TEACHER PERCEPTIONS OF THE IMPACT OF PROFESSIONAL LEARNING COMMUNITIES ON TEACHING AND LEARNING IN MIDDLE SCHOOL SCIENCE

by

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ABSTRACT

The purpose of this study was to examine teacher perceptions of professional learning communities in three middle schools. This research examined the perceived impact of professional learning communities on teaching and on student learning. One question guided this research. "What are the teachers' perceptions of seventh grade learning communities' impact on teaching and on student learning in science?"

This study used a multiple methods design to examine evidence about relationships among professional learning communities and teaching and student learning. A survey modified from an earlier research study was used (Bolam, McMahon, Stoll, & Thomas 2005). This survey was administered to the teachers who are part of seventh grade science learning communities from each of three participating middle schools. The results from this survey were used to describe teacher perceptions about the use of learning communities within each school. A purposeful sample of candidates was then selected for interviews. Through the use of the two data sources, surveys (see Appendix A) and interviews (see Appendix B), the researcher found four common themes that support the idea of a professional learning community and the effects teachers perceived as contributing to successful teaching and learning. The four themes that emerged included the importance of learning trends, organizational support for a learning community, enquiry orientation, and the need for provision of planning and development.

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CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

Professional learning communities are believed by some to be a necessity in order to promote student learning (DuFour, 2004). According to the advocates, teachers and staff members must collaborate and work together as teams to discuss, create, plan, and implement curriculum that will impact student learning. According to Hord (1997), professional learning communities are designed with student learning as the primary focus. Usually a school attempting to develop a professional learning community is set up so that teachers work in collaborative teams to develop, plan, and implement lessons that are innovative and promote student learning. Hord contended that it is important for professional learning communities to work closely with the administrative team as a support system in order to ensure that effective planning and implementation are taking place.

King (2002) described learning communities as consisting of (1) a clear shared purpose for student learning, (2) collaboration among staff to achieve the purpose, (3) professional inquiry by the staff to address the challenges they face, and (4) opportunities for staff to influence the school's activities and policies (p. 244). A cyclical process is thought to facilitate growth and development, and research suggests the process should take place on a consistent basis. According to DuFour (2004), professional learning communities are designed to include an administrative team member that provides support for the teachers and staff members. The administrative team members assist teachers and staff members by providing assistance and

guidance with the planning, implementation and problem solving of the designed curriculum for each subject area (DuFour, 2004).

DuFour (2004) explained the importance of providing support for every member of the professional learning community. He argued that most teachers and faculty members both want, and need to feel that they are important and that their opinions matter. They, in turn, feel empowered when they are supported in their endeavors to promote student learning. Professional learning communities are often constructed of several teams throughout the school. The staff is divided into subject areas, with each area including administrators, teachers, office staff, custodial staff, and cafeteria staff. Schmoker (2006) explained the importance of every member of the learning community accepting responsibility for fostering student learning in order to ensure students are academically successful.

As teachers work together in a collaborative environment, it is the purpose of the learning community to enable teachers to have a significant role in the planning process (Senge, 1993). Hoy and Hoy (2006) suggested that the importance of planning an effective curriculum is due to the impact it has on student learning. According to Hoy and Hoy (2006), the main focus of the professional learning community is to ensure students are given as many opportunities as possible to achieve academic success. Planning, as part of a professional learning community, will better prepare teachers for the classroom and will provide them with the tools they need to ensure student learning is taking place. This study examined seventh grade science learning communities and how they are perceived to impact teaching and learning for students in the classroom at three participating middle schools.

In professional learning community schools, the administrative team acts as a resource for the learning communities throughout the school, as described by Hoy and Hoy (2006). When

issues arise, the administrative team provides support to ensure that problems are dealt with quickly and effectively. This enables teachers to focus on the best methods for impacting student learning. The DuFour model of a professional learning community includes weekly team meetings (DuFour, 2004). During these team meetings, teachers work together and collaboration takes place about current issues or challenges with the curriculum, common assessments, and teaching strategies that are impacting student learning.

According to Little (2003), the most important aspect of a learning community should be the focus on student work. Teachers should examine student work to ensure that learning is taking place within the classrooms. Teachers should meet on a regular basis to discuss how and why student work drives classroom instruction. Common assessments need to be analyzed and discussed in order for teachers to have the necessary and appropriate data that are needed to effectively mold and shape future curricula and instruction. Another component explained by Little (2003) was the use of structured conversation. During the meeting, it is important to structure the conversation by use of a specific protocol designed for the meeting. The protocol helps keep the group on topic and ensures that the agenda addresses student learning issues.

Background/Rationale of Problem

According to DuFour (2004), learning communities of the 20th century provide more support to students and teachers in the classroom. King (2004) described how teachers are more aware and more focused on the methods and techniques that provide students with academic support that ensures student learning. Teachers learn new methods and techniques for teaching through collaboration with other teachers and experts within their field of education. Schmoker (2006) explained how teachers who function as part of a learning community should discuss

these methods and techniques collaboratively. They should constantly work together to develop, plan, implement, assess, and solve problems about issues in the curriculum. DuFour (2004) argued that improved student learning is one of the primary goals of a learning community.

Learning communities, according to DuFour (2004), give teachers and staff members the support that is necessary in order for them to successfully impact teaching and learning. King (2002) described how teachers in learning communities have many opportunities to engage in learning through their studies, experimentation, and helpful feedback. Eaker, DuFour, and DuFour (2002) explained how it is important for teachers to feel that they have a say in the planning process when it comes to teaching and learning in the classroom. Allowing teachers to participate in the planning process provides teachers with more ownership and control over the material that will be introduced and implemented in the classroom. Little (2003) described how student work is what drives teacher discussions during team meetings. Many school systems have a scope and sequence and descriptions of an academic knowledge and skills that teachers should follow; however, learning communities discuss the methods and techniques that will be used to implement the curriculum in order to more directly impact student learning.

The study was a multiple methods study that included a total of three middle schools from the Gwinnett County School System. Both qualitative and quantitative data collection and analysis procedures were used in this study. The researcher used a survey instrument (Bolam et al., 2005) previously designed by a group of researchers for a large study on professional learning communities in England. The instrument was modified slightly and administered to the seventh grade science teachers at each school and the data collected were used to describe the teachers' perceptions of the effects of the learning communities at each middle school. In

addition to the survey, the researcher conducted interviews with purposefully selected participants in order to enrich the data collected.

Theoretical Framework

The term learning communities has evolved into professional learning communities that provide an opportunity for collaboration and support to consistently take place for teachers, so curriculum and instruction can be better designed and delivered to students resulting in improved learning. Over the course of several decades, key individuals have helped to define the principles of professional learning communities. For example, Dewey, Meiklejohn, and Cox are some of the key individuals. Dewey (1933) suggested that learning should be student focused and should include shared decision making, but did not actually call them professional learning communities. Meiklejohn (1932) described how collaboration was important when developing effective curriculum. However, the term professional learning community was still not used to describe this collaboration process being used. Cox (2001) examined the concept of faculty learning communities during the 1970s. During that time, the focus of learning communities changed from being student-focused to faculty focused. Later, DuFour (2004) argued for the significance of the school culture and how culture plays a major role in student learning. Dufour (2004) has written about his experiences with professional learning communities and has argued that professional learning communities positively affect student learning. He argued that professional learning communities require teachers to discuss, create, plan, implement, and solve problems related to curriculum. King (2004) reviewed research about school reform. In his review, he argued for the importance of providing teachers with numerous opportunities to experience and learn effective teaching strategies through collaboration. In some of the more

recent work, for example, Schmoker (2006) argued that professional learning communities can have a positive impact on teaching and learning. Professional learning communities, according to Schmoker (2001), produced the fastest outcomes and results for student learning. According to Schmoker (2001), these outlined strategies were the most effective ones for improving student learning; however, less research has attempted to connect student learning with professional learning communities.

Conceptual Framework

The study by Bolam et al. (2005) shows a conceptual framework on professional learning communities that was used to help guide this study. The study conducted by Bolam et al. (2005) provided data that supports professional learning communities and how they are driving teaching and student learning. Bolam et al. (2005) discussed how groups of teachers need to collaborate about developing goals in order to promote high levels of learning. Collaborative teams are necessary in order for teachers to develop, implement, and monitor strategies that will promote student learning. The primary focus of the collaborative learning community is student learning. The Bolam et al. study discussed the themes that seem to contribute to the operation of an effective professional learning communities. The themes that were evident from the research in the Bolam et al. study are discussed further and include the following: learning trends, organizational support for learning communities, and enquiry orientation.

Learning trends as discussed in the Bolam et al. (2005) study consists of, but are not limited to, professional development and learning about subject knowledge and student learning.. Organizational support for professional learning communities, as discussed by Bolam et al. (2005), consists of shared values and visions and looks at the organization as a whole to

understand how the professional learning community operates and functions. Enquiry orientation includes aspects of the learning community that ensure student learning is consistently taking place. This also includes how learning communities are staying up to date and consistent with teaching strategies that ensure students are learning. This theme also includes collaboration, which has been described as one of the most important characteristics of a professional learning community.

DuFour (2003) described the importance of collaboration among professional learning communities and he identified three strategic questions used to help guide the learning community. His critical questions were as follows:

1. What do we want students to learn?
2. How do we know that they have learned it?
3. How do we respond when they do not learn? (p. 14)

The focus of professional learning communities is continuous improvement through constantly looking at student learning. Learning communities are used in developing and clarifying shared understanding of instructional leadership, identifying practical ways to improve the quality of student work, to critique one another's school improvement efforts, to increase content knowledge, to maximize instructional strategies, and to increase student learning.

Statement of the Problem

In recent years, an increased interest in accountability and school reform in education has been on the rise. Educators are trying to find effective ways to provide common teaching practices that are working to improve student learning. According to Little (2003), it is the ultimate goal of a school system to ensure that students are learning. This study investigated how

professional learning community models may affect teaching strategies that, in turn, may impact student learning. The research was based on the theoretical contributions of scholars and authors including Meiklejohn (2003), DuFour (2004), Little (2003), and King (2004).

Significance of the Study

This study focused on how seventh grade science learning communities are perceived to impact student learning in science. The study examined the importance of professional learning communities as described by DuFour (2004), Schmoker (2006), and others. The interest in professional learning communities has become increasingly popular over the past several years. School reform has pushed educators into a new world of accountability along with the implementation of new guidelines and procedures. This push is forcing schools and teachers to find ways to ensure teaching and student learning are taking place. In the science classroom it is important to provide students with knowledge and skills that they will carry with them throughout their education career and into life. The future especially depends on some of these students as they will be leading the studies of science in the fields of genetics, medicine, and other significant areas. I was interested in (1) describing the specific areas of the seventh grade science professional learning communities, which may contribute to student learning; (2) determining how the learning community models are designed to show that teaching and learning are the primary focus, and (3) describing to what extent the methods used appear to be working to produce positive results. This research probed faculty perceptions of the impact of professional learning communities on teaching and student learning.

Research Question

The following question guided the study about the impact of professional learning communities and student learning: What are the teachers' perceptions of seventh grade learning communities' impact on teaching and on student learning in science?

Research Design

The study was a multiple methods study that included three middle schools from the Gwinnett County School System. Both qualitative and quantitative methods were used for this study. The quantitative data for this study included demographic information about teacher background, education, and experiences as well as teacher ratings of their perceptions of the impact of the professional learning community on student learning. The survey research instrument (Bolam et al., 2005) was used to help the researcher identify specific themes that are consistent throughout each survey. The data helped the researcher determine which individuals would be interviewed. The qualitative portion of the study consisted of questions from the instrument that were used to collect teachers' perceptions of their school as a professional learning community and from interviews with a sample of the participants. The survey instrument was administered to the seventh grade science teachers at each school. The data collected described the teachers' perceptions of the effects of learning communities at each of the middle schools. Because educational experiences varied from teacher to teacher within each school, the data collected included questions; responses to those questions were used to capture the emerging themes about professional learning communities and how they are perceived to affect teaching and student learning.

Survey

Part one of the survey items used a Likert-type scale. In this section of the survey, five possible choices were based on teacher agreements with statements about their school as a professional learning community. In the second section of the survey, five possible choices were based on the extent to which the teacher believed the statement had changed over the past 2 years. This section of the survey included an open-ended set of questions that allowed for teacher comments. The final section of the survey, part three, included demographic data that were used to examine patterns among differences between responses and certain teacher characteristics. Teacher responses to the open-ended questions were used to determine the purposeful sample of teachers invited to participate in the interviews.

The researcher provided letters and consent forms to all members of the seventh grade science teachers of each participating school. The researcher distributed the instruments to each school's science department. Teachers who decided to participate were given a letter, along with the survey, which indicated the purpose of the research. Teachers were also informed that their participation was completely voluntary, and participants could opt out of the study at anytime. Instruments were color coded by school. The purpose of color coding the instrument for each school was to help ensure confidentiality for each teacher and school as well as to keep information organized between schools (e.g., Color A, Color B, and Color C).

Interview

Interview data were collected from eight purposefully selected participants to explain and support why and how professional learning communities may be impacting teaching and student learning. One-on-one in-person or telephone teacher interviews took place after the survey had

been collected. Interviews were approximately 15-20 minutes in length. Teachers interviewed were selected based on whether they had been department chairs, how long they had taught science, how many years of teaching experience they had, and/or by their responses on the questions from the survey items. Department chairs tend to work closely with the teachers within the department, as well as the administration to ensure that curriculum, instruction, and student learning are the focus during scheduled meetings.

Study Participants

Participants in this study were selected from three middle schools in the Gwinnett County School System. Participants that comprised the study were 21 science teachers who were working in professional learning communities. The schools studied had similar characteristics, including the curriculum that was being taught and student socioeconomic levels. Schools were selected based on the size and demographics that made up their school culture. Each of the schools had similar demographics and school size. The researcher wanted to show the themes and categories that emerged by studying three schools that had used a professional learning community's model.

Limitations of the Research

The research has limitations that may have affected the outcomes of the study. Participants for this study had a variety of teaching experiences. The teaching experiences and years of teaching in their subject areas varied from school to school. These experiences may have had an effect on the knowledge and understanding each teacher had about professional learning communities, including specific instructional strategies that affect student learning in science.

Another limitation is that the surveys and interviews collected only teacher perceptions, which may differ from what actually happened.

Assumptions of the Research

The following assumptions were made about the research:

1. Students were receiving the same curriculum and instruction in the seventh grade science classrooms in the district.

2. Teachers were meeting as teams and planning instructional practices and providing common assessments throughout the three schools studied.

3. Students were being assessed on their knowledge of the science material through common assessments throughout the department.

4. Student data were being collected in order to demonstrate mastery of specific knowledge and skills in the science curriculum.

5. Teachers accurately described their perceptions of their professional learning community.

Definitions of Terms

The following is a list of terms and definitions that are relevant to this study.

Academic knowledge and skills (AKS): The essential items that students are expected to know and are able to do within their grade or subject.

Backward approach: Teams focus on where they are going by starting at the desired end of the curriculum and working backwards. Common assessments should be developed first and

then an outline is developed of how the learning community will get to that point by looking at what will be taught from the beginning to the end.

Collaboration: When two or more people are working together to accomplish a set of common goals through the process of sharing, learning, and building consensus among the group.

Scope and sequence: An outline of curriculum that describes major content on the curriculum and is used by teachers to align curriculum and instruction with state and county standards.

Common assessments: In order to help provide comparability and reliability across each grade level, departments/teams work together to develop a test for each unit being studied. Departments/teams agree to use the test in all classrooms. The test is designed to assess each student on the material that has been taught for a specific unit. Each common assessment must be common across the grade level and include a common scoring scale. However, this does not mean that the assessment has to be identical from one class to the next. Instead, tests should have common academic subject matter that covers the information that is discussed and taught for the specific subject matter. The tests may need to be varied in their presentation depending on the individual student that will be assessed, for example, gifted, special education, or regular education students will all be tested over the same content of the curriculum; however, the test may vary to ensure each student's ability levels are being meet.

Professional learning communities: A group of individuals working together as teams to discuss, create, plan, and implement curricula on a regular and consistent basis that is working to impact teaching and student learning.

Student-focused learning: Teaching strategy that places the strongest emphasis on student learning and works to keep the student as the main focus of teaching and student learning.

Summary

This chapter described the background information that plays a significant role in learning and understanding how professional learning communities have evolved over the years. King (2004) and Little (2003) described the importance of educators having the ability to assess the resources that will enable them to successfully impact student learning. The purpose of this chapter was to provide a review of professional learning communities and show how and to what extent learning communities affect teaching and student learning. The research was based on the theoretical contributions of scholars and authors, including Meiklejohn (1932), DuFour (2004), Schmoker (2006), and other significant works. This chapter reviewed the characteristics of a professional learning community as to provide clarification and a better understanding about professional learning communities. The results from the study may identify changes in student learning, which teachers believe are based on the impact of learning communities. Chapter II will provide a more in-depth review of the literature on professional learning communities and how learning communities have changed over the past 2 decades.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

Learning communities have become increasingly more popular over the past 10 years in education. However, the first ideas about learning communities were discussed early in the 19th century by Dewey and Meiklejohn. The early works of these scholars helped to pave a road to what are today professional learning communities. This chapter reviews the historical background on learning communities and presents the theories of significant individuals. Fullan (1991) suggested that learning how and when to change is often challenging for some individuals. The process of change and how change should be implemented in a school is described to provide a better understanding of its importance. This chapter examines how teachers are learning in order to become better teachers through professional development as discussed by Hammond and McLaughlin (1995). The chapter describes how professional learning communities impact both teaching practices and student learning as well as how they are working to ensure that teachers provide students with curriculum and instruction that enables them to master the necessary knowledge and skills that are needed for academic success.

Early Views on Learning Communities

In the early 1920s and 1930s, the idea of shared problem solving was described by Dewey (1933) and Meiklejohn (1932). These scholars focused on shared problem solving for students with guidance from their teachers. Dewey (1933) presented the shared problem solving idea as a process where individual students would come together to collaboratively solve

problems. Dewey (1933) stated that learning should be active, student focused, and consist of shared decision making among students and teachers. Meiklejohn (1932) proposed that teachers would work in a collaborative effort in order to develop curriculum that would be consistent and logical for the student to learn.

John Dewey

Dewey (1933) was not an advocate for teaching designs that consisted of students working on assignments without peer interaction or without group discussions. He stated that this type of education lacked meaning and did not provide students with a variety of learning experiences. Instead, Dewey (1933) advocated for students to be involved in activities that were meaningful and significant to the concepts that were being taught. He argued that engaging students in these types of activities provided them with the necessary experiences that were essential for academic success and lifelong learning. Dewey (1933) explained how these experiences were an essential part of the learning process. Such experiences were needed in order for students to continue to build on the knowledge and skills they had already acquired. Although Dewey did not use the specific term of "learning communities," his ideas of teaching and learning through experience and collaboration are consistent with what many believe makes a learning community successful today.

Alexander Meiklejohn

Meiklejohn (1932) was best known for his experiment with student-focused learning communities during the early 1920s: the Experimental College. The focus of the experimental college was to bring students together in a collaborative setting to discuss curriculum ideas and

work as a unified group to make sense of the material that was being studied. Meiklejohn (1932) explained how group conferencing was one of the major components of the learning community (pp. 39-44). Conferencing brought the students and the faculty closer together. Meiklejohn (1932) argued for the importance of providing students with appropriate and meaningful instruction. According to him, when instruction was combined with group conferencing, it provided students with educational opportunities that enabled them to gain knowledge and understanding about relevant subject matter.

Milton Cox

According to Cox (2001), learning communities have evolved over the past century. The first idea of the learning community primarily focused on the student. During the 1970s, Cox focused on learning communities called faculty learning communities. Faculty learning communities were then teacher-focused rather than student-focused. This may have been the first time learning communities were called faculty learning communities.

Cox (2001) explained how faculty-learning communities were used to bring the staff together by providing them with common experiences and practices. Faculty members obtained these experiences in a collaborative setting, using a variety of teaching methods. The learning community, according to Cox (2001), was a place where individuals would constantly learn, discuss, and plan ways to use new ideas and teaching methods. He said that once the teachers were able to learn the key ideas, they would then be able to create common threads in curriculum with learning focused connections that would have a greater impact on student learning. The goal of the faculty learning community was to better influence student learning.

Richard DuFour

During the early 1980s and 1990s, learning communities became known in education as professional learning communities, and they began to take on a shape of their own. DuFour created one of the early models of what he described as the modern day professional learning communities, in the 1980s. At that time, DuFour was known for implementing professional learning communities at Adlai Stevenson High School in Lincolnshire, Illinois. DuFour worked as the principal of Stevenson High, where he implemented professional learning communities into the school system. He claimed the results supported the idea that professional learning communities have a significant impact on student learning.

Schmoker (2001) stated that several factors played a major role in the success of Adlai Stevenson High School including frequent, focused, data-driven teamwork, high-quality lessons and instructional units developed by teams, and recognition and praise of individuals and teams. All of these components were essential to the establishment of Adlai Stevenson High School. One of the challenges that Stevenson faced was that the school was already a high-achieving school. Schmoker said that with the tenets of professional learning communities, DuFour and the staff at Stevenson were able to improve student performance.

Professional Learning Communities and Data Analysis

According to DuFour and Eaker (1998), implementation of professional learning communities was the key component for improving student learning and academic success. DuFour (2002) described how to go from a focus on teaching to a focus on learning with the use of professional learning communities. The collaborative teams were a huge part of the Stevenson schedule. The schedule was very structured and called for weekly meetings. Schmoker (2001)

described how DuFour used a collaboration process to teach teachers to use a variety of techniques for improving student learning. According to Schmoker, one of the most effective measures of success was through use of a common assessment.

Schmoker (2003) suggested that data analysis was one of the most important aspects of a successful professional learning community school. The data that are gathered should be used to show areas that are in need of improvement. The data enable teachers to establish goals that will focus on the areas of low performance. DuFour (2004) suggested that data should come from a number of resources, including Criterion Referenced Tests (CRT) that gives performance information on specific content knowledge. Common assessments enable teachers to continually check for student mastery and understanding of content knowledge. According to Little (2003), the process of analyzing student work during collaborative team meetings enables teachers to pinpoint specific areas that are in need of improvement. This process also allows teachers to check the effectiveness of their teaching strategies when providing students with the necessary information needed in order to be successful.

According to DuFour (2004), common assessments are promoted because they provide for the collecting of reliable data. Establishing consistent data enables teachers to focus on the standards of the curriculum and to identify areas that are in need of improvement. Schmoker (2001) described DuFour's model of a curriculum development process, which includes several significant activities:

1. Focused instruction in each curriculum.
2. Identification of common core curriculum of student outcomes for each course.
3. Focus learning for students.
4. Analysis by the team and areas that need attention.

5. Provision of external indicators of effectiveness for teachers.

6. Insistence on collaboration. (p. 15)

The plan for improvement, according to DuFour, should consist of these six processes. It is important to develop only a few set goals per teacher. The curriculum, as Schmoker (1999) explained, was more beneficial to students when the content did not try to cover so much material. Teachers would be better able to implement content and knowledge when the information is on a more manageable level. Schmoker (2001) described how DuFour's idea of learning more by teaching less, for example, learning communities should decrease the content of study and develop ways to improve teaching strategies and student learning. He argued that one of the most significant ways to improve learning was through use of questioning strategies.

DuFour and Eaker (1998) established a set of questions that a principal might ask teachers about their instructional strategies to ensure that teachers are assessing how and what they are teaching. This should be done at the end of a chapter or unit and can help with assessing what curriculum items may need to be re-taught. The instructional strategy questions include the following:

1. Why did you teach this content?
2. How did it fit into the major outcomes of the course?
3. Why did you use these instructional strategies?
4. What worked and what didn't work?
5. How might you change or improve the lesson the next time the lesson is taught?
6. How can you and your team improve the instruction and how students are learning the material? (pp. 176-178)

Schmoker (2001) explained how Adlai Stevenson High School required every member of the faculty to question the way he or she was teaching on a regular basis. He said that continually

analyzing how things are done helps revise and improve instructional strategies that can enhance student learning.

Professional Learning Communities and School Climate and Culture

Hoy and Hoy (2006) explained how climate and culture work together to make up the atmosphere of the school. They are both an important part of how the school operates on a day-to-day basis. Culture refers to the shared beliefs that are displayed within the school, and climate is the patterns of behavior that take place within the school. According to Hoy and Hoy, school climate is easier to manage than culture. The climate and culture are two aspects used by the principal to analyze, understand, and improve teaching and learning (p. 312).

School Climate

Hoy and Hoy (2006) described how organizational climate analyzes two types of behaviors as principals interact with teachers and as teachers interact with principals. The first type of behavior analyzes the principal as being supportive, directive, and restrictive. The second type of behavior analyzes the teacher as being collegial, intimate, and disengaged. These six features are key components for developing a positive school climate. Hoy and Hoy explained how the use of professional learning communities helps when establishing the climate within the school by the way the learning communities are running and operating.

Dufour and Eaker (1998) described the components of a professional learning community as including a shared sense of purpose and values, norms of continuous learning and improving, a commitment and sense of responsibility for all students, collaboration, and an opportunity for the members of the learning community to share ideas and inquire about problems and concerns

(p. 84). In a study conducted by Snow-Gerono (2005), teachers expressed their value of collaboration and community. In traditional school systems where professional learning communities did not exist, the isolation of teachers was more of the norm. Hobson (2001) explained that isolation is often a means of protection for teachers. Schools that are not designed as professional learning communities tend to force teachers into isolation, since time for collaboration and community do not exist. Snow-Gerono (2005) explained how teachers participating in the study reported that the professional learning community gave them a sense of a safe environment where they could freely question practice and policy.

Schmoker (2006) argued that professional learning communities promote collaboration that takes place on a regular basis. He argued that learning communities have to have a scheduled time that is built into a weekly agenda. Setting the meeting schedule helps to develop a consistency that becomes part of the norm and sets a tone within the climate of the school. Peterson (2002) explained how the committee members become dependent on these meetings, because they help to ensure that the school is running and operating according to the vision and mission that has been designed and set into play by all of the stakeholders of the school. He said that sometimes the teams within the learning community are challenging for some individuals and that they may require assistance to ensure that positive, effective meetings are taking place.

Riley and Stoll (2004) described the importance of providing teachers with as many opportunities to become part of the learning community as possible. They explained that developing trust and support provide the major components in designing successful learning communities. Once members of the community feel that they are part of the community, Riley and Stoll (2004) argued that collaboration and teamwork will become key components that will ensure success of the learning community and of the members themselves. King (2002)

concluded that the inquiry that takes place within the learning community enables teachers to stay focused yet strong in their community. He further argued that a consistent, strong community is better able to commit to the goals that are set in place and are open to the changes that are necessary in a successful professional learning community.

According to Achinsdtein (2002), one key element that is a necessary part of a professional learning community is conflict. She described how conflict can be one of the driving forces within a learning community setting off new ideas that can, in turn, promote organizational learning. Organizational learning can be defined in several ways including (1) using past events to transfer knowledge for future decisions, (2) identifying and correcting errors, (3) routinely questioning values that guide organizational actions, and (4) generating new insights through gathering information and making sense of the information to change behavior (p. 424). Achinstein (2002) stated that understanding conflict enables teachers within their learning community to ensure that collaboration and consensus are taking place within the learning community. It is possible for conflict to arise when effective group discussions are taking place on a regular basis. According to Anchinstein (2002), when conflict occurs within a learning community it is important that teachers are able to manage conflict, negotiate borders, and define ideologies within the group. She explained that dilemmas are associated when groups are working without conflict as a key component of the learning community. Grossman (2001) explained the importance of seeing differences within the learning community as a resource and a way of coming to a consensus among the group. She states that community is a journey rather than a means to an end and does not go without bumps along the road. Grossman described the difficulties that are associated with group dynamics. However, she argued these difficulties are a key component to a successful learning community and can be worked through by establishing a

learning community that is conducive to collaboration by allowing for open debate and consensus building that focuses on teaching and student learning. Anchinstein (2002) described how often learning communities are unable to challenge their own designs and practices when conflict is missing from the equation. She stated that collaboration and conflict are a vital component of professional learning communities where teaching makes an impact on student learning.

Schmoker (2001) provided evidence to show how DuFour utilized the power of recognition and rewards. He argued that small gestures go a long way in the organizational behaviors of the school. According to Schmoker, teachers are more likely to perform better when the school as a whole takes part in the recognition of teachers and staff members and the impact they have on students. He further argued that rewarding teachers and staff members with coupons, coffee, and simple surprises can help create a positive climate that focuses on student learning. According to Schmoker, DuFour's vision has enabled other schools to successfully impact student learning through use of a professional learning community design.

School Culture

DuFour (2004) described the importance of the school culture when working to transform a school into a learning community. According to him, the school culture requires constant molding and shaping by the leader and/or leaders within the school. Culture is one of the components that DuFour identified as a key element in a professional learning community. According to Peterson (2002), "School culture enhances or hinders professional learning. Culture enhances the professional learning when teachers believe professional development is important and valued" (p. 12). Schmoker (2006) later wrote about the importance of principals setting the

tone for how the school will operate. He also said it is important that teachers be given the opportunity to collaboratively learn and solve problems with their colleagues about teaching and learning.

Developing new, innovative programs is not always embraced in education. In many classrooms, it is common to find educators doing what they have always done, year after year. According to DuFour and Eaker (1998), negative attitudes are often apparent when "change" is discussed among educators. The resistance to change is often due to fears of not knowing what might come once changes have been started. However, it is undeniable that schools are changing. DuFour (2004) argued that schools have been using variations of the same programs for decades, and that educators cannot continue to teach the same way they have always taught and expect different results. He said it is important to examine common teaching practices, in order to improve student learning. According to DuFour, developing a positive school culture is an ongoing process that takes place when collaboration between teachers, groups of teachers, administrators, and others, is combined along with the common perceptions of these groups, working to identify the combined beliefs, attitudes, and values of the school.

Change. According to Hoy and Hoy (2006), change does not just happen in an individual classroom. Instead, it happens throughout the entire school and even the school system as a whole. Hoy and Hoy described how organizational culture is something that can be examined through four levels including artifacts, shared norms, core values, and tacit assumptions (p. 18). These four levels work together to give a school its identity. In order for a school to be successful, the levels must be understood and a connection needs to be made to student learning. DuFour and Eaker (1998) suggested that individuals work more closely together in order to

maximize the advancements that are being made in how data are being used within schools and school systems to make better decisions about desired results. The availability of data and use of data to drive decisions, have recently become more prevalent within schools and school systems in order to assess student learning. As Hoy and Hoy noted (2006), the use of data should happen throughout the entire school and teachers should use the data to present a specific focus on the knowledge and skills that will most effectively impact teaching and student learning.

Supovitz and Christman (2003) described how learning communities focused on instructional discussions that are consistent, structured, and supportive and are working to consistently investigate the relationships that exist between instructional practices and student work noticed an increase in student learning. However, they explained that learning communities that fail to expand the practices that are necessary for learning new information and knowledge fall victim to failure. The lack of knowledge development is usually the reason that reforms do not succeed because they are not increasing the level of instruction and giving new insight and direction for the learning community to follow. Supovitz and Christman (2003) explained the importance of learning communities that build on their instructional practices in order for the learning community to successfully move into more sophisticated levels of teaching, including: collective analysis of teaching and/or review of student work (p. 5). Hipp, Huffman, Pankake, and Olivier (2007) stated that teachers and administrators who work together in a culture that is defined based on a collaborative setting, defined shared visions, and values based on student learning, and encourages risks and experimentation is an organization that works to ensure teaching and student learning is occurring on a regular basis.

Fullan (2006) described the importance of bridging the gap between changes within the school as well as system transformation by primarily focusing on the existing gaps in education.

He expressed how important it is to have strategies in place in order to become a successful school where teachers are implementing instruction and students are learning. There are several key components that he believes are necessary for change to happen successfully within the school including the following: (1) new leadership, (2) closer attention to assessment, (3) support from experts, and (4) an accelerated adoption of new programs, projects, or strategies. Fullan supported Kanter's (2004) solution that identified accountability, collaboration, and initiative as essential elements for school improvement. The goal is to work on continued improvement and reform by understanding how people and systems change (p. 33). Fullan (2006) stated it is necessary to make the change process a permanent mindset throughout the entire organization. Everyone within the organization needs to be on board in order for the implementation of change to be effective.

DuFour and Eaker (1998) argued that it is necessary for everyone undergoing organizational change to understand why the change is taking place and what significant reasons have led to the need for change. Once the administrator has presented data and explained the reason for change, it is important to develop the culture of the school. Peterson (2002) explained how the use of three key methods could shape the culture of a school. The first step is to understand the history of the culture and to learn and understand the vision of the school. Once the culture is explained, it should then be assessed in order to see what supports the vision and mission as well as what is hindering the vision and mission. He argued that properly assessing the culture will lead to molding and shaping the culture into one that enables students to be successful. Hoy and Hoy (1996) described why it is important for teachers to have a clear, concise vision of what the change will encompass and what the results might entail. They said

teachers need to see where they are going and how they will get there. It is also important to provide specific evidence about successful results.

Implementation of structural change. Fullan (1991) explained the challenges that many administrators face when they are developing programs designed to increase knowledge and skills, which are essential in order for students to be successful in the classroom. "Sustained improvement in schools will not occur without changes in the quality of learning experiences on the part of those who run the schools" (Fullen, 1991, p. 344). The administrator should have a clear, concise vision and understanding about the program that will be implemented. According to Murphy (2001), the administrator must ensure that staff members are provided with the necessary time and tools that will be needed in order for learning communities to be successful. Murphy argued that in order for successful implementation, the entire staff must understand the vision and mission of the program that is to be implemented.

DuFour and Eaker (1998) expressed the importance for the administrator to lead the faculty throughout the entire process of implementation and organizational change. They stated that teachers should be supported and encouraged during the transition into a new program, and they argued that when changes take place in an organization, individuals require growth in their feelings about the change, as well as their knowledge about the innovation. According to King (2004), it is important to recognize that every school will not fit into one specific model. Schools vary in many ways and require different support depending on the needs and development of the school. DuFour and Eaker (1998) contended that support should include training for teachers, which gives them the ability to express concerns with other members of the staff. DuFour (2001) said that collaboration must be well-established within the structure of the school in order for it

to be successful. He said that modeling could give teachers a hands-on approach as to how the collaboration process should work. Teachers are then able to see firsthand the tools that are needed to implement successful collaboration in planning and solving learning problems.

According to Murphy (2001), motivation is also a major factor for ensuring that organizational change takes place smoothly and successfully. Murphy (2001) suggested that teachers have the support from the administrator to ensure that they are doing a good job and that their efforts are being noticed. However, collaboration allows for necessary adjustments to be made when things are not running smoothly. Both Murphy (2001) and DuFour (2001) have argued that the administrator should be involved and aware of all challenges and successes in order to ensure that all aspects of the program are adhering to the plan for success.

Collaboration. According to Joyce, Murphy, Showers, and Murphy (1989), implementing a successful program requires teachers to be prepared for the changes that will take place. Joyce et al. (1989) explained the significance of collaborative team meetings and the impact they have on student learning. The focus of their work was on the student and how to provide students with teaching strategies that were beneficial to student learning. DuFour and Eaker (1998) emphasized staff development as a necessity for teachers to feel knowledgeable and prepared about the program and the changes to come. They argued that an identified timeframe is often helpful so members of the professional learning community can envision where they are going and how they will get there.

King (2004) and Little (2003) reinforced the ideas on staff development and how important it is to enhance teaching by providing professional development that is meaningful and focused on teaching and learning. King explained how Lowry established five ways that helped

improve teaching in the early 1900s, including supervision, work required of teachers, and rewards. In the late 1900s, the idea of improving teaching as described by Goertz, Floden, and O'Day (1996) became more prevalent and offered ideas that included (1) articulate a vision for reform, (2) provide instructional guidance to help realize the vision, (3) restructure governance and other organizational structures to facilitate leaning, (4) provide necessary resources, and (5) establish evaluation and accountability measures that help provide incentives and address barriers to change.

Professional development. Providing teachers with an opportunity to work collaboratively and to discuss what they are teaching and how they are teaching is a way for teachers to focus their attention on meeting the needs of the student, as well as on making decisions about appropriate professional development that will provide the necessary skills and information to enable them to improve their teaching strategies (King, 2004). In his review, King noted concerns of leadership that neglected to take part in teaching and teacher learning. King referred to Elmore (2000) and Cuban (1988) and their accounts in regard to the lack of leaders getting involved in ongoing instruction within their building. King suggested many schools are still working under the same leadership designs that Cuban (1988) described as being key components of leadership. He explained that many leaders use managerial and political components of their leadership roles; and they lack the instructional component that is necessary for successful leadership.

According to Grossman (2001), learning communities should consist of two key aspects including continuing essential tension of teacher community and continuing intellectual development. Continuing essential tension consists of groups of teachers coming together to

write new curriculum, create new assessments, and enhance student learning. The second component explained by Grossman looks at the continuing intellectual development of individual teachers in their specific content area. This aspect of learning communities focuses on teachers as lifelong learners within their subject area by becoming the content specialist. Grossman states that leaning communities for teachers must be focused on both teaching and learning in order for them to be effective and successful.

Professional development is an important part of implementing a successful program, because it helps ensure the successful implementation of a program. The National Staff Development Standards for Staff Development (2001) consist of three types of standards that help to ensure student learning is taking place. The three types of standards include context standards, process standards, and content standards. The context standards work to bring adults together to ensure that the teacher goals are aligned with those of the school and district. The National Staff Development Standards for Staff Development present several important components that help to ensure student learning, including date-driven results, evaluation, research-based, design, learning, and collaboration. Process standards are focused on how an organization provides teachers and staff members with a variety of ways to learn new teaching strategies that affect student learning. Context standards describe how the necessary knowledge and skills will provide teachers with strategies for quality teaching, as well as equity and family involvement. Using these standards is an important part of planning staff development for professional learning communities. According to Eaker et al. (2002), administrators, teachers, and faculty members should be provided with a number of staff development opportunities throughout the entire program, during implementation, and even thereafter. They also stated that

when professional development is designed consistent with the NSDC standards, it is more likely to produce successful results.

Professional development, as explained by DuFour and Eaker (1998), should provide faculty members with an understanding of the process of change, provide teachers who are credible to the practice, and should take place on more than one occasion. Joyce (2004) explained how teachers often lack the appropriate tools that are needed to properly take part in learning communities. The professional development sessions should include content that is geared toward developing explicit skills and knowledge.

According to Sparks (1983), it is necessary to look at the process of professional development and consider what the content should include. The professional development plan includes the content in relation to the training process and also the implementation of goals. Content should be structured based on program related material. DuFour and Eaker (1998) added that it is important for the content to be research-based and connected to student performance. Research data enable teachers to see how the program may produce desired changes. When teachers can envision the results, they gain clarification that allows them to review how the program impacts student learning through effective teaching strategies.

DuFour and Eaker (1998) explained how teachers might begin transitioning into the responsibilities for the implementation of the program once it begins. They stated that any time there is an organizational change, problems and concerns may arise. Riley and Stoll (2004) described how trust allows members of the learning community to develop the necessary relationships within the learning community. The trust within the community lends itself to learning about knowledge and skills that will impact student learning. This is why it is important to ensure teachers are being provided with necessary and appropriate staff development. The

staff development will also include continued follow-up and re-teaching strategies for specific curriculum and instruction (DuFour & Eaker, 1998).

According to DuFour and Eaker (1998), the follow-up portion of professional development provides the necessary support and assistance for teachers as they experience challenges during the implementation of the program. Riley and Stoll (2004) suggested that meeting throughout the implementation process gives faculty members the opportunity and support that is needed to properly apply the acquired knowledge and skills in their classrooms. Teachers then meet for collaborative discussions about what difficulties and successes may or may not be taking place. According to them, it is critical that knowledge and skills be implemented and maintained, in order to know how the program is working. Eaker et al. (2002), reported that the staff development process was what provided the school or school system with the appropriate knowledge necessary for solving problems when implementing a new program successfully.

Successful Professional Learning Communities

Fullan (1991) explained how it is important for an administrative team to continue to provide support and guidance for each learning community within the school during the implementation process. Fullan described the importance of team planning, team teaching, and developing new policies, which he contended all work together to promote the school improvement. According to Fullan, collaboration among the administration, teachers, and support staff during the implementation process is a critical component to the success of the program.

*Types of Te*am *Meetings*

Eaker et al. (2002) explained the importance of finding and allotting time during the school day to enable teachers to meet and collaborate on a regular basis. During collaborative meetings, the focus must be on improved teaching and learning. Guskey (2001) advised the use of collaborative team meetings to use a "backward approach" to planning. The backward planning approach simply means that teachers focus on where they are going by starting at the end and working backwards. He argued that when staff development is involved with student learning, it is necessary to first begin with what you want students to learn. Further, he said, every member of the learning community should contribute during the meeting. Schmoker (2001) explained how DuFour used several design methods within a professional learning community; including curriculum/interdisciplinary teams, peer observation, study groups, action research, professional sharing, and job-embedded learning. Each one of these design methods is structured to support teachers in their endeavors to maximize student learning.

Curriculum/interdisciplinary teams, according to Schmoker (2001), include teachers who share the same teaching assignment or same students. Peer observations are teacher observations that take place among peers. Teachers observe other teachers in their classroom setting during classroom instruction. Training is provided for teachers on classroom observations, instructional analysis, and conferencing skills in order to help them function better as effective peer observers. Study groups consist of teachers who are expected to participate in a group that conducts action on a research topic of interest to them, discuss its application to the school, and share questions and concerns as they experiment with that topic.

Action research is accomplished by groups who agree on an area of study, develop a hypothesis, collect, organize, categorize, analyze data, draw conclusions, and develop an action

plan based on their findings (Schmoker, 2001). Further, professional sharing consists of teachers providing their insights and findings regarding teaching and learning with their colleagues. Job-embedded professional growth consists of providing opportunities for learning and growth during an actual school or workday. Much of the research and writing by DuFour, Eaker, and Schmoker on professional learning communities has supported the idea that school collaboration should become the norm for a school that wants to successfully increase student learning.

In 2003, Little described learning communities or teacher groups that have worked as learning communities as teachers in which the primary focus is on student learning. One program that Little described is the "Evidence Project." The idea behind the Evidence Project is that teachers look at student work to show how students are thinking and learning. Teachers meet within the learning community to define the elements (based on student work) that will assist them in school improvement. According to Little, the Evidence Project was an opportunity that gave teachers ample time to collaborate and learn through their discussions about teaching and learning as a whole (p.186).

Another program that Little (2003) examined is the Academy for Educational Development (AED) in which middle schools put teachers in small groups within their grade levels where they designed interdisciplinary learning goals. The idea was to provide a guide for teachers in the various ways they viewed student work. One aspect of the AED design was that cross-district meetings took place to review portfolios of student work to ensure that the schools were meeting their goals. Little (2003) also described the Instructional Improvement through Inquiry and Collaboration Project, which was developed to ensure that teacher learning communities were primarily focused on teaching and learning. This development was added to

the already existing elements designed by the Coalition of Essential Schools for school reform as described by Little (2003).

According to Little (2003), there are several components that are essential when working to ensure that teaching and learning are the primary foci of the learning community. These components include (1) flexible, creative use of tools for local purposes; (2) ability to exploit subject expertise and examine subject issues; (3) a balance between comfort and challenge; and (4) facilitation to build a group and deepen a conversation. Overall, these individual components were designed to keep the group focused on student work and on how teaching impacts student outcomes through classroom instruction.

In 2004, the Annenberg Institute for School Reform conducted a study through Brown University. The institute worked with many school systems throughout the country that were working to improve education within their districts by creating professional learning communities as the primary component that was being used for school improvement. According to the study, professional learning communities have the ability to build productive relationships needed for school improvement, engaging educators in all levels of specified learning styles, providing support for teachers who are teaching students that need additional assistance through teaching and learning opportunities, and by consistently supporting efforts to improve culture, teacher practice, and student learning (p. 2). These key elements can be highly effective when professional learning communities are implemented into a school and teachers are regularly analyzing teaching strategies that are being used to improve student learning.

Wood (2007) discussed a Learning Communities Project that defined the major themes needed to sustain a professional learning community. Four themes were developed, including defining and fostering teacher agency, determining purposes for teacher collaboration, tracking

the challenges that impact district culture, and identifying the institutional and policy conditions (p. 699). Over the course of the project, Wood (2007) explained how teachers learned how to pose a question or problem, to develop action plans, and to collect data on what students were learning. She stated that the success or failure of working to improve student learning resides with the teacher. The Learning Communities Project was designed by and for teachers who are committed to how teachers are teaching and how students are learning.

Learning communities have been described in education for more than 50 years. According to Hord (1997), the contribution of scholars' and authors' work on learning communities supports the idea that a properly developed learning community is able to successfully impact teaching and student learning. Hord (2008) explained how a meaningful professional learning community organizes teachers in a way that enables them to engage in purposeful, collegial learning. The importance of the learning is to improve teacher effectiveness in the classroom. This is to ensure that all students are learning successfully at high standards. Hord believed the primary factor is focused on if teachers are teaching and students are learning. According to Graham and Ferriter (2008), many professional learning communities go through seven stages, including filling the time, sharing personal practices, planning, developing common assessments, analyzing student learning, differentiating follow-up, and reflecting on instruction. Each of these stages described by Graham and Ferriter (2008) enable teachers to come full circle in how they are teaching instruction, assessing how teaching is taking place, and ensuring that student learning is the primary focus of the professional learning community.

Cautions in Professional Learning Communities

As research continues to support the findings that professional learning communities are impacting teaching and learning, several questions have been raised as to how specifically professional learning communities impact student learning. Vescio, Ross, and Adams (2008), attribute some of the results as being due to the Hawthorne Effect. Franke and Kaul (1978) discussed Mayo's research on the Hawthorne effect in the early 1900s. The Hawthorne effect is the increase in worker productivity produced by the psychological stimulus of being singled out and made to feel important. This also led to the work of Fredrick Taylor, according to Franke and Kaul (1978), which focused on industrial psychology, meaning that it is important to consider all factors and influences when conducting efficiency research such as time and motion studies. Vescio et al. (2008) explained how the positive results could simply be the teacher's interest and involvement and not actually a direct correlation between the work that is taking place within the professional learning communities and the impact it has on teaching and student learning. However, studies have been conducted to attempt to show that student learning is affected. According to the studies conducted by Bolam et al. (2005) and by Louis and Marks (1998), on professional learning communities, these studies found that professional learning communities that are student focused work to change how instruction is being delivered to the students and thereby may affect student learning.

Additional concerns of practices within professional learning communities have been described by Little (2002). She explained the importance of teachers working together within their professional learning communities with a focus on an improvement of practice, and said even some really great professional learning communities were missing key components and are not focused on working toward change and improvement in teaching practice. Dooner (2008)

described some of the dilemmas that teachers face in respect to change and improvement largely due to conflicts and tensions within the community that often arise due to lack of trust, time, and talent. However, Dooner argued many times this is due to the lack of understanding of the processes used in a professional learning community.

Summary

Professional learning communities are described as a school reform innovation that may lead to improved student learning through the use of a variety of teaching strategies specifically designed to improve student learning. Significant increases in interests and some evidence has been found that supports the use a professional learning community. Proponents and advocates argue that these gains suggest that teacher perceptions, as well as data, may provide evidence that supports the fact that professional learning communities are having some degree of an impact on student learning. According to the entrepreneurial writings, some evidence shows that through the use of professional learning communities, students are learning and achieving at higher levels. The primary focus is ensuring that the student is the most important aspect of the learning community (Little, 2003). Creating a learning community that puts students first and creates an environment where learning is taking place, results in students who are mastering their knowledge and skills.

As described by Schmoker (2001), teachers are a primary part of a professional learning community and need to feel that they are important and that they make a difference. As discussed in this chapter, providing a learning community that incorporates collaboration is an important part of successful team meetings, which work to help teachers feel they are important and make a difference. Understanding how teaching strategies are working to improve student

learning is an important aspect of learning communities and leads to student learning. In order for these strategies to work effectively, teachers need to know how they can improve their teaching skills through current and up-to-date staff development that provides meaningful hands-on strategies that teachers are able to use in their classroom to improve student learning.

Skeptics of professional learning communities have raised questions about the effects they have on student learning. The results, according to Vescio et al. (2008), argued that a professional learning community should be student focused and constantly working to change how instruction is being delivered in the classroom. If these teaching practices are established and professional learning communities are operating as they are designed, then some weak and tenuous evidence shows professional learning communities are working and are impacting student learning. They are a hopeful sign, but rigorous research is needed.

CHAPTER III

RESEARCH METHODOLOGY

The purpose of this study was to examine teacher perceptions and views of how learning communities might affect teaching and student learning. Professional learning communities are designed so that teachers work in collaborative teams to develop, plan, and implement lessons that are innovative and may increase student learning (DuFour, 2004). Learning communities may enable teachers to collaborate about teaching strategies and the implementation of these strategies (Fullen, 2001).

Professional learning communities are said to establish a setting that enables teachers to work in teams to learn, plan, implement, and assess instructional strategies, develop and use common assessments, and thus increase student performance. In order to effectively provide students with the necessary knowledge and skills, meetings often take place weekly (Schmoker, 2007). During the weekly meetings, teachers discuss common assessments and how the common assessments are working, student performance, and collaboratively designed modifications, if any are needed. According to Peterson (2002), teachers rely on these weekly meetings in order to gain support from the learning community about common assessments, teaching strategies, and instruction. According to DuFour (2004), common assessments are one of the primary tools of professional learning communities. He claims it is important to determine where instruction is going and how the team is going to get there. This requires regular discussion, planning, and implementation that may impact student learning. Teamwork and collaboration, as described by

Riley and Stoll (2004), are two of the key factors for successful professional learning communities.

According to Schmoker (2006), student learning is the major focus of professional learning communities. The goal of professional learning communities is to impact student learning through use of effective teaching strategies based on examination of student learning data. Professional learning communities provide teachers with time to develop and plan instructional strategies that they believe can improve student learning. As Little (2003) recommended, it is necessary to create an environment that promotes and sustains student learning through teaching that is innovative and gets students excited about learning. In schools using professional learning communities, teachers consistently work together, plan together, and modify teaching strategies and techniques in order to make a bigger impact on students learning new information. As Little (2003) explained, working together as a team helps keep teachers focused on student learning and how innovative instructional strategies may positively impact student learning outcomes.

Research Design and Methodology

The study was a multiple methods study that included three middle schools from the Gwinnett County School System. Both qualitative and quantitative methods were used for this study. The quantitative data for this study included demographic information about teacher background, education, and experiences as well as teacher ratings of their perceptions of the impact of the professional learning community on student learning. The quantitative data were used to inform the analysis of the qualitative data. The survey research instrument (Bolam et al., 2005) was used to identify specific themes that are consistent throughout each school. The

survey data helped the researcher determine which individuals would be interviewed. The qualitative portion of the study consisted of question items from the instrument that were used to collect teachers' perceptions of their school as a professional learning community and from interviews with a sample of the participants. The survey instrument was administered to the seventh grade science teachers at each school. The data collected described the teachers' perceptions of the effects of learning communities at each of the middle schools. The open-ended items were used to capture the emerging themes about professional learning communities and how they affect teaching and student learning.

Survey

The survey consisted of three parts. Items in Part 1 asked teachers to rate teacher beliefs and behaviors about professional learning communities, using a Likert-type scale (see Appendix A). In this section of the survey, five possible choices were based on teacher agreements with statements about their school as a professional learning community. In Part II of the survey, five possible choices were based on the extent to which the teacher believed the statement had changed over the past 2 years. Part two of the survey also included questions that allowed for teacher comments. The final section of the survey, part three, collected demographic data that were used to show patterns among differences between responses and certain teacher characteristics.

The researcher provided letters and consent forms to all members of the seventh grade science teachers of each participating school. The researcher distributed the instruments to each school's science department. Teachers who decided to participate were given a letter, along with the survey, which indicated the purpose of the research. Teachers were informed that their

participation was completely voluntary, and that participants could opt out of the study at anytime. Instruments were color coded by school. The purpose of color coding the instrument for each school was to help ensure confidentiality for each teacher and school as well as to keep information organized between schools (e.g. Color A, Color B, and Color C).

Interview

Interview data were collected from purposefully selected participants to explain and support why and how professional learning communities may be impacting teaching and student learning. One-on-one in-person or telephone teacher interviews took place after the survey had been collected. Interviews were approximately 15-20 minutes in length. Interviewees were selected based on whether they had been department chairs, how long they had taught science, how many years of teaching experience they had, and/or by their responses on the open comment survey items.

Study Participants

Participants in this study were selected from three middle schools in the Gwinnett County School System. Twenty-one science teachers who were working in professional learning communities participated in interviews. The schools studied had similar characteristics, including the curriculum that was being taught and student socioeconomic levels. Schools were selected based on the size and demographics that made up their school culture. The schools that were selected consisted of similar numbers of years they had been using a professional learning community design. Each of the schools had similar demographics and school size. The

researcher wanted to show the themes and categories that emerged by studying three schools that had used a professional learning community's model.

Limitations

The research has limitations that may have affected the outcomes of the study. Participants for this study had a variety of teaching experiences. The teaching experiences and years of teaching in their subject areas varied from school to school. These experiences may have had an effect on the knowledge and understanding each teacher had about professional learning communities, including specific instructional strategies that affect student learning in science. Another limitation is that the surveys and interviews collected only teacher perceptions that may differ from what actually happened.

Research Position

My position as a researcher of this study is as follows. I am currently a teacher in the Gwinnett County Public School System. I have been an employee in the system for three and a half years. I currently teach seventh grade at school B, which was one of the research schools. In all qualitative research, the researcher is the primary investigator and all data that are collected is filter through the researcher. I recognize there may be a bias on the topic of professional learning communities. However I have attempted to remove as much bias by checking with participants to filter out any bias on the part of the researcher. I have also tried to stay as close to the data as possible by using the participant terminology instead of my own.

Research Instruments

Survey

The instrument used to collect the data was a slightly modified version of the survey that was developed and used to gather information on professional learning communities in England (Bolam et al., 2005). In developing their instrument, Bolam et al. (2005) determined the validity and reliability by using a factor analysis. They described the technical details of the analysis and used standard measures in order to deal with the missing values and to determine which items should be included or excluded from the survey (Atkinson & Thompson, 2004). Bolam et al. (2005) concluded that the instrument used to collect data showed a strong reliability score of ($\alpha >$ 0.7). When the factor scores were analyzed from each school, the findings showed four factors that existed within the survey. These factors were learning trends, organizational support for professional learning community, enquiry orientation, and support staff involvement (described as factors 1, 2, 3, and 4, respectively), which are consistent with the constructs in the literature on professional learning communities.

Post hoc tests were also used to determine internal consistency for the instrument (Bolam et al., 2005). The results of the internal validity check showed that the general school responses in part one do not conflict with those from part two. There were four factors resulting from survey part one, including: Factor 1, professional and pupil learning ethos ($r = 0.952$); Factor 2, school policy, management, and support ($r = 0.853$); Factor 3, enquiry orientation ($r = 0.788$); and Factor 4, participation of non-teaching staff in professional learning communities ($r = 0.793$). The results reported that the schools responding to the survey were consistent and provided evidence to show an acceptable level of internal consistency and highlighted important links between specific characteristics and factual items collected by other data sources.

Factors being analyzed were found to be aligned with the components of professional learning communities. The four factors were found to be statistically significant in relation to the support for professional learning communities. The results indicated that school responses were consistent and provided evidence to show internal validity. Additional relationships were also made between specific characteristics and factual information items that supported the validity of findings. The findings provided evidence to support the four themes that emerged from this study. The themes that were found support the common elements of professional learning communities and their impact on student learning.

Interview

The interview section used to collect data was devised by the researcher. The interview was developed based on the literature review on professional learning communities. Questions were constructed out of the characteristics that make up an effective professional learning community as discussed in the literature review. The questions were teacher focused to help ensure the researcher was able to capture an accurate and complete understanding of the teacher's perceptions about professional learning communities. Questions were created to allow teachers to report their experiences and understandings of their professional learning community.

Collection of Data

While primarily qualitative in design, multiple methods were used to analyze quantitative and qualitative data, which addressed the research question in this study. The research instruments that were used to collect teacher perceptions included a survey and an interview protocol. Twenty-one teachers completed the survey. The survey was categorized using a color

coding system as described by Miles and Huberman (1994). The participant responses to the survey questions were used to help determine a purposeful sample of candidates for teacher interviews. The interview protocol consisted of eight teachers that participated in the interview. The interviews were recorded and transcribed and used to collect teacher perceptions about professional learning communities. Data from the interview were used along with the open – ended questions from the teacher survey as the primary data sources for perceptions of teachers. The data were categorized and grouped according to the similarities and commonalities by using a color coding process.

Data Analysis

The surveys were then collected and data were analyzed according to commonly accepted qualitative research methods, with emergent themes and patterns identified as described by (Miles & Huberman, 1994). A multiple methods study was used to analyze the data. Data were analyzed through multiple methods. The data were first coded by themes using colors to separate them. This study began by gathering the necessary descriptive data that were needed about professional learning communities.

Survey questions were categorized using a color coding system that was used to organize and show similarities among the themes for this study. Colored dots were used for the coding system to show consistency that existed throughout the teacher perceptions. The survey reported the constructs within the theoretical framework. The data were grouped and organized according to the similarities and commonalities, as discussed by Miles and Huberman. These emerging themes and categories from participants' responses were compared to the demographic data about each of the participants, and then used to help determine a purposeful sample of candidates

for the teacher interviews. The researcher used the broad themes that were found in the literature review as a basis for judging the appropriate themes for this study. The themes for this study were organized according to how the teacher perceptions were reported in the surveys and teacher interviews. The researcher kept all names and schools anonymous, as required by the Institutional Review Board for The University of Alabama.

The results of the interview questions were categorized, and compared to the common themes that emerged through the findings from both the surveys and interviews. Each survey was grouped according to teacher perceptions for each statement. The researcher organized the collected data, as Miles and Huberman (1994) described, as having similarities and commonalities. The themes discovered assisted the researcher in explaining the findings of the research. The multiple data collections (survey and interview) strengthened the findings of the study, and increased confidence in the conclusions.

Summary

This chapter described the study methods, design, and instruments that were used in this study. The reliability and validity information about this survey explains the internal consistency and presents several common factors that exist within the survey instrument in regard to professional learning communities. Chapter IV presents the data collected in the research, and the findings from the study.

CHAPTER IV

RESULTS OF THE STUDY

Introduction

This study was designed to examine teacher perceptions about professional learning communities. The researcher wanted to determine how and to what extent professional learning communities may affect teaching and student learning in seventh grade science. Chapter's I-III of this dissertation provided background information on professional learning communities, a review of important literature significant to professional learning community research, and a description of the research methods used. This chapter describes the data collected, how the data were analyzed, and presents the findings from the study.

According to Little (2003) and Hoy and Hoy (2006), professional learning communities are believed to work by ensuring that teachers maximize instructional strategies in the classroom, and place a greater emphasis on student learning. As a result, they argued, teaching takes place with an emphasis on specific learning results, and students may achieve at higher levels. Two instruments were used to collect data about teacher perceptions on the professional learning community model. The instruments included a survey and interview. Common themes were then identified from the collected data about the perceived effects of teaching and learning in the schools studied.

Study Participants

The participants for this study consisted of seventh grade science teachers from three middle schools in the Gwinnett County Public School System. The Gwinnett County Public School System is one of the largest in the state of Georgia. The three schools selected for this study were similar in size and demographic characteristics.

School A opened in August of 2004. The school currently houses 1,260 students and has 76 teachers on staff. The school has 32% of students on free and reduced lunch. School B opened in 2004. The student population consists of 1,546 students. There are currently 82 teachers employed at school B. The total percentage of students on free and reduced lunch is 21%. School C opened in August of 1996. The school currently houses 2,770 students and 174 teachers. The percentage of students receiving free and reduced lunch is 22%.

Twenty-one seventh grade science teachers participated in the survey. The number was slightly lower than planned because 4 of the 25 teachers opted not to participate in the study. The demographic section of the survey provided the researcher with information about the specific numbers of years the teachers have been in their current schools, as well as the number of years the teachers have taught in their current subject areas.

Results of the Survey

The survey (see Appendix A) consisted of three parts. Part 1 was comprised of 43 questions that allowed the teacher to agree or disagree with each statement. The second part included 5 questions about the feasibility and relevance of professional learning communities as perceived by the individual teacher. The survey questions asked the teachers to provide feedback about their perceptions about the way their school operates in relation to a professional learning

community. Additional questions asked the participants to report how they felt about the working definition of professional learning communities, how they use a professional learning community to help their school or their students, their opinions about the support personnel needed to become a professional learning community, and the challenges of implementing a professional learning community. The third part of the survey consisted of demographic information about the individual teachers.

Survey, Part 1

Tables 3-6 present results about how the teachers answered the survey questions. The tables present the level of teachers' agreement with the items in the survey. The questions are categorized by the common themes found in the Bolam et al. research. In this study, the researcher organized the data by the themes that were evident from the data analysis. The data were organized to provide a better understanding of the themes. Each table represents a common theme and shows the results for the survey items specific to the theme that had the greatest significance to the participants.

Several components of professional learning communities were identified by all of the teachers as being representative of their learning community model. The survey results provided data supporting four themes. These data were evidenced in all three of the school climates. The four themes were learning trends, organizational support for the learning community, enquiry orientation, and planning and development.

One of the themes, support staff involvement, found in the Bolam et al. (2005) study was not found in this study. Insufficient comments about his theme were found among the teacher perceptions for a theme to emerge in this study. Support staff involvement was viewed by

various researchers from the Bolam et al. (2005) study, and by Little (2002) as being an important part of a professional learning community; however, it was not identified by the participants in this study. In addition, in this study, teachers reported that they perceived that a key contributor to a professional learning community was planning and development. This did not show up as a theme in the Bolam study; however, it was discussed and found to be important here. Teachers in the Bolam study provided some evidence that showed planning and development as being an area that showed a high rate of importance; however, it was not judged as significant by Bolam and his/her colleagues. The following tables present the themes with items and percentages of faculty who believed these to be important in this study.

Table 1

Percentage of Teachers Who Identified Learning Trends as Important to Their School's PLC

Item	Strongly Agree/Agree %	Neutral %	Strongly Disagree/Disagree %
1. Have opportunities for professional development.	100.0	0.0	0.0
2. Take responsibility for their own professional learning.	95.2	4.8	0.0
3. Give priority to learning more about student learning.	71.4	19.0	9.0
4. Learn about their own learning.	71.4	14.2	14.2
5. Give priority to learning more about subject knowledge.	71.4	14.2	14.2

Learning Trends

Table 1 presents teachers' perceptions about learning trends. The researcher categorized the statements from the survey and grouped them by this theme. Statements that provided the most evidence to support the learning trends theme are shown in Table 1. The data showed that all of the teachers agreed that they have the opportunity for professional development, and they

take responsibility for their own professional learning. The majority of the teachers, 71.4%, reported that they take part in learning about student learning, learning about subject knowledge, and learning about their own learning.

Table 2

Percentage of Teachers Who Identified Organizational Support as Important to Their School's PLC

Item	Strongly Agree/Agree %	Neutral %	Strongly Disagree/Disagree %
1. Have high expectations of students.	100.0	0.0	0.0
2. Regularly monitor the learning and progress of individual students.	100.0	0.0	0.0
3. Create conditions for pupils to feel the confidence to learn.	95.2	4.7	0.0
4. Routinely share information with parents and community.	90.4	9.5	0.0
5. Share responsibility for student learning.	90.4	4.7	4.7
6. Share a common core of educational values.	85.7	0.0	9.5
7. Are members of at least one professional team.	80.9	9.5	4.7
8. See the school as stimulating and professionally challenging.	80.9	4.0	9.5

Organizational Support for Learning Community

The statements were categorized and organized in Table 2 to show the levels of teacher agreement with the statements. A high percentage of teachers reported agreement for all of the categories listed in Table 2. For example, the teachers all agreed (100%) that they have high expectations for students, they regularly monitor the learning and progress of individual students, and they routinely share information with parents and the community. The majority of the

teachers, 80-95%, reported that they contribute to the school as a professional learning community, share responsibility for student learning, create conditions for pupils to feel the confidence to learn, share a common core of educational values, are members of at least one professional team, and see the school as stimulating and professionally challenging. The teachers perceived that these items were important components of the team design for all of the schools.

Table 3

Percentage of Teachers Who Identified Enquiry Orientation as Important to Their School's PLC

Item	Strongly Agree/Agree %	Neutral %	Strongly Disagree/Disagree %
1. Routinely collect, analyze and use data and evidence to inform their practice.	95.2	4.7	0.0
2. Take collective responsibility of pupil learning.	90.4	4.7	4.7
3. Base their approach to change on good evidence.	85.7	14.2	0.0
4. Ensure students receive constructive feedback about their work.	76.1	23.8	0.0
5. Seek out and use external research that is relevant and practical to inform their work.	71.4	27.2	4.7
6. Are involved in seeking solutions to problems facing the school.	71.4	14.2	14.2

Enquiry Orientation

Table 3 provides descriptive data about the areas that teachers reported as being important within the enquiry orientation theme. A high percentage of teachers agreed with the statements. For example, about 90% of the teachers reported that they routinely collect, analyze, and use data and evidence to inform their practice, they take collective responsibility of pupil learning, and that they base their approach to change on good evidence. They reported that they

ensure students receive constructive feedback about their work. In addition, about 75% of the teachers agreed that they seek out and use external research that is relevant and practical to inform their work, and they are involved in seeking solutions to problems facing the school. The items that are listed in Table 3 for enquiry orientation provide data that are supportive of the PLC implementation.

Table 4

Percentage of Teachers Who Identified Planning and Development as Important to Their School's PLC

Item	Strongly Agree/Agree %	Neutral %	Strongly Disagree/Disagree %
1. Learn together with colleagues.	100.0	0.0	0.0
2. Regularly discuss teaching methods.	95.2	4.7	0.0
3. Share my experiences and success.	95.2	0.0	0.0
4. Have some protected for joint planning and development.	95.2	0.0	0.0
5. Learn from each other.	90.4	4.7	0.0
6. Experiment and innovate about new curriculum.	76.1	9.5	0.0

Planning and Development

Table 4 shows a high percentage of teachers agreed with the statements about planning and development. All of the teachers (100%) said that they learned together with colleagues, 95% of teachers reported regularly discussing teaching methods, 95% of teachers said they shared experiences and successes as a group, and 95% of teachers reported that some protected time for joint planning, and development was made available. Additionally 90% of the teachers said they learn from each other, and 76% of teachers said they experiment with new curriculum.

Table 4 shows data that support the idea of planning and development as being required for professional learning communities.

Non-teaching Support Staff

Non-teaching support staff was another factor discussed in the research review as being part of a successful learning community. The non-teaching support staff included anyone who was not teaching in a classroom, for example, individuals working in the building supporting teachers on a daily basis. This could include, but was not limited to, administration, clerical, and/or custodial staff members. The teachers were asked to provide some information as to how the non-teaching support staff was viewed in their school setting. The teachers were given three statements in the survey portion to report their perceptions about the support staff. These included the non-teaching support staff is valued by teachers, the non-teaching support staff shares responsibility for student learning, and the non-teaching support staff actively contributes to the school as a professional learning community. Additional areas of the survey and interview provided teachers with opportunities to elaborate on this theme. However, only the results from the survey section on non-teaching support staff provided supportive data. There was not enough data for a theme to develop for non-teaching support staff in this study.

The following teacher perceptions about the non-teaching support staff were reported. All of the teachers reported that the support staff is valued by the teachers at each school, and that they actively contribute to the school as a professional learning community. Out of the 21 teachers who participated in this study, 18 completed this portion of the survey. Overall, it was clear that the non-teaching support staff at each school was perceived as a significant part of the

function and design of the school, and they were seen as a necessary component needed to ensure that the school is successful as a professional learning community.

Survey, Part 2

Part 2 of the survey (see appendix A) consisted of five questions designed to collect information about how teachers viewed several areas of a professional learning community. The areas that were described by the teachers included the following: the definition of professional learning communities, the challenges of maintaining a successful professional learning community, and how learning communities may affect teaching and students' learning. For example, the first question asked teachers to report how they see their school in terms of development as a professional learning community. There were five possible levels for teachers to select from: a mature/established professional learning community, a developing professional learning community, starting the journey to become a professional learning community, working to re-establish what they had previously achieved as a professional leaning community, and not yet started on becoming a professional learning community. Twenty teachers responded to this portion of the survey, and 35% of the teachers stated their school was a mature/established professional learning community. Forty-five percent of the teachers said their school was a developing professional learning community, and 15% of the teachers reported their school was starting the journey to become a professional learning community. Five percent of the teachers reported their school as working to re-establish what had previously been achieved as a professional leaning community. One teacher did not complete this portion of the survey.

All of the teachers who completed this portion of the survey (20 out of 21) said they liked the working definition of professional learning communities presented and would not change

anything in it. Two teachers said they would add an additional statement about professional learning communities to the already existing definition. One teacher stated, "She/he would include a statement about a team of teachers working together to create effective learners" (Teacher 7, School C). Another reported, "The definition could include the fact that teachers also reflect on the effectiveness of the lessons/activities as well as prepare and develop common assessments" (Teacher 5, School B).

Four main themes seemed to be evident in part 2 of the survey: learning trends, organizational support for learning community, enquiry orientation, and planning and development. These themes were consistent with the findings in the study conducted by Bolam et al. (2005).

Learning Trends

Professional development was also discussed by the participants as being a major component to a successful learning community. According to Eaker et al. (2002), the staff development process should provide the entire staff with a number of staff development opportunities throughout the entire program, during implementation, and even thereafter. This provision of new learning opportunities is a critical part of ensuring that growth takes place among the members of the learning community throughout the year. The participants in this research reported that professional development within the team was important.

Teachers reported that sustaining a professional learning community was important. One teacher stated, "Once a professional learning community is established, it is necessary to continue with a main focus on student learning in order for the learning community to be successful" (Teacher 5, School B). Another reported, "It is important to ensure that clear goals

are being established and that teams are working toward these goals" (Teacher 6, School B). Still another said, "There was a need for continued innovative training to provide methods and strategies that work to improve teaching and learning" (Teacher 1, School C).

Organizational Support for Learning Community

The climate and culture of a school were determined to be one of the themes that developed through this research. The participants described the importance of having a well defined climate and culture in order for the learning community model to be successful. The participants expressed their ideas about how the climate and culture should be designed. One teacher stated, "The climate of the group should provide an environment that teachers feel they are part of the learning community and are able to give their opinions and contributions" (Teacher 1, School C). Another teacher reported, "All members of the learning community need to feel that everyone is an equal participant and they are valued in the group" (Teacher 6, School B).

The lack of time was reported as an issue for learning communities as well as resistance. For example, one teacher stated, "Some teachers may resist the idea of meeting on a regular basis and at times they resist the collaboration process" (Teacher 5, School B). Teachers described the difficulties that take place when members of the team were reluctant to participate and resisted changes. Several commented about the need to trust each other. However, they saw trust as something that takes time and work. For example, "The initial process of designing a professional learning community takes time and should also include the creation and design of an atmosphere that is conducive to collaboration" (Teacher 6, School B). Most of the teachers reported that learning communities were valuable and beneficial to the school and to the pupils.

For example, one reported, “They are more useful and beneficial to the school instead of to the students” (Teacher 8, School C), while another teacher reported that, “Learning communities work well when more teachers buy into the system” (Teacher 4, School C).

According to Little (2003), the culture of the learning community should provide consistency and structure for the group. In these schools, it is the responsibility of the curriculum leader to ensure that meetings follow an agenda designed to cover the main priorities of the learning community. The participants in this research described the importance of having structure and guidance from administration, team leaders, and team members.

Enquiry Orientation

Collaboration was a category frequently discussed by teacher participants. In all of the data collected, collaboration was described most often by the teachers, and the importance of collaboration was evident among their learning community. Teachers reported that collaboration was important in order to hold in-depth conversations about the curriculum, instruction, and assessments on a regular basis. They reported that this process was one of the key components of their collaboration process, and that it positively affected student learning in their schools.

The teachers reported that many factors were important when a professional learning community is being designed. Leadership was one of the most often discussed aspects for a successful professional learning community. Teachers described how the leadership direction needs to come from the principal and assistant principals of the school, and that the teacher leaders should continue this direction within the curriculum teams. Several teachers described the importance of a team that was committed and delivered clear, concise goals that are set forth by the administrative team, and then are implemented through the curriculum teams. One teacher

reported, “Trust and respect are also necessary in order for each team to be able to be committed to and feel part of the team” (Teacher 2, School B). Another stated, “The team needs to have time for building trust by ensuring that time for collaboration and planning is established on a regular basis” (Teacher 4, School B).

Teachers reported that sustaining a professional learning community posed major challenges, especially when they were continuing to reach new goals. One teacher stated, “It is important to continue to look at new goals and ideas in order to keep the team moving forward and growing” (Teacher 1, School B). Another stated, “We can accomplish this by continuing to analyze areas of weakness, for example, student data and/or teaching methods” (Teacher 7, School B). One teacher reported, “Time and lack of commitment by team members were possible problems when sustaining a learning community” (Teacher 8, School C). This viewpoint was echoed by several teachers. As discussed in previous chapters, there are challenges that teams have to consider and collaboratively work to overcome. Riley and Stoll (2004) described problem solving as one of the major contributors to a professional learning community.

According to the teachers who participated in this study, constantly discussing the curriculum and instruction enabled the team to more effectively align the curriculum to meet the needs of the students through purposeful instruction. Teachers reported that common assessments were used to provide clear data about specific topics that may need to be revisited with further instruction. They also reported that the assessments helped identify which students may need additional assistance. The focus on data was a big part of a professional learning community, and it enabled the teachers to keep the curriculum consistently aligned with instruction. The data also helped guide the curriculum and instruction so the team knew where

they were going and how they got there through constant planning, designing, and implementing teaching strategies, focused on improving student learning.

Planning and Development

According to Little (2003), team meetings provide a place for teachers to come together to plan and design effective teaching strategies on a regular basis. In the schools in this study, the structure of the team meetings was an important part of the success of the learning community. According to Hord (2008), team meetings should have a purpose and the usefulness of time should also be considered. Hord explained how learning communities organize teachers, so they are better able to engage in purposeful, collegial learning. Several components of team meetings were reported by the teachers studied. For example, "It is important for teams to establish cohesiveness within the group and focus on setting up goals for the team" (Teacher 7, School C). Teachers reported the importance of creating an atmosphere where meeting frequently was part of the normal weekly activity and going beyond just planning together to analyze how it has helped student learning. Meeting on a weekly basis was believed to provide teachers with the necessary amount of time that was needed to accomplish the school goals as reported by the participants.

Teachers reported that collaboration time should be consistent and scheduled weekly in order to discuss the curriculum and instruction that is most beneficial to teaching and learning. One teacher stated, "The collaboration time should involve teacher participation and the development of knowledge and skills that is, in turn, implemented in the classroom" (Teacher 6, School B). During collaboration, one teacher discussed the importance of tolerance. She stated, "It is necessary for teachers to respect a variety of ideas within the group, so every member feels

he/she can trust each other (sic)" (Teacher 2, School B). "Teachers should be open and flexible when new ideas are shared among the group and have a willingness to try new things," another stated (Teacher 8, School C). One teacher argued about the importance of constructively critiquing the group and how the group performs as a whole. "This helps the teachers, team leader, and administrators to see the strengths and weaknesses within the team," she said. (Teacher 7, School B). Another elaborated, "This process can be very helpful for the team to see how members agree or disagree about the performance of the team as a whole. It allows teachers to show areas they need to work on to improve and grow as a team" (Teacher 6, School B). Several teachers reported that collaboration was the key to their school's success. One teacher said, "Collaboration enables us to gain more ideas and knowledge by problem solving and discussing issues with other science teachers" (Teacher 4, School C).

Several teachers described the challenges that should be considered when schools are interested in becoming a professional learning community. For example, "Time was a significant issue when becoming a professional learning community." One seventh grade teacher commented that time was necessary on a regular basis in order for collaboration and planning to be successful. This advice is given in the literature; according to Schmoker (2004), a professional learning community should meet on a weekly basis with a specified agenda to ensure that meetings are productive. His advice to administrators was that incorporating the necessary time needs to be part of the implementation process and should be consistently provided.

Survey, Part 3

Part 3 of the study provided the researcher with demographic information about the teachers. This included whether or not the teachers have taught in the science professional

learning community and the years of experience they have in their field of expertise. The data showed the majority of the teachers have been at their current schools since the school opened. The teaching experiences ranged from 2 to 32 years in their specific subject area of science. For example, 50% of teachers have taught science for 6-15 years, 39% of the teachers have taught science for 15+ years, and 11% of the teachers have taught for 1-5 years.

Teacher Interview Results

Teachers were selected for interviews based on their survey responses. In addition, specific teachers were asked to participate in the interview process based on their knowledge and understanding of a professional learning community. The interviews were recorded and transcribed. The data were added to those collected and reviewed as Part 1 and Part 2 of the survey. The results from Part 3 of the survey provided additional information about teacher experiences. Twelve teachers were initially invited to participate; however, only 8 teachers were actually interviewed. The teacher interviews (see Appendix B) consisted of 12 questions about learning communities, collaboration, and student learning. The interview questions were designed to provide additional information to describe the extent to which professional learning communities might be affecting the way teachers were teaching and the students' were learning. The interview questions focused on specific areas of professional learning communities and allowed the participants to describe his/her perceptions. The teacher perceptions as described in the literature helped establish an in-depth understanding as to how professional learning communities were working and any effects they perceived on student learning. These data were compared to data collected from the surveys in order to respond to the research questions.

The following are the results from the interviewees' responses. Some of the statements were made by more than one teacher. The responses to these questions are only reported one time, even if several teachers made the same comment. The results have been grouped according to the themes and arranged as teacher perceptions were used to respond to the research questions.

Research Question

What are the teachers' perceptions of seventh grade learning communities' impact on teaching and on student learning in science?

Four themes were found: (1) learning trends, (2) organizational support for learning community, (3) enquiry orientation, and (4) protected time for joint planning. Interviews were conducted with eight teachers about their perceptions of professional learning communities, and about school culture and climate, collaboration, professional development, and team meetings. These major components were described by Little (2003) as making a difference in how teachers teach and how students learn. These questions enabled the researcher to understand teacher perceptions about the professional learning community models, and how they were perceived as benefiting teaching and learning. These data also help explain the attitudes and feelings of the individual teachers.

Teachers reported their perceptions about the significance of each of the categories in the professional learning community model used. Their comments support the themes as described by Bolam et al. (2005). The results of the survey and interview items in this study were similar to those found in the Bolam et al. study, with the main themes of learning trends, organizational support for learning community, enquiry orientation, and planning and development being

perceived by teacher. However, only four of the themes identified in the Bolam et al. (2005) study were found in this study. These four themes are described separately.

Learning Trends

Joyce (2004) described the need for continued professional development that provides teachers with content designed to develop skills and knowledge for effective use of teaching strategies. Professional development was a theme that the participants in this research perceived as being an important component of a professional learning community. Participants reported that professional development was needed in order to ensure teachers continued growth within their learning community. For example, one teacher said, "Teachers need to have continued protection of planning and be provided innovative training" (Teacher 1, School C). Another teacher stated, "It is important to give and take, to be willing to try new things, and not become stagnant and lose focus" (Teacher 2, School B). The items reported by teachers were the importance of team meetings and their structure. For example, one teacher reported, "Creating an atmosphere when meeting frequently is part of a normal weekly activity" (Teacher 4, School B). Another stated, "We need to go beyond just planning together, but to analyze how it has helped student learning, and teachers establishing cohesiveness and setting (sic) up goals to work toward" (Teacher 7, School C).

Organizational Support for Learning Community

The discussion of school culture and climate has been explained by King (2004) and Riley and Stoll (2004) as being one of the main contributors of a professional learning community. The researcher found this to be one of the major themes teachers perceived as essential to professional learning communities. This theme was consistently repeated through the reports of the teachers and their views on professional learning communities. Teachers reported their thoughts and ideas about school culture and climate; for example, "Teams establishing cohesiveness and setting up the goals for the team, mutual trust and respect for colleagues" (Teacher 7, School C). Another reported, "It is important to have a willingness to consider other teachers' ideas, and continuing to look at areas of weakness, and to critique each other constructively" (Teacher 7, School B). Teachers reported the importance of collaboration within the learning community. For example, one teacher said, "Collaboration should be part of the professional learning community to help discuss and improve the needs of the students" (Teacher 1, School C).

Communication has been identified as one of the necessary components of a learning community by Joyce et al. (1998). All of the teachers here said that communication was a key component in order for a learning community to be successful and operational. One teacher reported, "Communication is needed in order for the learning community to work" (Teacher 7, School B). Another stated, "When an open line of communication is evident, team members feel they can be honest and trust the members of the group to be honest" (Teacher 9, School C). Still another reported, "Every member of the learning community needs to feel that he/she is an important part of the group and that his/her opinion matters. It is important for all of the team members to be able to openly discuss the topics at hand and move forward with group

consensus" (Teacher 1, School C). The participants consistently reported that communication was necessary in order for every member to feel part of the group and for the community to be successful.

Getting every team member to be "on board" is something that the teachers discussed as being a challenge for the learning community. One participant reported, "It is also challenging to get all of the members to be active participants, for example sharing ideas or lessons and contributing during meetings" (Teacher 3, School B). Another stated, "Ensuring that everyone is involved and working to better the team is a challenge" (Teacher 5, School B).

Enquiry Orientation

According to Riley and Stoll (2004), collaboration is an ongoing process that involves teachers who are consistently working together to create a common goal through discussion, problem solving, and sharing knowledge to ensure the success of teaching and learning. Collaboration is one of the most often reported characteristics of a successful professional learning community. Teachers participating in this research consistently reported the necessity of collaboration and the significance it brings to regular team meetings and the success of the learning community. For example, one teacher reported, "Collaborating about curriculum, instruction, and assessments helps to ensure that the necessary components of the required academic knowledge and skills are being met" (Teacher 6, School B). Another stated, "It is important for our team to have a visual outlook that allows us to see the path ahead" (Teacher 1, School C). Still another reported, "Teachers are constantly assessing themselves by collaborating about the curriculum, instruction, and assessments that are being developed among our team" (Teacher 6, School B).

According to the teachers interviewed, many goals were designed and set for each team. The goals were designed by the school and by the team of teachers. One teacher reported,

> School wide goals are designed by the Local School Plan for Improvement Committee (LSPI). These goals are used to guide our overall goals for the school. The administration team helps ensure that these goals are being met within each team of teachers through their weekly meetings. (Teacher 3, School B)

Another teacher stated, "Each team of teachers for each subject area sets goals for their specific group in addition to the goals that are designed for the school. Goals are set in place early in the year, based on student performance data" (Teacher 6, School B). Still another teacher reported,

> Teachers work to analyze data on student learning and look for areas that need to grow. These goals are set and discussed each week by the team. The team discusses ways they can work to meet the goals and the best ways for this to happen. (Teacher 1, School C)

"The curriculum leader and team members are constantly working together to establish the weekly agenda where these goals are discussed on a regular basis," another stated (Teacher 6, School B).

Several strategies were described by the participants as being important to the success of a professional learning community. They included the following: common assessments, Criterion Referenced Competency Test (CRCT) data, benchmarks, writing scores throughout the school, and a group survey on how the learning community is working to accomplish the school's goals. Several teachers reported that common assessments provided data about their own personal teaching successes as well as student mastery on specific content. The CRCT data and benchmark data were also described as being used to show student growth and how well students understood and mastered the knowledge and skills for the specific science curriculum. According to Grossman (2001), it is important for teachers to continually monitor their understanding of specific content areas for their own development as a teacher as well as for the individual students.

Data use was identified by several participants as a help with planning. One participant stated, "Data helps (sic) us to develop lessons that are structured to ensure student learning is taking place. This may include lessons that require re-teaching specific subject matter or follow up lessons that revisit material to check for mastery" (Teacher 3, School B). Another teacher stated, "Assessment data should be used to guide instruction by reviewing frequently missed questions" (Teacher 7, School C). Still another reported, "Analyzing teaching methods to determine how effective they are is also an important job of the learning community" (Teacher 5, School B). One teacher said,

> Just going over frequently missed questions and retesting does not give students a clear understanding of the material they are having a difficult time understanding. It is important for students to understand the material they are being taught, so they can obtain mastery on the subject matter. (Teacher 3, School B)

Several participants reported the use of common assessments. For example, one teacher stated, "Common assessments are pretty well developed and only require small amounts of adjustments from the team. This allows the group to focus more on sharing lessons, ideas, and experiences during collaboration time" (Teacher 7, School B). Another teacher reported, "Writing is one of the main focuses, that and the collaboration that takes place ensures that teachers understand the process and are clear about how writing instruction will take place in the classroom" (Teacher 5, School B). The teacher also commented, "This process is something that is new for a lot of the science teachers and it requires that teachers are well prepared in order to effectively help students to become successful writers in the science content" (Teacher 5, School B). As Little (2003) described, collaboration that takes place among the teachers provides them with guidance and support, when introducing new materials into the classroom.

Many teachers reported that team minutes or notes were an important part of the curriculum meeting each week. One teacher said,

> Minutes are taken by a note taker at each meeting about the major topics that were discussed. These minutes are then typed up into a document and distributed to each teacher on the team. The administration also receives a copy of the document for their documentation about the meeting. (Teacher 7, School B)

Several teachers described how it helped to have the minutes from the meeting as a refresher of the points that were discussed. One teacher reported,

> Meetings sometimes become intense and time gets away from us as we are collaborating and planning. I sometimes forget to write a note for myself and the minutes are good reminders about the meeting and things that I may need to go back and do. (Teacher 9, School C)

Several teachers reported that they printed the minutes and kept them for their own records. Overall, teachers seemed to think the minutes were something that were useful and helped them reflect on the specific topics that were important from the meeting. Only one teacher reported that the minutes were not something that she/he used that often.

Planning and Development

Teachers reported that team meetings were necessary and critical to the professional learning community. Teachers described the weekly meeting as being an important component that allowed them to revisit specific topics as a whole group with little time lapse between meetings. One stated, "Teachers are able to discuss issues in curriculum and instruction more frequently, which allows teachers to provide opportunities to evaluate the lessons and adjustments can be made to the curriculum and instruction when necessary" (Teacher 3, School B). Another teacher reported, "Meeting on a weekly basis is believed to provide teachers with the necessary amount of time that is needed to accomplish these goals" (Teacher 6, School B).

According to Little (2003), collaboration is a major component of a learning community. All of the participants described collaboration as essential and important for their learning

community. The following are quotes taken from teachers' perceptions about collaboration, and how it is working for their learning community model. According to the participants interviewed, collaboration was necessary and allowed for problem solving to occur among the team. One teacher said, "Developing and implementing lessons that are effective is difficult and time consuming" (Teacher 6, School B). The participants reported the importance of collaborating about curriculum, instruction, and that assessments helped to ensure that the necessary components of the required academic knowledge and skills were being met. A teacher stated, "When we meet as a team regularly we can plan the instructional strategies that will be most effective in order to maximize student learning. This helps us know where we are going as a team" (Teacher 9, School C). Another stated, "It is important for our team to have a visual outlook that allows us to see the path ahead" (Teacher 1, School C). Still another reported, "Teachers are constantly assessing themselves by collaborating about the curriculum, instruction, and assessments that are being developed by the team of teachers" (Teacher 6, School B). Several teachers commented about the curriculum and how it was important to the success of the students. One teacher said "Our collaboration time gives us time to align our curriculum with the instructional strategies that we use in the classroom" (Teacher 6, School B). Another stated,

> Professional learning communities are made up of teachers with a variety of strengths. The strengths of one teacher can help another teacher that may not be as strong in a specific area. Providing those teachers with the ideas and experiences can in turn make the entire team stronger. (Teacher 1, School C)

Teachers reported the importance of preparedness in the classroom and how being properly prepared for classroom instruction can sometimes be one of the biggest challenges for teachers. For example, King (2004) described how professional learning communities are designed to enable teachers to discuss these types of challenges before the members of their learning community. Several teachers expressed the importance of sharing their ideas, lessons,

and experiences with other teachers within the group. For example, the following are typical statements teachers made during the collaboration process among their learning community. One teacher said, "Everyone is gaining something from the team members and taking useful information back to the classroom" (Teacher 9, School C). Another stated, "Teachers can help each other discover better ways to reach students and be effective teachers" (Teacher 7, School C). This type of discovery comes from collaboration that provides opportunities for teaching and learning to take place on a consistent basis.

Common assessments help teachers know where the curriculum and instruction need to be focused. One teacher said, "The academic knowledge and skills (AKS) should be looked at carefully in order to develop common assessments that cover that appropriate material" (Teacher 3, School B). Another stated, "The assessments guide the curriculum and instruction, which helps teachers determine which lessons will help maximize student learning" (Teacher 6, School B). Still another reported, "When common assessments have been scored, it is important for teachers to look at the data and determine if the assessment accurately measured the curriculum and instruction that was taught" (Teacher 7, School B). Another stated, "Assessments identify the questions that students found more challenging and more often missed. These questions should be discussed and reviewed for future re-teaching of the subject matter" (Teacher 3, School B). The teacher interviews suggested that common assessments gave meaning to the student data and learning and provided the teachers with a map that helped them know where the curriculum and instruction should be focused.

Several participants reported that meeting on a weekly basis allowed teachers to revisit specific topics as a whole group with little time lapse between meetings. One teacher stated, "There are set goals that each team must reach throughout the year including designing

assessments, sharing lesson plans, discussing strategic teaching strategies, reviewing data on assessments, and curriculum and instruction implementation" (Teacher 3, School B). According to Little (2003), meeting on a weekly basis is believed to provide teachers with the necessary amount of time needed to accomplish these goals.

Several teachers reported that the factors within a learning community model contribute to student success. These teachers described how students benefit, for example, "Students benefit when teacher collaboration is taking place about curriculum and instruction on a regular basis" (Teacher 5, School B). One teacher said, "Student success can also be attributed to teachers sharing ideas among the team" (Teacher 3, School A). Another teacher stated, "It helps when developing instructional strategies that are focusing on student learning" (Teacher 5, School C). Another argued, "Teachers who consistently work together and share ideas help each other learn and at the same time are positively affecting student learning" (Teacher 7, School C). All of the teachers that were interviewed discussed the importance of collaboration and how this was necessary in order for the learning community to be successful.

Summary of Teacher Survey Results and Teacher Interview Results

Two types of data were used to answer the question: A teacher survey (Appendix A) and an interview (Appendix B). The survey included 43 survey questions and 5 questions about teacher perceptions on professional learning communities. Four themes were found: (1) learning trends, (2) organizational support for learning community, (3) enquiry orientation, and (4) planning and development. Interviews were conducted with eight teachers about their perceptions of professional learning communities, and about school culture and climate, collaboration, professional development, and team meetings. These major components were

described by Little (2003) as making a difference in how teachers teach and how students learn. These questions enabled the researcher to understand teacher perceptions about the professional learning community models, and how they were perceived as benefiting teaching and learning. These data also help explain the attitudes and feelings of the individual teachers.

Teachers reported their perceptions about the significance of each of the categories in the professional learning community model used. Their comments support the themes as described by Bolam et al. (2005). The results of the survey and interview items in this study were similar to those found in the Bolam et al. study, with the main themes of learning trends, organizational support for learning community, enquiry orientation, and planning and development being perceived by teacher. However, only three of the themes identified in the Bolam et al. (2005) study were found in this study.

The collected data provided specific information about the perceptions of seventh grade science teachers of a professional learning community model. Teachers described their observations and perceptions about a learning community model, and how specific practices, such as consistent collaboration and team planning, are probable contributors that may lead to successful teaching and learning. For example, one teacher reported "A collaborative setting allows teachers to bounce ideas off one another and provide suggestions, so that they can improve lessons that are beneficial to all students" (Teacher 3, School B).

Through the use of the two data sources, surveys and interviews, the researcher found four common themes that support the idea of a professional learning community and the characteristics that teachers perceived as contributing to successful teaching and learning. The four themes that have emerged from the research include the importance of learning trends,

organizational support for a learning community, enquiry orientation, and the provision of planning and development.

The teachers perceived that a professional learning community model was a major part of the school dynamics in each of these three schools. For example, one teacher reported the following:

> Our team is constantly striving to create engaging lessons, mutual trust and respect for colleagues is important for our team, collaboration is key to improvement of student learning, and our team of teachers are consistently working together to create effective learners. (Teacher 2, School B)

King (2002) described the importance of the school culture and climate within a school as being the driving force of a strong, successful learning community that is able to establish clear, concise goals and carry out those goals successfully. Hoy and Hoy (2006) explained how the use of professional learning communities may help establish the climate within the school, based on how the learning communities are implemented.

Collaboration, as described by Riley and Stoll (2004), is seen as a necessary component of a successful learning community. According to Joyce (2005), professional development should provide faculty members with an understanding of the process of change, provide teachers who are credible to the practice, and should take place on more than one occasion. Grossman (2001) explained how teachers needed to find and schedule time during the school day to enable teachers to meet and collaborate on a regular basis. These themes are discussed as being key components for a successful learning community, which may work to ensure teaching and learning that promote successful student learning.

Summary

This chapter reviewed the data collected during this research that provided some evidence that supports the idea of a professional learning community model. The researcher has identified four themes: learning trends, organizational support for a learning community, enquiry orientation, and planning and development, which seemed to be the most significant, according to the data collected in this study about professional learning community models as perceived by participants in this study. Chapter 5 will report the summaries and conclusions found in this study.

CHAPTER V

CONCLUSION, SUMMARY, AND DISCUSSION

Introduction

This chapter includes a summary of the findings, discussion of results, implications, and recommendations for future research on professional learning communities. The purpose of this study was to determine teacher perceptions about how three Gwinnett County middle schools were working as professional learning communities. According to Little (2002), understanding how teaching affects student learning enables teachers to focus on ways to improve instructional strategies and student learning through their collaborative efforts.

This study investigated how learning communities may affect teaching strategies that may have an impact on student learning. The researcher used a slightly modified version of the Bolam et al. (2005) survey and teacher interviews to collect data for this study. One primary research question was developed by the researcher: "What are the teachers' perceptions of seventh grade learning communities' impact on teaching and on student learning in science?"

The researcher selected three middle schools with similar demographics and school size to examine the perceived effects of a professional learning community model and the effects on teaching and learning. Twenty-five teachers were asked to participate in the study. Of the 25 surveys that were administered, 21 were returned for a response rate of 95%. Teachers were selected, based on their responses to the survey, to participate in an interview. Of the 12 teachers selected, 8 agreed to participate in the interview portion of the study.

This study was based on a theoretical framework, about the use of professional learning communities. According to Joyce (1989), professional learning communities should provide opportunities for collaboration and support for teachers, so that curriculum and instruction can be designed and implemented for maximum student learning. Works from Dewey (1933) and Meiklejohn (1932), and their ideas on student- centered learning, along with the ideas about professional learning communities from recent research of Little (2002), King (2002), and Joyce (2004) that encourage teachers to work collaboratively to discuss, create, plan, implement, and solve student learning problems related to curriculum, were used. Teacher collaboration is believed to create opportunities that may have a positive impact on effectiveness of instructional strategies and on student learning as described by Bolam et al. (2005) and Schmoker (2006).

Discussion of the Findings

Professional learning communities have become a popular topic in education over the last 2 decades. However, research that has been conducted on this topic has focused more on reviews or suggestions about professional learning communities and teams working together through collaboration instead of any effects on student learning. When reviewing research on professional learning communities, it became evident that the term "professional learning community" has a variety of meanings for different individuals, groups, and audiences; for example faculty learning communities (FLC); communities of learners; knowledge building communities; school assistance and intervention teams (CAI); and curriculum, instruction, and assessment teams (CIA) are just a few. However, many of the practices that are used in implementation efforts portray similar characteristics.

The researcher identified several components in the literature review to help provide a more in-depth understanding about the research on professional learning communities. In this research, four primary themes were perceived to be present, and were believed by the study participants to be important in the development of effective instructional strategies and in the improvement of student learning. These components include organizational support for the learning community, updated information on learning trends, enquiry orientation, and planning and development. Prior research on professional learning communities does not include much supportive data about effects of professional learning communities on teaching and learning.

In the Bolam et. al. (2005) study, support staff involvement was discussed as one of the four themes of the study. The data provided evidence to show that the involvement of the support staff was important. However, the data that were gathered in this study on professional learning communities showed only some importance in regard to support staff involvement. The literature suggests that support staff involvement is important and part of a professional learning community. However, the literature also describes several key components of a professional learning community. Due to the minimal support for support staff involvement in this study, a theme did not emerge.

The study conducted in three Gwinnett County middle schools provides some evidence that the teachers perceived that the professional learning community models used by the three middle schools may be affecting student learning. The three middle schools in this study do not label their collaborative teams as professional learning communities; however, the data collected offers supportive evidence to suggest that these schools portray the characteristics that have been described by Joyce (2004), King (2002), Little (2002), and Schmoker (2004) as professional learning community models.

This study investigated the relationship between professional learning communities and the perceived impact they may have on teaching and learning. Data showed the presence of characteristics of a professional learning community and the components that focus on the collaboration as presented in these learning communities. Teacher perceptions about professional learning communities were described. Purposefully selected participants provided additional interview data about teacher perceptions. These data provided the researcher with details and information that were supportive of the use of professional learning communities in this study.

As our nation's focus on education has continued to tighten over the past decades, the demand for greater accountability and responsibility has increased. This demand has forced educators to look at teaching practices and to access how they are affecting student learning. This study has provided some data on how teachers from the three middle schools believe professional learning communities are providing the necessary components that may be working to ensure that teaching and learning are the primary focus in education today and in the future.

Professional development was discussed by the participants as being a major component to a successful learning community. According to Eaker et al. (2002), the staff development process should provide the entire staff with a number of staff development opportunities throughout the entire program, during implementation, and even thereafter. This provision of new learning opportunities is a critical part of ensuring that growth takes place among the members of the learning community throughout the year. The participants in this research reported that professional development within the team was important. This characteristic of a professional learning community is important in continuing to build good teaching practices that are changing the way teaching and student learning are taking place in the classroom.

The climate and culture of a school were determined to be one of the characteristics that developed throughout this research. The participants described the importance of having a well-defined climate and culture in order for the learning community model to be successful. The participants expressed their ideas about how the climate and culture should be designed as to provide a professional learning community that contributes to better teaching practices and student learning. As the research suggests, a professional learning community must have the necessary support in order to effectively impact teaching and student learning. The data show that this characteristic was believed to be evident in an operational professional learning community and the participants provided some evidence to show this as being a contribution to a professional learning community.

Collaboration was frequently discussed by teacher participants. In all of the data collected, collaboration was described most often by the teachers, and the importance of collaboration was evident among their learning community. Teachers reported that collaboration was important in order to hold in-depth conversations about the curriculum, instruction, and assessments on a regular basis. They reported that this process was one of the key components of their collaboration process, and that it positively affected student learning in their schools. This characteristic seems to influence the success of a professional learning community.

If collaboration is taking place and teachers are talking and discussing curriculum and instruction on a regular basis, it is going to make a difference in the classroom. Assessing how these teaching practices are working allows teachers to approach teaching with student learning in mind. According to the teachers who participated in this study, constantly discussing the curriculum and instruction enabled the team to more effectively align the curriculum to meet the needs of the students through purposeful instruction.

According to Little (2003), team meetings provide a place for teachers to come together to plan and design effective teaching strategies on a regular basis. In the schools in this study, the structure of the team meetings was an important part of the success of the learning community. According to Hord (2008), team meetings should have a purpose and the usefulness of time should also be considered. Hord explained how learning communities organize teachers, so they are better able to engage in purposeful, collegial learning.

Limitations

The research has limitations that may have affected the outcomes of the study. Participants for this study had a variety of teaching experiences. The teaching experiences and years of teaching in their subject areas varied from school to school. These experiences may have had an effect on the knowledge and understanding each teacher had about professional learning communities, including specific instructional strategies that affect student learning in science. Another limitation is that the surveys and interviews collected only teacher perceptions, which may differ from what actually happened.

Practical Implications

According to Bolam (2004), professional learning communities are designed to ensure that teachers have the opportunity to work in a collaborative setting on a regular basis to develop, plan, and implement teaching strategies that promote student learning. The idea of a professional learning community must be studied to determine any evidence that suggests teachers work to promote student learning. This study was conducted to determine how professional learning communities were impacting teaching strategies and student learning. The results of this study

provided the researcher with four themes that provided continued support for a professional learning community. The implications from this study can provide educators with a basis of information to help design learning communities that can be used to improve teaching strategies and student learning.

The findings from this study provide educators with a professional learning community design that can be created for their school. Once the school determines its goals and visions, then learning communities can be put in place. The learning community will be the place where effective teaching strategies, strengths and weaknesses of students, and continued assessment of successful teaching and learning are shared and discussed. The literature can also be helpful for educators, as they are trying to better understand professional learning communities and how they are changing teaching practices and student learning.

Future Research

According to Schmoker (2006), when professional learning communities are consistently focused on teaching and learning, there is an increase in student learning. The results from this study can be used as a building block for future research in this specific area of professional learning communities. Additional research should be completed on school-wide effects of professional learning communities on student learning; how professional learning communities may vary at elementary school, middle school, and high school levels; various factors that may be considered including staff development, professional experience, and how long the professional learning community has been established within the school.

A study on similarities and differences among elementary, middle, and high school professional learning communities might be beneficial in showing how learning takes place

within each subject area, as well as how it continues through each subject from one grade to the next. Another study that examines student achievement and changes that occur over an extended period of time may help to show the long term affects of professional learning communities. In addition, a replication of this study could be done on a larger scale that studies several other middle schools across the state of Georgia or from one county to another. Obtaining information on a larger scale may help to show continued results that suggest professional learning communities are making a difference in curriculum and instruction and changing teaching practices and student learning.

Conclusion

Professional learning communities consist of several components, and when they are combined successfully they may increase how teachers are teaching and how students learn. The professional learning community model does not always portray the same characteristics from one team or school to another. However, what makes a team more likely to be successful is based on the structure of the learning community, the goals that are set in place, and the collaboration that exists on a regular basis.

As described by the participants of this research, it is necessary to collaborate about developing goals to promote high levels of learning. Collaborative teams were believed necessary in order for teachers to develop, implement, and ensure that effective instructional strategies are being used to promote student learning. The primary focus of a collaborative learning community is improving student learning through the use of effective teaching strategies. Professional learning communities focus on continuous improvement of learning through consistent assessment of student learning. As argued by Schmoker (2006), learning

communities are involved in developing and clarifying a shared understanding of instructional leadership, identifying practical ways to improve the quality of student work, working to improve school improvement efforts of everyone, increasing content knowledge and understanding, maximizing instructional strategies, and by increasing student learning results.

The teachers reported favorable perceptions of the effects of their professional learning community. They reported that their professional learning community was continuing to move in a positive direction, that it provided an opportunity for teacher growth, and that it ensured student learning is taking place. The themes identified in this research as being important to their professional learning community included learning trends, organizational support for the learning community, enquiry orientation, and planning and development. These themes provided the researcher with supportive evidence that professional learning communities are working to improve instructional strategies that make a difference in the students' learning.

Teachers perceived that the professional learning community's structural components were major contributors to the success of a functioning professional learning community. The research offers an outline of what schools should look at when developing and implementing a professional learning community, as well as what methods need to be understood and followed in order for the professional learning community to be successful. The evidence from the research suggests that professional learning communities' may improve teachers' content knowledge and teaching strategies.

The results of this study provide some evidence to support the primary assumption that professional learning communities may impact teaching and learning. The research shows four primary themes that seem to capture the essence of a successful learning community through the data collected on teacher perceptions. From the results of this study, the researcher concluded

that effective teaching should include constant collaboration that involves understanding and growth, which is geared toward teaching strategies used to make a difference in student learning. Further, the climate and culture of a school should not just focus on strategies that improve student learning, but should also be focused on working to improve teaching and learning strategies that are meaningful and effective for teachers as well. More research needs to be conducted on professional learning communities to investigate the effects they may have on student growth and learning.

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APPENDIX A

SURVEY

Survey/Questionnaire Protocol

The Professional Learning Communities Survey will be administered to the Science Departments of three schools that are participants of my study. A meeting will be set up for the surveyor to speak to the group of teachers at each school about the survey, the time frame for completing the survey, and future interviews. The surveyor will collect the surveys in a 2-3 week time period. Once the surveys are collected, individual interviews will be conducted with specific teachers based on possible answers to the survey questions.

Professional Learning Communities

Part 1:

A Professional Learning Community is designed so that teachers are provided with an opportunity to work in collaborative teams to develop, plan, and implement lessons that are innovative and promote student learning.

A Learning Community is designed so that teachers are provided with an opportunity to work in collaborative teams to develop, plan, and implement lessons that are innovative and promote student learning.

In completing this section, please circle whichever of the following best reflects your position
For each statement, please circle <u>one</u> number on scale A and <u>one</u> number on scale B.

<u>Scale A</u>
How does this apply to you?
1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

<u>Scale B</u>
Has this changed in the past two years?
1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

Teachers in your science learning community?	***How does this apply to your science department?***	***Has this changed in the past two years?***
1. Take collective responsibility for pupil learning.	1 2 3 4 5	1 2 3 4 5
2. Base their approach to change on good evidence.	1 2 3 4 5	1 2 3 4 5
3. Create conditions for pupils to feel the confidence to learn.	1 2 3 4 5	1 2 3 4 5
4. Learn together with colleagues.	1 2 3 4 5	1 2 3 4 5
5. Ensure students receive constructive feedback about their work.	1 2 3 4 5	1 2 3 4 5
6. Actively seek ideas from colleagues in other schools.	1 2 3 4 5	1 2 3 4 5
7. Set learning targets for individual students.	1 2 3 4 5	1 2 3 4 5
8. Routinely collect, analyze and use data and evidence to inform their practice.	1 2 3 4 5	1 2 3 4 5
9. Have high expectation of students.	1 2 3 4 5	1 2 3 4 5
10. Seek out and use external research that is relevant and practical to inform their work.	1 2 3 4 5	1 2 3 4 5
11. Have time dedicated to classroom observations.	1 2 3 4 5	1 2 3 4 5
12. Regularly monitor the learning and progress of individual students.	1 2 3 4 5	1 2 3 4 5

For each statement, please circle <u>one</u> number on scale A and <u>one</u> number on scale B.

<u>Scale A</u>
How does this apply to you?
1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

<u>Scale B</u>
Has this changed in the past two years?
1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

	How does this apply to your science department?					***Has this changed in the past two years?***				
13. Use professional/subject associations for professional learning.	1	2	3	4	5	1	2	3	4	5
14. Share a common core of educational values.	1	2	3	4	5	1	2	3	4	5
15. Think their work load is too heavy.	1	2	3	4	5	1	2	3	4	5
16. Are involved in seeking solutions to problems facing the school.	1	2	3	4	5	1	2	3	4	5
17. Are members of at least one professional team.	1	2	3	4	5	1	2	3	4	5
18. Regularly discuss teaching methods.	1	2	3	4	5	1	2	3	4	5
19. Share my experiences and success.	1	2	3	4	5	1	2	3	4	5
20. Experiment and innovate about new curriculum.	1	2	3	4	5	1	2	3	4	5
21. Receive training in how to work and learn in teams.	1	2	3	4	5	1	2	3	4	5
22. Have opportunities to take on leadership roles.	1	2	3	4	5	1	2	3	4	5
23. See the school as stimulating and professionally challenging.	1	2	3	4	5	1	2	3	4	5
24. Routinely share information with parents and community.	1	2	3	4	5	1	2	3	4	5
25. Learn from each other.	1	2	3	4	5	1	2	3	4	5
26. Take responsibility for their own professional learning.	1	2	3	4	5	1	2	3	4	5
27. Give priority to learning more about student learning.	1	2	3	4	5	1	2	3	4	5
28. Have dedicated time to be mentored in a new role.	1	2	3	4	5	1	2	3	4	5
29. Have opportunities for work shadowing.	1	2	3	4	5	1	2	3	4	5
30. Engage in team teaching.	1	2	3	4	5	1	2	3	4	5

For each statement, please circle <u>one</u> number on scale A and <u>one</u> number on scale B.

<u>Scale A</u>
How does this apply to you?
1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

<u>Scale B</u>
Has this changed in the past two years?
1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

	How does this apply to your science department?					***Has this changed in the past two years?***				
31. Learn about their own learning.	1	2	3	4	5	1	2	3	4	5
32. Have some protected time for joint planning and development.	1	2	3	4	5	1	2	3	4	5
33. Say they experience undue stress in their job.	1	2	3	4	5	1	2	3	4	5
34. Use private consultant for professional learning.	1	2	3	4	5	1	2	3	4	5
35. Systematically give feedback of external courses to colleagues.	1	2	3	4	5	1	2	3	4	5
36. Give priority to learning more about subject knowledge.	1	2	3	4	5	1	2	3	4	5
37. Share responsibility for student learning.	1	2	3	4	5	1	2	3	4	5
38. Have opportunities for professional development.	1	2	3	4	5	1	2	3	4	5
39. Are satisfied with their job.	1	2	3	4	5	1	2	3	4	5
40. Actively contribute to the school as a professional learning community.	1	2	3	4	5	1	2	3	4	5

Non-teaching support staff in this school:

Non-teaching support staff would be anyone who is not teaching in a classroom. This could include administration, clerical and/ or custodial staff members.

41. Are valued by teachers.	1	2	3	4	5	1	2	3	4	5
42. Share responsibility for student learning.	1	2	3	4	5	1	2	3	4	5
43. Actively contribute to the school as a professional learning community.	1	2	3	4	5	1	2	3	4	5

Part 2

The idea of the school as a professional learning community is relatively new and the purpose of this research is to investigate its feasibility and relevance. The provisional, working definition used in this research is:

"Usually a school attempting to develop a professional learning community is set up so that teachers work in collaborative teams to develop, plan, and implement lessons that are innovative and promote student learning."

44. What is your overall assessment of the school's current position in relation to the above working definition?

Overall this school is: (please read all categories before checking <u>one</u> box)

a mature/established professional learning community ……... ☐

a developing professional learning community …… ☐

starting the journey to become a professional learning community…….. ☐

working to re-establish what we had previously achieved as a professional leaning community ……..☐

not yet started on becoming a professional learning community ……. ☐

45. How would you change the working definition? What is your definition?

46. How useful is the idea of a professional learning community for your school and pupils?

47. What do you see as the main facilitators to:

a. becoming a professional learning community?

b. sustaining a professional learning community?

48. What do you see as a challenge to:

a. becoming a professional learning community?

b. sustaining a professional learning community?

Part 3 Factual Information

About You

49. Please indicate your position in this school.

50. Approximately how many years have you worked in this school?

51. How many years have you taught your subject area?

APPENDIX B

INTERVIEW PROTOCOL

Interview Protocol

Interviews for each teacher will include a signed permission form that will give permission for the interviewer to use the information that will be discussed for research purposes. Interviews may take place face to face or by phone. The interviews will relate to how the participant answered questions on their survey. The interview questions will be compared to other interviews and the questions from the survey.

Interview Questions

1. How do you see PLC's contributing to student success?
2. How do you see PLC's are helping teachers to be prepared for classroom instruction?
3. Why do you feel collaboration is an important part of PLC's?
4. How do you think communications within a PLC contributes to its success?
5. What do you think the benefits of meeting weekly enable the PLC to accomplish as opposed to meeting bi-weekly or monthly?
6. How does your PLC determine goals for the year?
7. How does your PLC document minutes/information and distribute to the group?
8. How do common assessments help you to develop lesson plans for instruction?
9. How does data help your PLC when decided lessons for upcoming units? (re-teaching, follow-up lessons, etc)
10. How has your PLC changed at your school over the past 2 years?
11. What are some challenges of a PLC?
12. What data has been provided to help determine the success of PLC? (data, articles, books, etc.)

APPENDIX C

LETTER INVITING TEACHERS TO PARTICIPATE IN THE STUDY

Dear Teachers,

My name is Teresa Bitterman and I am currently teaching 7th grade Science at Osborne Middle School. I am completing my EdD in Educational Administration from the University of Alabama. I need your assistance in completing the attached survey for my research. I have given a brief description of my research below. The survey results will be kept in confidence at all times. I know that your time is very important and I truly appreciate your efforts.

Please complete the attached survey, place it in the envelope provided, and then place it in the currier. It should only take about 15 minutes of your time. Please sign the following consent form and return it with the survey. If you have any questions or concerns, please feel free to call or email me at any time. Thank you for providing your knowledge and understanding on this subject matter.

Sincerely,

Teresa Bitterman

APPENDIX D

INFORMED CONSENT STATEMENT

Consent to Participate in Research for Teachers

RESEARCH:	TEACER PERCEPTIONS ON HOW LEARNING COMMUNITIES IMPACT STUDENT LEARNING
INVESTIGATOR:	Teresa Bitterman 3590 Greenside Ct. Dacula, GA 30019
ADVISOR:	Dr. Daisy Arredondo-Rucinski, PhD. Educational Leadership, Policy, and Technology Studies College of Education 205.348.4456
SOURCE OF SUPPORT:	In partial fulfillment of the requirements for a doctoral degree in Educational Administration at the University of Alabama.
PURPOSE:	The research you are being asked to participate in is being used to determine the impact of professional learning communities and how they impact student learning.
RISKS AND BENEFITS:	There are no risks or benefits to you as the participant.
COMPENSATION:	There is no compensation for your participation in the research. There will be no cost to you as the participant in the research. Participants will be provided with an envelope that will be used to return the survey.
CONFIDENTIALITY:	All of the information that is collected will remain confidential. Your name will not be used in any of the research. The surveys will remain in a confidential secure location. After the research is complete all material will be destroyed.
RIGHT OF WITHDRAWAL:	You do not have to participate in the study. As a participant you have the right to withdraw your consent to participate at any time.
SUMMARY OF RESULTS:	Once the research is complete, a summary of the results will be supplied to you upon request.
VOLUNTARY CONSENT:	I have read the information above and understand the terms of my participation. I understand that

my participation is the research is voluntary and that I can withdraw my consent at any time. Under these terms and conditions, I certify that I am willing to participate in this research.

I understand that if I have any question or concerns about the research, I should contact Teresa Bitterman at 678.482.0393 or email her at teresa_bitterman@gwinnett.k12.ga.us. If I have any concerns that my rights are being violated, I may also contact the University of Alabama Institutional Review Board for the Protection of Human Subjects at 205.248.5152.

Participant's Signature	Date
Investigator's Signature	Date