student participants. All participating treatment and control group students completed the Degrees of Reading Power pretest. Testing took place in their classrooms with their teacher present. Teachers assigned each student a number to be used as identification on the both the pretest and posttest. The test took most students between 60 and 90 minutes to complete. I scored and recorded all tests.

Early in the month, participating teachers completed the first Study Group Survey. Each teacher then recorded a literacy discussion with her students. Teachers received no directions as to what type of text to choose or how to conduct the conversation. The discussions could be with a single student, small group, or whole class, and could involve either a read aloud or guided reading. Teachers then transcribed these discussions according to the written directions provided (Appendix C). Each teacher analyzed her discussion for the types of talk that took place (teacher talk, student talk, and question and response types) using the Code Book. Teachers completed the First Discussion column of the Discussion Comparison and Analysis Form and turned in a copy to me.

After receiving the Discussion Comparison and Analysis Form, I distributed study group materials to the teacher. Each teacher received a copy of *Questioning the Author*, several research articles on reading comprehension and comprehension instruction, and a loose-leaf notebook to keep materials. They also received a calendar with a schedule of study group meeting times, a list of reading assignments, and paper for taking notes. Although the teachers received numerous articles to read, *Questioning the Author* was the only assigned reading. All other materials served as supplementary materials for the teachers to read as time permitted. In addition, I made other professional books available for the teachers to check out and most teachers checked out at least one extra book. The teachers received additional articles each week throughout the study.

The first study group met on a scheduled inservice day. The study group received permission to visit a school in a neighboring school system. Group members visited the classroom of a teacher who is recognized as being a highly effective reading comprehension teacher. This teacher has been Teacher of the Year twice in her school system. University professors bring their preservice teachers to observe in her classroom regularly because of her ability to model excellent reading instruction. After observing in this classroom and talking with the teacher about her instruction, the study group met for the rest of the afternoon to discuss the observation and to make plans for the rest of the semester.

Originally, the study group planned to meet twice a month for three months. However, because of scheduling problems, the group ended up meeting only three more times. Due to teachers' involvement in the school's ongoing accreditation review, as well

as unexpected meetings called by the principal during this time, the group was forced to cancel scheduled meetings. Each time the group met, they discussed the reading assignment for *Questioning the Author* and members shared problems or successes in conducting comprehension instruction. I participated in all Study Group meetings, and I also met with teachers informally in their classrooms throughout the study. Teachers completed reading *Questioning the Author* in early April.

Between the end of April and the second week in May, students in both the treatment and control classes completed the Degrees of Reading Power posttest. Participating teachers recorded a literacy discussion in their classrooms and completed the Second Discussion column on the Discussion Comparison and Analysis form. They used the information on this form to complete the Transcript Analysis Survey. They turned these forms along with the tape recordings of both discussions in to me. The teachers then completed the Study Group Survey #2. I completed data collection by the end of May.

Data Analysis

Quantitative data analysis was completed for Research Questions 1 and 2. For Research Question 1 (Are reading comprehension scores of second and third graders taught by teachers who have participated in transcript analysis and a teacher study group focusing on comprehension instruction higher than the scores of students of teachers who have not done so?), a 2 (Group: treatment and control) X 2 (Time: pre and post) mixed analysis of variance was conducted using group as the independent variable, posttest scores as the dependent variable, and pretest scores as the covariate. For Research

Question 2 (Does transcript analysis by teachers participating in a teacher study group positively affect the quality of literacy discussions they conduct with their students?), a series of paired sample t-tests was calculated to evaluate if significant differences existed between the means in Discussion 1 and Discussion 2. Because of the small sample size in Research Question 2, an alpha of .15 was set for statistical significance (Stevens, 2002).

Role of the Researcher

My role in this project was three-fold. First, I administered the Degrees of Reading Power assessment to students. Second, I provided materials to the teachers and set deadlines for assignments. Third, I acted as a facilitator in study group meetings and I met with teachers informally throughout the study. Because I had a close working relationship with these teachers, my role was more of a group member than a researcher.

IV. RESULTS

This study attempted to determine if teachers' participation in a teacher study group and transcript analysis would influence classroom literacy discussions, student reading comprehension scores, and teacher perceptions of reading comprehension instruction. Student outcomes were measured using the Degrees of Reading Power (DRP) comprehension assessment. Statistical analysis was completed on student scores to determine if there was a statistically significant difference between the student treatment and control groups. Classroom literacy discussions were examined and statistically analyzed using the quantitative data compiled by the teacher participants on the Discussion and Analysis Form. Qualitative analysis of literacy discussions was completed using the data on the Transcript Analysis Forms. Qualitative analysis of teacher perceptions of reading comprehension instruction was completed using the Study Group Survey.

Student Outcomes

Research Question 1 asked whether the reading comprehension scores of second and third graders taught by teachers who have participated in transcript analysis and a teacher study group are higher than the scores of students of teachers who have not done so. The raw scores of the DRP assessment were converted to percentages because the number of items on the assessment was different for second and third graders. A total of 171 students completed both the pre- and posttest assessments. However, one treatment

class (11 students) was not included in the analysis because of extenuating circumstances. The excluded class was unable to be tested until the final week of the school year when it was very difficult for the students to focus on a lengthy assessment. Although all other treatment and control classes made gains from pre-test to posttest, the mean of the excluded class dropped 6 points. This discrepancy is likely explained by students' inattention to the test rather than becoming less able to comprehend text. Therefore, the decision was made to eliminate these students' scores from the analysis.

A one-way analysis of covariance (ANCOVA) was conducted using group as the independent variable, posttest scores as the dependent variable, and pretest scores as the covariate. Posttest scores of the treatment group were significantly higher than the posttest scores of the control group when pre-test scores were held constant, $F(1, 161) = 11.63, p = .001$, Eta squared = .069.

Table 1. Adjusted and Unadjusted Group Means and Standard Deviations for Post Scores.

	Adjusted M	Adjusted SE	Unadjusted M	Unadjusted SD	n
Control	.544	.013	.520	.197	84
Treatment	.610	.014	.635	.206	77

Teacher Outcomes: Discussion Comparison and Analysis

Research Question 2 asked whether transcript analysis by teachers participating in a teacher study group positively affected the quality of literacy discussions they conduct with their students. Teachers recorded their analyses of their discussion transcripts on the Discussion Comparison and Analysis form. This form contains three categories: Kinds of

Talk, Kinds of Teacher Questions, and Kinds of Teacher Responses. Percentage of each item (e.g., Student or Teacher Talk, Retrieve or Think/Frame questions) recorded within the total number within each category (Kinds of Talk, Kinds of Teacher Questions, and Kinds of Teacher Responses) was used for analyses. A series of paired sample t-tests was calculated to evaluate if significant differences exist between the means in Discussion 1 and Discussion 2. Because of the small sample size, an alpha of .15 was set for statistical significance (Stevens, 2002).

Kinds of Talk

The Kinds of Talk category contained only two items: Teacher Talk and Student Talk. The mean Teacher Talk in Discussion 1 ($M = 47.50$, $SD = 5.46$) did not significantly differ from the mean Teacher Talk in Discussion 2 ($M = 44.67$, $SD = 3.06$), $t(5) = 1.45$, $p = .21$. Of the six teachers, only Teacher 2 showed a large change in the amount of teacher talk: a reduction of 12 percentage points.

Kinds of Teacher Questions

The Kinds of Teacher Questions category tested a total of seven items. The results of the paired-samples t-tests in this category resulted in three items showing statistically significant differences among means. The mean for Retrieve questions in Discussion 1 ($M = 41.00$, $SD = 7.90$) was significantly greater than the means for Retrieve questions in Discussion 2 ($M = 26.67$, $SD = 4.41$), $t(5) = 1.85$, $p = .12$. The mean for Think/Infer Discussion 1 questions ($M = 13.33$, $SD = 4.91$) was significantly lower than the mean for Think/Infer Discussion 2 questions ($M = 17.17$, $SD = 4.35$), $t(5) = -1.72$, $p = .146$. The

mean for Think/Evaluate Discussion 1 questions ($M = 6.67$, $SD = 3.05$) was significantly lower than the mean in Discussion 2 ($M = 12.33$, $SD = 2.40$), $t(5) = -2.11$, $p = .90$.

Kinds of Teacher Responses

The Kinds of Teacher Responses category tested four items. The results of the paired-samples t-tests in this category resulted in two items showing statistically significant differences between Discussion 1 and 2. The mean for Collect responses in Discussion 1 ($M = 41.33$, $SD = 8.45$) was significantly greater than the mean for Collect responses in Discussion 2 ($M = 30.17$, $SD = 6.54$), $t(5) = .230$, $p = .07$. The mean for Probe responses in Discussion 1 ($M = 28.50$, $SD = 7.09$) was significantly lower than the mean in Discussion 2 ($M = 41.50$, $SD = 7.38$), $t(5) = -2.22$, $p = .076$.

Teacher Outcomes: Transcript Analysis Survey

Research Question 2 was addressed qualitatively using the Transcript Analysis Survey. This open-ended survey asked teachers to reflect on their discussions and what they learned as a result of the transcript analysis. In addition, the survey asked them to identify improvements they need to make in order to be more effective in leading discussions. The survey is separated into five parts: Texts, Segments, Questions, Responses, and Future Work.

Texts

All six teachers reported becoming more conscientious about text selection for the second discussion. Five of the teachers stated that it was very important to choose books that the children can relate to in some way. Teacher 2 and Teacher 4 pointed out that if the students do not have background knowledge sufficient to understand the book, then

the teacher must build that knowledge before beginning the book. Teacher 3 reported using a non-fiction book for the first discussion and a fiction book for the second discussion. She felt the fiction book lent itself to better discussion. Teacher 1 stated that books should have complex ideas in order to generate better discussion. However, she felt her second book was too complex for her students and it stifled discussion. Teacher 5 felt that students can relate to almost any type of text if only she could foster a greater atmosphere of openness during discussions.

Segments

Teacher 5 reported having students read the entire story before having the first discussion. During her second discussion, she chose much shorter segments of reading with discussion following each segment. Teacher 6 reported rushing too much during certain parts of the first discussion and not allowing students enough time to think about what they were reading. In her second discussion, she chose segments to discuss that she felt were important and gave students ample opportunity to talk about them. For her first discussion, Teacher 2 went page-by-page to segment text for discussion. In her second discussion, she stopped at points where she felt there were important ideas to discuss rather than stopping at the end of each page. All teachers reported that they learned the importance of preparing ahead of time to know where to segment texts for more meaningful discussion.

Questions

In general, teachers reported transcribing the first discussion made them much more aware of their use of “Retrieve” questions (literal questions with answers that come

directly from the text) and avoided those during the second discussions. All teachers stressed the importance of preparing questions in advance and using more open-ended, thought-provoking questions. Teacher 5 stated her percentages did not change much from the first to second discussion, even though she was more aware of the questions. However, she felt she could not get the results or answers that she wanted from her students during the second discussion. She felt she needed to be better prepared with her questions and to attempt to think like her students think while she is preparing for discussions. Teacher 5 also came to realize during the study how dependent her students were on her to ask all the questions and set the agenda for discussion.

Teacher 2 stated that her first discussion used an overwhelming number of retrieve questions that led to one-word responses. However, her second discussion employed more open-ended questions that encouraged students to think before they responded. In her second discussion, students talked and debated ideas with each other with little teacher input. Teacher 3 reported that questions in her first discussion led students to give answers that came from the text while her second discussion had more thought-provoking questions, which encouraged students to respond with personal experiences and feelings to connect to the text. Teacher 4 was surprised at how her questions during the first discussion led to short student replies. In her second discussion, she felt her questions led to lengthier replies and occasionally student-initiated discussion.

Responses

Teachers stated that generally their responses in the first discussion did not promote student talk. They reported having a specific idea of what they wanted for a correct response before asking the questions. Teacher 5 felt that she needed to be more open to her students' responses and try to understand why her students' thinking is the way it is (i.e., "What connection do they see that I don't?"). Several teachers reported just repeating the students' answers or stating something like "O.K." during their first discussion. In their second discussion, teachers reported feeling more open to student ideas and allowing students to respond to each other.

Future Work

All teachers reported a need to continue to develop their questioning and responding techniques. Taping, transcribing, and analyzing their discussions made all six teachers more aware of what they were doing in preparing for and leading discussions. Most stated that they did not realize how much they dominated the conversations and how little they really heard from their students. Teacher 4 expressed a desire to learn how to help students rely less on the teacher during discussions and to feel freer to express themselves. Teacher 1 echoed this sentiment stating she wishes to work on more meaningful conversation because presently she dominates classroom conversations with her students. Teacher 5 expressed a desire to work on questioning and being more prepared for things the students may say during discussion. She stated that she wants her students to be able to think things through with guidance, not pushing, from the teacher. In listening to her second discussion, Teacher 3 noticed student comments that she picked

up while listening to the tape but missed during the actual discussion. She stated that she plans to work harder at listening and responding to all her students' comments.

Teacher Outcomes: Study Group Survey

Research Question 3 asked what effect participation in a study group and transcript analysis had on participating teachers' perceptions of comprehension instruction and classroom discourse. The open-ended questions on Study Group Survey #1 and #2 asked teachers to discuss their understanding of reading comprehension instruction and classroom discourse. Questions 1 through 11 on Study Group Survey #1 and Questions 1 through 4 on Study Group Survey #2 are applicable to Research Question 3 concerning perceptions of reading comprehension instruction and classroom discourse. Teachers' answers to these questions will be presented and discussed in the following sections, Reading Comprehension Instruction and Classroom Discourse. Study Group Survey #2 contained questions regarding study group participation. These questions did not relate to the research questions, but were included to evaluate the participants' perceptions of the study group experience. The responses to those questions will be addressed in the Study Group Participation section.

Reading Comprehension Instruction

Four of the six teachers reported a change in their ideas about reading comprehension instruction. Teacher 1 came to realize that although some students acquire reading strategies naturally through practice, struggling readers need more explicit modeling to develop awareness of such strategies. Teacher 6 reported that she came to realize that students need to be taught explicitly how to think deeply and relate to a story.

She also learned how important teacher read alouds are to reading comprehension. On her first survey, she listed teaching main ideas and details and asking questions and clarifying ideas as the types of things she did to teach reading comprehension. On her final survey, she stated that she now looks at reading instruction completely differently because she now realizes comprehension instruction is much more than just teaching the main idea of a text. Teacher 5 stated that she previously separated reading comprehension skills from the enjoyment of reading. She stated that she will emphasize comprehension as an on-going process, not merely answering questions after reading. Teacher 2 felt she did not change her understanding of what reading comprehension instruction should be, but that reading more about it and being encouraged to practice instruction techniques helped her to use them more effectively. Teacher 4 had a solid understanding of reading comprehension instruction before the study began. She read several books on teaching comprehension strategies over the last few years. She felt that participation in the study group confirmed her belief that children need specific, systematic instruction in reading comprehension as well as ample practice to develop effective reading strategies.

Classroom Discourse

All teachers reported making changes in classroom discussion as a result of participation in this study. Teacher 2 reported that she now tries to make discussions more student-centered. Teacher 4 discovered that her idea of a small group discussion was not small enough. She reported that she now tries to assure that she uses small enough groups so that voice of every child can be heard during the discussion. Teacher 6 learned that after teacher-modeled instruction, students should be allowed to lead

discussions. Teacher 5 stated that she will worry less about recall questions and expecting specific answers from her readers. Teacher 1 realized the importance of true discussion in the classroom and stated she now hopes to move away from only teacher-student discussions to discussions that include student-student and student-teacher interactions. Teacher 3 realized the importance of guiding students through discussions without doing all the talking herself. She also felt that she has learned to question more effectively.

All teachers responded positively about recording classroom discussions and doing transcript analysis even though it was time-consuming. Teacher 3 noted that transcript analysis was very helpful because she did not realize how much she talked and that she was asking so many of the same types of questions. Teacher 4 said that analyzing classroom discussions allowed her to “see” what she does in the classroom. She found that what she was actually doing was not what she intended to do. Teacher 2 realized that the way she phrased many questions confused her students and thus was not effective. Teacher 1 stated that transcript analysis allowed her to see how much talking she did and how little the students did. Teacher 5 discovered through listening to both transcripts that she cannot just “wing it” when leading a discussion. She reported that she must be better prepared and must model the behaviors she wishes her students to learn.

Study Group Participation

At the conclusion of this study, all teachers completed the Study Group Survey. Some of the questions related directly to the research questions addressed in this study; the rest of the survey asked teachers more general questions regarding participation in the study group. This process was a very different professional development experience for

the participants. There were no other teacher study groups in the school at the time I conducted the study. Previous professional development had always been one-shot workshops (one day or even several days in the summer). It was important for me to ascertain how participating teachers rated this professional development experience and what aspects were most beneficial before making recommendations for future implementation of study groups and transcript analysis as the means for engaging teachers in professional development.

All participants rated this experience as more valuable than past professional development experiences. Four teachers commented that it was better because it focused on their teaching and the way they conducted lessons. They felt it was a useful and practical learning experience because it allowed them to make changes based on their own analysis of their teaching rather than what someone else thought they should be doing. All six teachers reported feeling more competent as a reading teacher because of their participation in the study group. Teacher 4 reported that the study confirmed her own values and gave her new ideas to put into practice. Teacher 5 expressed that she had more confidence to try different things and that having a different instructional style (from the teachers around her) is okay. Teacher 3 said that the group discussions helped her to see that many of the problems she struggles with are similar to those of other teachers. She felt comfortable asking for advice and learning about real strategies that work for other teachers. All teachers stated that they will continue to use the information that they have learned during this study in their teaching.

When asked to rate what aspects of the study were most helpful, somewhat helpful, or not helpful at all, most teachers rated the visit to the exemplary teacher's classroom (at the beginning of the study) as very helpful. In fact, this visit seemed to result in all teachers rethinking their approach to small group instruction. Those teachers who did not use small group reading instruction began to do so. Those who were using small groups already changed their instructional design or instructional focus. Teacher 4, who used small group instruction, decreased the size of her groups and developed routines that allowed her to engage each group in literacy discussions. Teachers 3 and 6 began implementing literacy discussion groups in their own classrooms with some advice from Teacher 4.

Teachers also rated analyzing classroom discussions, study group meetings, and studying additional articles and book chapters given to them as being "very helpful." All teachers felt the transcript analysis, although time-consuming, was a valuable experience that allowed them to learn where they needed to make improvements.

Teachers rated reading *Questioning the Author* (Beck et. al., 1997) as only "somewhat helpful." Three teachers said it was difficult to read and "dry." One of those three, however, said it was very helpful. Two teachers said they enjoyed the book, found it improved their understanding of queries and discussion, and was worth reading. When asked if she would recommend it to other teachers, Teacher 1 said she probably would not recommend it because the ideas in the book are best for very reflective teachers and many of the teachers she knows are not reflective.

When asked about what was the most difficult part of participating in the study group, all teachers cited not having enough time to do the required reading, transcribing, and preparation for discussions. One teacher also listed difficulty in obtaining appropriate sets of books to use for literature groups. All teachers expressed the hope that they would be more prepared the following school year to implement better discussion and comprehension instruction in general. When asked whether they wanted to participate in a study group the following year, all teachers said they wanted to participate. All six teachers said that they wanted the study group to continue to focus on comprehension instruction and improving classroom discussions.

All six teachers stated that being able to have professional discussions with good teachers, visiting each others' classrooms, and observing each other teach would help improve their skills as a reading teacher. Several teachers suggested that the study would have been improved by having more group meetings and by having more observations of teachers (in other schools) who are successful at teaching reading.

V. DISCUSSION

Summary

This study sought to determine if teachers could improve their classroom discussion of readings and comprehension instruction through participating in a teacher study group and by analyzing their class discourse related to reading. The study also investigated whether this type of professional development for teachers would improve student reading comprehension. Unlike some studies, these teachers received no formal instruction in comprehension instruction, discussion techniques, or transcript analysis. They learned through self-analysis, observation, collaboration, and reading the professional literature. Teacher participation in this study positively impacted classroom discourse and resulted in increased student reading comprehension.

Teachers also became much more aware of their questioning techniques and reduced the frequency of lower level questioning. They increased their use of questions that ask students to think, infer, explain, predict, and evaluate ideas in text. In addition, they improved the quality of their responses to students by reducing the number of responses that simply restated or acknowledged student talk and increased those that probed for deeper understanding of student thinking. Teachers reported that analyzing their classroom discussions helped them discover the deficiencies that existed in their instructional practices. Although all teachers felt that their second recorded discussion with students employed better techniques than their first recorded discussion, none of the

teachers felt completely satisfied with their attempts at building meaningful conversation. Each teacher expressed a need to continue to improve in helping their students to become active participants in discussions. Teachers reported learning much about reading instruction and felt their teaching improved as a result of their participation in the study.

These teachers' students scored significantly higher on a measure of reading comprehension than students of teachers who did not participate in the study. It was somewhat unexpected that students would show a significant difference in the short length of this study, particularly considering the difficulty of improving reading comprehension instruction and classroom discussion. However, other researchers have reported that student comprehension can improve even when teachers are not implementing comprehension instruction completely or perfectly (Bramlett, 1994; Duffy, 1993; NRP, 2000). The data from the present study suggest that as teachers become more aware of their practices and begin implementing improved comprehension instruction, their students improve in reading comprehension in a relatively short amount of time.

All participants rated this experience as more valuable than past professional development experiences. They were particularly influenced by their visit to the exemplary teacher's classroom. Although the transcript analysis was time consuming, all teachers felt it was beneficial. All of the teachers enjoyed the collaboration with their colleagues and being able to discuss instructional issues with each other. Every teacher who participated in the study group expressed gratitude for providing them with the opportunity to participate in the study group. They all undertook tremendous amounts of work, but they felt it was worth the effort because it extended their knowledge and

thinking about reading instruction. They also revealed the belief that their students' thinking broadened because of the changes they made in their instruction. One teacher stated:

Thank you for doing this! So often teachers go to their room, do their thing, and hope for the best. I loved the support and help we received. I definitely felt challenged to use what I've learned to develop "deep thinkers."

Finally, the power of teachers working together to improve their instruction is expressed in the words of a veteran of 24 years who sent me a card with the following message:

Thank you so much for asking me to be a part of your study group. It caused me to really think about how I teach and why I choose the methods I do. Honestly, I didn't always like the conclusions I reached, but hopefully I will become a better teacher for the experience. Because of the study group, I am actually more excited about teaching next year than I have been in a long time.

Limitations of the Study

This study employed a quasi-experimental design in which teacher participants were not randomly assigned to treatment and control groups. Study group participant selection was based on several factors including teachers' willingness and ability to participate in a project that would require them to meet after school and to do the extra work required. I had an established a working relationship with all of these teachers. We

shared many conversations about teaching philosophies and practices. They are not necessarily representative of elementary school teachers in general. Three of the six teachers are National Board Certified Teachers, an accomplishment that reflects a commitment to teaching and professional development. Two other of the other teachers plan to go through the National Board Certification process in the next year or two.

I matched control group teachers to the experimental rooms by teacher variables (e.g., years of experience) and classroom grouping variables (e.g., self-contained classrooms or classes that group for language arts instruction) and student variables (e.g., approximately equal reading levels). However, because fewer classes in the school are self-contained than are grouped for language arts instruction, the choices for matching were limited. Only six second grade classes are self-contained and three of those teachers were participants in the study. Also, none of the control group teachers are National Board Certified Teachers nor are any attempting to attain that certification at this time.

The sample size of the teacher participants was small. A larger and more diverse group of teachers as well as randomization would allow more generalization of the results. However, in an educational setting randomization is often difficult. With regard to professional development, the literature is clear that teachers should have a voice in deciding what and how they will participate (Joyce & Showers, 1995). Randomizing teachers to professional development groups would need to allow for personal choices and needs.

The treatment length and the time of year that the study was a conducted were both limitations. The treatment time lasted only three months, which is a short period of

time considering the difficulties and extended periods reported in previous studies aimed at improving teachers' reading comprehension instruction. The study took place during the second semester of school. During this time, third grade teachers felt it a necessity to spend considerable amounts of time reviewing for state-wide standardized tests. This testing itself took almost three weeks of instructional time away from the teachers. As happens every year, several school-wide activities (e.g., Earth Day celebration, Kickball Tournament, Awards Ceremony) during the last month of school also reduced instructional time and diverted the attention of students away from regular class work.

The study also relied on self-report for teacher outcomes. All of the treatment group teachers analyzed their own discourse and made the necessary changes to instruction in an attempt to improve student learning. They decided how questions and responses would be coded. I collected the tape recordings of classroom discussions and the transcripts; these items only provided validity of the teachers' transcripts. I left the final analysis in the teachers' hands. It is possible that teachers' coding of classroom discourse varied according to individual interpretation. I did not re-code the transcripts to check for reliability of the teachers' coding because the present study sought to determine if teachers' participation in transcript analysis would affect their students' reading achievement, not whether they coded accurately.

Implications

Professional development of teachers is an important issue in schools today (Joyce & Showers, 1995; NRP, 2000; Speck & Knipe, 2005). The findings from this study have implications that should interest school administrators and teachers. This

study indicates that regardless of years of experience or education, teachers may feel unqualified when it comes to reading comprehension instruction. Teachers who are interested in improving their comprehension instruction may be helped in doing so by participating in a teacher study group and by doing transcript analysis. Providing teachers with high-quality study materials and release time for observations, transcript analysis, and group discussions is a low-cost alternative to bringing in highly-paid consultants and so-called experts.

Recommendations for Further Research

According to the teachers in this study, asking teachers to do transcript analysis is a very demanding, but rewarding, experience. Allowing teachers more time during the school day to transcribe and analyze classroom discussions as well as providing time for planning and collaboration would be very beneficial. Future studies should document the time teachers actually spend working on these activities in order to plan for other study groups.

Future studies should determine what types of study group materials are most valuable to teachers who want to improve their classroom discussions. This study was based on improving classroom discussions using *Questioning the Author*, but teachers also received many other reading materials. Determining what materials provide the best instruction would enable teachers to focus only on the most valuable.

Future studies that examine how professional development of this type impact student learning should include other outcome measures such as standardized tests, other criterion-referenced tests that allow assessment of literal and inferential comprehension,

and tests of critical thinking. Studies of various periods of time should be done to determine the optimal length that professional development should be provided to lead to the greatest student achievement.

Finally, future studies need to address the motivational factors that influence a teacher's decision to participate in this type of professional development. Pressley (2005) has applied the idea of metacognition to teaching effectiveness. His observations over many years of effective and less-effective teachers suggests that teachers must be open to making improvements in their teaching for staff development to be successful. Teachers, such as the ones in the present study, who are metacognitive about their teaching (or in other words, spend time thinking about their teaching effectiveness), are more likely to make teaching improvements as a result of participation in study groups and transcript analysis. According to Pressley (2005), less effective teachers have a "metacognitive failure" and "often have no clue that they are not very good teachers and that their students are not learning" (p. 406). Researchers need to identify teachers who are not motivated to make teaching improvements and develop methods that help these teachers become more aware of the quality of their teaching skills. Transcript analysis may be an avenue that could be explored to help these teachers become metacognitive in their teaching. Knowing the type of support that is needed for various types of teachers is vital information to have in order to plan effective professional development.

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APPENDICES

APPENDIX A
INFORMED CONSENTS

INFORMED CONSENT
For Research Study Entitled
“Transcript Analysis and Teacher Study Group:
Improving Comprehension Instruction”

You are invited to participate in a research project that will study the effects of teachers analyzing their classroom discussions on the reading comprehension achievement of their students.

If you agree to participate, you will be asked to record, transcribe, and analyze your classroom literacy discussions. You will also be asked to participate in a study group that will require you read various professional articles and a book. You will be asked to participate in the study group after the regular school day and you may need to do additional work outside the normal school day. At the beginning and end of the study you will be asked to complete a survey concerning your understanding of reading comprehension and reading comprehension instruction.

Copies of your audio tapes, transcriptions, and analysis will be given to the principal investigator at the end of the study. Discussions of the study group will be audio-taped and kept by the principal investigator for later analysis. All information that is collected will be confidential and only the principal investigator will have access to it. Data collected from you or your students will not be used in any way to make judgments about you or your teaching abilities and will in no way jeopardize your job standing.

If you do not wish to participate in the research you should feel free to decline this offer. If at any time during the project you decide you no longer want to participate, you may stop the activities and withdraw any data that have been collected. In either case, your decision not to participate will not affect your future relations with Smiths Station Elementary School, Lee County Schools, or Auburn University.

To participate, please sign the consent form and return it to me. If you have any questions please call or email Connie Buskist, doctoral student, (821-4757, buskicj@auburn.edu) or Dr. Susan Villaume (844-6882, villase@auburn.edu). For more information about your rights as a research participant, you may contact the Office of Research Programs by phone or email. The people to contact there are Mr. Chip Burson at bursoen@auburn.edu or (334) 844-5966 or Dr. Peter Grandjean (the chair of the Auburn University Institutional Review Board) at grandpw@auburn.edu or (334)-1462.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR DECISION TO PARTICIPATE.

A copy of this form is yours to keep.

Investigator's signature	Date
Participant's signature	Date

INFORMED CONSENT

For Research Study Entitled

“Transcript Analysis and Teacher Study Group:
Improving Comprehension Instruction”

Your child is being invited to participate in a research project being conducted by a teacher at Smiths Station Elementary School in conjunction with Auburn University. This study will examine how teachers can improve their reading comprehension instruction by analyzing the literacy discussions that take place in their classrooms. Children in several second and third grade classrooms are being invited to participate.

If you agree to let your child participate, he or she will be given a comprehension assessment at the beginning and end of the project (approximately six weeks apart). This comprehension assessment is one that is used regularly in many elementary classrooms to help teachers assess their students' reading comprehension in order to plan appropriate instruction. It is a pencil and paper test that takes approximately 45-50 minutes to complete. It will take place in your child's regular classroom with his/her teacher in the room. Because we will only be looking at classroom averages, results of these tests will be anonymous. Your child's name will not be included on the test data.

If your child participates, he or she may be in the classroom of a teacher who is participating directly in the study. If this is the case, your child's voice may be audio taped during a literacy discussion with the teacher. These audio tapes will be used by the teacher in an attempt to learn more about reading comprehension instruction. Any transcripts of the audio tapes will not include your child's real name. Teachers will assign pseudo names to all children to protect their identities. Your child will not participate directly in any activities with the investigator.

If your child participates, it is possible that he or she will be in the classroom of a teacher who is not participating directly in the study. If this is the case, your child's teacher will be given an opportunity at the end of the study to participate in activities to learn more about reading comprehension instruction.

Participation in this study is completely voluntary. You and your child should not feel any coercion on the part of the investigator, the school, or your child's teacher to participate. If at anytime during the study, you decide you no longer wish for your child to participate, you may stop immediately and withdraw any data that has been collected. If you decide not to participate, it will not affect your relationship with Smiths Station Elementary School, Lee County Schools, Auburn University, or your child's teacher.

Possible risks from participating in this study include test anxiety. All attempts will be made to help your child understand that the comprehension assessment will not affect his/her grades, standing in the class, or ability to pass to the next grade level. If you choose for your child not to participate, he or she will be taken out of the classroom during testing and audio taping. In this event, every effort will be made to make sure your child is not made to feel uncomfortable by leaving the room. Your child's teacher will plan other activities for him/her during this time.

For your child to participate, please fill out the consent form, sign it, and return it to me. If you have any questions please call or email Connie Buskist, doctoral student, (821-4757, buskicj@auburn.edu) or Dr. Susan Villaume (844-6882, villase@auburn.edu). For more information about your rights as a research participant, you may contact the Office of Research Programs by phone or email. The people to contact there are Mr. Chip Burson at bursoen@auburn.edu or (334) 844-5966 or Dr. Peter Grandjean (the chair of the Auburn University Institutional Review Board) at grandpw@auburn.edu or (334)-1462.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH FOR YOUR CHILD TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR PERMISSION FOR YOUR CHILD TO PARTICIPATE.

A copy of this form is yours to keep.

1. Investigator's signature Date

2. Parents'/Guardian's signature Date

3. Child's Name Teacher's Name

Assent Form

If it is all right with you, you are going to take a reading test. You will read all the questions and answer them. We might also tape record your voice while your teacher has a discussion with your class about a story you are reading. If at any time you don't want to be recorded or you do not want to take the test, you may tell your teacher and she will let you do something else.

If that is okay, please write your name on this paper.

Name _____

APPENDIX B

INSTRUMENTS FOR DATA COLLECTION

Discussion Comparison and Analysis

Table 1: Kinds of talk

	Teacher Talk Number of times/Percentage	Student Talk Number of times/Percentage
Discussion		
Discussion 2		

Table 2: Kinds of teacher questions

Kind of question	Discussion 1 Number of times/percentage	Discussion2 Number of times/percentage
Retrieve		
Relate		
Think/Explain		
Think/Infer		
Think/Predict		
Think/Connect		
Think/Evaluate		
Think/Frame		

Table 3: Kinds of teacher responses

Kind of response	Discussion 1 Number of times/Percentage	Discussion 2 Number of times/percentage
Collect		
Probe		
Connect		
Redirect		

Kucan (2004)

Transcript Analysis Survey

How would you summarize what you have learned about responding to students during discussion? Take a close look at the tables that you created. What changes do you see in the kinds of talk, kinds of teacher questions, and kinds of teacher responses when you compare Discussion 1 and Discussion 2? What consistencies do you notice?

1. TEXTS

- a. How do you think the texts that you selected for your first and second discussions influenced those discussions?

- b. What have you learned about text selection as it relates to a discussion that focuses on understanding the ideas in the text?

2. SEGMENTS

- a. What do you notice about the segments in your first discussion?

- b. What do you notice about the segments in your second discussion?

- c. How would you summarize what you have learned about segmenting text for discussion?

3. KINDS OF QUESTIONS

- a. What do you notice about the kinds of questions that you posed to students in your first discussion, and the kinds of responses that those questions elicited from your students?

- b. What do you notice about the kinds of questions that you posed to students in your second discussion, and the kinds of responses that those questions elicited from your students?

- c. How would you summarize what you have learned about posing questions during discussion?

4. KINDS OF RESPONSES TO STUDENTS

- a. What do you notice about how you responded to students in your first discussion?
- b. What do you notice about how you responded to students in your second discussion?

5. FUTURE WORK

Based on the analysis of the transcripts for both of your discussions, what do you think is the most important aspect of discussion for you to work on as you continue to refine your understanding of how discussion works and how it can support students in building an understanding of text ideas? Why? (you can answer on the back)

Adapted from Kucan (2004)

Study Group Survey #1

1. What is your understanding of what reading comprehension is?
2. What do you consider reading comprehension strategies to be?
3. Do you ever have trouble understanding what you read? What do you do when this happens?
4. What types of things do you think good readers do?
5. What types of things do you do or want to do to teach reading comprehension?
6. From your reading classes at the university, what instruction in reading comprehension do you consider most beneficial?
7. How do you think discussion relates to comprehension?
8. When do you usually have discussions in your classroom? Why do you have them?
9. How often do you have discussions in your classroom? What are your goals for having students engage in a discussion?

10. Do you ever guide or lead a whole class discussion while you are reading aloud or students are reading aloud from a text?

11. How do you plan for a discussion?

12. What do you hope to gain by participating in the study group?

Adapted from Kucan (2004)

Study Group Survey #2

While considering what you have learned through participation in the study group, please answer these questions. Please answer honestly—you opinion is very important. Don't forget to answer the second part to the questions (why/how)—you know how hard we try to get our students to do that!

1. What do you consider reading comprehension strategies to be?

2. Has your understanding of teaching reading comprehension changed? If so, how.

3. Have your ideas about classroom discussion changed? If so, how?

4. Did recording your classroom discussion and then analyzing it help you to think more objectively or systematically about your performance in this area? Why or why not?

5. Has participation in the study group caused you to change what you do in your classroom in any way? If so, what and/or how?

6. What has been the most difficult part of participating in the study group? (transcript analysis, doing the reading, implementation of discussion in the classroom, not enough time, not enough modeling, lack of materials, etc).

7. Please rate each aspect of the study group as to what was most helpful (1=very helpful, 2=somewhat helpful, 3=not helpful at all)

_____ Visit to XXXXXXX's classroom
_____ Reading Questioning the Author
_____ Analyzing classroom discussions
_____ Additional articles, book chapters,
_____ Group meetings/discussion

8. As you look through the articles you were given to read, was there any one article or book chapter (other than QtA) that was especially helpful? If so, what was it and why was it helpful?

9. What suggestions would you make to improve a study group?

10. If you were to participate in a study group next year, what would you want to study? (Continue with discussion/comprehension; focus on vocabulary instruction, spelling instruction, math instruction, or something else?)

11. How would you rate the study group/transcript analysis in comparison with other professional development experiences you have had? (better, worse, they are both worthless, etc.!) Why?

12. How likely are you to continue using the things you have learned in your classroom?

_____ 0=will not continue to use
_____ 1=maybe continue to use
_____ 2=will definitely continue to use

13. What support/help do you feel would help you to continue to improve your skills as a reading teacher?

14. Has participating in the study group made you feel _____ 1) more competent
_____ 2) less competent _____ 3) no change as a reading teacher?
Why?
15. How would you rate Questioning the Author as far as being helpful for the
following things: 1=very helpful 2=somewhat helpful 3=not helpful at all
- _____ understanding the constructivist view of reading
 - _____ understanding how traditional questioning differs from queries
 - _____ understanding how to segment text
 - _____ understanding how to plan questions and responses
 - _____ implementing meaning building discussion in the classroom
 - _____ improving instructional conversations in the classroom
16. How did you feel about QtA? Would you recommend it to other teachers as
something that would be helpful to them? Why or why not?
17. Can you think of anything that you read about or heard about while
participating in the study group that was completely new to you?
18. What connections, if any, do you see between reading instruction and content
area instruction (science, social studies, and math)?
19. Before participating in the study group, did you purposely plan to teach reading
strategies during content area instruction? What did you do? Do you do
anything differently now?
20. Feel free to make any other comments concerning the study group on the back.
I am particularly interested to know in what ways the study group extended
your knowledge and thinking.

Adapted from Kucan (2004)

APPENDIX C

TRANSCRIPT ANALYSIS DIRECTIONS

Transcribing Your First Discussion

Transcript analysis is an opportunity for you to focus your attention on text-related talk that goes on in your classroom. Here are the steps:

1. Secure permission from your students' parents for them to be tested and audio taped.
2. Select a text that your students are reading or one that you will read aloud to them. This text can be narrative or expository, just make sure it is one that is worth thinking and talking about.
3. Audio tape yourself reading/and or discussing the text with your students. This could be a whole or small group discussion.
4. Transcribe the discussion using the following format.
 - A. Provide an introduction explaining what students are reading and discussing. For example:

The class is reading the story "Slower than the Rest" by Cynthia Rylant, which appears in their reading anthology. The discussion takes place as the story is being read.
 - B. Provide a description of students. For example:

There were 18 students in this class. Thirteen are white and five are black. Three are reading below average, three above average, and twelve are average.
 - C. For your own reference, make a list of the students' names and assign each one a pseudonym. Use the pseudonyms in your transcripts.
 - D. Transcribe the discussion by playing the audiotape and typing each word in the discussion, including:
 - The text that was read (you can photocopy this and paste it into your transcript)
 - Teacher comments and questions
(Teacher: Why do you think she did that?)
 - Student comments and questions
(Tom: That's not what I wanted to happen.)
5. When you are finished, please turn the transcript and tape in to me.

Adapted from Kucan (2004)

Analyzing Your First Discussion

1. Begin by counting the number of times you talk—record these in the first discussion column for Teacher Talk. Now count the total number of times students talk—record this in the Student Talk column for the first discussion. Add these two totals together and figure a percentage by dividing the total Teacher Talk by the total number of talk. For example, if you talked 35 times and your students totaled 27 (a total of 62), you divide 35 by 62 to get 54%.
2. Now using the Code Book, tally up how much of **your** talk fell into each question and response category on the chart. Don't stress too much where each comment or question should fall, just make sure you code each one somewhere (make your best judgment). When you are finished, add up the total amount of questions asked and figure a percentage for each category. For example, if you asked a total of 56 questions and 12 of those were in the retrieve category you would put 21% in that column (12/56). Do this with the response categories as well. If you responded 28 times and 10 of these were in the Collect category you would put down 36% (10/28).
3. When you are finished, please return the transcript and Discussion form to me.

Planning for Your Second Discussion

The best way to plan for your second discussion is to plan and run several discussions before you tape and transcribe your “second” discussion. The more practice you have planning and running a discussion, the better your discussions will be. The planning that you do for your second discussion should be informed by what you have learned as a result of:

- Analyzing your first discussion
- Reading Questioning the Author
- Your other professional readings and discussions in study group meetings

Think about what you have learned and how it will inform your second discussion. Review the guidelines in Questioning the Author and follow these steps in planning your second discussion:

1. Read the text that you have selected for your second transcribed discussion with thoughtfulness and care. Read it more than once so that you can think about it as the expert reader that you are and also as a student in your class might read it.
2. List the learning goals that you decide upon for the text. What do you want students to understand as a result of reading and talking about the text? Be specific. Someone reading the learning goals should be able to know what the important content in the text is.
3. Make notes about any sections of the text that might confuse students.
4. Make a photocopy of the text.
5. On the photocopy, mark where you plan to stop to ask questions.
6. Write the questions that you plan to ask right on the photocopy of the text.
7. Include any follow-ups that you want to have ready.
8. Make notes about who will read certain sections. For example, you might read part of the text. You might want a struggling reader to read an easy or short part of the text.

Adapted from Kucan (2004)

Transcribing and Analyzing Your Second Transcript

Prepare your second transcript the same way that you prepared your first transcript. Please complete your second transcript and turn it and the analysis into me. Please follow the guidelines below.

Transcribe the discussion using the following format.

A. Provide an introduction explaining what students are reading and discussing. For example:

The class is reading the story “Slower than the Rest” by Cynthia Rylant, which appears in their reading anthology. The discussion takes place as the story is being read.

B. Provide a description of students. For example:

There were 18 students in this class. Thirteen are white and five are black. Three are reading below average, three above average, and twelve are average.

C. For your own reference, make a list of the students’ names and assign each one a pseudonym. Use the pseudonyms in your transcripts.

D. Transcribe the discussion by playing the audiotape and typing each word in the discussion, including:

- The text that was read (you can photocopy this and paste it into your transcript) Put this in to your transcript as it fits into the discussion—cut and paste your photo copy into your transcript.
- Teacher comments and questions
(Teacher: Why do you think she did that?)
- Student comments and questions
(Tom: That’s not what I wanted to happen.)

Analysis

Complete your analysis by filling in the column for the Second Discussion. Remember, your break down of the teacher questioning and response should add up to the total number of times the teacher talked up at the top. Don’t stress too much where each comment or question should fall, just make sure you code each one somewhere (make your best judgment). Keep a tally going in each category. When you are finished, add them up and figure a percentage for each category just as you did for the First Discussion.

Also, please return your tape (one discussion on each side) to me with your transcript and analysis. If you have borrowed any books from me, I need those back as well as your *Questioning the Author*.

Adapted from Kucan (2004)

APPENDIX D

CODE BOOK

Transcript Analysis Code Book

Kinds of questions	Code
Retrieve information <ul style="list-style-type: none"> • From text/pictures • From personal experience/memory 	Retrieve
Relate to personal experience <ul style="list-style-type: none"> • Share experiences • Express opinion 	Relate
Think about and use text information <ul style="list-style-type: none"> • Explain • Infer • Predict • Evaluate • Connect/Compare/Contrast • Frame 	Think/Explain Think/Infer Think/Predict Think/Evaluate Think/Connect Think/Frame

Kinds of responses to student answers/comments	Code
Collect multiple responses to the same question	Collect
Request students to elaborate/clarify/evaluate	Probe
Ask other students to comment on response provided by a student	Connect
Redirect student question to the group Request student to do research	Redirect

Kinds of Questions

RETRIEVE

- **Retrieve information from text/pictures**

Teacher asks students to remember, recall information explicitly stated in text or represented in text illustrations

EXAMPLES:

- ❑ *What does EPA stand for?*
- ❑ *(Teacher shows picture.) Where is Max now?*

- **Retrieve information from personal experience/memory**

Teacher asks students to remember, recall information not explained in text. Can include asking students to define vocabulary not explained in the text

EXAMPLES:

- ❑ *What does an alarm clock do?*
- ❑ *What do you think butternuts are?*

RELATE

- **Relate to personal experience**

Teacher asks students to think and talk about personal experiences

EXAMPLE:

- ❑ *So, what kind of jobs do you do at home to earn money?*

Teacher asks students to offer personal opinions or reactions

EXAMPLES:

- ❑ *The little girl has come up and she's looked and there's a fire and it's her house that is burning down. How would you feel?*
- ❑ *What would you do if someone said that to you?*

THINK/EXPLAIN

- **Explain**

Teacher asks students to focus on explaining the meaning of a specific text segment.

EXAMPLES:

- ❑ *What's going on here?*
- ❑ *What do you think the author wants us to know after you have read these 2 sentences?*
- ❑ *What's the author telling us here?*
- ❑ *How would that work?*

THINK/INFER

Infer

Teacher asks students to consider information from more than one text segment or to “read between the lines” in a single text segment in order to figure out why something happened or why a character might feel or act in a certain way

OR

Teacher asks students to think about why the author has provided certain information

EXAMPLES:

- ❑ *Why do you think Marty is suspicious of his uncle? What do we know about him that might make Marty suspicious?*
- ❑ *Why do you think Lee is acting this way? What's she trying to do?*
- ❑ *Why do you think the author gives us this information now?*

NOTE: Many inference questions begin with the word *why*. If the answer to the “why” question is stated in the text, then it is a retrieve question rather than an infer question.

THINK/PREDICT

- **Predict**

Teacher asks students to consider information from more than one text segment or to “read between the lines” in a single text segment to figure out what might happen next or what might result from an action

EXAMPLES:

- ❑ *So, based on what we know, what do you think will happen next?*
- ❑ Because we know some things about how this machine works, what do you think will happen if Beth forgets to turn it off?

NOTE: If prediction is obvious, count as RETRIEVE.

EXAMPLES:

- ❑ *So, now that they have the sugar and flour and eggs, what do you think they will do next?*
- ❑ What do you think the boy will do next? Every time someone knocks on the door the boy jumps. Here’s another knock.

THINK/EVALUATE

- **Evaluate/Judge/Consider Alternatives**

Teacher asks students to provide an evaluation of or judgment about a situation described in the text

OR

Teacher asks students to choose from among possible alternatives

OR

Teacher asks students what they would do if they were in a particular situation described in the text

EXAMPLES:

- ❑ *Then that was called segregation. Um, what do you think about the idea that black people couldn’t go to the same schools or churches?*
- ❑ *What do you think Brian should do: stay where he is, or start walking and hope he’ll find someone?*

THINK/CONNECT

- **Connect/Compare/Contrast**

Teacher asks students to compare, contrast, or connect information from one part of the text to information in another part of the text

EXAMPLES:

- ❑ *Okay, let's compare Treegap now, using the description here, to the description that the books gave us in the earlier chapters.*
- ❑ *How does what Ralph says here connect to what we found out about his family?*

THINK/FRAME

- **Frame**

Teacher provides a framework for students to use in thinking about text information from more than one segment

EXAMPLES:

- ❑ *Okay, so the scientist figured out how the elephant made sounds by putting several bits of information together. What did she use to figure out how elephants communicate?*
- ❑ *So, let's think about what question the scientists were trying to answer, how they tried to answer it, and what they found out. Who wants to start us off?*
- ❑ *At the beginning of a story, the author often introduces the characters. Who have we met so far and what do we know about them?*
- ❑ *The setting can be an important element in a story. What's the setting of Marty's home? Where does he live? What's it like there?*
- ❑ *The narrator of a story tells us things from his or her point of view. What do we find out about that only Holly could tell us?*

Kinds of Responses to Student Answers/Comments

COLLECT

Teacher repeats/rephrases question to same or different student

EXAMPLES:

- ❑ *Student:* *He has to have food.*
- ❑ *Teacher:* *Okay. He has to have something to eat. What else does he need right now?*
- ❑ *Student:* *Now she knows that her best friend is not really her friend at all.*
- ❑ *Teacher:* *Does anyone else have something to add?*

NOTE: Also count multiple responses to a single question/ comment when teacher does not explicitly ask for more responses but just acknowledges student responses, or just calls on students, or just repeats student comments.

EXAMPLES:

- ❑ *Student:* *He has to have food.*
- ❑ *Teacher:* *OK.*
- ❑ *Student:* *And he needs water.*
- ❑ *Student:* *And fire.*

PROBE

- Teacher requests additional information such as reason or evidence for response

EXAMPLES:

- ❑ *Student:* *He doesn't have a chance.*
- ❑ *Teacher:* *What makes you say that?*
- ❑ *Student:* *He will never get out.*
- ❑ *Teacher:* *Why?*
- ❑

- Teacher requests clarification or further explanation of response

EXAMPLE:

- ❑ *Student:* *She's bluffing.*
- ❑ *Teacher:* *What do you mean?*

CONNECT

- Teacher elicits evaluation of response by asking students if they agree or disagree with student comment, or if they want to comment on what another student said

EXAMPLES:

- ❑ *John:* *He doesn't have a chance if he leaves.*
- ❑ *Teacher:* *Do you agree with John that Brian doesn't have a chance of being found if he leaves the area where the plane crashed?*
- ❑ *Sarah:* *I don't think he'll make it because he feels so afraid that he's not thinking straight.*
- ❑ *Teacher:* *What do you think of Sarah's idea?*

REDIRECT

- Student poses a question to the teacher but the teacher redirects it to the group

EXAMPLE:

- ❑ *Student:* *But why is the boat still floating? It's got so many holes.*
- ❑ *Teacher:* *Who would like to respond to Mary's question? It's a good one.*

- Teacher invites students to do research related to a question that a student raises

EXAMPLE:

- ❑ *Student:* *Can a bee smell?*
- ❑ *Teacher:* *Does anyone know? Would you like to look that up and tell us about it later?*

APPENDIX E

SUPPLEMENTAL STUDY MATERIALS LIST

A Sample of Supplementary Study Materials

- Allington, R. L., Johnston, P. H., & Day, J. P. (2002). Exemplary fourth-grade teachers. *Language Arts*, 79, 462-465.
- Barton, J. & Sawyer, D. M. (2003). Our students are reading for this: Comprehension instruction in the elementary school. *The Reading Teacher*, 57, 334-347.
- Clark, K. F. & Graves, M. F. (2004). Scaffolding students' comprehension of text. *The Reading Teacher*, 58, 570-580.
- Duke, N. K. & Pearson, P. D. (2002). Effective Practices for Developing Reading Comprehension. In A. E. Farstrup and S. J. Samuels (Eds.) *What research has to say about reading instruction (3rd edition)*, pp. 205-242. Newark, DE: International Reading Association.
- Duke, N. K., & Reynolds, J. M. (2005). Learning from comprehension research: Critical understandings to guide our practices. In L. Hoyt (Ed.) *Spotlight on comprehension: Building a literacy of thoughtfulness*, (pp. 9-21). Portsmouth, NH: Heinemann.
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