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Teacher Dialogue and Its Relationship to Student Achievement

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The University of Southern Mississippi

TEACHER DIALOGUE AND ITS RELATIONSHIP TO STUDENT ACHIEVEMENT

by

Heather Norton Montgomery

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

May 2013

ABSTRACT

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by Heather Norton Montgomery

May 2013

Many studies have been conducted to analyze the different methods and structures of teacher conversations. Researchers realize how complex the study of teacher dialogue may be and have concentrated their efforts to study discourse within the context of teaching teams. Some of the literature has focused on what topics and factors of dialogue contribute to improved student achievement. The purpose of this research was to determine whether some factors or themes of dialogue are discussed more frequently than others within third, fourth, and fifth grade-level teams, and if those themes and factors of dialogue had a relationship to academic achievement. This study was significant in that it attempted to measure dialogue quantitatively and found emerging patterns in team dialogue that may have relationships to academic achievement.

Findings may help administrators facilitate productive conversations in team meetings. Those findings consistent with the literature included teams who reported participating in group studies and planning with exceptional needs specialists had positive correlations to math and reading achievement. Administrators may want to encourage these practices among teams. As teams reported their increased discussions concerning student behavior, their students' academic achievement in math and reading decreased. This finding supports previous studies suggesting student behaviors may interfere with student achievement. Principals who find teams spending a great deal of

time discussing student behaviors should look closely at classroom management to improve student achievement.

Ending team meetings with student action plans and sharing lesson plans were negatively correlated with math and reading achievement, which is inconsistent with the literature. School leaders working with teams of teachers may consider monitoring teaching methods used to make sure they are research based. Teams in this sample reporting their use of data in discussions was negatively correlated to math and reading scores. There is some evidence in the literature of teachers being overwhelmed by the amount of data they are asked to review. Administrators may consider providing professional development to help teachers better understand data-driven instruction.

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TABLE OF CONTENTS

ABSTRACT	ii
ACKNOWLEDGMENTS	iv
LIST OF TABLES.....	vi
CHAPTER	
I. INTRODUCTION	1
Statement of the Problem	
Research Questions	
II. LITERATURE REVIEW.....	10
Teacher Dialogue and its Relationship to Student Achievement	
A History of the Development of Teams	
Team Practices	
Team Organization and Effective Communication	
Summary	
III. METHODOLOGY	48
Overview	
Research Design	
IV. RESULTS.....	55
Description of Sample	
Conclusion	
V. DISCUSSION.....	67
Limitations	
Conclusion	
Recommendations	
APPENDIXES	74
REFERENCES	80

LIST OF TABLES

Table

1.	Summary of Descriptives Reported by Population Sample.....	56
2.	Summary of Means, Standard Deviations, Correlations and Significance Levels between Dialogue Factors and Student Achievement in Math and Reading.....	60
3.	Summary of Means, Standard Deviations, Correlations and Significance Levels between Dialogue Themes and Student Achievement in Math and Reading.....	64

CHAPTER I

INTRODUCTION

Teachers have extremely high demands placed on them regarding the amount of work they are expected to complete in the amount of time they are given (Bianco, 2010). The work expected of teachers is so great that administrators realize some of that work must be delegated to teams of teachers, instead of individual teachers (Reeves, 2008; Zenger, Musselwhite, Hurson, & Perrin, 1994). Teams of teachers may create lesson plans together, discuss individual student needs, review the school's data, and support one another through various modes of inquiry regarding issues within the school (Brinson & Steiner, 2007; Glickman, Gordon, & Ross-Gordon, 2010). All of these discussions within the teams are in some way intended to do one thing: promote student achievement. However, some teams have better results in student achievement than others. Perhaps this has something to do with their topics of discussion during team meetings.

Though many studies believe that low socioeconomic factors have a negative relationship to student achievement, there are studies that have demonstrated that this is not necessarily true (Billig, Jamie, Abrams, Fitzpatrick, & Kendrick, 2005; Reeves, 2000). There are common practices among successful schools with students of low socioeconomic status that lead students to high academic achievement. These include the use of many team-based problem-solving strategies. Researchers have often found it useful to study successful schools and the practices they use. It may be possible that the patterns of discourse in their dialogue have commonalities as well.

Many researchers have questioned whether moving teachers from isolation to a structured team setting would force teachers to take part in productive conversations (Little, 1990). Several studies set out to determine the efficiency of teacher teams

(Clement & Vandenberghe, 1997; Fenwick, 1996). One common theme in the literature is that teachers require support and training in order to work together to produce desired outcomes (Bunker, 2008; Darling-Hammond & McLaughlin, 1995; Troen and Boles, 2012; Zenger et al., 1994).

Teacher dialogue has many variables that make it difficult to measure (Navarro, 1992). One must consider differences such as how intensely teachers feel about their discussion, how well they are able to articulate their feelings, and how comfortable they are sharing with the group. Since teachers regularly share discourse within team meetings, the literature review focused on various team structures.

Dialogue is just one component of collaboration. More recent literature has focused on finding ways to improve collaboration between team members. Collaboration occurs when more than one person works together to produce a desired outcome. There appear to be some common themes regarding effective teaming skills. Those norms include the need for a facilitator, an agenda, a problem-solving session based on current data, and a plan of action or follow-up to the discussion. Social dynamics of teams also play an important role in the productivity of the team. The literature outlines several methods for handling group patterns of behavior that may hinder team productivity (Glickman et al., 2010; Graham, 2007; Musanti & Pence, 2010; Troen & Boles, 2012).

Blankstein (2004) and Hord (2003) encourage the use of mission statements and school visions as a way to promote a shared dialogue among teachers. While the school vision offers clarity for the direction of a school's future, the school mission provides the school's purpose for educating students. Common goals help teams incorporate the views of many stakeholders in their daily operations. If these statements are reviewed

during meetings and school plans are adapted to promote those ideas, schools may reap the rewards of student success (Slate, Jones, Wiesman, Alexander, & Saenz, 2008).

The term *teacher voice* refers to a collection of voices from educators and how effectively educators feel their own concerns are considered by policy and decision makers (Hargreaves, 1994). If teachers do not feel their voice has been considered, they are less likely to support the decisions made regarding changes in education. There is some evidence that suggests the use of structured dialogue, perhaps with an agenda, facilitates discussions when teachers gather to voice their contribution to policy makers. This agenda may include some content that has been demonstrated to have a positive effect on student achievement (Navarro, 1992).

Teams which review, assess, and implement curriculum have reported that meetings provide them with clarity regarding the curriculum (Bunker, 2008). Teachers in Mississippi are finding themselves navigating through the new Common Core Curriculum Standards. These standards have some conceptually different ideas about the content and application of materials than the current Mississippi curriculum as evidenced by Mississippi's crosswalking documents (Mississippi Department of Education, Office of Curriculum and Instruction, 2010). Teams will need to meet regularly to decipher the language of these globally competitive standards and adapt teaching methods to meet the new demands. The literature states that team-based inquiry assists teachers with making such conceptual understanding a reality in classroom practices when teachers brainstorm and experiment with different practices (Mantei & Kervin, 2011; Plauborg, 2009).

Three arrangements of team structure are popular in the literature. They have all come about to promote collegial discourse among a variety of educators to help improve student achievement. Response to Intervention (RTI) models deal with students who are

struggling either academically, behaviorally, or both. Teams of teachers, counselors, and other specialists discuss interventions and results of interventions to determine if the student may qualify for alternative placement (Bianco, 2010; Searle, 2010). Critical Friends Groups (CFGs) develop from teachers sharing concerns and meeting to discuss them. Facilitating effective teaming practices, the group thinks critically about its questions and tries to come up with a common solution (Cox, 2010; Curry, 2008). Professional Learning Communities (PLCs) use teacher inquiry as a form of professional development. Teachers use research-based practices and record data while they implement those practices in their classroom. Based on the data they obtain, they discuss problems and solutions to patterns in the data (Gamble-Risley, 2006; Goddard, Hoy, & Hoy, 2000; Hord, 2003; Spanneut, 2010).

Statement of the Problem

The intent of the present research was to find what categories of dialogue grade-level teams engage in most often and whether those categories have a relationship to student achievement. Teachers have very little time to meet all of the requirements they need to meet and be as productive as they possibly can be. If teachers are able to *work smarter, not harder* by focusing on specific topics of discussion, they may be able to maximize the time spent in meetings, resulting in increased instructional effectiveness. Literature regarding teams of teachers and how their discussions relate to their productivity has outlined many variables that may influence this dialogue, and some of those variables were included in the survey.

Research Questions

The following research questions guided this study:

1. What is the rank order of factors of dialogue in terms of how often teams discuss those categories and their student achievement scores?
2. What is the rank order of themes of dialogue in terms of how often teams discuss those categories and their student achievement scores?
3. Is there a relationship between specific factors of dialogue and math and reading achievement?
4. Is there a relationship between specific themes of dialogue and math and reading achievement?

Definition of Terms

- Best practices – These are instructional techniques that are backed by research, such as those outlined by Marzano (2007) in *The Art and Science of Teaching*.
- Collaboration – This is when groups of people work together to produce a desired outcome (Troen & Boles, 2012).
- Collective efficacy – This is a group rating produced by teams that feel they are productive when working together to meet a common goal (Goddard et al., 2000).
- Collegiality – This is a term used to describe teachers simply working together collectively (Troen & Boles, 2012).
- Critical Friends Groups (CFGs) – This is a method developed by the Annenberg Institute for School Reform at Brown University (National School Reform Faculty, 2011). The groups are run by a facilitator trained in directing the group through certain guidelines for listening and thinking about a shared problem.

- Data-driven instruction – Educators use data to drive instruction when they analyze results of student assessments for patterns and identify gaps in student learning to provide students with interventions and re-teaching as necessary (Fox, 2001).
- Dialogue – a conversation or discussion between two or more people to arrive at a new understanding (Clark, 2001).
- Dysfunctional team roles – These are the roles held by some team members when working in groups. Team members who act out dysfunctional roles interfere with team productivity and morale (Glickman et al., 2010).
- Effective collaboration – This type of collaboration results in positive outcomes when problem-solving and improving instruction. (Rosenholtz, 1989).
- Personal dimension skills – These are team skills theorized by Benne and Sheats (as cited in Glickman et al., 2010). Such skills pertain to the emotional dimension of team interactions that are identified by motivational strategies.
- Productivity – For the purposes of this study, productivity pertains to team outcomes of increased student achievement.
- Professional Learning Communities (PLCs) – Teacher teams organized to analyze problems through teacher inquiry by researching and sharing best instructional practices with their team (Hord, 2003).
- Reflective thinking – Reflective thinking is a metacognitive way to self-analyze practices and take corrective action to enhance teaching methods. This may be done through dialogue with colleagues or written logs (National Board for Professional Teaching Standards, 2002).

- Response to Intervention (RTI) – A model designed for teams of educators to ensure early identification of students with learning problems and tiered interventions to provide students with additional instructional assistance (Searle, 2010).
- School climate – A collective attitude about the school’s atmosphere as it applies to the feelings of students, educators, and stakeholders regarding the school’s values, contribution to learning, and commitment to and involvement with the community. (Liebman, Maldonado, Lacey & Thompson, 2005).
- School mission statement – The school’s mission statement serves as a guide for educators and school stakeholders when working together to meet a common goal. The purpose of school mission statements is to assist educators with policy and decisions in all aspects of the school’s function (Stemler, Bebell, & Sonnabend, 2011).
- School vision – This is a shared idea of the purpose of the school. The vision is often thought of as the ideal that educators and students aspire to become. (Liebman et al., 2005).
- Shared leadership – Unlike traditional top-down directives from administrators; principals, team leaders and teachers act as facilitators to encourage all stakeholders to become involved in the decision making process (Reeves, 2008).
- Student achievement – How well students perform on common assessments compared to other students taking the same test.
- Student data – There are many types of student data that may be analyzed, but for the purposes of this study, student data is comprised of the results of district-wide common assessments.

- Teacher dialogue – The conversations teachers engage in about their profession, including but not limited to classroom instruction, student behavior, and organizational tasks. (Clark, 2001).
- Teacher inquiry – Teacher research on instructional practices within their own classroom settings. Teachers report the results of their inquiry back to other teachers for discussion (Clark, 2001).
- Teacher voice – A term used to describe how teachers feel their opinion is valued and considered in school decisions and policy making (Hargreaves, 1994).
- Team organization – For the purposes of this study, this includes the way teams are organized by educator positions, team roles and organization, and the purpose of the team.
- Task-oriented skills – Team skills theorized by Benne and Sheats (as cited in Glickman et al., 2010). The task dimension roles are needed by teams to help it reach its objective.

Delimitations

- The research was restricted to surveys of team leaders in public schools in Mississippi and the types of dialogue in which their teams participate.
- The topics of dialogue were limited by survey questions.
- Upper elementary third, fourth, and fifth grade teams of students and teachers were included in the study.
- Assessments were limited to the spring 2012 statewide Mississippi Curriculum Test II (MCT 2).
- The study of professional teacher dialogue may have become dense in theories of linguistics with regard to the sociology of teacher interactions to the

psychology of the individual teacher's perceptions. This research attempted to address some of these feelings of group efficacy and teacher voice in the survey to determine their effect on student achievement in addition to the categories of dialogue.

Assumptions

- Teachers teach the objectives measured by the district test used to compare student scores and categories of dialogue.
- The Mississippi Curriculum Test 2 (MCT2) measures the objectives teachers are required to teach throughout the school year.
- Team leaders provide an accurate report of survey questions that is representative of the collective beliefs of the team.
- Team leaders provide accurate answers on the approximate amount of time they spent discussing the categories outlined by the survey.

Justification

Teachers must increase their group productivity to enhance student achievement. Though it is difficult to measure teacher dialogue, research suggests there are important discussions teachers must have that result in improved instruction and student achievement. Administrators and teachers will benefit from concentrating dialogue to areas that improve student achievement. This may assist teams with prioritizing items for discussion on their agendas. Teachers may maximize their time in meetings through increased productivity so they may continue to move the educational system at a pace conducive to the needs of our society.

CHAPTER II

LITERATURE REVIEW

Teacher Dialogue and its Relationship to Student Achievement

Teachers participate in professional dialogue in many different ways. They have team meetings, meetings to address specific student needs, staff meetings, and district-wide meetings. Dialogue is a very complex theoretical study of linguistics. Studies of dialogue include the syntax, semantics, and pragmatics of the particular interaction. This study sought to investigate categories of professional dialogue within grade-level teams of teachers that promote student achievement. Research questions guiding the study included the following:

1. What is the rank order of factors of dialogue in terms of how often teams discuss those categories and their student achievement scores?
2. What is the rank order of themes of dialogue in terms of how often teams discuss those themes and their student achievement scores?
3. Is there a relationship between specific factors of dialogue and math and reading achievement?
4. Is there a relationship between specific themes of dialogue and math and reading achievement?

Teachers value their time to complete tasks related to developing their curriculum, planning to teach and assess their lessons, and grading student assessments to obtain data. Teachers may be less inclined to take the time to engage in meaningful dialogue when meetings do not produce desired results. There are gaps in the research in the area of teacher dialogue and which categories of dialogue appear to have an effect on improving team performance to enhance achievement. Knowing and understanding the categories

of dialogue that are most useful at improving student achievement may help teacher teams and administrators make the best use of their limited time to enhance practices.

Literature suggests that removing teachers from the isolation of their classrooms and requiring them to collaborate in teams does not instinctively lead to them to rely on one another for assistance (Clement & Vandenberghe, 1997). This insinuates a need for teachers to be trained on how to collaborate using effective dialogue to promote meaningful engagement between team members. Many variables must be considered to produce the desired outcome: student achievement.

Early research on teacher collegiality and dialogue by Little (1990) suggested a need for studies to concentrate their efforts on how teacher dialogue is formed rather than the content of the dialogue. She identified two forms of content within the dialogue. One was ‘social talk’ versus professional discussions about teaching. The other included the group’s overall description of what they were collaborating about. Regarding the content of dialogue among teachers, Little stated,

Neither (‘social talk’ nor professional discussions) of these substitutes well for a more close-grained account of the moral and intellectual dispositions that teachers bring to or develop in the course of their relations with one another; neither has been well-informed by careful scrutiny of the actual talk among teachers, the choices teachers make in concert, or the ways in which individual actions follow from the deliberations of the group. (p. 524)

As the quote suggests, there are many dynamics at play when teachers meet to engage in collaborative discussions. Some teachers may have experience working together and have unspoken expectations of one another; others may have conflicting beliefs about solutions to a problem being addressed in a team meeting. This demonstrates the

complexity of measuring dialogue within the educational setting. Teachers have reported positive outcomes resulting from their discussions, yet researchers have found that these reported outcomes may or may not have a relationship to student learning (Bunker, 2008; Plauborg, 2009).

The content of professional dialogue has been targeted throughout the literature review in order to investigate possible relationships between teacher collaborative dialogue and student achievement. Within those studies about team collaboration was a common theme about the reform of teaching practices and how it improved student learning. Those themes were outlined in the literature review and became integral components of the survey items.

A History of the Development of Teams

Historically, research regarding teacher dialogue has focused mainly on dialogue between teachers in developing teams. Several studies set out to determine the productivity and effectiveness of the outcomes of teacher teams (Clement & Vandenberghe, 1997; Fenwick, 1996). One common theme in the literature is that teachers require support and training in order to work together and produce desired outcomes (Bunker, 2008; Darling-Hammond & McLaughlin, 1995; Troen & Boles, 2012; Zenger, Perrin, & Hurson, 1994).

Early literature about teacher teams stated that the teacher teaming process became a popular part of the reform process of education after the findings of *A Nation at Risk* (1983). The report identified an abundance of what they deemed “deficiencies” in our educational system (U.S. Department of Education, 2008, p. 8). It quickly became apparent that no one teacher could singlehandedly correct those deficiencies. When schools were still unable to meet public expectations, the Elementary and Secondary

Education Act of 1965 (ESEA) was revisited. In an attempt to improve the act, it was reauthorized as the Improving America's Schools Act (1994) prior to its current reauthorization the No Child Left Behind Act (2001) (Hoffman & Jorgensen, 2003).

The intent of this law was to increase student achievement while focusing on teacher accountability. The individual states were required to develop their own standards and assessments. This resulted in many schools across the nation to "teach to standardized tests" (Norwood, 2007, p. 35), which may have inadvertently affected students' ability to apply knowledge across subjects and skills (French, 2003). This is our present form of accountability and testing.

The ESEA (1965) has been up for reauthorization since 2007. Many states applied for a waiver of some ESEA requirements this past year to help them move forward in their ability to promote student achievement and meet the needs of their schools. Mississippi was granted the ESEA waiver which will forgive the state from accountability actions that are required for federal funding under No Child Left Behind in exchange for making changes in their educational systems. An online publication written by Mississippi Department of Education Office of Federal Programs (2012) stated that the waiver will allow the state to plan its own educational reforms.

Mississippi's accepted reauthorization focuses on increasing student performance while closing achievement gaps between identified student subgroups. Under the guidance of the Office of Associate Superintendent, struggling schools will become part of a professional learning community (PLC) designed to provide them with the support they need to increase their achievement and close gaps. Teacher collaboration within these groups will be vital to their success. A draft rubric of a new teacher evaluation

system may be found in the appendix of the waiver. This draft rubric also includes professional learning communities as part of a teacher's professional responsibilities.

In an ongoing attempt to provide higher standards and a more rigorous curriculum in a global society, the Council for Chief State School Officers (CCSSO) and the National Association Center for Best Practices (NGA Center) recognized the need for educational accountability of that viable curriculum. This developing curriculum is the Common Core. As we move from individual state accountability under NCLB to the Common Core on an almost national level, teachers will need to collaborate to understand the standards to promote equity among academics.

The literature on teacher professional dialogue as it relates to student achievement is categorized into three areas. Those areas include the use of various types of reflective dialogue to improve teacher instruction by using (a) best practices, (b) student data, and (c) teacher inquiry. Teachers may increase the use of best practices by discussing the various ways they are being incorporated into their instruction. Teacher discussion of student data may assist them with identifying patterns in the data to improve instruction, and team members may offer alternative solutions for instructional remediation. Dialogue regarding teacher inquiry may help teachers reflect on their current practices and discover new methods they may share with their team.

There are many studies focusing on team development as well as the evolution of professional dialogue within teams. Few of the studies on professional dialogue have concentrated on analyzing which categories of teacher dialogue are more effective or productive than others in order to improve student achievement. Dialogue among teachers in schools develops the educator's sense of belonging to the organization and has demonstrated results in teacher learning. Measuring the dialogue of teacher teams

through self-reporting may be a way for schools to analyze how effectively team members are collaborating so that concerns can be dealt with accordingly (Neil & Johnston, 2005).

The literature has stressed the importance of collegial work among teachers as part of the education reform process. Teachers will need to engage in productive discussions about this reform at the grassroots level as dialogue of the process moves from organizational learning to the classroom. The literature review also has examined some of the pros and cons of face-to-face dialogue versus online collaboration. Most of the literature has focused on educational teams and the dialogue that occurs within them.

Team Practices

Many recent studies on developing teams have recommended the use of a shared leadership style, with the administrator being a facilitator rather than a person who simply delegates responsibilities. Shared leadership recognizes the experience and expertise all members of a team may contribute to discussions. Reeves (2008) reported that in schools reporting their staff configurations led to student achievement, 64.8% of the students scored above the proficiency level of their achievement tests (p. 7).

Administrators' roles have changed significantly over the past 30 years. Schools realize the competitive and rigorous changes being made within their curriculum are too much for one person to fully comprehend. It is unreasonable to think that a single person could have enough knowledge about every subject to make final decisions without considering the input of multiple sources. Zenger et al. (1994) were able to foresee these changes in business teams. They wrote of a changing world including global knowledge, and ongoing government regulations and requirements. Teams were able to brainstorm solutions to problems and maintain an edge on the competition. The same is true of

Mississippi public schools and the possible competition that may result from recent charter school legislation, House Bill Number 369, Mississippi Charter School Act of 2013. Some low-performing public schools may be required to fund charter schools as a result of the act.

Administrative roles have not, however, become obsolete (Reeves, 2008; Zenger et al., 1994). It is critical administrators become experts at understanding and facilitating teams. If administrators understand where to lead conversations, their facilitation skills have been mastered. Reeves (2008) provided many ideas for promoting shared leadership within schools. He identified the importance of teachers becoming researchers of their own practices. This requires greater leadership responsibility because administrators must always be looking for teachers who are successfully implementing research-based practices.

One study questioned whether principals should choose teachers by their licensure qualifications or by their ability to fit within a team (Fuller, Young, & Baker, 2011). The outcome of the study advised that principals obtain careful training on how to employ and retain qualified teachers who are able to contribute to collegial teams. Administrators should be able to identify a teacher candidate as a person who has the capacity to share and solve problems within a team setting. This may be an important reason administrators conduct team interviews of a prospective colleague with team members.

Literature on developmental supervision began in the 1980s as a way to increase the productivity of teachers through on-going administrative observations. Glickman, Gordon, and Ross-Gordon (2010) provided guidance for identifying the stages of development of a teacher and how to provide feedback to teachers that would increase their independence and productivity. This is much like the basic premise for the

developmental supervision of groups of teachers. *Directive control behaviors* of a group are required when a team is functioning at low levels of team development. Directive control behaviors require administrators to closely monitor the group operations and keep them on task. Facilitating concise, productive dialogue within these teams is crucial. The administrator must be very clear about expectations about group processes and outcomes by providing a specific agenda and timeline for completion. The group must be reinforced for expected performance and continuously monitored. Glickman et al. (2010) cautioned administrators to move away from this model of supervision as quickly as possible.

Directive information behaviors must be used when team development, team dedication, and expertise are low. In groups that require directive information, the facilitator must discuss the problem with the group, listen to team member's input and provide them with three or more alternative solutions to their problem. Through clarification and options for alternative solutions, the administrator may guide the group without forcing directives. *Collaborative behaviors* occur with teams who have mixed levels of developmental stages. Professional Learning Communities work well within these mixed stages. In other words, a PLC does not need to have all members working together at the same pace for the same amount of time. Some members may come and go and the PLC model remains effective. *Nondirective behaviors* are used to facilitate a high functioning team. The facilitator clarifies the problem through paraphrasing, listening to members, reflecting on the meeting and asking the group to commit to a plan of action (Glickman et al., 2010). Both Glickman et al. (2010) and Zenger et al. (1994) suggested that facilitators gradually allow teams to take on more responsibility on their own.

Researchers of educational practices examine patterns in school practices among schools having high student achievement scores. Finding common patterns in achievement may assist other schools in implementing those practices and improve student achievement in their schools. If communication is an important feature of successful schools, it may benefit researchers to find patterns within their dialogue that may be replicated as well.

Schools known as *90/90/90 schools* have many common practices (Reeves, 2000). These schools are defined as those in which 90% of the students are eligible for free lunch, 90% of students are part of a minority group, and 90% of the students have met or exceeded high academic standards. The purpose of studying 90/90/90 schools was to determine if consistent practices led to student success. Reeves (2000) found techniques used by 90/90/90 schools to be replicable and consistent. These schools set standards that were implemented, monitored, assessed, and changed as needed. The school climate is also a common factor. If all educators believe they are working to improve student achievement, the school climate is one that promotes effective dialogue and behaviors that will increase academic achievement.

Holistic accountability is used by 90/90/90 schools to measure student success. This accountability system focuses on the progress of individual students. Curriculum, teaching practices, and leadership are all used as measures of accountability. Reeves (2000) reported that this appears to have an effect on student behavior, because of its focus on the individual student.

It was also found that 90/90/90 schools work in teams. Collaborative scoring of student work allows for inter-rater reliability when the faculty is provided with time in their schedule to meet to grade papers. Teachers working in collaborative teams realize

their work raises the expectations for student products and improves their academic performance. The quality of teaching practices, not the type of curriculum used, is what contributes to student success. Identified categories of dialogue such as inquiry-based team practices may further their instructional performance.

Assessment is essential to the practices of these schools as part of their holistic accountability. Cohort data assessments are completed frequently and students are provided with multiple opportunities for improvement. Open-ended, written responses are used to help teachers obtain diagnostic information about student writing. If these assessments are discussed regularly as part of team dialogue, additional gains in academic achievement may result.

A study conducted by the U.S. Department of Education: Office of Vocation and Adult Education found similar commonalities among all successful schools (Billig, Jamie, Abrams, Fitzpatrick, & Kendrick, 2005). Again, a positive, student-centered school culture was a shared variable. High student and faculty expectations promoted achievement in these schools. Student assessment guided instruction and remediation of student achievement. Teaching practices were engaging and meaningful to students. Both studies also found successful schools made changes in class schedules to allow more time in the subject areas of reading and writing. Finally, as with 90/90/90 schools, collaborative dialogue among staff members empowered teachers to make the changes they needed to improve student achievement.

Gabriel, Pereira, and Allington (2011) studied successful teachers from different states. These teachers cited the same reasons for their success. They identified professional development that provided them with systematic ways to interpret student

work and actions. The professional development was not focused on methods, materials, or strategies as a source of growth.

Successful teachers reported that their relationships with teachers in their school helped them succeed as educators. Collegial support promoted meaningful conversation between peers and established a shared culture of student achievement. Teachers felt supported when they had peers or mentors they could share ideas with or reflect on their practices. Successful teachers were also inspired by enthusiastic team members.

Teachers also mentioned *engaged autonomy*, in which administrators encouraged them to think and act independently and share their findings with their teams. This allowed teachers to share and reflect on their practices within a group while maintaining their independence.

Team Organization and Effective Communication

Professional dialogue among teams of teachers and administrators is the vehicle for problem solving and turning education research in to practice (Mantei & Kervin, 2011; Plauborg, 2009). This discourse is a way for educators to refine their decisions and outcomes concerning problems based on their past experiences. Clark (2001) described dialogue as a process, suggesting that it takes time to develop. The team must develop structure and consistency before productive dialogue is able to take place.

Scribner, Sawyer, Watson, and Myers (2007) used discourse to locate patterns among conversations between teachers. During the study, teacher teams were presented with two types of problems. One problem was a “problem-finding” scenario, which required a team of teachers to find problems within their instructional practices (p. 79). The problem finding team had a great deal of trouble with the open-ended nature of their query. When teachers were unable to offer creative solutions, most dialogue between

group members became concerned with following ground rules team members had established. The other was a “problem-solving” scenario (p. 79). Teams in this scenario were asked to come up with solutions to identified problems within instructional practices. The problem-solving team experienced less frustration with the structured scenario, but their solutions to the problem appeared to be less creative than those of the problem-finding group. When teachers in the problem-solving group spoke of a creative solution to the problem their comments were disregarded by other team members.

Scribner et al. (2007) concluded that principals should be aware of the clarity and purpose of team problem-solving so teams will be more effective and innovative. The findings of this study imply that teams require some structured direction to assist them with discussion; however conversations that are too structured may inhibit creative solutions to the problem. It is important to organize and plan some types of professional dialogue so educators maximize the use of their time together devoted to student achievement. Classroom-based research and student assessment data are examples of important topics of discussion (Brinson & Steiner, 2007; Glickman et al., 2010).

Bunker (2008) conducted a study to measure whether teachers found value in collaboration, and whether those who found value experienced improvements in student achievement. Teachers reported that they felt they benefitted from collaborating with their team, even if there were no obvious gains in student achievement. Gains in student achievement occurred only when teachers were trained or skilled in collaboration.

Troen and Boles (2012) wrote that many teams do not work at levels high enough to improve student achievement. These teams do not engage in dialogue that has an impact on classroom instruction. Simply grouping teachers in teams does not improve student learning (Elmore, 1997). Although a teacher may produce excellent results

within the classroom, working productively in a team is an entirely different experience. Even expert teachers require training to maximize their results when collaborating with co-workers.

Glickman et al. (2010) pointed out two dimensions of effective groups based on work done by Bales. He described a balance of task-oriented skills and personal behaviors that encourage and reinforce discussions. Both dimensions have roles that are played out by group members. The task dimension of teams focuses on the content and purpose of the meeting, and the personal dimension of teams focuses on interpersonal processes and team satisfaction. This personal dimension is sometimes called *collective efficacy*. If a team has collective efficacy and team members feel their work together is meaningful, the team experiences a positive relationship with students' academic performance. The research conducted in this study may assist administrators when guiding teachers toward collective efficacy, a term defined as a group perception by teachers about their practices and efforts and how they influence student achievement (Goddard et al., 2000; Lee, Zhang, & Yin, 2011).

The first step in analyzing the roles of the group is to identify the functional roles of task and personal group members. All team members play a part in effective collaboration. The task roles of teams were identified by Benne and Sheats (as cited in Glickman et al., 2010). Research on group roles and dynamics is important to include when analyzing dialogue. If one of the outlined roles is missing within the group, discussions may become less effective. Identifying roles within the organization of teams may help increase the team's ability to communicate effectively. Some examples of these task-like positions and their functions are the *information seeker*, who analyzes ideas for factual evidence; the *energizer*, who motivates and challenges team members to

make decisions; and the *procedural technician*, who takes care of group logistics. Many of the roles identified by this research are easily identifiable in teams today.

Seven *person roles*, also developed by Benne and Sheats (Glickman et al., 2010), are ideal for establishing teams that are satisfying and cohesive. If any of these roles are missing, a group may risk losing the voice of some teachers, and only the most vocal teachers will provide input to team discussions. This may affect the group's shared commitment to decisions. Some examples of the person-oriented roles are the *harmonizers*, who mediate problems between group members and the *followers*, who are the listeners in the group and are willing to follow along with decisions made by more vocal group members. This early study demonstrated that productive team member roles have not changed much over time. The social needs within teams remain fairly constant. In respect to this study and requirements that teachers work in grade-level teams, one must consider teams with fewer numbers in regard to these studies. Some team members may need to be encouraged to take on multiple roles in order to maintain their productivity.

Troen and Boles (2012) described the following roles currently essential to group productivity. There should be a facilitator, timekeeper, note-taker, and a norms-and-process checker. The norms and process checker is the person who keeps the team on topic and makes sure the established group norms are being followed. Team norms should be decided by requiring the group to identify a set of rules to follow in the areas of communication, relationships, teaming, and procedural guidelines. Meeting guidelines should include a way to end meetings by summarizing the discussions and a plan of action. Regular team "tune-ups" are recommended, in which group members

periodically assess their effectiveness by reviewing their norms (Cardno, 2002; Troen & Boles, 2012, p. 43).

Techniques for eliminating barriers to professional dialogue were outlined by Fenwick (1996). These techniques demonstrate the need for administrators to identify problems in collaborative discussions. The problems include behaviors and dialogue that keep the group from being productive. Effective dialogue is described as conversations that (a) pinpoint important issues about learning, (b) attempt to remediate those issues, and (c) advocate for change that will resolve those issues. The administrator should encourage teams to critically reflect on practices and solutions. They must periodically orient the team to discover resolutions to the problem at hand. Clear expectations set forth by administrators allow all teachers to have a voice in the discussion.

Administrators must learn to guide teachers toward collective efficacy. This is defined as a group perception by teachers about their practices and efforts and how they influence student achievement (Goddard et al., 2000). Many teachers feel team efforts are hindered by time constraints when attempting to meet and implement all initiatives imposed on them (Bianco, 2010). Curry (2008) wrote that teams of teachers are often organized to complete “work related to tasks” instead of inquiry-based teams (p. 735). Teacher concerns about productive meetings may be alleviated if the team uses an agenda and adheres to recommended guidelines regarding topics of conversation.

A 10-year study to create a team performance model was developed by Drexler, Sibbet, and Forrester (2009). This model outlined questions teams ask themselves throughout their development. This study might be of significant help to administrators so they might be able to identify where a team is in their development. The administrator might then combine this understanding of team development with specific topics of

discussion that increase student achievement. This could expedite the team's ability to move through key stages of development by discovering a dialogue that increases the capacity to improve student achievement.

Several types of teams are at work within the educational as well as business setting. Zenger et al. (1994) identified different types of business teams. The following models include those teams and their educational team parallels at the site-based level. *Intrafunctional* teams are those who work in another department until they understand their own connectedness to that department. This may be similar to departmentalized teachers working together to develop an interdisciplinary unit. *Problem-solving* teams are developed to target specific problems within the business on an as-needed basis. An example of a problem-solving team at the school site may be similar to a few members of the leadership team working to correct scheduling issues. *Cross-functional* teams are those that monitor, standardize, and improve the work of the organization. An example might be a faculty meeting or leadership team with representatives from each department within the school. *Self-directed* teams work within their department to manage daily operations. Grade-level teams at the elementary school level are often self-directed to work through tasks required by the school's operations.

Dysfunctional team roles may become problematic when developing productive collaboration among team members (Glickman et al., 2010). The roles and dialogue such team members engage in take time away from meetings by causing distractions and sidebar conversations. They may also impede the group morale and the efficiency of the group process.

Whether the team is just developing or is considered a highly effective team, there are steps group leaders can take to deal with those behaviors. First, the behavior must be

observed and the group leader must speculate on the reasons for that behavior. Then the team leader should have a personal conversation with disruptive group members to talk about how their behavior is affecting the group. The team leader can then ask all group members to either review or create behavioral expectations for meetings (Glickman et al., 2010). Creative team leaders may be able to take negative behavior and turn it in to something positive and productive to the discussion. Troen and Boles (2012) suggested the group do a case study of a team in trouble and suggest solutions to the team in the study. They may then try to apply their ideas to their own team setting.

Zenger et al. (1994) outlined problems within teams that hinder performance. These issues apply to a school's effort and willingness to reform current practices. If a team is *internally-driven* instead of *customer-driven*, members will have a difficult time understanding the needs and expectations of their customers. This is of particular importance to public schools who may find themselves competing with private and charter schools for student enrollment. A *functionally-focused* team has several different departments that meet together and continue to work separately. This model may be similar to schools where special education teachers, activity teachers, and independent grade levels function independently of other classroom teachers. Gaps in the curriculum, student behavioral issues, and irrelevant special supports may occur as a result. *Management-centered* teams risk impeding information, skills, experience, and authority from team members.

Lee (2009) provided solutions to situations that may slow team productivity. If group members are new to the team, icebreakers help lower anxiety of team members and allow them to begin working. Facilitators must understand adult learners and realize they are educated and wish to be respected as experienced teachers. If an administrator is

unable to predict the team dynamics, they may wish to set ground rules to promote professional and constructive teamwork. Setting clear expectations and providing team members with some form of accountability will lead to positive outcomes.

Musanti and Pence (2010) conducted a qualitative study to determine the meaning of teacher resistance in groups. The study took place as part of a federally-funded project to create teacher teams that would better address the needs of students who are English Language Learners (ELL). Dialogue was analyzed during teams and teachers were regularly questioned about the process. It was determined that the behaviors typically viewed as ‘resistance’ or those that impeded reform were actually part of the learning process and development of the team. Researchers theorized that reform requires learning new concepts and changing current behaviors, which inevitably causes conflict. Effective professional development teams require mutual exchange, dialogue, and the ability to overcome constant challenge. The gains teams make through resistance must be identified and utilized to the benefit of the team. Such creative ideas must become a part of the administrator’s role.

Teacher Voice

The term *teacher voice* is repeated throughout the literature in regard to educational professional dialogue. Teacher voice is defined as how much input teachers have in the decisions made about their profession. This is a concern because the teachers, who are ultimately responsible for student achievement, feel they have little or no say in how they implement mandated curriculum and manage their classrooms.

Teachers must develop their understanding of best practices to create a “voice” in school reform. Teachers are the people who implement data-driven, evidence-based decision-making in the classroom. Critical thinking and discussion of those practices

help teachers develop methods they can base on their previous experiences. Liberman (as cited in Clement and Vanderberghe, 1997) stated that “contexts, needs, talents and commitments differ, but one thing appears to be constant: schools cannot improve without people working together” (p. 81).

Estola and Syrjälä (2001) conducted a nine-year longitudinal study on teacher voice in school reform. Many teachers reported reform efforts might have been sustained if the changes in practices were incorporated into current practices, rather than removing old practices altogether. Teachers stated that reform initiatives started off well, but lost their relevance over time. The researchers concluded that if teacher voices about reform are not heard, reform efforts are not upheld by teachers.

In a paper written by Hargreaves (1994), it was argued that many voices contribute to teacher voice. These are the voices of teachers, students, parents and other stakeholders. Hargreaves stated that teachers who feel their “voice” is lost will resist changes they view as imposed upon them. Frost (2008) defined teacher voice as “to articulate and amplify views, experiences, and perspectives of teachers on educational policy and practice” (p. 347).

When considering teacher voice, one must understand that it includes a collective voice of more than one viewpoint. Navarro (1992) studied teacher voice within Professional Development Schools. Navarro argued that teacher voice is difficult to measure because teachers will generally say what they feel researchers want to hear which may affect the internal validity of studies conducted on teacher voice. Many dynamics were found that determined whether teachers had developed a collective voice. Teachers must first develop their own voice as individuals. All teachers who wish to establish a strong voice must then determine who will represent their voice. The most

effective outcome when a group finalizes their voice is when they ensure all representatives are heard and all input is considered.

Navarro (1992) recognized the complexity of teacher voice and stated that it is important to consider the following variables when making judgments regarding teacher voice. Teachers who do not feel 'heard' would want to know who would speak for them, how their voice would be considered, and why they should voice their opinion if their own opinion would not be heard specifically. Navarro cautioned that when establishing teacher voice the conversations must be structured, but not too structured.

Teacher Dialogue

Teacher dialogue is not always direct. Studies based on communication among teachers have found patterns within their dialogue. Little (1990) identified one type of dialogue as informal story-telling. This has also been identified as a *personal experience narrative*, as described by Hymes and The Center for Applied Linguistics (1980). Qualitative researchers contend that this type of teacher dialogue can be very dense in meaning and difficult to interpret (Hymes et al., 1980). An example of dense meaning would be when a teacher intends to provide team members with aid and assistance and those receiving the advice find it difficult to interpret whether the team member is being sincere or judgmental about the competence of their teaching. Another problem with teachers contributing to teams is how much depth and detail is rendered by those offering advice.

Another category of dialogue that has potential issues was found in the area of teachers' *sharing* practices. Little (1990) stated that sharing dialogue would only be effective because the extent and amount teachers would share depended on their willingness to do so. Little's (1990) criticism of teachers working in teams was that even

though teachers have been required to collaborate, they are able to maintain their privacy or isolation in other ways.

There are several models that are designed to enrich dialogue among teachers to make it more meaningful. These models follow agendas that have demonstrated effective teaming skills. Researchers and educators realize that simply asking teachers to collaborate is not enough and have responded with the formation of groups that engage in meaningful inquiry about student achievement.

Teacher Dialogue Online

Wheeler, Kelly, and Gale (2005) studied the outcomes teachers experienced through project-based learning (PBL). Teachers in the study were given real-life teaching scenarios and asked to collaborate with other teachers to help brainstorm solutions. The study found that teachers reported that online learning helped them improve their practice, but there was little evidence to back this contention. This is similar to the results of studies conducted on face-to-face dialogue. Teachers engaging in face-to-face dialogue reported feelings of efficacy resulting from this type of collaboration, yet there was little evidence to support improved instruction (Bunker, 2008).

The researchers identified problems within the online learning community with the wait response times teachers had between collaborative opportunities. Teachers also protested that they were unable to reply to responses before other teachers and could not retract their replies once they were posted. They felt this limited their freedom to be as sincere in their responses to the scenarios. Gabriel, Pereira, and Allington (2011) recognized the Internet as a way to obtain and share good ideas, but face-to-face dialogue, with teachers who share a common professional vocabulary and who respect

and trust one another, is a preferred method of dialogue shared by successful teachers.

Byington (2011) wrote of teacher blogs as being a convenient and interactive way for teachers to collaborate about their practices. Online dialogue is a way for teachers to reflect on their responses prior to posting in order to give more concise answers to questions posed, though some may be uneasy with the practice because they cannot retract comments once they are posted. Another benefit to online collaboration is the opportunity for teachers to learn and interact with teachers all over the world. Given the global economic society students in which students must learn to compete, teachers may gain further insights through collaboration in global online communities. Teachers are also able to enter chat rooms to identify and converse about specific topics of concern. Researchers may wish to investigate whether teachers in chat rooms dedicated to certain topics regularly demonstrate higher student achievement.

Critical Friends Groups

Critical Friends Groups (CFGs) began as a part of The Annenberg Institute for School Reform at Brown University. CFGs were designed so that schools and teachers would play an active role in school reform (Curry, 2008.) When considering the values of Glickman et al. (2010) regarding the two dimensions of teamwork, CFGs emerge on the person side of group collaboration. The task dimension of work is still considered by CFGs, but the personal dimension prevails. These groups are organized to promote a more qualitative design to teacher research. These small groups consist of eight to twelve educators who voluntarily come together to discuss and reflect on topics relating to teaching practices. Discussions are facilitated by trained coaches who use time management strategies and sensitive questioning practices, and who assist the group with

adhering to set protocol for examining practices. The CFG coach must also understand general guidelines for professional dialogue.

It has been reported that CFGs may transform team meetings and make them meaningful and effective (National School Reform Faculty, 2011). Cox (2010) outlined some of the basic principles the members of CFGs follow that are different from typical faculty meetings. CFG members actively advocate for rigorous learning outcomes and reject status quo attitudes about student achievement. CFGs take risks and voice controversial topics and find thoughtful responses in consensual resolutions. This method is similar to the findings of Musanti and Pence (2010), in that the cycle of conflict and resolution may be an important part of team problem-solving.

According to the National School Reform Faculty (2011, para. 5), the format for dialogue within a CFG is

- facilitator overview;
- presentation of observations, work, or issues;
- clarification questions;
- feedback and discussion by participants;
- presenter reflections; and
- debriefing of the process.

CFGs use a method called *Continuum Dialogue* as a technique to familiarize team members with one another, as the feedback part of the CFG dialogue is based on the trust and confidence peers have with one another within a group. The facilitator establishes norms for the continuum dialogue, following these guidelines:

- Listen with respect and interest.
- Speak with candor.

- No one's comments will be challenged or argued.
- Thoughtful reflection on others' responses is okay.
- The facilitator is responsible for the process until he/she steps back.
- When the facilitator steps back, everyone is responsible for the process.

(National School Reform Faculty, 2011)

Critical Friends Groups attempt to operate at levels of dialogue that have demonstrated a positive relationship between their outcomes and student achievement (Graham, 2007).

CFGs may help promote and continue topics of dialogue identified in this study.

Professional Learning Communities

Over the past two decades, school districts have been moving away from an isolated self-contained classroom model to a team collaboration model to improve test scores on standardized state tests (Hord, 2003; Troen & Boles, 2012). Many studies have been conducted on the effectiveness of Professional Learning Communities (PLCs) and their effect on student achievement (Gamble-Risley, 2006; Goddard, Hoy, & Hoy, 2000; Spanneut, 2010). PLCs use professional dialogue to share with one another and reflect on student data and instructional practices within the classroom. PLCs have been demonstrated to be effective avenues to incorporate research-based practices in to the classroom and increase student achievement (Goddard et al., 2000; Hord, 2003).

When considering Glickman's dimensions of teaming, PLCs primarily lie within the task dimension, while the person dimension remains in respect to team practices. PLCs are designed to enhance professional dialogue and assist with implementing evidence-based instruction. Evidence-based techniques become more applicable to the individual teacher's classroom when teachers discuss various ways to apply these practices within their current model of instruction. A PLC uses professional teacher

dialogue to share instructional practices and reflect on student data from current objectives and behaviors. This dialogue is known as reflective dialogue (Hord, 2003). Reflective dialogue is a way of debriefing classroom practices as they have occurred while the team makes suggestions and corrections within those practices.

Hord (2003) identified five major themes among PLCs: (a) supportive and shared leadership, (b) shared values and vision, (c) collective learning and application of that learning, (d) supportive conditions, and (e) shared personal practice. PLCs organize teachers so they are better able to focus meeting discussions on research and implementing these practices in their classroom (Norwood, 2007). Unlike a CFG, a PLC may include up to forty members. Teachers hypothesize and carry out research questions relating to educational practices and analyze results as a group. These discussions may help bring research into practice (Mantei & Kervin, 2011).

Graham (2007) collected data from sixth through eighth grade level PLC teams. The research found that PLCs demonstrated improved instruction among those who participated, but not without considering many variables. The improvements in instruction were those improvements in knowledge, skills, and teaching practices. Some of the variables required for improved productivity were administrative support for the PLC model, and organizational support for team development. This study found the most important factor contributing to improved teaching methods within a PLC was the level at which the teams effectively developed their community. The highly effective community was defined by the balance between their discussions and conflict they had developed in their dialogue.

The PLCs in this study had transformed through different stages of development to reach a stage that was identified as a developed community. This was achieved

through the support of strong leadership focused on collaboration. Administration provided teams with this foundation by both requiring professional learning and allowing for organizational structures to support it. Once in place, leaders facilitated meetings by encouraging active learning by all members of the group. Administrators structured meetings by organizing topics of conversation. It was important that the administrator sustained collaborative practices by focusing discussions on the task at hand. Team outcomes were most effective when they developed community by engaging in a dialogue that was evenly distributed between agreeable conversation and conflict.

Graham's 2007 study found that team size was determined to have a relationship to the effectiveness of teams. Team dynamics may be less effective with some types of configurations. For example, a team of two will never have a majority vote to make decisions about any given topic. Understanding team structure is a complex undertaking, which requires constant reevaluation of the team to ensure the team's productivity. The teams in this study were organized by grade level.

Response to Intervention Teams

Teachers may have a difficult time meeting the needs of subgroups of students who are struggling within their classroom. The Response to Intervention (RTI) team model is used by many school districts to identify and provide intervention for students before they fail (Bianco, 2010; Searle, 2010). This model was developed with revisions to the Individuals with Disabilities Education Act (IDEA) in 2007. The model is successful when teachers engage in problem-solving dialogue to regularly monitor assessments, identify struggling students and individualize instruction to remediate student weakness.

The level of student intervention required of team members is organized into tiers. Tier I ensures the student is receiving research-based classroom instruction, Tier II

specializes instruction further by adding specific accommodations, and Tier III provides maximum instructional support. The use of the RTI model assists teachers and administrators with required documentation of student progress, as well as outlining specific topics of conversation about data and student achievement. The need for this type of information about students guides the dialogue within teacher-support teams. Specific guidelines for documenting interventions were noted by Bianco (2010) to track the RTI process: the instructional intervention, the frequency of the intervention (days per week), the duration of the intervention, the intensity (whether it is one on one or in small groups), and documentation of any deviation from this process. Collaborative RTI groups may increase their student achievement outcomes if they follow guidelines to analyze the student's needs (Montana Office of Public Instruction, n.d.).

Murawski and Hughes (2009) stated that when teachers meet as part of an RTI team, their collaboration must ensure that instruction is based on research. They must attempt to identify the specific problem a student is experiencing and possible reasons the problem is occurring. The team should develop and implement an individualized intervention plan for that student, and carefully monitor the student's progress during the intervention. Decisions about that student's education should be based on the data obtained from the intervention. Not only does data analysis help educators with individual students, it may help spot weaknesses in instruction by identifying objectives in which all students are struggling. The teachers need to determine whether the interventions continue to address the needs of all students in the classroom. Teachers must also ensure that all students continue to have access to the general curriculum. Data collection and evaluation must also continue so that when teams meet, teachers are able to demonstrate that students on tiers II and III are receiving more specialized

instruction in small groups.

Doll et al. (2005) conducted a study about teacher perception about school consultation teams. They found that teams must be well trained in the process of teaming as well as student interventions. Training teams of educators how to collaborate was a common finding throughout the literature. Teams without proper training and support faced many obstacles. Participants felt the process was also time consuming and was conducted regularly through uncompensated time. The team decided at one point in the study to eliminate steps in the process that were not crucial to academic achievement. They reported having limited access to intervention resources for students. When the team was asked about administrative support, they felt they had none.

RTI and Teacher Support Team processes are difficult to navigate. They require well-informed participants who understand the language of RTI and the requirements throughout the progression of the student's team evaluation. At times the intent of the process can become difficult for teachers to interpret. In addition to those problems outlined by Doll et al. (2005), teachers, administrators, and school personnel must be able to work through the large amounts of data produced by this process. The need for specific and intense training across interdisciplinary educators becomes evident. Identifying effective dialogue that promotes student achievement would be a great contribution to student behavioral and academic support teams.

Shared Mission and Vision

There are many studies that support the significance of having a shared mission and vision among teams of teachers (Blankstein, 2004; Hord, 2003). Shared goals provide teams with long-term objectives they work to achieve together. The culture of the school often depends on stakeholder buy-in to the mission and vision of the school.

Blankstein (2004) writes that mission statements should be clear, specific, measurable, and offer solutions for learners who are having difficulties.

Promoting academic success was a common expression found in the mission statements of high performing schools in Texas (Slate, Jones, Wiesman, Alexander, & Saenz, 2008). Having a mission statement that focuses on academic success may promote dialogue on those principles. If teams review the mission statement regularly and incorporate it into their daily decisions they may further the influence of a belief in academic success. Mission statements should also influence how resources are allocated, programs implemented, and policy decisions are made, and in turn, influence teacher dialogue as well (Stemler, Bebell, & Sonnabend, 2011).

A vision is an idea of what the school feels it is able to become. Its purpose is to motivate and unite stakeholders to do their best to achieve that vision. Labaree (1995) explains the history of school visions and public interests to understand our current ideals. The first school visions in colonial times were to preserve religious beliefs. Then school visions transformed to focus in turn on citizenship, economic growth, and equal opportunity. Given our current focus on school reform, one may argue that we now envision students who are prepared to work in a global society.

Teacher buy-in to the mission and vision of the school could help motivate teacher teams to work together for a common purpose and desired outcome. Including teachers in the process of writing and establishing the mission and vision of the school may increase their satisfaction that their voice in the school's direction has been heard. If teachers take ownership of the school's mission by contributing to writing the statement, they may be more likely to share those ideas through a common dialogue.

Using Teams to Promote Professional Development

Site-based professional development is no longer focused on inviting outside venues to conduct professional development. The use of teams has become a popular way to promote inquiry-style professional development. Darling-Hammond and McLaughlin (1995) identified policies that support collaboration. One of the policies recommended was to allow teachers time for collegial discussions so they may share their ideas. This 'knowledge sharing' consists of teachers determining what areas they need more training in and taking the time to link research-based practices to their own classrooms. Plauborg (2009) defines this process as *action learning*. Some studies (Darling-Hammond and McLaughlin, 1995; Troen & Boles, 2012) emphasize the need to have systems in place that support strategies for team planning, sharing, learning, and reflecting on practices.

Historically, teachers have been required to attend professional development sessions in which experts in a particular skill provide teachers with a summary of knowledge in their area of concentration (Yendol-Hoppey, Jacobs, Gregory, & League, 2008). The teacher was then expected to implement this practice in the classroom, with little or no guidance as to how that technique could be applied to their own setting. When teachers attempted new techniques and found them difficult, many would turn back to practices they found to be more comfortable. This is the basis of the argument for teacher inquiry. Research has found that when teachers take part in their own professional development, they are more likely to use research-based teaching techniques because they learn to adapt those techniques to their own teaching style and classroom procedures.

In writing about teacher inquiry, Clark (2001) said that “the core idea of these research and development projects is that sustainable professional development for teachers must be led by teachers themselves and be intrinsically satisfying, voluntary, and inexpensive” (p. 114).

Reeves (2008) summarized the many benefits of teachers acting as researchers of their profession. He stated that teacher researchers are able to have a measurable impact on student behavior and achievement as a result of their inquiry. They are providing data-based evidence that the teaching practices either do or do not work for them. Teacher researchers promote effective practices and influence other teachers on their teams to do the same. Reeves (2008) encouraged a new framework for the teaching profession based on teacher research, evidence of best practices, and personal experiences with that evidence. Most researchers who study teams stress the importance of the final phase of teacher inquiry, which is developing an action plan to improve teaching and learning (Glickman et al., 2010; Trohen & Boles, 2012). This holds teachers accountable for their research with follow-up to determine the sustainability of new practices.

Plauborg (2009) conducted a study to determine what knowledge teachers acquire from collective professional development. Most teachers in this study reported that they did not necessarily feel their instructional practices improved, but they did obtain a deeper conceptual understanding of their curriculum and instruction. This ‘self-awareness’ or metacognitive way of thinking about teaching practices has been identified as a critical step for improving instructional practices in the classroom.

Reflective thinking and journaling techniques, such as those used by the National Board for Professional Teaching Standards (NBPTS), have assisted teachers in finding

various ways to critique their own practices, implement data-driven teaching techniques, and enhance student achievement. “Striving to strengthen their teaching, accomplished teachers critically examine their practice, seek to expand their repertoire, deepen their knowledge, sharpen their judgment and adapt their teaching to new findings, ideas and theories” (National Board for Professional Teaching Standards, 2002, p. 4). This type of metacognitive thinking is a systematic way for teachers to reflect on teaching practices and the individual needs of their students so they become better able to express their needs as educators. Requiring reflective practices may lead teachers to make new connections to their current instructional methods.

The use of collaboration and professional dialogue as professional development tools supports many aspects of adult learning theories. “Experience learning provides sustainability as authentic activities are embedded in specific situations” (Glickman et al., 2010, p. 55). Numerous professions use experiential learning to enrich classroom-based knowledge by way of internships to provide students with practical knowledge relating to their profession. This assists students with the application of classroom instruction.

Many adult learning theories suggest that adults attain knowledge when they collaborate within groups of learners who have similar interests and desired outcomes (Glickman et al., 2010). Knowles (1970) developed the adult learning theory of andragogy, which explains how adults and children learn differently. He found that adults have a strong desire to be independent, self-taught learners. This may be why most adults require training to work in teams. Adults have an abundance of experiences they are able to apply to new knowledge and are quickly able to apply their new knowledge to new experiences. Adult learners wish to be recognized for the knowledge

they currently possess. When considering teams and discourse, adults are sensitive to social obligations when they are learning.

Teams Discussing Curriculum

Mississippi schools, along with most other states in the country, are moving towards complete adoption of the Common Core Curriculum (National Governors Association, 2011). This curriculum will eventually compare the scores of students in Mississippi with those of students in those other states using the same curriculum. Teachers will need to collaborate to work out many questions that will arise as this dynamic entity evolves. Hargreaves (1994) viewed collegial relationships as the best way for teachers to take ownership of an outside curriculum. Teachers may accomplish such tasks through joint planning. The Mississippi Department of Education Office of Curriculum and Instruction (2010) has provided schools with an alignment of the new Common Core Standards against the state's current Mississippi Curriculum Test, Second Edition (MCT2) objectives. This *crosswalking* document has each standard broken down and compared to current Mississippi objectives at each grade level. Some states, such as North Carolina, have created similar documents that actually provide similar alignment, discussion, and examples of each Common Core objective compared to North Carolina's standards. These documents are examples of important techniques used by teams to take ownership and make sense of curriculum.

There are several methods educators use to make sense of the curriculum.

Unwrapping and *unpacking* standards are two such methods (Ainsworth, 2004; Public Schools of North Carolina, 2010). Methods for deciphering the language of objectives or standards may be used by individual teachers or teams of teachers. The techniques require teachers to break down the language of the objectives and standards so they are

better able to understand what is required in teaching those objectives and standards. As a result, teachers and students become sensitive to the information they need to obtain to perform on state tests.

Oliva (2004) defined curriculum implementation as "...[the] transition of plans into action...ways of delivering the learning experience, for example, using teaching teams, are taken out of the planning context and made operational" (p. 9). In order for Mississippi students to achieve the Common Core's competitive expectations, educators must be highly skilled in the areas they are teaching. Understanding the intent of the curriculum at a national level will require a continuing common dialogue between educators across the United States. Knowing the type of dialogue that is most effective in improving instruction may help teacher teams and administrators make the best use of their limited time to enhance practices.

The Common Core Curriculum concentrates on the integration of subject matter across disciplines. Schools have historically departmentalized subjects to allow teachers to specialize in their education, licensure, and lessons. In the Common Core Curriculum, the need for educators to be specialized in their subject area will remain, yet they will need to be able to assist students in the application of their subject matter to other subject areas (House & Murphy, 2011). In order to implement the Common Core State Standards and Assessments, teachers will be required to plan lessons that are intended to be rigorous and provide students with deep learning experiences and ensure they are retaining all information. This will require teachers to work together to share their expertise, and understand that their own learning will not be static. They must embrace continuous professional learning.

Team Use of Data-Driven Instruction

Data analysis is essential for educators in order to understand and apply instructional methods to improve student achievement. These data-driven components of instruction have become popular for targeting specific learning objectives as well as individualizing or differentiating instruction for students. Students are assessed not only to measure their gains, but also to determine what areas of the curriculum need to be re-taught. Teachers must use the data to guide instructional practices and pace instruction (Gamble-Risley, 2006). Data-driven instruction, coupled with the use of research-based teaching practices, has dramatically improved student achievement (Furlong-Gordon, 2009; Marzano, 2007).

Standardized tests have been used for decades, first to assess the capacity to attain knowledge through I.Q. testing, then to assess academic knowledge acquired by students in multiple subjects (Fletcher, Francis, Morris, & Lyon, 2005). Then the No Child Left Behind Act (2001) proposed that all students be assessed equally and teachers be held accountable for the results of those standardized tests. These conflicting classroom requirements in public education have required teachers to stay abreast of current trends in practices and understand the effects of those practices on student achievement (Mantei & Kervin, 2011). However, Marzano (2003) advised that teachers use assessments to measure exactly what is taught and cautioned teachers who may be tempted to use standardized data that this data is not necessarily assessing what is being taught in the classroom at any given time.

Data-driven practices provide an excellent way for teachers not only to measure student achievement, but also to improve the school-wide performance of a single objective taught across grade levels. Teacher accountability practices are another reason

data-driven instruction is essential for improving practices. Teachers who have better outcomes on specific objectives may discuss their teaching methods with those who need improvement in an effort to share those strategies that may improve learning.

A system or plan should be in place within schools to analyze classroom data (Marzano, 2003). Bernhardt (1998) identified other forms of data (aside from student assessments) teacher teams should employ. Data used to drive student instruction must be current. Instructional programs must be assessed and matched with standards and student needs on a regular basis. Bernhardt also mentioned the use of perception data, which is a measurement of how committed school stakeholders are to school improvement. Using data about the mission and vision of the school may be one way to measure these perceptions.

Several recommendations for data analysis were presented in Fox's 2001 article, "No More Random Acts of Teaching." Fox (2001) stated that classroom data should be analyzed in relation to standards. Teachers should use several data resources to determine student growth and the data being disaggregated should be very organized so it may be discussed in simple terms. The procedures used to examine the data should be uncomplicated and feasible for teachers, and schools must create time to discuss data and make it a part of their daily dialogue.

Teacher Collaboration and Student Behavior

Studies on the relationship between student behavior and its effect on academic achievement have yielded mixed results. This makes it difficult to generalize that all negative student behaviors will have a direct effect on academic achievement (Algozzine, Wang, & Violette, 2011). Few would argue that classroom management issues are disruptive to the learning process. Rischer (2008) stated, "Discipline, classroom

management, and engagement strategies are critical. To provide adequate instruction, a classroom must have structure, rules, and boundaries. Students must also be engaged with differentiated strategies” (p. 47).

Experts in behavioral modification stress the need for teachers to provide all students with clear and consistent behavioral expectations. Teachers must revisit classroom rules and procedures regularly (Marzano, 2007). If teacher teams who share students have regular discussions about student behavior and consistently provide students with the same interventions, student behavior may improve.

When considering our vision for the future of our students as part of their academic achievement, problematic behaviors should be corrected. Teaching students about the relationship between their behavior and academic outcomes may be one way teachers can prevent negative outcomes (Blum, 2004; Wentzel, 1993). Another possible way for teachers to connect behavior and academic outcomes is to make academic achievement a part of behavioral expectations set for students (Blum, 2004).

Behavioral improvements should be proactive. Teacher teams should discuss and agree on a list of behavioral expectations for students. The rules and consequences should be clear and easy for students to understand. Teams must share those rules with students and practice the rules as a team on a regular basis (“Establishing a Positive,” n.d.)

Todd, Horner, Newton, Algozzine, Algozzine, and Frank (2011) found that the use of a formal collaboration model, Team Initiated Problem Solving (TIPS), did show some improvements in student behavior among schools that used the model. In this model, the facilitator had a clear role, the agenda was predictable, participation was stable, minutes were taken, and a data analyst disaggregated records. The Learning First

Alliance (2001) stated that a systematic approach to dealing with student behaviors along with a school climate where all faculty members believed every child can learn had a positive impact on student behavior. Crow and Pounder (2000) found teams of teachers reported less behavior problems on their teams than those teachers who worked in isolation. This may be due to teams of teachers developing behavior intervention strategies and a collective development strategy that addressed the problem behavior (Crow & Pounder, 2000).

Summary

The literature review emphasized the use of various categories and themes teachers should focus on that may promote effective discussions to enhance student achievement. Teams of teachers may be more consistent in their productivity if they realize where the majority of their discourse should occur. Administrators may also benefit by using an agenda of categories that improve student achievement as a guide to facilitate meetings.

CHAPTER III

METHODOLOGY

Overview

The study was conducted using a quantitative causal comparative design to research categories of themes of teacher dialogue consistently discussed throughout the school year. Those categories were compared to student scores on the Mississippi Curriculum Test, Second Edition (MCT2) state assessments in reading/language arts and math. A systematic sampling of grade-level teams was used to select different school districts in Mississippi to create a sample for the research. The intent of the study was to obtain information from third, fourth, and fifth grade team representatives using a survey to distinguish which types of dialogue their teams participated in most often. Those results were compared to each grade-level team's MCT2 test scores in reading and math from that school year. The intent was to determine whether different themes of conversation among teachers had a relationship to the district test scores of students on the corresponding teacher teams.

Several bodies of research have outlined important factors that affect student achievement: schools that have strong mission and vision statements, a feasible curriculum, conduct teacher studies, use data-driven instruction, provide special services to students in need, and teams who work together to improve student behaviors. The purpose of the study was to compare teams who report using the above methods most frequently, and to varying degrees, as to the achievement scores of their students.

Research Design

The hypothesis was to determine if there was a relationship between specific factors and themes of dialogue used in teaching teams and their students' achievement. Specific research questions within this hypothesis were "Is there a relationship between factors of dialogue and math and reading achievement?" and "Is there a relationship between themes of teacher dialogue and math and reading achievement?" The research was designed to identify topics of conversation most used by teams that have students who perform successfully on district assessments. The topics were identified based on previous research literature about teams and collaboration.

Variables measured by the survey included the demographics of the team, the topics of discussion most frequently used by the team, and the results of the MCT2 in reading and math for that team. Information regarding independent variables on the survey and dependent variables of math and reading test scores were collected one time.

The status variables in the survey were included to determine whether those variables also contributed to academic achievement, as found in the literature. Many of the status variables pertained to the structure of the team. Status variables were reviewed in the analysis of data in an attempt to determine any if any relationship existed between the team demographics and the independent or dependent variables.

Independent variables were measured by a paper survey completed by team leaders of the third, fourth, and fifth grades within the sample of teams. The independent variables were categorized by demographic data, team efficacy, and topics of professional dialogue. The demographics of the team included the number of teachers on the team and how many years each member had been on the team. Previous research found that effective dialogue develops over time, and perhaps those teams who have

worked together longer have established more effective dialogue. Team efficacy was measured based on research on effective team practices. Those practices include team guidelines, establishing action plans, improving student learning through data-driven discussions, and how effective the team feels it is at meeting its goals for students. The topics of dialogue were those that were identified in the literature as having a positive relationship to student achievement: schools that have strong mission and vision statements, a viable curriculum, those that conduct teacher studies, use data-driven instruction, provide special services to students in need, and teams who work together to improve student behaviors.

Dependent variables were the MCT2 state assessment results for each team involved in the study. MCT2 state assessments are standardized tests administered to determine whether or not students have mastered objectives as set forth by the state department of education. These tests are used for district, school, and teacher accountability purposes. Therefore these assessments allow for comparisons between team dialogue and student achievement throughout the state of Mississippi.

Participants

Survey information was obtained from team leaders in third, fourth, and fifth grades throughout the state of Mississippi. In order to obtain a significant sample size within this stratum, it was necessary to select enough districts to obtain approximately one hundred combined third, fourth, and fifth grade teams of teachers to respond to the survey.

A list of school districts was obtained from the Mississippi Department of Education (MDE) website reference Mississippi district and school information (2012) and used for systematic selection. Randomization entailed beginning at “A” on the

alphabetical list and counting down the list to select every fifth district (disregarding county titles) to conduct research. Upon IRB approval (Appendix A), permission was obtained from some district superintendents and all elementary schools containing grades 3-5 within those districts. Team leaders in grades 3-5 from the previous school year were identified on the mailing label of the envelope which contained the survey.

Instrumentation

The survey method chosen was a self-reporting instrument to obtain information from third, fourth, and fifth grade team leaders. This instrument was appropriate for a population of teachers who are literate and licensed in the field of teaching. Teachers would understand common teaching terminology used throughout the survey. The survey questions were developed from theories and research found in the literature review. The survey instrument can be found in Appendix B.

- Question 1 determined whether a team was identified as only third, only fourth, or only fifth grade. A team of multiple grade levels might interfere with the analysis of data if teachers taught multiple grade levels. This question might also assist with applying demographic variables to the final data analysis.
- Question 2 determined whether these demographic variables related to the dialogue and perhaps student achievement. Departmentalization may keep teams from analyzing data to target specific objectives if some teams do not teach those subjects. This isolation may hinder student achievement.
- Question 3 was included to determine whether years of experience as a team had an effect on student achievement. Some research suggests that developing a team with productive dialogue occurs over time (Drexler, Sibbet & Forrester, 2009).

- Question 4 was developed to determine the frequency of time a team had to assist them with their productivity and topics of conversation, which might have an effect on student achievement (Troen & Boles, 2012).
- Question 5 pertained to rules or guidelines for discussions within team meetings and whether they had an effect on a team's productivity resulting in student achievement (Troen & Boles, 2012).
- Question 6 again pertained to the structure of the team and whether teams ended with a common goal relating to student achievement (Troen & Boles, 2012).
- Questions 7 and 8 asked about the team's feelings of their efficacy concerning student achievement (Bunker, 2008; Goddard, Hoy, & Hoy, 2000; Plauborg, 2009).
- Question 9 dealt with how teams coped with conflict among team members. There is some evidence that conflict is an important part of dialogue as it provides team members with different viewpoints if worked through objectively (Musanti & Pence, 2010).
- Question 10 inquired about the team's training regarding teaming practices. The literature suggests that most productive teams require some form of training in order for them to work at levels efficient enough to effect student achievement (Troen & Boles, 2012).
- Question 11 determined whether teams used the mission statement as a guide for decisions they made regarding student achievement. There is a large body of literature suggesting that teams who share common goals are able to work together productively to achieve those goals (Blankstein, 2004; Hord, 2003).

- Question 12 included topics regarding curriculum, planning, and teaching techniques to measure frequency of these conversations against the team's student achievement. Hargreaves (1994) stated that collegial conversations are an ideal way for teachers to take ownership of new curriculum.
- Question 13 identified whether inquiry-based methods were used within grade-level teams to measure their possible effect on student achievement (Glickman et al., 2010; Reeves, 2008).
- Question 14 was about the use of dialogue regarding data-driven instruction to measure the frequency of this dialogue against the team's student achievement (Furlong-Gordon, 2009).
- Question 15 questioned the collaboration of the team with outside specialists to meet the different needs of their students. These conversations are often mandated by government policy regarding students with special needs and the RTI process.
- Question 16 considered conversations about student behavioral issues at the team's grade level. Research has determined that consistent practices regarding students with behavior problems reduces problem behaviors and subsequently increases academic achievement (Marzano, 2007; Rischer, 2008).

A pilot study was conducted to determine the validity of the survey. A validity questionnaire (Appendix C) and the survey instrument were provided to twelve teachers in third through fifth grades. Data collected for the purpose of the pilot study was used only to assess the reliability and validity of the survey instrument. The survey instrument was refined by making changes suggested by the pilot study.

Procedures

Upon superintendent approval from each of the participating school districts, the survey (Appendix B) was sent to all schools within that district that had third, fourth, and fifth grades. Each school survey and MCT2 assessment was numbered using a random number generator for data analysis purposes. Team leaders were mailed the informed consent letters and surveys (Appendices B and D). The survey was distributed and collected one time. Those team leaders completed the survey and returned it via mail, fax, or email. As the data was collected, it was entered into an Excel document and the raw data was placed in a locked cabinet. After two weeks, a follow-up post card (Appendix E) was sent to prompt team leaders who had not completed the survey to complete the survey and mail it back at their earliest convenience.

Limitations

The most significant threats to internal validity in this study included that the sample of those studied was limited to reports from surveys of third, fourth, and fifth grade team leaders in the state of Mississippi. Forced choices on the survey might make respondents choose an answer that was not exactly what the response should be. For example, if teacher teams were forced to choose the number of times they met in a given period of time, the limited choices might not be the exact number of times they actually met. This might compromise the internal validity of the study. Different pacing guides and objectives were measured to compare results of the types of dialogue used by teachers in meetings if more than one school was sampled. Extraneous variables also known to affect student achievement, such as teaching quality, might also interfere with the results of the study.

CHAPTER IV

RESULTS

The purpose of the study was to determine if a relationship exists between specific categories of dialogue used within teaching teams and student achievement. Specific research questions were “Is there a relationship between factors of dialogue and math and reading achievement?” and “Is there a relationship between themes of teacher dialogue and math and reading achievement?” A survey instrument was developed and a validity questionnaire distributed to obtain input from a panel of experts. Results of the validity questionnaire were considered and revisions were made based on the feedback provided on the survey instrument prior to distribution.

Description of Sample

One hundred twenty participants were contacted by mail and asked to complete the survey. Out of those 120, 22 surveys were completed, yielding an 18 % response rate. Two were eliminated because the respondents taught multiple grade levels, and it was not possible to compare their categories of dialogue to specific MCT2 Math and Reading scores. Table 1 summarizes demographic data collected about the teams. Of those team representatives who responded to the survey, 20% represented third grade teams, 30% were fourth grade teams, and 50%, fifth grade teams. Ten percent of those teams taught multiple grade levels, 15% were self-contained classrooms where teachers taught all subjects, and 75% were departmentalized for math and reading/language arts. Team representatives reported that 10% of the teams had six or more years of experience together, 20% had three to five years together, and 70% reported working together as a team for zero to two years. When queried as to frequency of team meetings, 5% reported meeting three times per week, while 10% met daily, 35% less than weekly, and 50% two

times per week. Seventy-five percent of the teams were departmentalized for language arts and math instruction, 15% were not departmentalized, and 10% were departmentalized in some other capacity.

Table 1

Summary of Descriptives Reported by Population Sample

	<i>n</i>	Percentage
Grade		
3	4	20
4	6	30
5	10	50
Years together		
0-2	14	70
3-5	4	20
6+	2	10
Frequency of meetings		
Less than weekly	7	35
2 times per week	10	50
3 times per week	1	5
4 times per week	0	0
Daily	2	10

Table 1 (continued).

	<i>n</i>	Percentage
Departmentalization		
Not departmentalized	3	15
Yes-language, math	15	75
Yes-other	2	10

Note. The number of respondents who reported each of the descriptive demographics as outlined in the survey may be found vertically in the table. For each descriptive, $N = 20$.

Findings among Factors of Dialogue

Factors of dialogue were identified as common means by which teams engaged in discussions regarding student learning. The research question identified for these factors was intended to determine whether these factors had a relationship to math and reading achievement among those teams surveyed.

Dialogue factors were identified and compared to math and reading achievement scores for the teams which responded to the survey. This comparison was conducted using a Pearson Correlation. None of the dialogue factors in the study resulted in a statistically significant correlation. As shown in Table 2, combined factors and student achievement in math had a weak positive correlation ($r = .07, p = .77$), while combined factors and reading achievement had a weak negative correlation ($r = -.16, p = .50$).

Feelings about team efficacy were examined to determine whether a team's perception that they were effective in their practices had a relationship to reading and math achievement. If a team believes it is effective, it may promote an environment that allows teachers to feel comfortable to safely express their ideas. Most team

representatives reported they strongly agreed that their team was effective at meeting the needs of their students ($M = 4.35$, $SD = .59$). This was the highest rank reported on the Likert scale with the lowest standard deviation. This factor was weakly correlated to math achievement scores ($r = .05$, $p = .83$) and had a weak negative correlation with reading achievement scores ($r = -.05$, $p = .84$). As team feelings of efficacy increased, so did math achievement scores, suggesting that this factor does influence math achievement. Conversely, as reports of team efficacy increased, reading scores decreased. Math and reading correlations had similar non-significant p values.

The next factor considered among dialogue was team sharing of successful teaching techniques. The majority of participants reported their teams collaborated regarding teaching techniques, and those techniques were effective at meeting the needs of their students. The mean for this technique was 3.95 (close to “almost always”) with a standard deviation of .95 (see Table 2). This factor’s correlation to math achievement was trending in a positive direction ($r = .11$, $p = .64$) suggesting that as teams shared techniques, math achievement scores rose. This same factor had a weak negative correlation to reading achievement ($r = -.09$, $p = .70$). Sharing instructional techniques appeared to work favorably for math achievement, but not reading achievement within this sample.

The majority of respondents reported ending their meetings with a plan of action for student achievement, with a mean of 3.65 on a 5-point Likert scale, and a standard deviation of .75. This type of dialogue was considered for the study as it may assist teachers in turning their discussions into practice. A weak negative correlation was found between this factor of dialogue and math achievement ($r = -.13$, $p = .58$) and a slightly stronger, yet still weak, negative correlation with reading achievement ($r = -.24$, $p = .31$).

This reading achievement statistic also had one of the lowest p values. Having a plan of action did not increase math and reading scores in this sample. The results suggest that as the team increased their use of a plan of action, math and reading scores decreased.

Conflict resolution among teams of teachers was determined to be another factor that might result in a team's ability to communicate effectively. Teams with a procedure to follow when resolving conflicts could be more effective in overcoming conflict and moving on to focus on student achievement. The sample reported a mean of 3.40 with a standard deviation of 1.28 for teams who followed a procedure for conflict resolution. This dialogue theme had a variety of responses. When the correlation was determined between this theme and math achievement, it was found that there was no relationship between the two variables, and the significance level suggested this correlation is very close to having occurred by chance alone ($r = -.004, p = .99$). Similar results were found when team conflict resolution was compared to reading achievement ($r = -.02, p = .92$). The results suggest this factor of dialogue was not related to math or reading achievement.

The sample was surveyed to determine whether the team had been trained in team methods, which might assist with organizing team dialogue. The results suggested polarization, given the mean of 3.10 (close to neutral) with a standard deviation of 1.14 (see Table 2). When the correlation was determined between this factor and math achievement, a weak correlation in a positive direction was found ($r = .14, p = .52$). The correlation run with the same factor and reading achievement yielded a weak negative correlation ($r = -.07, p = .78$).

Representative team members varied in their responses to having established procedures for their meetings, with a mean of 3.10 and a standard deviation of 1.17. Such procedures could help teams organize their discussions to target student achievement. Among individual factors, representatives who reported that their teams followed established procedures during meetings had a weak positive correlation to math achievement scores ($r = .09, p = .72$). This same factor had a negative correlation to reading ($r = -.25, p = .28$). Although the scores were weak, the reading score suggests a stronger correlation than that found in this same theme with math achievement. For this sample, as procedures were set for team meetings, math scores went up and reading scores went down.

Table 2

Summary of Means, Standard Deviations, Correlations and Significance Levels between Dialogue Factors and Student Achievement in Math and Reading

Factors	Descriptives		Math Achievement		Reading Achievement	
	<i>M</i>	<i>SD</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Combined dialogue factors			.07	.77	-.16	.50
Team efficacy	4.35	.59	.05	.83	-.05	.84

Table 2 (continued).

Factors	Descriptives		Math Achievement		Reading Achievement	
	<i>M</i>	<i>SD</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Shared teaching techniques	3.95	.95	.11	.64	-.09	.70
Plan of action for students	3.65	.75	-.13	.58	-.24	.31
Team conflict resolution	3.50	1.28	-.004	.99	-.02	.92
Teaming methods training	3.40	1.14	.15	.52	-.07	.78
Team procedures	3.10	1.17	.09	.72	-.25	.28

Note. Factors of dialogue are presented in mean rank order from highest to lowest reported use. A Likert scale is used in the survey instrument, a score of “1” meaning “strongly disagree,” 3 being “neutral,” and 5 representing “strongly agree.” All correlations between factors of dialogue and math or reading scores (*p* values) were non-significant ($p < .05$).

Findings among Themes of Dialogue

Themes of dialogue were isolated as variables that were common topics of discussion in team meetings. The research question for this variable was intended to determine whether these themes among teacher dialogue appeared to have a relationship to reading or math achievement. A Likert-type scale was used to measure reported use of different themes. The scale was ranked 4 to 0, 4 being always, 3 meaning “very often,” 2 meaning “sometimes,” 1 meaning “rarely,” and 0 meaning “never.” No results

demonstrated statistical significance. As seen in Table 3, when all themes among dialogue were combined and correlations with math and reading were determined for this sample, both resulted in negative correlations ($r = -.10, p = .69$ and $r = -.22, p = .36$, respectively).

Sharing lesson plans was reported as a fairly common theme among teams who responded to the survey ($M = 3.45, SD = .76$). This theme of discussion was negatively correlated with math as well as reading achievement in this sample ($r = -.21, p = .36$; $r = -.32, p = .18$) with a slightly stronger negative relationship in reading, and slightly stronger significance in math. Most team representatives reported they almost always used student data in team meetings, ($M = 3.10, SD = .64$) using a Likert-type scale of 0-4 (see Table 3). Data-driven team meetings were negatively correlated to math ($r = -.09, p = .71$) and reading ($r = -.28, p = .24$) achievement scores within this sample. This finding indicates that the more often data was used by these teams, the more likely it was that math and reading achievement scores would go down. Although weak, the findings among this theme also appeared to have a slightly greater correlation and were closer to significant for reading than math achievement scores.

Problem-solving student behavioral issues was not a prevalent topic of conversation for all teams within the reporting survey sample ($M = 2.85, SD = 1.04$). Team representatives who reported participating in discussions about behavioral interventions had negative correlations in math ($r = -.17, p = .47$). Reading achievement scores and team discussions regarding student behavior had a weak negative correlation but were slightly stronger and trending more toward being significant ($r = -.28, p = .24$) than math (see Table 3). This implies as the theme of dialogue involving discussions about student behavior increased, math and reading scores decreased.

Group studies among various learning communities are one way teams engage in discourse that helps them apply data-driven teaching practices. Team representatives reporting use of group studies varied in their responses ($M = 2.65$, $SD = .99$). When this theme of dialogue was compared to math and reading achievement, math had a weak positive correlation ($r = .13$, $p = .58$) and reading a positive yet weaker correlation ($r = .01$, $p = .96$). In this sample, as group studies were conducted within teams, math and reading scores rose.

Team planning with exceptional needs specialists helped all teachers support one another in creating a curriculum that targets students with special learning needs. Among the representatives responding to the survey, the mean was 2.60, fairly close to the “almost always” scale used in the instrument, and the standard deviation was .75. The Pearson Correlation indicated a weak positive correlation between exceptional needs planning and math achievement ($r = .22$, $p = .36$). This correlation and significance level was somewhat stronger than with reading achievement scores ($r = .04$, $p = .85$). According to the results within this sample, as planning with exceptional needs specialists increased, so did scores in math and reading achievement.

The remaining theme of dialogue was surveyed to determine whether or not teams discussed and aligned decisions based on their school’s mission and vision. The responses to this question suggested some teams participated in this practice, while others did not ($M = 2.35$, $SD = .99$). The correlations between this theme and math and reading achievement were both weak and negative. Math achievement and mission or vision alignment was slightly more negatively correlated and significant ($r = -.26$, $p = .26$) than reading achievement ($r = -.17$, $p = .48$). These findings indicate that as teams increased

their use of the mission and vision in decision making, math and reading scores decreased.

Table 3

Summary of Means, Standard Deviations, Correlations and Significance Levels between Dialogue Themes and Student Achievement in Math and Reading

Themes	Descriptives		Math Achievement		Reading Achievement	
	<i>M</i>	<i>SD</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Combined dialogue themes			-.10	.69	-.22	.36
Curriculum sharing and planning	3.45	.76	-.21	.36	-.32	.18
Student data analysis	3.10	.64	-.09	.71	-.28	.24
Behavioral interventions	2.85	1.04	-.17	.47	-.28	.24
Group studies	2.65	.99	.13	.58	.01	.96
Exceptional needs planning	2.60	.75	.22	.36	.04	.85
Mission and vision alignment	2.35	.99	-.26	.26	-.17	.48

Note. Themes of dialogue are presented in mean rank order from highest to lowest reported use. Means and standard deviations for each factor in the study ($n = 20$) are arranged in vertical columns. The next four columns present correlations and significance levels first between themes of dialogue and math achievement scores and second between themes of dialogue and reading achievement scores. Mean scores represent the results of the Likert-type scale presented in the survey instrument, 4 meaning “always,” 3 meaning “very often,” 2 meaning “sometimes,” 1 meaning “rarely,” and 0 meaning “never.” Higher means

indicate more respondents chose they always use that theme of dialogue in their team meetings. Higher standard deviations indicate more variation in the respondent's answers to those particular questions. Positive r values closer to 1 indicate a stronger positive linear relationship between variables, while negative r values indicate a negative linear relationship between variables. All correlations between factors of dialogue and math or reading scores (p values) were non-significant ($p < .05$).

Conclusion

The problem statement of this study was to determine if there was a relationship between specific categories of dialogue among teaching teams and student achievement. Specific research questions within this hypothesis were “Is there a relationship between factors of dialogue and math and reading achievement?” and “Is there a relationship between themes of teacher dialogue and math and reading achievement?” The hypothesis stated that some factors or themes among teacher dialogue would have a stronger relationship with student achievement than others. While there were some correlations that were of interest, due to the small sample size within this study the hypothesis could not be tested. Among factors of team dialogue, some types of dialogue had varying degrees of positive and negative relationships to reading and math scores.

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not be tested. Among factors of team dialogue, some types of dialogue had varying degrees of positive and negative relationships to reading and math scores.

CHAPTER V

DISCUSSION

The purpose of this study was to determine if there was a relationship between specific categories of dialogue used in teams and student achievement. If specific discourse promotes student achievement more than others, teams may maximize the benefit of the time they spend in meetings and administrators may be better able to facilitate productive dialogue. A survey instrument was developed based on previous research detailing themes and factors of educational practices that have demonstrated relationships with student achievement. This section explores the results of the completed surveys.

The types of dialogue measured were separated into two areas: *factors* of dialogue, and *themes* of dialogue. Factors of dialogue were identified as circumstances that influence how dialogue occurs. Themes identified for this study were subjects or topics of dialogue found throughout the literature as those that are commonly used by teachers in meetings.

A validity questionnaire was completed by a panel of experts and changes were made as suggested by the expert feedback. One hundred twenty participants were contacted by mail to complete the survey. Twenty-two out of 120 surveys were completed, yielding an 18 % response rate. Two of those surveys were eliminated due to teachers teaching multiple grade levels, and the inability to compare their categories of dialogue to specific MCT2 Math and Reading scores.

Limitations

The majority of the respondents had been together less than two years, worked in fifth grade classrooms, and met two times per week. Since the literature concerning the

development of team practices states it takes time to build relationships and the developmental stage of the team should be considered, perhaps these variables influenced the results of the survey (Clark, 2001; Glickman et al., 2010; Zenger et al., 1994). Not only were the respondents restricted to grades 3-5, but to the state of Mississippi as well. The language of the survey questions could have been misinterpreted by the respondents if they were not familiar with a particular theory or had another name for that theme or factor.

The limited survey response rate placed considerable constraints on the generalizations that could be made from this study. Self-selection bias may have also contributed to the results of the survey, particularly when answering sensitive questions about the team. The survey may have been too long for teachers who are very busy applying all of the theories outlined in the research. This low response rate also limited the significance levels in all of the statistical correlations and none of the hypotheses could be tested. Given all of the confounding variables within teacher dialogue, the small sample of data yielded results that must be cautiously interpreted.

Conclusion

The first hypothesis was intended to determine whether there was a relationship among factors of dialogue and student achievement. This hypothesis could not be tested due to the small response rate and non-significant results. However, a rank order for this particular sample of respondents did emerge. Results for the rank order of factors in order of those closest to a level of significance and with positive correlations in math achievement were 1) teams having been trained in team methods, 2) teams who shared teaching techniques, 3) following team procedures, and 4) teams who felt they effectively met the needs of their students. The above factors are not in the order in which their use

was reported, but rather how they appeared to positively relate to math achievement. None of the factors had positive correlations to reading achievement in this sample, suggesting none of the contributing components of dialogue in the survey would have a relationship to reading achievement.

The highest reported factor among teams was team efficacy. The majority of team representatives reported they strongly agreed their team was “effective” at meeting the educational needs of their students, regardless of whether their math and reading scores supported this belief. This result is similar to results of a study conducted by Bunker (2008), which found that teachers reported their collaboration as effective, even when there was no evidence the teams were able to impact student achievement.

Administrators may consider facilitating dialogue based on findings in this study consistent with the literature. One such finding was a team’s engagement in group studies. Teams reporting their engagement in group studies was positively correlated with reading and math achievement. This theme is supported throughout the literature, specifically in discussions concerning Professional Learning Communities (PLCs) (Gamble-Risley, 2006; Goddard et al., 2000; Spanneut, 2010). Hord (2003) discussed the use of PLCs extensively and how these teams might help turn research into practice through their inquiries.

Another theme that demonstrated a positive correlation with math and reading achievement was planning with specialists for students with exceptional needs. Administrators may advise this practice take place regularly to improve student achievement. This finding supports previous research regarding the importance of individualized instruction through the tier process (Bianco, 2010; Searle, 2010) and the need for experts specializing in meeting the needs of exceptional students. Teams in this

sample reported the use of this technique as the fifth most often used theme of dialogue. However, results showed it is had the strongest correlation to student achievement.

The theme of dialogue regarding discussions of student behavior implied that as discussion of student behavior by teams in this study increased, math and reading achievement decreased. School leaders should monitor dialogue concerning student behavior as this could mean teams are having significant behavior problems and those behaviors could interfere with academic achievement. Frequent discussions concerning student behavior could also mean teachers do not know how to manage classroom disruptions. Findings in this study supported previous findings by Algozzine, Wang, and Violette (2011) that it is difficult to measure student behavior's direct effect on academic achievement.

Principals and administrators may also consider some of the findings in this study inconsistent with the literature. Teams who ended their meetings with a plan of action for student achievement had scores negatively correlated with math and reading achievement. This contradicts findings concerning the Response to Intervention (RTI) studies found in the literature. Murawske and Hughes (2009) stated that teachers must be sure to use research-based teaching methods in their collaboration concerning students. Administrators must be sure that when teachers do create a plan of action for students, those actions are supported by research.

Data-driven instruction entails individualizing and planning student interventions. Findings in this sample did not support the use of data-driven instruction for improving math and reading achievement. This is a practice widely supported by administrators, yet teachers there is some debate as to whether teachers know how to effectively navigate the data to improve instruction. Marzano (2003) stated that schools should have some type

of data-driven instructional process within their schools. This process has demonstrated dramatic improvements in student achievement (Furlong-Gordon, 2009; Marzano, 2007). Fox (2001) stated that student data should be highly organized so it may be discussed in simpler terms. Teams in this study may have used data-driven instruction, but needed to disaggregate the data in a way that would promote student achievement. The use of standardized tests to measure what is being taught in the classroom may not be the best way to analyze data if the classroom instruction is not aligned with the test (Mantei & Kervin, 2011). Furthermore, teachers may require specific training in how to interpret data (King, 2010). When administrators require teachers to use data-driven instruction, they must be clear as to what data to use and how they expect it to be used.

Curriculum sharing and planning were negatively correlated to math and reading in this sample. This supports Little's theory (1990) that teachers generally like to keep to themselves and will only share information when they want to. However, it could also mean that teachers in this study were not sharing targeted objectives related to assessments, but other materials not related to assessments. School leaders should consider this to be a component of data-driven instruction, which did not demonstrate a positive correlation in this study (Gamble-Risley, 2006). Sharing curriculum to improve student achievement would mean teachers would need to target objectives and share research-based materials and ideas based on those objectives (Furlong-Gordon, 2009; Marzano, 2007). When administrators are facilitating meetings, they must be sure teachers are discussing research-based teaching methods.

In this study, as the mission and vision of the school were considered in decisions concerning team matters, academic achievement in math and reading decreased. . This may be because the mission and vision have no real effect on student achievement, which

contradicts such literature as Blankstein (2004) and Hord (2003), which states teams should have shared missions and visions that provide them with long-term objectives. It could also be that these schools did not have motivating mission statements that included language about promoting academic success, a common language found in high-performing schools in Texas (Slate et al., 2008). Many school leadership programs advocate the use of mission statements. If those statements do not appear to relate to higher achievement scores, school leaders may need to consider revisions that include statements concerning student achievement.

Recommendations

This study was conducted to help administrators facilitate team meetings to help improve student achievement. There are so many complex theories concerning student achievement that no one person could navigate all of them. It is ideal that teams work together to put these theories into practice.

This study was unique in its attempt to quantify data that is typically measured qualitatively. Language has very dense meaning and is not always straightforward, making it very difficult to measure quantitatively as well as qualitatively (Hymes, 1980). Further qualitative studies of patterns among dialogue within different theories (data-driven discussions, student behavioral discussions, group studies) may find patterns in dialogue to help create more specific quantitative survey questions. Even then, the semantics, pragmatics, and syntax of the various situations in which the dialogue occurs could affect the validity of the study.

Marzano (2007) determined percentage of improvement in student achievement based on a variety of instructional strategies through a meta-analysis concerning best teaching practices. This research attempted to take many teaching practices and

determine their overall relationship to student achievement. Perhaps this study could have been conducted in the manner Marzano conducted his research, by conducting a meta-analysis of these individual theories, then comparing those results to a much larger sample of teaching teams.

The design of future studies concerning effective teacher dialogue could include surveying the entire team instead of a single team representative to compare all of those responses to the team's overall student achievement. Each factor or theme within the study could be isolated to include individual studies in each area.

More research is needed to determine ways to promote effective dialogue in teams that will lead to increased student achievement. Most of the literature has concentrated on team structure and practices, but there is very little evidence to support a particular line of questioning or a particular team agenda that promotes a powerful effect on student achievement.

The literature states that dialogue within teams takes time to develop, while other studies take a developmental approach to teams (Clark, 2001; Glickman et al., 2010). Future research may focus on either the amount of time teams have worked together, or identify the team's developmental stage and study differences in dialogue between these teams and compare it to student achievement. Those differences may be used to promote a particular type of dialogue to increase student achievement

Perhaps studies to improve the quality of dialogue within each theme or factor would improve student achievement. Reeves (2000) found it was the quality of teaching, not the curriculum that impacted student achievement. It could be that the quality of dialogue, and not the themes or factors discussed, is what truly impacts student achievement.

APPENDIX A
IRB APPROVAL



INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.6820 | Fax: 601.266.4377 | www.usm.edu/irb

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 12050903
PROJECT TITLE: Teacher Dialogue and its Relationship to Student Achievement
PROJECT TYPE: Dissertation
RESEARCHER/S: Heather Montgomery
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: Educational Leadership
FUNDING AGENCY: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF PROJECT APPROVAL: 05/16/2012 to 05/15/2013

Lawrence A. Hosman, Ph.D.
Institutional Review Board Chair

APPENDIX B

PROFESSIONAL DIALOGUE SURVEY

Teacher Dialogue Survey					
Check only one of the following items that apply to your grade level team:					
1. What grade level does your team teach? <input type="checkbox"/> Grade 3 <input type="checkbox"/> Grade 4 <input type="checkbox"/> Grade 5 <input type="checkbox"/> We teach multiple grades 3-5	2. Is your team departmentalized? <input type="checkbox"/> No <input type="checkbox"/> Yes - we are separated by math and reading/language arts <input type="checkbox"/> Yes – we share students across multiple grade levels <input type="checkbox"/> Yes – other (please specify) _____				
3. How many years has your team worked together at your current grade level? <input type="checkbox"/> 0-2 years <input type="checkbox"/> 3-5 years <input type="checkbox"/> 6 or more years	4. How often does your grade-level team meet? <input type="checkbox"/> Less than weekly <input type="checkbox"/> 2 times a week <input type="checkbox"/> 3 times a week <input type="checkbox"/> 4 times a week <input type="checkbox"/> Daily				
FOR EACH QUESTION BELOW, CIRCLE THE NUMBER TO THE RIGHT THAT BEST FITS YOUR OPINION REGARDING THE DIALOGUE YOUR TEAM ENGAGED IN DURING YOUR TEAM MEETINGS LAST YEAR.					
Factors influencing student achievement:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
5. Our team has set procedures we follow when conducting meetings.	5	4	3	2	1
6. Our team always ends our meetings with a plan of action to improve student achievement.	5	4	3	2	1
7. Our team has had measurable success improving student learning as a result of shared teaching techniques.	5	4	3	2	1
8. Our team is effective at meeting the educational needs of our students.	5	4	3	2	1
9. When our team experiences conflict, we revisit the procedures we set for our meetings to try and resolve the conflict.	5	4	3	2	1
10. Our team has received adequate training on team methods and practices.	5	4	3	2	1

Themes of teacher dialogue:	Always	Very Often	Sometimes	Rarely	Never
11. How often does your team discuss the school's mission and vision and aligns decisions with those statements?	4	3	2	1	0
12. How often does your team discuss curriculum, planning, and effective teaching techniques?	4	3	2	1	0
13. How often does your team engage in group studies to analyze individual student progress, new teaching techniques, and new curriculum?	4	3	2	1	0
14. How often does your team discuss student data and methods for re-teaching?	4	3	2	1	0
15. How often does your team collaborate with specialists regarding students with exceptional needs?	4	3	2	1	0
16. How often does your grade-level team meet to discuss student behavioral issues that are interfering with instruction?	4	3	2	1	0

APPENDIX C

VALIDITY QUESTIONNAIRE

Teacher Topics of Discussion in Grade Level Teams

Thank you for volunteering your time to assist me in the development of this survey. Your input is very important with respect to the survey itself and the development of my dissertation overall. Your willingness and consideration to participate in this study is greatly appreciated.

Please rate the included survey based on the following information:

1. Does the survey contain language that can be understood by teachers who participate in grade-level team discussions grades 3-5?

2. Does the survey address specific and appropriate issues in the statements, as it relates to obtaining information regarding teacher topics of discussion in grade level teams?

3. Do you find any of the questions offensive or obtrusive?

4. Are there any items you would exclude from the survey?

5. Are there any other topics of discussion or survey items that are not included in the survey that might be added?

6. Please make any other comments or suggestions about the survey below:

APPENDIX D
INFORMED CONSENT LETTER

Dear Participant,

This research study is being conducted to determine if different themes of teacher dialogue have a relationship to student achievement. Teams of teachers may create lesson plans together, discuss individual student needs, review their school's data, and support one another through a variety of collaborative techniques. All of these discussions within teams are in some way intended to do one thing: promote student achievement. However, some teams have better results in student achievement than others. Perhaps this has something to do their topics of discussion during team meetings. The enclosed surveys are being distributed to public schools throughout Mississippi. The results of the surveys will be compared to that team's MCT2 math and reading scores.

The survey should take approximately ten minutes to complete. Please reflect on your team discussions while completing the survey. Participation in the survey is completely voluntary and may be discontinued at any time without penalty or prejudice. A random number generated by a computer program may be found at the top of your survey instrument will be used to compare your survey results with your team's MCT2 scores in reading and math. At no time will the researcher use identifying information during data analysis. All codes for surveys and MCT2 scores will be kept in a locked cabinet in the researcher's office and no one but the researcher will have access to the information. All coded surveys and MCT2 test scores will be destroyed immediately after the data has been entered and analyzed, and all identifying information regarding the study will remain completely confidential.

If you have any questions or concerns regarding the survey, please contact:

Heather Montgomery
(601) 454-3813
h.montgomery@eagles.usm.edu

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subjects should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive # 5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

Thank you for your participation.

Sincerely,

Heather Montgomery

APPENDIX E

POSTCARD REMINDER FOR PARTICIPANTS

This is a reminder that two weeks ago a survey was sent to you seeking information about your team and your discussions about educational issues. The study is being used to determine themes among teacher dialogue and how those themes may have a relationship to student achievement.

If you have already completed and returned the survey, thank you very much. If not, please do so at your earliest convenience. Your answers are extremely important to research that may save valuable time for teachers and promote student achievement. Thank you for your participation in this survey.

Sincerely,

Heather Montgomery

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