

**THE IMPACT OF A PROFESSIONAL LEARNING COMMUNITY
ON STUDENT ACHIEVEMENT GAINS: A CASE STUDY**

Janice Croasmun

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Approved By:

Advisor: Dr. William Malloy

Reader: Dr. Frank Brown

Reader: Dr. Sam Oertwig

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ABSTRACT

JANICE CROASMUN: THE IMPACT OF A PROFESSIONAL LEARNING COMMUNITY ON STUDENT ACHIEVEMENT GAINS: A CASE STUDY

(Under the direction of Dr. William Malloy)

Throughout the United States, public schools are looking for ways to raise student achievement levels in order to meet the accountability standards required by the No Child Left Behind legislation and other federal, state, and local accountability. This is a case study of one elementary school in North Carolina that raised its student achievement level from 56% to 84% over a five year period, and credited this increase to the creation of a professional learning community at the school. The purpose of this study was to verify the existence of a professional learning community at the school and to investigate its impact on the increase in student achievement.

Hord's (1997) five components of a professional learning community were used as the framework of this study. These five components include: (a) Supportive and Shared Leadership, (b) Shared Values and Vision, (c) Collective Creativity, (d) Shared Practice, and (e) Supportive Conditions. A questionnaire was first given to all staff which looked at the presence and strength of a professional learning community at the site. Additional data were gathered from interviews, observations, and documents.

Results of this study indicated that a professional learning community exists at the school site, and that this professional learning community did positively impact student achievement. Findings also suggest that a combination of factors contributed to the increase in student achievement, with some components of the professional learning community making more of an impact than others.

As an increasing number of schools and school systems look to professional learning communities as a way to address accountability and raise student achievement, this study provides some evidence that such an approach can have positive and successful results.

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I. INTRODUCTION

Introduction

The concept of a “professional learning community” has become increasingly popular among educators in recent years. The term has several definitions and can take different forms; however, researchers have identified particular components that must be in place for an organization to function as a learning community (Hord, 1997; Lambert, 1997; DuFour, 2004). This study uses the five dimensions of professional learning communities developed by Hord (1997) to examine the effect of a professional learning community on student achievement. These five dimensions are supportive and shared leadership, collective creativity, shared values and vision, supportive conditions, and shared personal practice.

Accountability for student achievement has also made its way to the forefront of education. Accountability standards are in place in all 50 states, and the passage of No Child Left Behind in 2001 further defined national expectations for student achievement.

This study investigates the possible relationship between the existence of a professional learning community and an increase in student achievement by conducting an in-depth case study of one elementary school in North Carolina. During the past five years, student achievement at this school has risen from 56.4% proficient to 82.6% proficient, meaning that 82.6% of students scored at or above grade level as defined by the North Carolina ABCs of Education. During the same years, the school staff operated

as a professional learning community. Data were collected and analyzed in order to verify the existence of a professional learning community in this school and whether its existence influenced the gains in student achievement.

Background of the Study

The publication of *A Nation at Risk: The Imperative for Educational Reform* in 1983 was a wake-up call for our country. Our schools, often thought to be the best in the world, were not measuring up to those in other countries. The call for change came from both the American public and from politicians. Since the late 1980s, there has been a focus on changing teaching practices, organization and management in public schools (Elmore, 1990).

The publication of Peter Senge's *The Fifth Discipline* in 1990 was a pivotal milestone for corporate America, and, eventually, for America's educational system. Senge envisioned a learning organization – a place where individuals would actively seek knowledge and begin to look at their work environments in different ways (Senge, 1990).

This same concept was soon applied to the school workplace. Fullan (1991) recommended reorganizing schools into places where innovation and improvement are part of daily life in schools. Astuto, Clark, Read, McGree, and Fernandez (1993) proposed a professional community of learners, in which all members of a school staff continually seek, share, and act upon their learning. Hord (1997) worked with a school that functioned as a professional learning community, and witnessed the high level of collaboration and support for change and improvement. Hord and other researchers have

continued to study and develop the creation of professional learning communities in schools.

While the publication of *A Nation at Risk* brought cries for change and school reform, it also ignited a push for schools to be accountable for student achievement. The passage of the No Child Left Behind Act of 2001 outlined specific guidelines for accountability, and all 50 states now have standards and measurements in place to assess student progress. North Carolina's accountability program, the ABCs of Education, was first implemented in the 1996-97 school year. The ABCs measures student proficiency on state tests and tracks annual academic growth.

Statement of the Problem

While many schools purport to be professional learning communities, they are often self-titled. It is possible, therefore, that some schools that claim to be operating as a professional learning community may not meet the criteria for this classification. It is imperative for this research that the existence of a professional learning community be confirmed. An instrument now exists (Hord, 1997) to verify the existence of a professional learning community and its level of maturity in a particular school. We are also able to measure student achievement and progress in schools. This research explores the impact the existence of a professional learning community may have on student achievement.

Research Design

This research is a case study of one school with marked improvement in student achievement in recent years, and labels itself as a learning community. This elementary school has experienced a significant increase in student achievement over the past five years (NC Public Schools, 2006). This study explores possible connections between professional learning community activities and the increase in student achievement. Merriam (1998) stated that when a researcher wants to understand the details of a particular phenomenon, it makes sense to use a case study approach that allows for in-depth investigation.

The research design yielded both quantitative and qualitative data. Using a survey developed by Hord (1997), data were collected from teachers, staff and administrators at the school to assess the existence of a functioning learning community at the site. The survey was followed by interviews of teachers employed at the school since 2001, the year the school began to focus on becoming a professional learning community. Based on teacher interviews, as well as observation and review of documentation, the researcher investigated whether the gain in student achievement was influenced by the professional learning community at the school. The research question asked in this study was: *What impact does a professional learning community have on student achievement?*

Significance of the study

The emphasis on educational reform and accountability in recent decades can be traced to a common goal of increasing student achievement. There have been many

studies regarding student achievement and the factors that contribute to it. Most of these focus on the behaviors of individual teachers and classroom practices.

The phrase “it takes a village to raise a child” was popularized by Hillary Clinton in the 1994 presidential election. This notion has also been applied to schools recently with the evolution of professional learning communities, where an entire school staff comes together to work toward a single outcome: increasing the academic achievement of all students. Toward this end, educational researchers continually study ways to improve student achievement.

While the literature shows that professional learning communities have had many positive effects in schools, there is very little research in the literature regarding the impact that they may have on student achievement. According to Hall & Hord (2006), “the ultimate and most important question for continued study is: How does the culture of a professional learning community affect student learning results?” (p.34) This study hopes to further define this relationship. Also, few studies have identified factors related to sustainability of high academic performance by a once low performing school. This study may provide some best practice insight into this issue.

Limitations of the study

Research design

The study focuses on one North Carolina elementary school. All schools have distinct qualities, individuals and cultures working together to create a unique environment. Therefore, the findings regarding the impact of this professional learning community on student achievement in this school may not be true of all learning

communities. According to Stake (1995, p. 85), “single cases are not as strong a base for generalizing to other populations as other research designs...but people can learn much that is general from single cases”. It is the hope of the researcher that this study will provide information about professional learning communities and student achievement in elementary schools.

Theoretical framework

There are several theoretical frameworks in the literature about professional learning communities. In choosing Hord’s (1997) framework, other frameworks were rejected that may have offered additional components or attributes useful for the purposes of this study.

Additional causal factors

This study focuses on one variable and its affect on student achievement. While the focus is on professional learning communities, other factors not addressed in this study may have affected student achievement at this site.

Self-reporting

The use of surveys and interviews require the researcher to rely on the teachers’ self-reports regarding any personal or collective changes in knowledge or teaching practices, as well as their perceptions of the professional learning community.

Purposeful sampling

Teachers were selected for interviews based upon the length of time employed at the school. These teachers will be chosen because of their knowledge of the school prior to the introduction of learning communities and increase in student achievement. The

experiences of this select group of teachers may not represent those of the entire school staff.

Definition of Terms

Professional Learning Community: The researcher used Hord's (1997) definition, which encompasses five descriptors of a professional learning community:

1. Supportive and shared leadership: The facilitative participation of the principal, sharing decision-making and encouraging leadership roles among the staff.

2. Shared values and vision: An outcome statement created by the staff, working together to identify and articulate common values and goals.

3. Collective creativity: Staff learning together and applying that learning to address students' needs.

4. Shared practice: Visitation and review of teaching by peers, providing feedback leading to improvement.

5. Supportive conditions: Physical and human conditions, such as time and space to meet, communication structures, trust and respect, that support the staff in developing and sustaining a professional learning community.

Student achievement: For the purposes of this study, the indicator of student achievement is the performance composite of proficiency as defined by the North Carolina ABCs of Education. Under this model, schools are given designations based upon the percentage of students passing the End-of-Grade tests in reading and math in grades 3-5. Some categories also consider the amount of academic growth made by students during the year. Categories include: School of Distinction (>80% student

proficiency), School of Excellence (>90% student proficiency and meets growth standard), No Recognition (>50% student proficiency and does not meet growth standard), and Low Performing (<50% student proficiency and does not meet growth standard).

Proficiency: Percentage of students performing at or above grade level as measured by the North Carolina student accountability model.

II. REVIEW OF THE LITERATURE

Introduction to the Chapter

Professional learning communities are becoming more common in our schools. However, the idea is not a new one. This chapter reviews the origins of learning organizations in the business world, and follows the concept as it crosses over into the education arena. The chapter then progresses into a look at the history of accountability for student achievement, both nationally and locally in North Carolina. Finally, several conceptual frameworks are discussed, including the one chosen for this study.

Businesses as Learning Organizations

During much of the early and mid twentieth century, businesses were influenced by Frederick Taylor's theories of scientific management. Taylor, an engineer, believed there were rational, logical solutions to any problems that may arise. (Nelson, 1980) He emphasized total management control of jobs and processes. A hierarchical system planned and managed the flow of work, and employees had virtually no input into the way work was assigned or completed. This system eventually began to break down during the 70's and 80's, when corporate profits fell, there was increased international competition, and technology was developing at a rapid pace. These events led business leaders to seek practices that could solve these corporate woes. Terms and theories such as total quality management, teamwork and empowerment were studied and utilized.

Herrick and Macoby (1975) put forth the idea that giving employees greater control of their work, as well as participatory decision making opportunities, would lead to improved attitude and increased productivity. The Office of the American Workplace of the U.S. Department of Labor (1994) said this about successful organizations: “They change in fundamental ways their approach to worker learning. They switch from training for specific jobs to emphasizing skills that equip workers with the ability to solve problems and interact with...other workers and other departments. Training is viewed as continuous, with a commitment to lifelong learning” (p.2).

Learning Organizations: Transition from Business to Schools

Concurrent with these new ways of looking at workers and learning came the publication of Peter Senge’s The Fifth Discipline in 1990. His work popularized the term “learning organization”, which he defined as “organizations where people continually expand the capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together” (Senge, 1990. p.3).

Senge (1990) outlined five components, or “disciplines” that are necessary in learning organizations: systems thinking, personal mastery, mental models, building shared vision, and team learning. He believes it is vital that the disciplines develop together, and calls systems thinking the fifth discipline because it facilitates the combination of theory and practice. It defines the details of the learning organizations and the new lens through which individuals see themselves and their organization. In the revised version of his book, Senge (2006) states that “at the heart of a learning

organization is a shift of mind – from seeing ourselves as separate from the world to connected to the world, from seeing problems as caused by someone ‘out there’ to seeing how our own actions create the problems we experience. A learning organization is a place where people are continually discovering how they create their reality. And how they can change it” (p.12).

During this same period, the school reform movement was underway and educators were searching for ways to improve and restructure the nation’s schools and began to apply Senge’s principles to schools, and the term learning organizations became learning communities (Hord, 2004). Rosenholtz (1989) explored the effect of the school workplace on quality of learning, maintaining that when teachers feel supported in their own continuous learning, via teacher networks, cooperation among colleagues and an expanded professional role, they show increased efficacy for meeting student needs. McLaughlin and Talbert (1993) also found that when teachers were given opportunities for collaborative inquiry and learning, they had a greater body of collective wisdom about teaching practices and student learning.

Learning Organizations in Schools

The release of “A Nation at Risk”, in 1983, outlined many concerns regarding public education in the United States, but failed to offer solutions for these problems. Three years later, the Carnegie Forum on Education and the Economy Task Force on Teaching in Education released *A Nation Prepared: Teachers for the 21st Century*. This report offered recommendations for strengthening education and teaching, and became the basis for the National Board for Professional Teaching Standards. The board

developed five core propositions that they consider to be exemplary teaching practices for teachers:

1. Teachers are committed to students and learning.
2. Teachers have knowledge of subject matter for which they are responsible and how to share this knowledge with students.
3. Teachers are able to plan, monitor and assess student learning.
4. Teachers think systematically about their teaching, reflect upon their practice and make adjustments based upon their reflection.
5. Teachers are members of learning communities.

The National Board Certification process for teachers, which allows teachers in 30 fields to receive national certification in their area of expertise, is based upon these propositions, and every teacher seeking National Board Certification will be assessed upon their proficiency in these areas (NBPTS, 2006).

A review of literature on professional learning communities in schools reveals many definitions of the term. Sergiovanni (1992) believes “the idea of the school as a learning community suggests a kind of connectedness among members that resembles what is found in a family, a neighborhood, or some other closely knit group, where bonds tend to be familial or even sacred” (p.47). Astuto, Clark, Read, McGree and Fernandez (1993) see a professional learning community as one where a school’s professional staff members seek to find answers through inquiry and subsequently act on their own learning to improve student achievement. Louis & Kruse (1995) describe a learning community as being characterized by teachers engaging in reflective dialogue with a collective focus on student learning and shared norms and values. In a further study, Louis, Kruse, and

Marks (1996) describe a professional learning community as a cultural climate that enhances professional development, collective inquiry, and risk taking among teachers.

Lambert (1998) described “places in which teachers participate in decision making, have a shared sense of purpose, engage in collaborative work, and accept joint responsibility for the outcomes of their work” (p.11). Most recently, DuFour (2004) defined a professional learning community as an organization that shares common goals, decision-making and collaboration, and utilizes available data to guide its work. All of these definitions, while worded somewhat differently, describe ongoing, participatory learning occurring within a school community.

Table 2.1 Comparison of PLC definitions

Kruse, et. al.’s Core Characteristics	Dufour’s Big Ideas	Hord’s Attributes
1. Shared values	1. Ensure student learning	1. Supportive shared leadership
2. Reflective dialogue	2. Culture of collaboration	2. Collective creativity
3. Deprivatization of practice	3. Focus on Results	3. Shared values and vision
4. Focus on student learning		4. Supportive conditions
5. Collaboration		5. Shared personal practice

Pacific Resources for Education and Learning (2002) defines a professional learning community as a group having “shared vision, challenging curriculum aligned to instruction and assessment measures, a culture of continuous learning and improvement, parents and community as partners in the learning process, and supportive school structure”.

Eaker (2002) outlines comparisons between traditional schools and professional learning communities (Table 2.2). The characteristics Eaker attributes to professional learning communities are closely aligned with those outlined above in Table 2.1: collaboration, shared vision and values, collective creativity in determining teaching practices and desired outcomes, and a focus on student learning.

Collaboration is embedded into the culture of a learning community, with collaborative teams working to achieve common goals. A common vision is continually reflected in the work of the professional learning community, and the staff collectively seeks to learn and apply their knowledge to address student needs (Hord, 2004).

Table 2.2 Comparing Traditional Schools to PLCs

Traditional Schools	Professional Learning Communities
Teacher Isolation	Collaborative Teams
Vision developed by a few	Vision developed by broad collaboration
Values are random	Values are linked to vision
Primary focus is on teaching	Primary focus is on learning
Teachers independently decide what to teach	Curriculum is agreed upon collaboratively
Improvement plans focus on a variety of things	Improvement plans focus on a few important goals that affect student learning
Decisions about improvement strategies are made by “averaging opinions”	Decisions are research-based with collaborative teams seeking out “best practices”.

In a true professional learning community, all members of a school staff reflect on their practices and the outcomes of these practices on student learning. They assess whether their practices are having the desired effect on student learning, and identify what they need to change in order for all students to be successful learners (Hall & Hord, 2006). While professional learning committees in schools consist of all staff members, transforming a school into a professional learning community, and sustaining the transformation, can be done only with the endorsement and nurturing of the principal. The principal is not only a fellow learner, but encourages staff input into all aspects of decision making. According to Hord (2004), principals must participate and learn side by side with teachers, “questioning, investigating, and seeking solutions for school improvement and increased student achievement” (p.8).

While there has been little research regarding the impact of professional learning communities on student achievement, there are studies that link some of the main components of a professional learning communities to academic improvement. Longitudinal studies by the Center on Organization and Restructuring of Schools identified four factors that were connected to improved student learning (Newmann & Wehlage, 1995). These factors included shared decision making, teachers teaming, collective responsibility for student achievement, and a shared vision (Hord, 2004). The Southwest Educational Development Laboratory found that high performing schools shared many characteristics that low performing schools did not (Morrissey, 2000). These included organizational supports, strong communication and collaboration, and a whole-staff focus on improvement strategies. In 1995, Darling-Hammond found that teacher

collaboration regarding teaching and learning, and discussion of effective instructional strategies resulted in positive academic growth.

Accountability for student achievement

This section reviews the history of accountability in education in the United States, beginning with the development and use of standardized tests and progressing through the national No Child Left Behind legislation and its impact on accountability. Next, the focus will turn to the accountability movement in North Carolina and its impact on education in the state.

Accountability in the United States

As corporate profits began to fall in the 70's and 80's, Americans also became concerned about the educational system.

In the 1950's, the Scholastic Achievement Test (SAT) was developed and soon became widely used by universities and colleges as a tool for identifying potentially successful degree candidates. From 1967 to 1982, scores on the SAT declined significantly, as did performance on the National Assessment of Educational Progress (NAEP) (Peterson, 2003). Prior to this decline, Americans in general regarded the U.S. schools as superior to schools of other nations. According to Peterson, "the United states was the first country to achieve universal elementary education, the leader in the expansion of secondary education, the earliest to create comprehensive schools that combined students from all backgrounds into a common institutional framework, and a trailblazer in the area of higher education" (p.4).

Finally, in 1983, the National Commission for Excellence in Education released *A Nation at Risk*. This report outlined reforms that were designed to reverse the decline in student achievement. The commission recommended that students be taught a more rigorous curriculum, and that schools have higher expectations for student achievement (NCEE, 1983). The report received widespread attention, and was the first in a succession of initiatives designed to increase accountability and student achievement. In 1989, President George H. W. Bush brought together 50 governors at the Education Summit. They agreed on six goals, two of which directly addressed student achievement and the development of standards. In 1990, the Secretary's Commission on Achieving Necessary Skills (SCANS) was appointed by the U.S. Secretary of Labor to define skills necessary for students to be successful in the workplace. The Goals 2000: Educate America Act was passed under President Clinton, which provided funding for state and national efforts to implement challenging academic standards and develop ways to measure student achievement growth. Also, in 1994, congress passed the Improving America's Schools Act (IASA), requiring states to implement content and performance standards and accountability measures for student performance (Haertel and Herman, 2005). By 2001, when the No Child Left Behind Act was enacted, 49 of the 50 states had implemented accountability standards and assessments (Linn, 2005).

The No Child Left Behind Act of 2001, which applies to Title I schools, further defined the IASA by requiring that schools annually assess all students in third through eighth grades in reading and mathematics, based on rigorous academic content standards. NCLB also required that states set performance targets so that by the year 2014 all students are proficient in both subjects. In addition, each school must demonstrate that

students are making adequate yearly progress (AYP), on average, in both subjects. Test scores are also disaggregated into subgroups, and each of these subgroups that is of statistically significant size, must also make adequate yearly progress toward the goal of full proficiency. Subgroups include ethnicity groups, students with disabilities, students with limited English proficiency, and economically disadvantaged students. Schools that do not make AYP in all subgroups will be defined as needing improvement, and students must be given the option of transferring to another school in the district. In each successive year that the school fails to make AYP, sanctions become more severe, with state takeover possible after five unsuccessful years (Peterson, 2003).

Accountability in North Carolina

Following the SCANS report and the passage of Goals 2000, North Carolina began to gain national attention for its accountability efforts. NAEP results showed that test scores were rising faster in North Carolina and Texas than in any other state. (Grissmer, 2000) The General Assembly of North Carolina directed the State Board of Education to develop a school restructuring plan, leading to the unveiling of the School Based Management and Accountability Procedures plan (ABCs of Public Education) in May of 1995. According to the School Based Management and Accountability Procedures Manual (Public Schools of North Carolina, 2004, p.6), “the General Assembly believes that all children can learn. With this as a guiding mission, the State Board of Education was charged with developing a school-based management and accountability program with improving student performance as the primary goal”. The ABCs plan was implemented in the 1996-97 school year. Under the plan, schools are

measured on two standards: the percentage of students deemed proficient in reading and mathematics, and the amount of academic growth students made from one year to the next. Schools are recognized for meeting or exceeding the standards for proficiency and growth, while schools failing to meet the standards are labeled as low performing schools. For schools that meet certain proficiency and growth standards, the instructional staff receives financial bonuses (Public Schools of North Carolina, 2001).

In the years following its initial implementation, the ABCs plan has undergone several changes, including the addition of performance expectations in written composition. However, the basic premise remains the same: schools not meeting certain growth and proficiency standards are labeled as low performing and are subject to state intervention, while schools exceeding these standards are given labels such as School of Distinction or School of Excellence and may receive monetary awards for staff members. During the 2003-2004 school year, a new recognition category was added for Schools of Excellence that also meet federal AYP goals; they are called Honor Schools of Excellence (Public Schools of North Carolina, 2006).

The state has seen mixed results regarding student achievement as measured by the ABCs accountability model. In 1999-2000, 69.8% of the schools in NC made expected or high achievement growth, compared with 69.2% in 2004-05. During this same period of time, 27.6% of schools were designated Schools of Distinction or Schools of Excellence in 1999-2000, compared with 28.9% in 2004-05 (North Carolina Department of Public Instruction, 2006). While some of the results may be due to changes made in the ABCs formula over the years, overall progress has remained flat,

and school officials and administrators continue to explore ways to increase student achievement.

As a result of the ever-increasing federal and state standards for accountability, schools are striving to maximize learning for all students. Many schools are looking at the concept of Professional Learning Communities to help them meet this goal.

Theoretical Framework

An examination of the literature on professional learning communities led this researcher to investigate three possible conceptual frameworks through which to conduct the research. The first framework considered was Kruse, Louis & Bryk's five core characteristics of professional learning communities. They identified these characteristics as shared values, reflective dialogue, deprivatization of practice, focus on student learning, and collaboration. Kruse, Louis and Bryk also identified six structural conditions and five social and human resources necessary to facilitate development of and to sustain professional learning communities (Louis, Kruse & Associates, 1997). The necessary supporting conditions included: time to meet and talk, physical proximity, interdependent teaching roles, communication structures, and teacher empowerment and school autonomy. Social and human resources were openness to improvement, trust and respect, access to expertise, supportive leadership, and socialization. This framework, while quite detailed, was too complex for the scope of this research, a case study of one particular school.

The second framework considered was put forth by DuFour (2005) and consisted of three "big ideas" which represent the characteristics of a learning community. The first

of the three, ensuring that students learn, highlights the concept of learning rather than teaching and puts the focus on the students. He surmised that the answer to the question “How will we respond when a student experiences difficulty in learning?” separates professional learning communities from traditional schools (DuFour, 2005, p.33). The second big idea, a culture of collaboration, emphasizes systematic, rather than informal, collaboration. Big idea number three is a focus on results. DuFour’s professional learning community judges its effectiveness by the results of student achievement. Teams continually identify current levels of achievement, and then set a goal for improving that level. While this researcher likes the emphasis of this model on student achievement, this researcher does not believe it is well defined enough to provide meaningful results for this study.

The third framework considered is Hord’s attributes of professional learning communities (Hord, 1997). She identified the five attributes as: 1. supportive and shared leadership, 2. collective creativity, 3. shared values and vision, 4. supportive physical and human conditions, and 5. shared personal practice. These attributes are somewhat similar to those identified by other researchers. However, this researcher found Hord’s framework to be more defined and detailed than DuFour’s, yet less complex than Lambert’s framework. In addition, Hord developed a likert scale survey that complements her conceptual framework, and this survey instrument will be used as a part of the research in this study.

Hord’s attributes of professional learning communities are detailed here, along with supporting research for each attribute.

Supportive and Shared Leadership

According to Hord (1997), the support of the principal or school leader is imperative in creating a professional learning community in a school. Kleine-Kracht (1993) suggests that principals must learn alongside the teachers, dissolving the traditional hierarchical notion of the principal as being wiser and more powerful. This coming together of administrators and teachers lends itself to a team-oriented atmosphere of shared leadership and working together toward a common goal of creating a better school (Hoerr, 1996). Senge (2000) envisions a school where “all people in the system are seen as learners and act as learners” (p.417). Supportive and shared leadership implies that all constituencies are supported in and involved in making decisions that affect the school community. According to The National Commission on Teaching and America’s Future (2003), shared leadership is a vital component in building professional learning communities.

Shared Values and Vision

Shared vision requires bringing together individual expectations and aspirations into alignment to create a common image of the future of their organization, and collectively defining goals to guide them on the journey. A vision must maintain focus on student learning and their potential achievement; this will lead to collective staff support for behaviors that work toward the common vision.

Collective Creativity

In professional learning communities, people from all levels and areas of the school join together to learn, identify and solve problems, and dialogue about teaching and learning. Newmann et. al. (1996) found that in successful schools the focus was on

increasing capacity through dialogue among all members of the school communities, collaborating to discuss issues related to teaching and learning. Senge (2000) envisions collective creativity occurring through alignment, which he defines as “arranging a group of scattered elements so they function as a whole, by orienting them all to a common awareness of each other, their purpose, and their current reality” (p. 74). Fullan (2005) looked at capacity building as “the daily habit of working together....by doing it and getting better at it on purpose” (p. 69).

Shared Personal Practice

Teachers learn best from their colleagues, and benefit from the opportunity and conditions to “teach each other the art of teaching” (DuFour 2004, p. 141). In a 2001 study, Huffman et. al. found that shared personal practice was the most rarely evident characteristic of a professional learning community. According to Hord (1997), one type of shared practice involves visiting colleagues’ classrooms and discussing these observations. Dialogue about best practices is another way for teachers to share their craft with others. Such practices are “based on the desire for individual and community improvement and is enabled by the mutual respect and trustworthiness of staff members” (Hord, 1997).

Supportive Conditions

Hord (1997) recognizes two types of supportive conditions that are necessary for professional learning communities to function successfully. Physical conditions include time to get together as a group, close physical proximity among staff, small school size, interdependent teaching roles, and procedures for communication, school autonomy and empowerment to make decisions (Louis & Kruse, 1995). People capacities revolve

around the willingness of the individual to function as a member of a professional learning community, including the ability to provide and receive meaningful feedback.

Louis and Kruse (1995) identified the following human factors as needing to be present in order to have productive learning communities: trust and respect among colleagues, skills and knowledge related to effective teaching, administrative support and concentrated socialization efforts. Teachers become more willing to be involved in leadership at the school when they are empowered to share decision making and facilitate change within the school (Louis, Kruse, & Raywid, 1996).

As previously stated, Hord's professional learning community model was chosen as the framework for this research because it provides detailed descriptors of the components of a professional learning community, without being too complex. There is also a valid, reliable survey instrument which corresponds to this model and will provide quantitative data that can be used to confirm and corroborate the qualitative data gathered in this study.

III. METHODOLOGY

Introduction to the Chapter

This study investigated whether a professional learning community influences student achievement. The basic question guiding this research was: “What impact does a professional learning community have on student achievement?” This chapter outlines the type of research used in the study, followed by a description of the site selection. The methods for data collection and analysis are then explained and discussed.

Type of Research

This study used primarily qualitative methodology to provide an in-depth study of a professional learning community and the impact of that community on student achievement. Many factors have been attributed to gains in student achievement. Many schools also identify themselves as professional learning communities and cite many benefits that this status has brought to their staff members, students, and school communities. This study confirmed one elementary school’s status as a professional learning community and then explored the view of school administrators and staff members and their interpretations of the impact of this professional learning community on student achievement in their own setting.

In order to verify that the school is a professional learning community, the researcher asked certified teachers at the site to complete Hord’s (1999) questionnaire entitled School Professional Staff as Learning Community. This instrument is designed to

identify schools that operate as professional learning communities. It is useful for schools that operate as professional learning communities as an ongoing assessment of their work (Hord, et. al., 1999). Usability, reliability and validity test have been completed on this instrument, which is designed to assess the maturity of a schools staff as a professional learning community. The confirmation of the existence of a learning community allows the researcher to link its existence to possible impact on student achievement.

Langenbach, Vaughn and Aargard (1994) state that “case studies provide information that focuses on a single issue, individual, or organizational behavior or outcome within a narrow context containing limited variables...the researcher must relate his or her findings to theory in order for the work to be considered research”. Qualitative research should show interest in descriptive data, emphasis on interactions and processes, focus on individual experiences and outcomes, and uncertainty about the importance or effect of individual variables (Patton, 1987). It is important to listen to and study the voices of those involved in the school setting during the recent gains in student achievement and concurrent development of a professional learning community. Therefore, a qualitative study was used.

Qualitative methodology allows the researcher to understand the “thoughts, feelings, beliefs” (Marshall and Rossman, 1999, p. 57) of the school staff regarding their professional learning community, the recent gains in student achievement, and the possible linkage between the two phenomena.

The data gathered from the initial survey, as well as the information from interviews and observations, allows for triangulation, which is the comparison of data gathered from these methods (Creswell, 2005). The researcher then compared results

from the survey to the qualitative data to determine whether the findings support or contradict each other.

Site selection

This study used a purposeful sample. Patton (1990) describes purposeful sampling as selection of a site because its “information rich” case suits the purposes of the study. Purposeful sampling is not designed to represent a defined population, but to achieve an in-depth understanding of a particular case. When a researcher is selecting a case in order to develop or test a theory, then the findings can be generalized to the theory, not to a defined population (Yin, 1989). This complements Patton’s (1990) description of purposeful sampling. Patton identified 15 types of purposeful sampling used in qualitative research, each serving a different purpose. The strategy for this study is considered to be “critical case sampling”, used to study educational programs and related phenomena. The particular site was selected because it purports to operate as a learning community, as many schools do; however, during the time the school has been operating as a learning community, student achievement has risen dramatically.

The research site is located in a rural county near the east coast of North Carolina, with a population of less than 15,000. Within the county is one small town, which also serves as the county seat, and is home to about 5,000 residents. Due to its location near the east coast, Riley County is visited by several thousand tourists each year. There is very little commercial development in the area; one main grocery store, a handful of banks, some motels and several restaurants. Most residents make their living through agriculture, marine fisheries, and small businesses. Some residents live in Riley but

commute daily to work in larger cities in North Carolina or Virginia. Despite its rather small size, the population is relatively stable, and families whose ancestors settled in the area generations ago continue to make Riley home. Riley County's school district serves approximately 2500 students at four schools. Two of these are elementary schools, one serving kindergarten through second grade, and the other serving third through fifth grade. There is one middle school and one high school. Prior to the late 1990's, there were two K-5 elementary schools; one located inside the town limits, and the other located outside city limits. When it was time to build a school, the district decided to combine the elementary students, building a "double school" on one large plot of land on the outskirts of town. The new building, opened in 2000, consists of two separate school sites, joined in the center by a common hallway. Fowler Elementary serves the K-2 students and Riley Elementary serves the 3-5 students. The schools have totally separate facilities and staffs, sharing only a bus circle and school buses.

This study focuses on Riley Elementary School, which serves 540 students in grades 3-5. Because over 60% of its students live in poverty, Riley is classified as a Title 1 school. The ethnic makeup of the population is 48% African-American, 49% Caucasian, and 3% other (multiracial, Hispanic and Asian). In the year 2000 the school was given a designation of "no recognition" under the ABCs of Education accountability model, with only 56% of its students achieving at grade level.

For the first three years following the implementation of the ABCs of Education accountability model in the 1996-97 school year, Riley Elementary had between 52-56 percent of its students performing at grade level. The following year, a new principal was hired for the school. In subsequent years, the percent of students achieving academic

proficiency has climbed steadily, from 56.4% in the 1999-2000 school year, to 83.6 % in 2004-2005 (see Fig. 3.1).

Table 3.1 Composite performance proficiency based on NC Accountability Model

1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005
56.4%	62.3%	73.5%	81.2%	82.8%	83.6%

Source: NC Public Schools (2006)

Data Collection

Four methods of data collection were used for this research: 1. survey, 2. direct observation, 3. personal interviews, and 4. document review and analysis.

The researcher asked all certified staff members to complete the *School Professional Staff as a Learning Community* instrument. The Cronbach's Alpha reliability for this instrument is .94. A value of .75 or greater indicates appropriate internal consistency of an instrument (Hord, 1999). Results of this survey were used to verify the existence of a learning community at Riley Elementary School. Following administration of the survey, the researcher spent four full days on site at the school, over a period of several weeks, observing, conducting interviews, and reviewing documents. Observation, interviews, and document review and analysis all have strengths as means of gathering qualitative data (Gall et. al. 1996).

When conducting observations, the researcher assumed the role of observer-participant, "entering the setting only to gather data and interacting only casually and non-directly with individuals or groups while engaged in the observation" (Gall et. al.

1996). Observations include horizontal learning team meetings, vertical learning team meetings, staff meeting, and informal gatherings and conversations. Horizontal learning teams consist of seven to ten teachers who teach the same grade level. Each vertical learning team has members representing each grade level, as well as other teacher groups, such as cultural arts teachers, special education teachers, counselors, and other specialists. Detailed and highly descriptive notes were taken, with awareness in regards to the researcher's possible impact on the participants being observed. An observation protocol was used to look for evidence of the five components of professional learning communities and references or connections to student achievement (Appendix C).

In order to gather information regarding the possible impact of the professional learning community on the academic achievement gains made by the students at Riley Elementary, the researcher conducted interviews with the principal of the school, as well as with teachers and other staff members who have been at the school since the year 2000. Questions asked during the interview were based upon Hord's (1997) five components of professional learning communities (Appendix A). Questions were also asked regarding any changes the participant has noticed in these areas during the past five years, as well as the participant's thoughts on the recent increase in student achievement. Interviews were tape recorded in order to provide a complete record of what was said, and the researcher also took detailed handwritten notes. Because some participants may be nervous about being recorded, the researcher thoroughly explained the purpose of recording the conversation and hopefully gained the confidence of the participant. Participants were informed that the tape recordings will not be shared with anyone else, and that they will be destroyed upon completion of the study. Participants were also

given the option of not having the interviews recorded, but none of the interviewees objected to the use of a tape recorder during the interview.

Lincoln and Guba (1985) identified two types of written communications: documents and records. They define documents as written communications prepared for personal reasons, and records as formal, official written communication. The researcher had the opportunity to review and/or copy numerous records and documents collected by the school and the principal during the years 2000-2005.

Data Analysis

Marshall and Rossman (1999) defined the data analysis process as consisting of five parts: organizing the data, generating categories and patterns, using the data to test the emergent hypothesis, searching for alternative explanations of the data, and reporting the results. Data reduction and interpretation should be part of each phase of the analysis as the researcher brings meaning to the information collected. Brogdan and Biklen (1992) outline a similar process of data analysis.

The data gathered from the survey was tabulated to yield six averaged scores, one for each of the five component areas and one overall score. The likert scale on the survey ranges from 1-5. For the purpose of this research, an overall result of 3.8 or more will indicate the presence of a professional learning community at the school, and a result greater than 4.0 in any of the component areas will indicate a strong presence of that particular descriptor.

Following the teacher interviews, the researcher organized data by categorizing into the five component areas. The researcher also looked for references to student work,

student achievement, and teaching practices resulting from the professional learning community work and their possible connection to increased student achievement. To increase the validity of the data, the researcher used member checking, having the participants review the summaries of the interviews. This purpose of this was to reveal error – either factual errors that can be corrected or discrepancies which require additional data collection in order to resolve them. Reading the report could also cause the participants to recall additional information or perceptions regarding the situation (Gall et.al. 1996).

IV: RESULTS

This case study used Hord's (1997) five components of a professional learning community to investigate the impact of professional learning communities on student achievement. Hord's five components of a professional learning community are: 1) supportive and shared leadership, 2) collective creativity, 3) shared values and vision, 4) supportive conditions, and 5) shared personal practice.

To explore the existence of a learning community at the school and its impact on student achievement, the researcher used the following sources of data: the results from Hord's (1996) School Professional Staff as Learning Community Questionnaire, which explored the existence and maturity of a professional learning community at the school site; interview data from one-on-one interviews with the principal and six teachers, and one focus group of six teachers; observations of professional learning team meetings, both horizontal grade-level meetings and vertical planning teams consisting of a cross grouping of teachers; and school documents such as improvement plans, minutes from team meetings, internal and district surveys, and staff development information.

This chapter contains the analysis of the data collected from the sources listed above. The chapter begins with a brief description of each type of data used for this research: survey, interviews, observations, and documentation. The next section will discuss the results of the School Professional Staff as Learning Community Questionnaire. The subsequent sections of the chapter will summarize the data collected

from interviews, observations and documents and will be presented in five sections, with each representing one component of Hord's professional learning community model.

Survey

The School Professional Staff as Learning Community questionnaire contains seventeen items and is divided into five sections, with each section corresponding to one of Hord's (1997) five components of a professional learning community. On the questionnaire, participants are asked to respond to a particular statement with regards to their perception of its existence at their particular school, using a likert-scale ranging from 1 to 5. Responses for each of the seventeen items were averaged to come up with a score for each item. Then the seventeen item scores were averaged, resulting in one overall score which was used to determine the existence of a professional learning community. For the purposes of this study, a comprehensive overall result of 3.8 or more will confirm the existence of a professional learning community at the site. According to Hord (1999), higher scores indicate greater maturity of the learning community. The researcher decided to use 3.8 to ensure a strong indication that a professional learning community and its components are present at the school site.

Interviews

In order to gain in-depth information and understanding of the professional learning community at Riley Elementary School, the researcher conducted six individual teacher interviews and one focus group interview with six participants. All twelve teachers interviewed had been teaching at Riley Elementary School for five or more

years. It was important to select teachers who were at the school prior to 2001 because those teachers were part of the school when student proficiency was low, and had experienced the steady increase in student achievement in subsequent years. After the principal identified the teachers who had been at the school prior to 2001, the researcher randomly selected two teachers from each grade level to participate in individual interviews. The remaining names were then combined and six were selected at random to participate in the focus group. Focus group participants included two cultural arts teachers, a third grade teacher, a fourth grade teacher, a fifth grade teacher and a resource teacher. Each interview lasted approximately 45 minutes.

Despite having taught at Riley Elementary School for the past five years or more, the twelve interviewees had varied experiences and backgrounds. Two of the interviewees had retired after thirty years of teaching in the Riley School District, and decided to return to the classroom again. Two of the teachers spent several years teaching in New England before relocating to North Carolina to continue their teaching careers. Two of the interviewees taught in neighboring counties prior to coming to Riley, and the remaining six teachers have spent their entire teaching careers in Riley School District. Of the twelve interviewees, there were: two male and ten female, four African-American and eight Caucasian. These interviewees comprised the following teaching assignments: three third grade teachers, three fourth grade teachers, three fifth grade teachers, two cultural arts teachers, and one resource teacher.

The interviewees were asked to respond to open ended questions. The questions were based on Hord's (1997) five components of a professional learning community. A list of questions used for the interviews can be found in the Appendix.

Observations

The researcher spent about 15 hours observing the professional learning community at Riley Elementary School. Observations included vertical learning teams, horizontal grade level teams, informal staff interactions with each other in small and large groups, and staff interactions with children. In addition, the researcher spent time in the school office, halls, classrooms, teachers' lounge, and cafeteria.

While the observations were valuable in gleaning information about the professional learning community at the school, the majority of the observation time was spent in learning team meetings. Riley Elementary has two main types of learning communities; vertical learning teams and horizontal learning teams. There are six vertical teams and three horizontal teams. Each vertical team consists of teachers from all three grade levels, as well as one or more from each of the other teacher groups: cultural arts teachers, resource teachers, and student support staff. Horizontal teams consist of all the teachers at a particular grade level, and each grade level has eight to ten teachers. Teachers from other groups, such as the counselor or media specialist, attend the horizontal team meetings as needed. Time is built into the schedule for these teams to meet weekly in the office conference room, and most teachers are members of both a vertical team and a horizontal team. The six vertical teams meet on Thursdays, for one hour each, and the three horizontal teams meet every Friday for ninety minutes.

Documents

The researcher had access to a vast amount of electronic and paper documentation. The principal of Riley Elementary School keeps notebooks containing minutes of all committee meetings both at the school and district level, as well as any handouts distributed at the meetings. There are also staff development notebooks that contain lists of staff development attended by the principal and/or the staff and copies of any information distributed at the meetings. Planning notebooks contain all documentation produced by the school and district planning team, including annual team goals, schedules, program and curriculum changes, and other school improvement information. Data notebooks contain results of state and local tests, benchmark tests, and parent, student, and staff survey results.

The principal also keeps copies of all electronically produced documents and emails on her computer. The computer contains folders for each vertical team and each horizontal team, and all electronic documentation pertaining to each group is placed in that folder. There are folders for each school committee and each district committee, as well as folders containing teacher evaluations, program evaluations, and even one for personal reflections and future plans.

The researcher was given full access to all the notebooks of information compiled by the principal since her arrival at the school in 2001, as well as to all of the principal's computer files and folders.

School Professional Staff as Learning Community Questionnaire Results

There are 36 certified teachers at Riley Elementary School. Their teaching assignments are shown in Figure 4.1.

Table 4.1 Certified Staff Teaching Assignments at Riley Elementary

Teaching Assignment	3 rd grade	4 th grade	5 th grade	Resource	Cultural Arts
Number of Teachers	10	10	7	4	5

The principal gathered the staff together after school for a short meeting in which the researcher discussed participation in the study. Thirty of the staff's certified teachers attended the meeting, and all thirty completed and returned the questionnaire. A separate meeting was held at a later time for the teachers who were unable to attend the initial meeting. Three teachers attended the second meeting, and all three completed the questionnaire. In total, 33 of the 36 certified teachers returned the survey, resulting in a response rate of 91.6%. Figures 4.2, 4.3 and 4.4 provide demographic information for the 33 respondents.

Table 4.2 Respondents' years of teaching experience

Total years teaching	Number of respondents
0-4	5
5-9	9
10-14	4
15-19	6
20+	9

Table 4.3 Respondents' years teaching at Riley Elementary School

Years at Riley	Number of Respondents*
0-4	14
5-9	13
10-14	4
15-19	0
20+	1

*one respondent did not answer this question

Table 4.4 Respondents' type of teaching certification

NC Provisional (not tenured in North Carolina)	NC Regular (tenured)	National Board Certification
9	15	9

As mentioned previously, the survey contains seventeen items divided into five categories, with each category representing one of the components of a professional learning community. A score was obtained for each of these five components by averaging the item scores of the items corresponding to each component. Averages for each of the five components will provide additional information regarding the existence and strength of each component area at the school. Prior to the study, the researcher set the criteria for the existence of a professional learning community as being an overall mean of 3.8 or greater on the five point likert-scale School Staff as Professional Learning Community survey. Figure 4.5 shows the overall composite mean of the School Professional Staff as Learning Community questionnaire. A more detailed chart containing composite means for each survey question can be found in the Appendix.

Table 4.5 Results of the School Professional Staff as Learning Community questionnaire – by component

Category	Item Numbers	Mean
Component 1: Supportive and Shared Leadership	1a, 1b	3.803
Component 2: Shared Values and Vision	2a, 2b, 2c	4.131
Component 3: Collective Creativity	3a, 3b, 3c, 3d, 3e	4.085
Component 4: Shared Personal Practice	4a, 4b	3.378
Component 5: Supportive Conditions	5a, 5b, 5c, 5d, 5e	3.842
Overall	all	3.90

In order to study the impact of a professional learning community on student achievement at Riley Elementary, the researcher first had to determine whether a learning community actually exists at the site. With a composite mean of 3.9, it was determined that a professional learning community does exist at Riley Elementary School.

According to Hord (1999), the survey can indicate the level of maturity of a learning community; with higher numbers indicating the presence of a stronger and more mature learning community. The results of the survey show that the teachers at Riley Elementary School perceive that two of the components of a professional learning community, shared values and vision and collective creativity, are the strongest and most mature at their school, while one component, shared personal practice, is perceived as being much weaker than the other four.

Supportive and Shared Leadership

The current decision making process is much different than it was in 2001. One interviewee reported that, “Before Sharon came; we were told...now we are asked.” Another teacher said “Decisions used to be haphazard. (Former principal) would change something and we’d get the memo later.”

It is clear that the principal’s leadership plays a key role in the PLC at Riley Elementary School. When asked to identify leaders in their school, interviewees mentioned several different names, although the principal was named consistently by all of them.

Documents show that teachers have many opportunities to give input and share in the decision-making at the school. Leadership is shared among many committees and learning teams, and committee chairs change frequently. The committee structure of the school, symbolized by an umbrella, consists of one main committee called the planning team. According to an organizational chart created at the beginning of the school year, the planning team includes members from administration, all grade levels, resource teachers, cultural arts teachers, and classified staff. The committee helps to set overall goals and charts a course for how to accomplish them. Subcommittees, characterized as the spokes of the umbrella, include staff development, curriculum, communication and climate. Again, each subcommittee includes members from all curricular groups in the school.

The document review yielded a list of planning team responsibilities, distributed to the staff at the beginning of the school year, contains the following charges for the team for the year 2004-05:

1. Investigate and implement reassignment or hiring of staff to provide at least five teacher planning periods weekly.
2. Analyze and improve dismissal procedures for bus students.
3. Review and update Riley Elementary School's mission statement, involving all stakeholders, including students.
4. Establish, implement, and communicate a fair, consistent discipline policy.

In looking at the list of planning team responsibilities over the past four years, it appears that these responsibilities change slightly each year but always provide the planning team and its subcommittees with similar latitude to decide upon and implement changes. The principal corroborated this finding, stating that, "we have a school structure that works, but we continually look for ways to tweak things and improve them when we can."

In addition to the committees, teachers also serve on two learning teams, one horizontal team consisting of others with similar teaching assignments, and one vertical team comprised of members from all grade levels and other certified and classified groups. The school schedule shows that horizontal team meetings last all day on Thursdays, and vertical team meetings are held all day on Fridays. There are six horizontal teams and four vertical teams.

The observer had the opportunity to observe six horizontal team meetings and three vertical team meetings. During both vertical and horizontal learning team meetings, group members are in charge of the agenda and the direction of the discussion. Each group has a facilitator, timekeeper and recorder, and these jobs rotate occasionally among those in the group. In each group observed by the researcher, all members were actively

engaged and contributing. When necessary, efforts were made by the facilitator to encourage participation. The principal was in and out of the room, answering questions and occasionally contributing to the discussion, but she was definitely in a background role. When questions came up regarding scheduling, materials, or other needs, the principal appeared eager to help the group get what they needed. When one teacher called the office to say that she could not meet with her learning team because her teacher assistant had gone home sick, the principal responded, "I'll be right there to take your class for you. It is important for you to be able to join your team."

Decisions made by learning teams included pacing of the literacy units, purchase of materials for classroom libraries, sequencing of science units, and identifying field trips to support the upcoming social studies unit. Many of the decisions made in team meetings were relatively small ones, but they were taken seriously by the teachers, and team members did a good job of making sure that everyone's viewpoints were heard and considered.

Several interviewees stated that the principal encourages the staff to come to her if they have problems or concerns. She also asks that they come with possible solutions to the problem. The researcher observed at least three occasions where individuals did come to speak with the principal, and the principal was positive and affirming in her interactions with the individuals. While offering her help, however, the nature of these interactions indicated that she was not willing to be enabling, but rather empowering; offering suggestions or support but expecting the teacher to take the lead in resolving the issue. One classroom teacher shared a problem that she was having with a student. The

principal responded, “I can see why you might be frustrated. What have you tried already? I can help you explore some options.”

According to a survey given to all Riley Elementary School staff members in 2005, most staff members feel like they are able to share in decision-making at the school, and that they have a positive and productive working relationship with the principal. See Figure 4.6. (A total of 72 staff members took part in the survey; 40 certified teachers and 32 non-certified staff members.)

Table 4.6 Results of 2005 Riley Elementary School Staff Survey

Statement	Agree	Disagree	No Opinion
I am involved in the development of the school’s vision, beliefs and mission	85%	9%	6%
I am regularly involved in making school policies and procedures	59%	26%	15%
Teachers at our school play a major role in curriculum alignment	85%	5%	10%
I have meaningful input in selecting staff development activities	60%	25%	15%
Teachers and staff in our school have a positive and productive working relationship with the principal	73%	22%	5%

While the level of agreement varied among the statements, in each case the majority of the staff agrees that they are involved and able to give input into decisions made at the school. It is interesting, however, that only 59% of the staff feels like they are involved in making school policies and procedures, as the documents show that committees are involved in determining policies and procedures, and during interviews, most teachers agreed that this was a responsibility regularly shared with the staff. The relatively low (60%) agreement regarding selection of staff development activities is

more understandable, as the principal and some teachers indicated that much of the staff development is determined for the entire district at the district level. Individual and small groups of teachers, however, may occasionally attend workshops of their choice offered in nearby cities.

Both teachers and the principal indicate that shared leadership is not without its drawbacks. While teachers have many opportunities to provide input and overall they feel that their opinions are heard and valued and that they truly have a hand in what goes on at the school, some see this as a mixed blessing. With the increased responsibility for decision-making and leadership comes additional work. Some interviewees mentioned feeling overwhelmed by the number of meetings and emails that are often required in order for people to be involved and give input. One interviewee said, “When we were working on the vision, we had meeting after meeting after meeting. In the end we had a great outcome, but it took forever!” Participatory decision-making takes more time and effort. The overall feeling, though, is that the pluses of shared leadership outweigh the minuses. As one teacher put it, “We used to have less work, but there was more unhappiness.”

In addition, both the principal and the staff concede that some decisions are not made as a group but rather by the principal or central office personnel. And, while she wants the staff to have as much input as possible, the principal remains highly involved in all aspects of the school and works closely with all teams and committees as they share in the leadership of the school. One teacher said, “There is a lot of shared leadership at this school, but Sharon’s hand is in all of it.” The principal agrees with this, and sees it as both positive and necessary, commenting that “putting shared leadership and decision-making

into practice in a school has to be a deliberate.” It was a philosophy that she brought with her to Riley Elementary and she believes that teacher involvement has reaped its rewards in increased student achievement. “The teachers are putting themselves out there...they put a lot of thought into these decisions and they want to see them succeed.”

The principal has represented her district as Principal of the Year twice during her five year tenure at Riley Elementary. She is a leader with a vision, and she makes it happen each day. She has worked hard to change the climate at the school, from one of authoritative, top-down management to one where everyone is involved in both the process and the outcome, and the changes are obvious. During one of the researcher’s visits, a central office administrator summed it up by saying, “This school was in big trouble. Now the kids are learning, really learning, because of what she has created here.”

Shared Values and Vision

One thing strongly agreed upon by the teachers interviewed and by the principal, and which remained a common thread across all data collected, is the degree of commitment of the staff to the students’ learning and well-being. When asked what the staff values at the school, responses consistently referred to student achievement and citizenship. The teachers believe that students are respected and cared for by all the adults at the school, and that everyone is committed to academic success for all students. “We are a close community. We are all different people, but every adult in this school is here for the kids. We teach them, but we also love them,” said one interviewee.

There seemed to be an unspoken, yet definitely shared, vision regarding student achievement at the school. There were many discussions, and sometimes differing

opinions regarding how to get there, but it appears the staff as a whole is working toward the same end. A few of the interviewees told the story of the forming of the school vision. According to one interviewee, “We had meetings, meetings, lots of meetings.” There was a lot of discussion during the meetings about the wording of the vision to ensure that it was something everyone believed, and that the wording would be easily understood by anyone, including parents and students. When asked to “tell me about the vision of this school,” however, none of the interviewees actually stated the mission statement. One described the vision as “what you feel when you come here,” going on to say that the vision was visible in the efforts put forth by all the staff and that walking into any classroom “you would see first that we’re here for the kids.” Another teacher felt that the staff as a whole values children and education and that the children are so well-behaved, for the most part, because they are reflecting the way they are treated at Riley – with mutual respect – and everyone “knows we care about them here.”

According to interviewees, each day over the intercom, the principal reminds students to “be honest, be respectful, be responsible” and shares details about how to “live” various character traits. The researcher observed that character traits are posted throughout the school, in every classroom, and on the large school sign located along the road next to the entrance of the school. In addition, the school mission is posted in the entry hall and in the classroom, and is printed in the student planners.

The school is clean, bright, and orderly in the office area, the hallways, and in the classrooms. Student work is abundantly displayed in various ways throughout the school as well; leading the researcher to believe that overall the staff values a cheerful but

organized learning environment that showcases their pride in their school and their students' learning.

Learning is valued for adults as well. During learning team meetings, the researcher observed that every team was on-task and focused throughout the time allotted for their meeting. Minutes from past meetings show that this is usually the case; the vast majority of team meeting time is devoted to issues that are directly related to instruction, leading the researcher to believe that overall the staff values respect for each other and commitment to improved teaching, and that these values are shared across the board among the adults at the school.

When asked whether this is different now than it was in 2001, one teacher felt that it is not different now, that students have always been first with the school staff. Another interviewee, however, said that the difference is "huge," that the school was not cohesive five years ago, and everyone was going in their own direction...we had no common goal, no shared vision or direction. There were whole groups of teachers who would not even talk to each other or work together." This teacher also says "now we not only say it, we believe it, and we act like it every day. We are all together in where we are going." Observations and data gathered by the researcher overwhelmingly show shared values and vision among the staff, and, while individuals on the staff may have always been committed to and cared for the children's welfare and education, the key now is that both the principal and the teachers are now formally united in their vision and working together to achieve it.

Collective Creativity

Collective learning is abundant at Riley Elementary School. Every teacher interviewed attributed time spent learning together as a major factor in the improvement of student achievement at the school. Prior to 2001, teachers had the opportunity to attend workshops, but the information was beneficial only to the person attending the workshop because there was no format for sharing learning with others. Group learning did not seem to be valued by the administration, and any collective learning that did occur was more by chance than by design. This is certainly not the case today.

A copy of the school schedule shows that each week, two complete days out of five are devoted to collective learning and shared practice in learning teams. In addition, Monday afternoons are set aside for faculty meetings, committee meetings, and staff development opportunities after school, resulting in more than 40% of the week formally devoted to collective learning.

The principal explained the two types of learning teams at Riley Elementary – vertical and horizontal. Each vertical team consists of members from every grade level and teacher group. Horizontal teams are essentially grade level teams, with all teachers on the team having the same type of teaching assignment. Vertical teams meet weekly for one hour, and horizontal teams meet weekly for ninety minutes. Each group has a facilitator who keeps the group on-task and focused and develops an agenda prior to each meeting. According to the interviewees, team members share teaching ideas, view and discuss videos of best practices, and discuss ways to improve various aspects of teaching and achievement. During one horizontal meeting, a teacher came with a large geode and said, “Since we’re getting ready to start our rock unit, I thought I would share this geode.

I have enough for everyone to open one with your class.” Another teacher thanked her and said, “I created two literacy center activities to use during rocks. They are in my shared folder (on the computer) under November.” When asked about collective learning, every interviewee mentioned learning teams as the most valuable and consistent way that the staff learns together.

The researcher observed that nearly all of the learning team time was spent discussing the craft of teaching and how to best increase student achievement and meet the individual and collective needs of the students. In each team, there was a high degree of participation from all members, and the atmosphere was helpful and collegial. Both the teachers and the principal believe that time spent discussing teaching and learning in team meetings has had a major impact on the increase in student achievement at the school.

The school conference room is set up to facilitate team meetings. Tables and shelves are lined with multiple titles of resource books for teachers to use in group study on topics such as differentiation of instruction, guided reading, integrating science and mathematics, and interactive writing. There are also video collections designed to showcase particular teaching methods or subjects and provide staff development to teachers wanting to learn more about these methods. A projector and a computer with internet access are available for teachers to use to take notes and look up any information they may need during the meeting.

During one vertical team meeting, the observer sat around the table with the eight members of the team. They had just finished a previous study on effective ways to teach spelling and were ready to move on to another topic. The team decided they wanted to

focus on working with words in literacy instruction and looked around the room at the available resources. They decided to use a video series about incorporating word work into the classroom literacy program. This suggestion came from a team member said, “Let’s look at the “Ways With Words” video. Carol said her team used it at the beginning of the year and they got some great ideas. What do y’all think?”

The facilitator noted that the entire video lasted approximately one hour, and a team member suggested watching fifteen minutes of the video for each of the next four weeks, then taking some time after each viewing to discuss what they saw and ways that it could be used in their classrooms. While the team watched the first segment of the video, the facilitator took notes on the computer (which was projected onto the board) regarding key points of the segment. Following the video, a discussion ensued about different ways to incorporate word work. One teacher mentioned that she “liked how the person in the video used different colors to show different chunks of the words,” starting a discussion of how this could be used to enhance mastery of spelling words. Another teacher then noted that “the love of words from the teacher on the video was obvious,” and discussion turned to teacher enthusiasm for subject matter and its effect on students.

During another vertical team meeting, one member shared information from a conference she had gone to where she learned ways to implement and enhance a reading program already in use at Riley Elementary. She started out by saying, “I am so excited about this. The workshop was so good and I have so much to share with you!” She passed out copies of the information she received from the conference, and then taught her teammates what she had learned about different ways to use the reading program in the classrooms, how to set reading goals with children, and ways that the teacher can

encourage children to choose increasingly difficult books as their reading levels increase. At the end of her presentation, a teammate remarked, “Thank you so much. I’ve had that resource box for two years and never knew exactly how to use the stuff effectively.”

A third vertical team was also ready to begin a new topic of study. The facilitator led the group in reviewing the list of learning goals that was given to them at the beginning of the year. One member expressed an interest in learning more about effective ways to help students understand math concepts. Another member referred to a standards integration article that the principal had distributed to all teachers earlier in the year, and expressed an interest in learning more about applying this to classroom practice. “Sharon wanted us to read this article, and it was good, but I need to figure out how to apply it in my classroom and help my kids learn.”

Because vertical teams are comprised of teachers from a variety of teaching assignments, discussion included each topic along a continuum of grade levels and subject areas. Rather than individual activities and specific application of the teachers’ learning, these teams spoke more about the overall value and benefit of using the practice at Riley Elementary, as well as what it could look like at different grade levels and how it could be integrated into other settings.

Horizontal teams also had a heavy focus on collective learning. Because these teams were comprised of teachers from the same grade level, discussions were more specific regarding classroom practice. One team was preparing to do a unit centered on the book The Polar Express, and the facilitator reminded all team members to bring ideas and activities to the next meeting for the group to discuss and decide on what to include in the unit.

Later in the meeting, the same group had a thirty minute discussion about ways to structure reading lessons and how to incorporate Marzano's higher-level thinking into the lessons and assessments. One teacher brought copies of questions she had been using and distributed them to the group. Another teacher had tried a lesson in which students wrote their own questions, and then matched them to the corresponding questioning level. She distributed a copy of the classification sheet to her colleagues and discussed how they could use it. She also brought some examples of the questions her students wrote. "My kids loved this, and look at these questions. Some of them are really high level. Aren't they impressive?"

Another horizontal team was getting ready to begin a multiplication unit in math. One teacher had made a math jeopardy game, brought it to the meeting to share it with her team, and then told them that she had put a copy of it in the team's shared folder on the computer so that everyone could access it if they wanted to use it. "My kids loved this game," she said "I made new questions each time we played it, but after just a few games they started answering the questions more quickly and accurately. My questions are in the shared folder, too, so you don't have to make up your own unless you want to." Two veteran teachers then spent some time talking to the newer teachers about the different strategies they taught their students to use when multiplying, and one teacher got up to demonstrate on the whiteboard.

The next topic of discussion on the agenda for this group was the "daily fix-it" – a method many of the teachers used to teach writing mechanics and conventions. Each teacher shared her own way of presenting the daily fix-it to her class while the facilitator used the computer to record the ideas to be put in the grade level's shared folder. One

teacher brought a poster she made to correspond with a writing lesson and offered to use the school's poster machine to make one for any teammate who would like to have one for her classroom.

The third horizontal team spent the majority of their meeting discussing the current science and social studies units and how they were integrating them into other subject areas. Two teachers shared websites they had used for social studies, and another shared some materials that she was using to teach latitude and longitude. As with the other two groups, a large majority of the ninety minute meeting was spent learning and sharing together.

Clearly a great deal of learning, discussion, and collaboration occurs throughout the team meetings. In addition, teachers have many other opportunities for staff development. The district and/or the school bring outside consultants in to meet with teachers and share ideas and methods. Individual or small groups of teachers have opportunities that are offered outside the district. Interviewees said that, while teachers had the opportunity to attend workshops during the prior administration, teachers now share their learning with other teachers either at a faculty meeting or during learning team meetings upon their return from the workshop. Time is also set aside at faculty meetings for teachers to share their "trials and triumphs" in the classroom.

As they are sharing and learning with colleagues, teachers are getting input and ideas about how to best help their students be successful learners. One teacher remarked that she believes time spent learning collaboratively has made a big difference in the amount of progress students are making. "Each of us is good, but together we are great. I've gotten ideas from other teachers that made differences for my students that I never

would have thought of before. I am such a better writing teacher because of their ideas, and my students are better writers as a result.”

According to many interviewees, the principal has made collective learning a high priority even outside of the school setting. At the end of each school year, all teachers are given a copy of the same book to read over the summer, along with some questions related to the reading for them to think about and reflect upon. The book, chosen by the principal, is supposed to be an “easy read” that deals with some aspect of teaching or education. When teachers return in the fall for a new school year, time is spent discussing the summer reading and its application to the school and the classroom.

Collective learning abounds at Riley Elementary School, and all teachers appear to be embracing and participating in the opportunities to learn together. The principal and the teachers believe that this focus on adult learning and collaboration has resulted in more effective teaching and increased student learning. Teachers are no longer isolated, but work together to improve learning and instruction. They are able to build on each others’ strengths and provide and receive ideas and feedback from colleagues. Responsibility for student learning is shared, and teachers collaborate to help all students learn, rather than just those assigned to them. One teacher summed it up by saying, “We finally figured out as a school what needed to be done. We had to let go of personal agendas and look at other ways of doing things. There used to be a divisive, competitive spirit here, but people are now willing to share and wanting to work together. We’re all in it together. And our kids’ learning shows that.”

Shared Practice

Teachers at Riley Elementary School believe they are continually sharing practice with their colleagues. During learning team meetings, teachers share ideas and best practices with each other. At faculty meetings, time is set aside for teachers to share their “trials and triumphs” as they discuss what is working and what is not, and give and receive input from colleagues. Interviewees also see the level of sharing as being quite different now than it was five years ago. “Sharing was almost nonexistent,” said one teacher. “Imagine the opposite of sharing and you’ll know what we had here.”

According to Hord, however, the main component of shared practice is teachers observing each other as they teach, then providing feedback regarding the observation. Teachers at Riley Elementary School are just beginning to actually observe each other in action. It is mainly informal in nature, and happens when one or more teachers wants to learn about a particular method or practice used by another teacher. There is no feedback component to the observation at this point, and the benefit is mainly for the observer.

“My team wanted to see how Maxine was doing guided reading because it seemed to be working for her,” said one classroom teacher. “Sharon arranged for us to be able to observe in her classroom so we could see it in action.” The purpose of the visit was more to gain knowledge than to provide feedback.

The composite score on the Professional Staff as Learning Community Survey for this component was noticeably lower than the score for the other four components. Questions on the survey pertained specifically to teachers observing colleagues in the classroom and then having conversations about the observation. One teacher commented that, “Sharon would like to see us do this more, but I think most of us aren’t there yet.

Some people are just really not comfortable being observed. And we know what other teachers are doing; we talk about it all the time.”

Although the survey was specific to teachers observing each other in practice, the interviewees at Riley believe that they do share their practice quite often in other ways. “We share ideas, we share plans, and we share our teaching with each other all the time. You can see it all over this place. We’re just one big sharing bunch.”

The researcher also observed some more informal shared practice at the school in the form of discussions and sharing activities and resources. Looking through the shared folders on the computer, the observer found abundant examples of teachers sharing projects, worksheets, games and other activities with their colleagues. Walking through the hallways after school one day, the researcher observed two small groups of teachers gathered informally in the hall. One group of three teachers was discussing ways to adapt guided reading lessons to incorporate nonfiction text. Another teacher was showing a student’s writing response to her colleague across the hall and asking for advice on ways to work with that student on sequencing events in a narrative. However, there was little evidence of peer observation or feedback happening at the school. This would explain the low score on Hord’s survey instrument in the area of Shared Practice.

Supportive Conditions

According to Hord (1997), supportive conditions include adequate time for collaboration, space to meet, resources, and emotional support.

Many interviewees commented that, prior to 2001, administrative support at Riley Elementary School was sporadic and unpredictable. One veteran teacher summed it up by

saying, “There was definitely not a feeling that the principal was on our side or aware of what we needed to do a good job. Mostly we were on our own.” Teachers now believe that they have a great deal of support, both from administration and from colleagues. Several interviewees reported that, while the principal has high expectations for her staff members, she also provides them with whatever they need to do their jobs well, including time, materials, information and emotional support.

The principal makes a point of being visible and accommodating. She is a can-do person, and her high energy and positive attitude set the tone for the rest of the staff. She has an open-door policy and the researcher observed many instances in which a teacher or staff member came to voice a concern, share a thought or ask a question. Each time, the staff member was greeted with a smile and welcomed into the room, and was given the principal’s undivided attention. In one case, the principal was on the telephone but asked the caller to hold for a moment to let the teacher know that she was happy to talk to her and to find out if the teacher could come back in five minutes. The principal ended the call five minutes later in order to talk to the teacher. As she was leaving the room, the teacher (who also happened to be an interviewee in the focus group) said, “This is a perfect example of the support we have here. Even when she’s busy, she lets us know that we are important and valued.”

Time and space are set aside during the school day for teams to meet. The meeting space is nicely furnished, with comfortable leather high back chairs and a large table. The periphery of the room contains resource books and videos for teacher use, as well as a basket of post-it notes, pens and pencils, highlighters, scissors and a stapler.

There is a computer and projector for presenting information, writing minutes, and taking collective notes, and a television and DVD/VCR for teachers to use if needed.

On two occasions, a teacher was unable to come to the team meeting because the teacher or assistant that was to cover the class was absent. In both cases, the principal covered the class or secured another person to cover the class so that the teacher could participate in the team meeting.

The school itself is configured to support sharing and interaction. Rather than locating all classrooms of a particular grade level in one section of the building, each hall contains at least two or three classes of each grade level, as well as a mixture of resource classes. Several teachers have asked to try different approaches, and the principal has supported them in their endeavors. The principal said, “As long as they can show me they have a well-thought out plan and a good rationale, I’ll do whatever I can to make it happen.” This year, two teachers asked to be in adjoining classrooms. They combined their students into one large class of fifty students, and divide the students in different ways throughout the day based upon the students’ needs and each teacher’s strengths. When the master schedule was created, these teachers were put together so they always have planning at the same time each day to provide maximum time for collaboration.

One teacher said, “Sharon’s support has made a huge difference in this school. She makes things happen for us and we make it happen for the students. It’s a chain and it’s all linked. You can see the results in the learning gains the students are making. I think when we feel better about what we do, then we do it better.” This sentiment was echoed by other teachers as well. “We have been given the time to become better teachers and I think we have become better teachers because of the support we get here. I’ve been

in this district for twelve years, and the kids are definitely learning more than ever before.”

Summary

Each of the five components of a Professional Learning Community is present to some extent at Riley Elementary School. According to the data, four of these components have a particularly strong presence: Supportive and Shared Leadership, Shared Values and Vision, Collective Creativity, and Supportive Conditions. The creation of a Professional Learning Community began five years ago as a vision of the incoming principal, and during the same five years, student achievement has increased dramatically at the school.

In analyzing the data, three factors were perceived as having the greatest impact on student achievement: strong and supportive leadership, common values and vision among the staff in the form of commitment to students and teaching, and collective learning through learning teams and collaboration. Teachers who have been at the school for more than five years all point to these things as having a major impact on the improved achievement at the school. The data also reveal supportive conditions, such as time, space, and resources as being a contributing factor, although the teachers tend to view these as being closely tied to the school leadership. They believe that the principal is the one who, as one teacher remarked, “Makes it all possible. Although we are all committed 100% to this school and these kids, she is the driving factor behind everything that you see here.”

In Chapter Five, the relationship between these common threads and student achievement will be discussed further and linked to literature in order to support the results of this study.

V: SUMMARY AND DISCUSSION

The purpose of this case study was to investigate the impact of a professional learning community on student achievement in an elementary school. This final chapter will restate the research problem, review the methodology used in the study, summarize the results, and discuss the implications of the study as well as recommendations for future research.

Statement of the Problem

As stated in Chapter 1, the concept of professional learning communities has become increasingly popular among educators in recent years, however there has been very little research regarding the effect that these learning communities have on student achievement. After verifying that a professional learning community did exist at the site, this study investigated the possible relationship between the professional learning community and an increase in student achievement.

Review of the Methodology

This case study used Hord's (1997) five components of a professional learning community as a theoretical framework to investigate the impact of a professional learning community at an elementary school in North Carolina. The school, Riley Elementary School (a pseudonym), has seen a large increase in student achievement in recent years, and also labels itself as a professional learning community. In 2000, just 56% of the

students at Riley Elementary School were considered to be proficient as measured by the North Carolina End-of-Grade tests. Student achievement rose steadily each year, and by 2005, 84% of the students were proficient (NC Public Schools, 2006). In the year 2001, a new principal came to the school and immediately began to create a professional learning community at the school.

The research design used for this study yielded both quantitative and qualitative data. A likert-scale instrument, Hord's (1999) School Professional Staff as Learning Community questionnaire, was administered to the certified staff of the school, to verify that the school, in fact, was functioning as a professional learning community. Data were then gathered using interviews, observations, and document collection. The researcher spent approximately 38 hours over a two month period interviewing teachers, observing meetings and school activities, and examining documents. Twelve teachers were interviewed, all of whom have been working at Riley Elementary School since prior to 2001. Six teachers were interviewed individually, and another six in a focus group. The principal was also interviewed individually. Following the interviews, the information was summarized and given to the participants for verification.

Summary of the Questionnaire Results

The theoretical framework for this study, Hord's (1997) Five Components of a Professional Learning Community, was used to organize the results presented in Chapter 4 of this study, and is used here to summarize those results. The five components identified by Hord were: 1) Supportive and Shared Leadership, 2) Shared Values and Vision, 3) Collective Creativity, 4) Shared Practice, and 5) Supportive Conditions.

Hord's (1999) Professional Staff as a Learning Community survey was administered to the certified staff at the school. The survey used a likert-scale response with values from 1 to 5. The researcher set the criteria for the existence of a professional learning community as a score of 3.8 or higher. The overall composite score on the survey was 3.9, indicating that the school was actually functioning as a professional learning community. The survey also gave composite scores for each of the five components. The component receiving the highest score, 4.1, was Shared Values and Vision, followed closely by Collective Creativity with a 4.08. The only individual component receiving a score below 3.8 was Shared Practice, with a score of 3.37.

Observations, documents, and interviews showed strong evidence of four out of five of Hord's Professional Learning Community components.

Summary of Results: Observations, Interviews, and Document Review

Supportive and Shared Leadership

Evidence emerged which shows that the leadership at Riley Elementary School has made a profound difference in many ways. Teachers are given many opportunities to provide input into decisions and to serve in leadership capacities within the school. There is a committee structure in place which outlines responsibilities for gathering information from all stakeholders and using the information to make collective decisions that affect the school. While some decisions are made at the district level or by the principal alone, she shares this responsibility with her staff as much as possible. Because shared leadership was not in place at the school under the prior administration, the staff was not used to participating in decision making. Both the principal and the staff agree

that shared leadership can be time consuming, often requiring additional meetings and time to gather information and come to a consensus. In addition, once a decision has been made, the principal has high expectations for compliance with and commitment to the decision. Overall, the teachers have great respect for the principal and there is no question about her dedication to the success of her staff and her students.

Shared Values and Vision

One thread that emerged strongly from the data was the degree of commitment of the staff to the students and to student achievement. A great deal of time was spent crafting a formal vision and mission statement that the entire staff contributed to and agreed upon. Shared values are apparent in informal ways as well. There is a continual focus on teaching and learning throughout the school day, in classrooms, team meetings, and informal staff interactions. The staff cares about the students' emotional well-being as well as their academic success. Respect is highly valued among adults and is taught and modeled for students, and a strong commitment to improving instruction and student achievement is apparent.

Collective Creativity

Both the principal and the teachers believe that the learning teams have had a major impact on student achievement at Riley Elementary School. Two full days each week are devoted to collective learning, and every teacher belongs to a horizontal and a vertical learning team and spends two to three hours each week in structured learning time with colleagues. Each year, everyone on the staff is given a copy of a book about some aspect of instruction or learning, and they meet together to discuss and process the

content of the book. Teachers report that time spent learning with colleagues has made them more effective classroom instructors. Groups research and discuss effective teaching strategies and work together to put them into action in the classroom. The collaboration results in more consistent school wide implementation of best practices and collegial support leads to greater success within individual classrooms and for all students.

Shared Practice

This component of a Professional Learning Community received the lowest score on the Professional Staff as Learning Community Questionnaire. Hord's definition of shared practice involves teachers observing each others' teaching and then providing feedback regarding the observation. This type of shared practice is not happening at Riley Elementary School. Teachers do share practice in other ways, through the exchange of ideas and resources. Some teachers have also spent time observing in colleagues' classrooms for the purpose of learning more about a teaching strategy being used by that teacher. However, peer observations and feedback cannot be attributed to increased student achievement at the school, as this practice is basically non-existent.

Supportive Conditions

Teachers at Riley Elementary School agree that they have a great deal of support from the administration and from their colleagues. The staff is provided with materials, resources, space, and time during the school day to focus on teaching and learning. The

school schedule is specifically designed to provide time for collaboration. The room in which learning teams meet is comfortably furnished and well-stocked with materials, supplies, and internet access. The principal has an open door policy and teachers feel that their questions and concerns are heard and acted upon. She is very supportive of teachers' requests to try alternate classroom configurations or teaching methods, as long as they can present a well thought out plan that is designed around increased student achievement.

Discussion of the Results and Impact on Student Achievement

The data show that a professional learning community exists at Riley Elementary School, and that student achievement at the school has made impressive gains during the past five years. According to McLaughlin and Talbert (2006), there is data-based evidence that professional learning communities improve teaching and learning. Lee, et. al. (1997) also found that learning communities positively impact student achievement.

Though Hord's theoretical framework identifies five components of a professional learning community, only four of these components, as defined by Hord, were fully present at Riley Elementary School. The results show little evidence of shared practice at the school that fits Hord's definition of this component.

Throughout this study, three strong themes have emerged as having the greatest effect upon student achievement at the school: a strong and supportive principal, learning teams and collaboration among the teachers, and a shared vision and commitment to a common goal. These threads are closely tied to Hord's first three components of a professional learning community. While another of Hord's components, supportive

conditions, did not emerge as a strong theme, the teachers often included many characteristics of this component when talking about the principal. They clearly see her as being the reason that supportive conditions such as space, resources, and time for collaboration are in place. In this section, the three common threads will be discussed and tied to student achievement gains.

Prior to the year 2000, barely half of the students at Riley Elementary School were achieving at or above grade level as measured by the North Carolina End-of-Grade tests. According to Michael Fullan (2001), effective leadership is the key to successful school change, and this school definitely needed to make some changes.

Cotton (2003) states that, “decades of research have consistently found positive relationships between principal behavior and student academic achievement” (p.1). In a review done by the Wallace Foundation, researchers found that, of school-related factors, leadership is second only to classroom instruction in the impact on student achievement (Center for Comprehensive School Reform and Improvement, 2005). It is no surprise, then, that student achievement at Riley Elementary School began to improve when Sharon Kirk came on board. She had been working in the school for a year prior to her appointment as principal. At that time, Riley was struggling with low student proficiency and the staff was not working well together. Sharon’s job was to assist the principal in making changes that would improve student achievement and school climate. The principal resigned at the end of that school year, and Sharon applied for the position. She came in with a vision for the school and its teachers and students, and immediately put a plan into action. She knew that test scores were poor, morale was low, and the school lacked cohesiveness and direction.

From the beginning, Sharon was committed to creating an environment where leadership and decision-making were shared among the entire staff and empowered teachers to be an integral part of the school community. Blase and Blase (1994) found that the most successful schools were ones in which shared leadership and participatory decision-making were strongly in place, and that these factors contributed to student achievement. This seems to be the case at Riley Elementary School as well. One of Sharon's first actions as principal was to recruit a planning team from among the teachers, and she began to solicit input as she shared her vision for the school. She told teachers of the positive, collaborative, learning-focused environment she envisioned and warned that, while the end result would be well worth it, she had high expectations for all staff members and everyone needed to be willing to put forth the effort. Several teachers left the school during the first couple of years of Sharon's tenure and, according to the principal, they were teachers who were fine with the status-quo and unwilling to make the changes that were being asked of them. Following their departure, Sharon was able to hire teachers that shared her vision of collaboration and high student achievement.

Over the years, Sharon has introduced changes slowly, and has been careful to provide the conditions needed to make them successful. She began with the planning team, then added other subcommittees and expected each staff member to serve on one. She put a mechanism in place for committees to solicit input from all staff groups when making decisions. She asked that everyone come to school each day and be able to say, "I get to be at Riley Elementary School today!" and that if they didn't feel that way, to "fake it 'till you feel it." She encouraged those who didn't "feel it" after a while to find a different place to work, as she needed everyone to want to be at the school. Some

teachers mentioned this in their interviews, and one said, “I had to fake it for many months before I finally felt it, but now I wouldn’t want to be anywhere else. I’m proud to be here and I love this school and what we do here.” Teachers at the school believe that their ability to be involved in making decisions and take leadership roles in the school have increased their commitment to their profession and have made them better teachers. They appreciate the principal’s trust in them and feel supported by her both personally and professionally.

A second factor appearing as a common thread throughout this study is the values and vision that are shared by the staff. Cunningham and Gresso (1993) see the development of a vision as the first step in a school’s move toward higher student achievement. The principal engaged the staff in this process during her first year at the school. Staff members at Riley Elementary School spent many hours over several weeks examining their values and priorities in order to come up with a common vision that everyone agreed upon. According to the teachers, this was a long process, but well worth the time and effort.

In their study of schools having successful learning outcomes for students, Hulley and Dier (2005) found that, at successful schools, staff members had a common vision of success for all students and a high level of commitment to their students’ learning. In high achieving schools, the staff also collectively values high expectations for achievement of all students (Cotton, 2003). At Riley, the process allowed the staff to understand the degree to which they are all committed to not only the students’ learning, but to the students themselves. The teachers had a collective desire to improve student learning. By creating a shared vision and realizing the depth of their shared values, the

teachers began to see each others as partners in the quest for increased student achievement. Working toward a common goal of increasing student learning brought the staff together and helped to eliminate the isolation and competition of the past.

The third factor identified in this study as having an impact on student achievement is collective creativity – the opportunity for teachers to collaborate, discuss their craft, and learn together, then apply their learning in the classroom.

At schools with high levels of student achievement, teachers learn and work together to improve instruction and student learning (Cotton, 2003; Hulley and Dier, 2005). At Riley Elementary School collective learning in the form of learning teams was highlighted repeatedly by interviewees and the principal as having a big impact on student achievement at the school. The principal reported that learning teams got off to a slow start in the fall of 2003. It took teachers a while to get used to having meaningful conversations about teaching and learning. They had been used to teaching in isolation, to going into their classrooms and doing their own thing. Grade levels sometimes met together on their own after school, and time was usually spent talking about logistics such as fundraisers and field trips.

When horizontal learning teams were first created, a list of goals for the year was developed by the planning committee to give the teams some direction. Groups worked together to choose roles, such as facilitator, recorder and timekeeper, and came up with group norms that everyone would buy in to. The principal provided materials that correlated to the team goals, such as videotape series' of best practices and multiple copies of books for the group to use as they learned together. The principal knew that having the staff learn together would be crucial to improving student achievement, and

that time and resources had to be made available for this to happen. In order for collective learning to be effective, this time must be woven into the school day on a consistent basis, providing teachers with continual opportunities to learn together (Renyi, 1996).

The addition of vertical learning teams two years later went much more smoothly. Teachers were more used to learning together and having conversations about teaching. They had started sharing knowledge, ideas, and activities with colleagues at their same grade levels; vertical teams allowed them to do the same type of work but with colleagues of various grade levels and other teaching assignments. Exceptional children's teachers are part of the learning teams as well, and teachers cite this as making a difference in the achievement of students identified as having special needs. One teacher said, "Our EC teachers are on the same page with us now. They demand the best of their students, and so do we. It's a more unified approach and it shows in the learning."

Teachers come to the learning team meetings prepared and time is spent discussing, listening, and learning about topics identified as needs at the school. Teachers are valued for their strengths and contributions. "There are so many experts here, so much that we can learn from each other," said one interviewee. "There used to be a competitive feeling here, now we build on each others' strengths and we've all become better teachers in so many ways. Also, we focus on children all of the time. All the time."

Summary of Impact on Student Achievement

The results of this study show that a combination of factors contributed to the student achievement gains at Riley Elementary School, and the literature supports these findings. While all five of Hord's components of a Professional Learning Community

were present to some extent at the school, there were three that stood out as having the greatest effect on student achievement: supportive and shared leadership, shared values and vision, and collective learning.

It was the principal's vision for the school, her determination, her high expectations for staff and students and her belief in shared leadership that set the school on a charted course toward improvement. She began by involving the staff in her effort early on. They worked together to create a shared vision that was closely aligned to that of the principal, yet was decided upon by the staff as a whole. Throughout this process, it became evident that the staff shared a strong commitment to the students as well as to their achievement. Teachers began sharing ideas, helping each other with difficulties, and learning and implementing new practices. Slowly, the invisible walls that some teachers had built around themselves began to come down. Teams began looking at student work and at assessment data so that they could focus in on student needs. As the teachers' efforts turned collectively toward the students and best practices for learning, students began to learn more. Teachers were provided with the time to work in teams, the resources they needed to improve their craft, and the encouragement and support to try new things and make changes in areas such as teaching methods and student groupings. All of these factors match closely to Hord's components of professional learning communities, and all contributed to increased student achievement at Riley Elementary School, with the greatest impact resulting from supportive and shared leadership, shared values and vision, and collective learning.

Implications for Practice

This study revealed that a professional learning community can have an impact on student achievement. The school in this study raised student proficiency from 56 percent to 83 percent in less than five years, concurrent with a concerted effort to establish and sustain a professional learning community. Although the success of the school in this study does not provide enough evidence to imply that every school can achieve the same results, this study does show that it is possible to achieve gradual and consistent improvement by implementing components of a professional learning community.

The results of this study can serve as a model for other schools seeking to improve student achievement, especially in economically disadvantaged and racially diverse schools such as this one. According to study results, all five of Hord's (1996) components of a professional learning community play an important part in this process. The principal must come to the school with a vision of where the school could go and a plan for taking it there. Shared leadership, however, allows everyone involved to take ownership of the journey and become invested in its success. Shared values and vision among staff members ensure that everyone at the school is moving in the same direction, toward the same end result. Collective creativity and shared practice allow teachers to learn together and learn from each other. Conversations about improving the practice of teaching, about particular students, and about personal challenges and successes lead to improved and more effective practice in the classroom. In this study, there was little evidence of shared practice in the form of peer observations and feedback. Impressive gains in student achievement were made without this component in place; it is impossible to say whether the implementation of this practice would have affected achievement

results. Finally, supportive conditions provide the necessary supports for the other components to take place; time, space, resources, and moral support underscore the importance of, and commitment to, the establishment of the professional learning community.

It is important to emphasize that the implementation of this professional learning community did not happen overnight but rather evolved slowly over a period of years. In this era of No Child Left Behind, the stakes are high and the pressure is great for schools to improve and achieve. Purposeful and systematic implementation of a professional learning community can result in steady and consistent achievement gains that provide some immediate results but build the foundation for long-lasting success.

This study can also provide valuable information for administrative training programs. The principal was a vital factor in the success of this school. Professional learning communities are becoming increasingly popular topics of discussion in the field of education. Understanding the impact of a professional learning community on student achievement may assist future principals in increasing academic success at the schools they will lead.

Suggestions for Further Research

This study took place in a rural elementary school serving a population comprised of approximately 50% African American students and 49% Caucasian students. Other than these two racial groups, there is very little cultural diversity at the school. As our country continues to become more culturally diverse, it would be helpful to study the impact of professional learning communities on student achievement in schools in which

more cultures are represented including, perhaps, students for whom English is a second language.

According to federal No Child Left Behind legislation, schools must meet academic performance goals for several subgroups of students. This study addressed student achievement as a whole, which allows for the possibility that some subgroups within the school were more successful than others. Valuable information may be gleaned from studying the impact of professional learning communities on student achievement of particular subgroups, including students with disabilities, economically disadvantaged students, students with limited English proficiency, and students of specific ethnic identity.

Finally, this case study investigated a school in which a new principal came into a poorly performing school, armed with a vision and a plan to create a professional learning community. In many cases, however, it is possible that a school is faced with the need to make improvements without the acquisition of a new, charismatic leader. Would this process be as successful if attempted by a principal who has been in place at a poorly performing school and has existing relationship and history at the school, yet attempts to change his personal leadership style by creating a professional learning community at the school in order to improve student achievement? Similarly, would the attempt to improve student achievement by creating a professional learning community be successful if mandated at a district level rather than by the individual school leadership?

Additional studies of schools exhibiting some of the situations listed above may provide valuable insight as to the ability of professional learning communities to impact student achievement in a variety of school settings.

APPENDIX A: INTERVIEW QUESTIONS

1. Supportive and Shared Leadership

Who are the leaders at your school?
How is leadership shared?
How are decisions made at your school?
How the current decision making process different than it was six years ago?
How have these changes impacted the school?

2. Shared Values and Vision

Tell me about the vision of this school.
How was the vision created?
How is the vision shared with students, parents, staff, and community?
What part does the vision play in school and classroom operations?
Describe the values that the staff holds regarding what goes on in the school.
How do you know?
How are the values and vision different than they were six years ago?

3. Collective Learning

How does your staff learn together?
How do you determine what will be learned and when you will get together?
How do you use what you learn?
Did the staff learn together in this manner in the past?
How has this collaboration impacted the school in the past six years?

4. Supportive conditions

How do members of this staff support each other?
How are teachers given time to work and learn together?
How do staff members communicate with each other?
Who are the staff members that motivate and inspire others?
How has this level of support changed the school in the past six years?

5. Shared practice

How do members of the staff share their practice with colleagues?
Do teachers get together to look at student work? If so, how often?
Do teachers observe colleagues working with students? If so, how is this arranged?
How do you provide and receive feedback regarding these observations?
How is shared practice different than six years ago, and what impact has it had?

APPENDIX B: OBSERVATION PROTOCOL

Observation Protocol

Setting:

Type of activity observed:

Role of Observer:

Date:

Time:

Length of Observation:

SSL	SVV	CL	SC	SP	SA
Notes:					

SSL	SVV	CL	SC	SP	SA
Notes:					

SSL	SVV	CL	SC	SP	SA
Notes:					

SSL	SVV	CL	SC	SP	SA
Notes:					

SSL	SVV	CL	SC	SP	SA
Notes:					

SSL: Supportive and Shared Leadership SVV: Shared Values and Vision CL: Collective Learning
SC: Supportive Conditions SP: Shared Practice SA: Student Achievement

APPENDIX C: QUESTIONNAIRE RESULTS BY ITEM

Results of the School Professional Staff as Learning Community questionnaire – by individual item

Component	Item Number	Item Means	Component Means
Supportive and Shared Leadership	1a.	3.757576	
	1b.	3.848485	3.80303
Shared Values and Vision	2a.	3.848485	
	2b.	4.30303	
	2c.	4.242424	4.131315
Collective Creativity	3a.	3.666667	
	3b.	4.272727	
	3c.	4.212121	
	3d.	4.156250	
	3e.	4.121212	4.085795
Shared Personal Practice	4a.	3.030303	
	4b.	3.727273	3.378788
Supportive Conditions	5a.	4.393939	
	5b.	3.878788	
	5c.	4.212121	
	5d.	3.30303	
	5e.	3.424242	3.842424
Composite mean		3.905804	

APPENDIX D: CONSENT LETTER

**University of North Carolina-Chapel Hill
Consent to Participate in a Research Study
Adult Participants
Social Behavioral Form**

IRB Study # 06-0789

Consent Form Version Date: 11/18/06

Title of Study: What Impact Does A Professional Learning Community Have On An Increase in Student Achievement?: A Case Study.

**Principal Investigator: Janice Croasmun
UNC-Chapel Hill Department: School of Education
UNC-Chapel Hill Phone number: 962-2510**

Study Contact telephone number: 968-3803

Study Contact email: janinnc@aol.com

What are some general things you should know about research studies?

You are being asked to take part in a research study. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies. Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will be given a copy of this consent form. You should ask the researcher named above any questions you have about this study at any time.

What is the purpose of this study?

The purpose of this research study is to learn about the impact that professional learning communities have had on student achievement at your school. If you participate in an individual interview, you will be one of six people, and if you participate in the focus group, you will be one of approximately six people.

How many people will take part in this study?

If you decide to be in this study, you will be one of approximately 30 people in this research study. If you participate in an individual interview, you will be one of six people, and if you participate in the focus group, you will be one of approximately six people.

How long will your part in this study last?

You will be asked to fill out a short survey regarding professional learning communities at your school. You may also be asked to participate in an individual interview or a focus group lasting approximately 30 minutes. The study will take place over a period of approximately two months.

What will happen if you take part in the study?

Your involvement will include taking a survey that will require about ten minutes to complete, as well as possible participation in a 30 minute interview or focus group. Interviewees will be chosen from those teachers who have worked at this school since 2000. You will be asked to respond to questions regarding components of the professional learning community at the school.

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You may also expect to benefit by participating in this study by having the opportunity to read the results of the study once it is completed. This information may give you additional information about the impact that professional learning communities have had on the increase in student achievement at this school, as well as information regarding which components of the learning community may have the strongest impact.

What are the possible risks or discomforts involved from being in this study?

There are no known risks to you for being involved in this study. School administrators and staff will not have access to the surveys. You should report any problems to the researcher.

How will your privacy be protected?

Information regarding years of teaching experience, level of certification, and years teaching at this site will be used in this study. Only the researcher will have access to data collected. Data will be kept in a locked file cabinet, and electronic data will be stored on a password-protected computer. Participants will not be identified in any report or publication about this study. The information collected regarding teaching experience, certification, and years at the school will not be linked to any individual quotes or data and readers will not be able to deductively identify an individual on the basis of this information. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies for purposes such as quality control or safety.

Interviews will be recorded using audio tapes. Tapes will be transcribed following the interviews, and will be kept locked in a cabinet until the research study has been completed. After six months, the tapes will be destroyed. If you would prefer not to be recorded during the interview, you may request for the recorder to be turned off.

Participants in individual interviews and focus group interviews will not be asked to reveal their name. If you are a participant in a focus group, you must agree not to reveal comments or information shared in the group.

Will you receive anything for being in this study?

You will not receive anything for taking part in this study, and there will be no costs to you for being in the study.

What if you have questions about this study?

You have the right to ask, and have answered, any questions you may have about this research. If you have questions, or concerns, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research participant?

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

Participant's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

Signature of Research Participant

Date

Printed Name of Research Participant

Signature of Person Obtaining Consent

Date

Printed Name of Person Obtaining Consent

APPENDIX E: QUESTIONNAIRE

Please answer the following questions by placing a check next to the appropriate response. Individual surveys will not be seen by anyone other than the researcher.

1. Teaching Assignment:

☐ regular classroom teacher

☐ non-classroom teacher

2. How many years have you been teaching?

☐ 0-4 years ☐ 5-9 years ☐ 10-14 years

☐ 15-19 years ☐ 20 years or more

3. How many years have you been at this school?

☐ 0-4 years ☐ 5-9 years ☐ 10-14 years

☐ 15-19 years ☐ 20 years or more

4. Which of the following best describes your certification?

☐ NC Provisional Certificate (non-tenured)

☐ NC Regular Certificate (tenured)

☐ National Board Certification

☐ Other (please specify:_____)

School Professional Staff as Learning Community Questionnaire

Directions: This questionnaire concerns your perceptions about your school staff as a learning organization. There are no right or wrong responses. Please consider where you believe your school is in its development of each of the five numbered descriptors shown in bold-faced type on the left. Each sub-item has a five-point scale. On each scale, circle the number that best represents the degree to which you feel your school has developed.

Date: _____
 Name: _____
 School: _____

1. School administrators participate democratically with teachers sharing power, authority, and decision making.	1a	5	4	3	2	1			
		Although there are some legal and fiscal decisions required of the principal, school administrators consistently involve the staff in discussing and making decisions about school issues.						Administrators invite advice and counsel from staff and then make decisions themselves.	Administrators never share information with the staff nor provide opportunities to be involved in decision making.
		5	4	3	2	1			

		5	4	3	2	1			
		Administrators involve the entire staff.						Administrators involve a small committee, council, or team of staff.	Administrators do not involve any staff.
		5	4	3	2	1			

		5	4	3	2	1			
		Visions for improvement are discussed by the entire staff such that consensus and a shared vision result.						Visions for improvement are not thoroughly explored; some staff members agree and others do not.	Visions for improvement held by the staff members are widely divergent.
		5	4	3	2	1			

		5	4	3	2	1			
		Visions for improvement are always focused on students, teaching, and learning.						Visions for improvement are sometimes focused on students, teaching, and learning.	Visions for improvement do not target students, teaching, and learning.
		5	4	3	2	1			

		5	4	3	2	1			
		Visions for improvement target high-quality learning experiences for all students.						Visions for improvement address quality learning experiences in terms of students' abilities.	Visions for improvement do not include concerns about the quality of learning experiences.

3. The staff's collective learning and application of the learnings (taking action) create high intellectual learning tasks and solutions to address student needs.	3a	5	4	3	2	1
		The entire staff meets to discuss issues, share information, and learn with and from one another.	Subgroups of the staff meet to discuss issues, share information, and learn with and from one another.	Individuals randomly discuss issues, share information, and learn with and from one another.		
	3b	5	4	3	2	1
		The staff meets regularly and frequently on substantive student-centered educational issues.	The staff meets occasionally on substantive student-centered educational issues.	The staff never meets to consider substantive educational issues.		
	3c	5	4	3	2	1
		The staff discusses the quality of their teaching and students' learning.	The staff does not often discuss their instructional practices nor its influence on student learning.	The staff basically discusses non-teaching and non-learning issues.		
	3d	5	4	3	2	1
		The staff, based on their learnings, makes and implements plans that address students' needs, more effective teaching, and more successful student learning.	The staff occasionally acts on their learnings and makes and implements plans to improve teaching and learning.	The staff does not act on their learning.		
4. Peers review and give feedback based on observing one another's classroom behaviors in order to increase individual and organizational capacity.	3e	5	4	3	2	1
		The staff debriefs and assesses the impact of their actions and makes revisions.	The staff infrequently assesses their actions and seldom makes revisions based on the results.	The staff does not assess their work.		
	4a	5	4	3	2	1
		Staff members regularly and frequently visit and observe one another's classroom teaching.	Staff members occasionally visit and observe one another's teaching.	Staff members never visit their peers' classrooms.		
	4b	5	4	3	2	1
		Staff members provide feedback to one another about teaching and learning based on their classroom observations.	Staff members discuss non-teaching issues after classroom observations.	Staff members do not interact after classroom observations.		

5a	5	4	3	2	1
	Time is arranged and committed for whole staff interactions.	Time is arranged but frequently the staff fails to meet.	Staff cannot arrange time for interacting.		
5b	5	4	3	2	1
	The size, structure, and arrangements of the school facilitate staff proximity and interaction.	Considering the size, structure, and arrangements of the school, the staff are working to maximize interaction.	The staff takes no action to manage the facility and personnel for interaction.		
5c	5	4	3	2	1
	A variety of processes and procedures are used to encourage staff communication.	A single communication method exists and is sometimes used to share information.	Communication devices are not given attention.		
5d	5	4	3	2	1
	Trust and openness characterize all of the staff members.	Some of the staff members are trusting and open.	Trust and openness do not exist among the staff members.		
5e	5	4	3	2	1
	Caring, collaborative, and productive relationships exist among all staff members.	Caring and collaboration are inconsistently demonstrated among the staff members.	Staff members are isolated and work alone at their task.		

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 Southwest Educational Development Laboratory
 211 E. 7th St., Suite 200
 Austin, TX 78701-3253
<http://www.scdl.org>

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