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# An Investigation of Professional Learning Communities in North Carolina School Systems

## **About the Author(s)**

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## **Keywords**

Professional Learning Communities, shared leadership, shared practices



## An Investigation of Professional Learning Communities in North Carolina School Systems

Kelly Higgins

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### **Abstract**

In this work, the researcher examined the effects of professional learning communities (PLCs) on teachers' perceptions after initial implementation at select high schools in North Carolina, USA. Professional learning communities is a type of school change that emphasizes the importance of trust, collaboration, and job embedded learning by teachers in order to advance academic achievement of students. Professional learning communities entail five main dimensions. These dimensions involve the sharing of leadership, vision, values, and expertise as well as investigating student needs through collaborative inquiry. Professional learning communities need to meet regularly in order to address these dimensions.

There were 111 participants who were involved in either the pretest or posttest using the *School Professional Staff as Learning Community Questionnaire (SPSaLC, 1996)*. The survey was provided electronically and data were analyzed using SPSS. The analyses indicated that professional learning communities have the potential to promote academic goals but expanded allocations of time and resources, improved acceptance by teachers, and stronger support of school leaders are needed.

Recommendations include conducting a broader study to include more North Carolina School systems that are using professional learning communities. In addition, conducting a study that encompasses all grade levels using professional learning communities would be advantageous. A longitudinal study within school systems using professional learning communities is essential to monitor and determine the progression of professional learning communities.

**Keywords:** *professional learning communities, shared leadership, shared practice, shared values and vision, supportive conditions, collective learning*

### **Introduction**

In the past century, there have been gradual changes in education that have been attributed to reform efforts in teaching and learning (DuFour & Eaker, 1998). Reform efforts such as the *No Child Left Behind Act* (National Conference of State Legislatures, 2006) have resulted in higher expectations for students and teachers regarding learning, teaching, and educational accomplishments (DuFour & Eaker, 1998). Reform efforts require that there is a clear focus on student learning, which is linked to teaching practices (McLaughlin & Mitra, 2003). In 2001 and 2003, the National Staff Development Council (NSDC) emphasized learning communities for teachers, administrators, and board members in order to enhance teaching skills

and improve academic achievement for all students (National Staff Development Council, 2001, 2003). Professional learning communities is an alternative to what many teachers are currently doing which is not working for many students. In addition, this requires teachers to collaborate and learn together to advance teacher knowledge and skills as well as student abilities and academics.

In order for students to achieve at high levels and improve their learning, consistent learning experiences for teachers as well as collaboration are necessary through the support of administrators (Hord & Sommers, 2008; Reeves, 2000). There is no prescribed definition for professional learning communities (Bolam et al., 2005, DuFour, Eaker, & DuFour, 2005; Elmore, 2007). With the introduction of professional learning communities, working in isolation or using the teachers' own resources will no longer occur rather a collaborative environment will emerge through transforming school culture (Hord, 2004; McLaughlin & Talbert, 2006; Schmoker, 2006).

Hord (1997, 2004) developed five main dimensions needed in order for professional learning communities to be successful. These components are necessary in order for school culture change and academic success to occur and include: (a) supportive and shared leadership, (b) shared values and vision, (c) collective learning and the application of learning, (d) shared practice, and (e) supportive conditions for the maintenance of the learning community. Each of the five dimensions is interconnected (Hipp & Huffman, 2002). Teachers work collaboratively to develop authentic assessments together, which will be used and discussed by teacher teams to determine additional learning needs to reach all students (DuFour, DuFour, Eaker, & Karhanek, 2004). Ultimately, students will benefit from this shift in thinking and teaching in order to prepare students for the 21<sup>st</sup> century (North Carolina Professional Teaching Standards Commission, 2007; Public Schools of North Carolina, 2006).

### **Professional Learning Communities Application Defined**

The focus of professional learning communities is to ensure that all students are involved in challenging learning experiences by providing essential tools to demonstrate successful learning (Roberts & Pruitt, 2003). Professional learning communities are involved in continuous learning, addressing team goals, analyzing student data, making instructional changes based on student data, meeting regularly for making changes in instruction, and sharing team roles (DuFour et al., 2004; Hord, 2004; Hord 2008; Hord & Sommers 2008; Jolly, 2005, 2008). Teachers and administrators must be involved in intensive collaboration experiences as well as job embedded learning situations and discussions that improve teacher practices (Little & McLaughlin, 1993; Senge, 1990).

### **Supportive and Shared Leadership**

Tichy has stated, "leaders are people who can think and act intelligently on their own and who can teach others" (2002, p. 151). A number of leaders teach members of organizations important ideas so that others within the organization can also learn the same information (Woodruff, n.d.). Important aspects of the teaching and learning cycle include characteristics such as open teamwork opportunities (Holdsworth, n.d.), communication, leadership opportunities, trust, diversity, and respectful attitudes (Jacobs, n.d.). Leaders in teaching learning organizations typically demonstrate good listening skills, have personal connections, and have caring relationships among staff members (Jacobs, n.d.). The goals for these types of organizations are to develop leaders and to assist them in developing characteristics of good

leaders (Hrebenuk, n.d.). Preparing future leaders will assist in maintaining the school reform concepts after the departure of the current leader (Fullan, 2002). Lessons, ideas, and advice shared by the business sector can be directly applied to school organizations and become part of the concepts of professional learning communities through shared leadership between administrators and teachers (Senge, 2000; Tichy, 2004).

Principals who are open to the idea of shared leadership firmly believe in the concept of teacher leadership and understand its importance in education (Witmer & Melnick, 2007). Through teacher leadership opportunities, teachers are encouraged to transform and nurture leadership capabilities (Gehrke, 1991). One such opportunity is involvement in the decision making process with administrators (Mid-continent Research for Education and Learning, McREL, 1995-2006). Increased morale occurs due to this type of involvement (Adams, 2009; Fullan, 2002) as well as further understanding of school change and the importance to student achievement (McREL, 1995-2006). Professional learning communities place a high value on the development of leadership opportunities for teachers (DuFour & Eaker, 1998). Principals that lack apathy and interest can prevent the success of professional learning communities (Melnick & Schubert, 1997). Those principals who do not support teacher leadership are not only barriers to teachers; opportunities for leadership roles but are insecure about the power which they possess (Crowther, Ferguson, & Hann, 2008). Sustaining professional learning communities involves the willingness of principals to share leadership roles (Roberts & Pruitt, 2003). This change will not occur without the support and committed effort of the principal (Boyd, 1992).

### **Shared Vision and Values**

The vision of the school addresses the direction the school wants to go in educating students (McREL, 1995-2006). The students should be the central theme of an achievable school vision (DuFour & Eaker, 1998). A shared vision depicts what is important to an organization (Hord, 2008). By making yearly and periodic changes to the school's vision, the overall quality of current educational practices will be enhanced and therefore benefit the students (Eaker, DuFour, & Burnette, 2002; Roberts & Pruitt, 2003). When educators embrace the school's vision and are highly involved in the development of the vision, a stronger belief system is directly related to empowering teachers through other opportunities and leadership roles (DuFour & Eaker, 1998). Higher student expectations, team responsibility for students, and an environment that displays improvement efforts are evident in schools that are involved in shared values and vision (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). The development of the school vision as well as the professional learning team vision is not an entity within itself but related to the central vision of the school system (Morrissey, 2000). All must have key pieces of what represents the school system even though each school has similar directions and goals for the community of students; each school also has unique features of what constitutes the vision for each school (DuFour & Eaker, 1998). Senge (1990) has stated "you cannot have a learning organization without a shared vision" (p. 209).

There is not only a school vision but also a vision within teams that creates part of the professional learning community's desire to improve the educational abilities of the students (DuFour & Eaker, 1998). Through the ideas and goals from the vision, teams will focus on learning for all students at high levels based on their capabilities (Hord, 1997; Kruse, Louis, & Bryk, 1995). The central purpose of the team and any decisions, which are made, involves the students (Kruse, Louis, & Bryk, 1995). As professional learning communities grow through

stronger relationships and trust, the team vision also grows along with the team goals in order to increase student abilities and achievements (Roberts & Pruitt, 2003). The team vision, which is created, will be a guide to teacher planning, curriculum, and classroom activities within the team as well as the school (Hord & Sommers, 2008).

Shared values are guiding principles within schools, which are typically absent from school improvement initiatives but play a major role in the process (DuFour & Eaker, 1998). The development of shared values is a process that requires teachers and staff to identify commitments and actions that will assist the school as a whole to achieve the agreed upon goals for the school (Roberts & Pruitt, 2003). Through this process, the teachers and faculty ask themselves questions about what they want the school or organization to represent. A process such as this requires reflective thinking and inquiry by all members of the community (Little & McLaughlin, 1993). By being involved in shared values, employees care about their job, work more effectively, and experience less stress and job tension (DuFour & Eaker, 1998; Kouzes & Posner, 2003). Through input such as shared values, it makes educators' overall opinions and voice valued through the shared sense of vision (Barth, 2001; DuFour et al., 2004). Through the shared values, a shared mission and shared vision will be connected and the understanding that change occurs today and not into the future.

### **Supportive Conditions: Physical Conditions**

For the work of professional learning communities to be successful, educators need the necessary supports in place in order for reform efforts to take place. Professional learning communities require supportive practices that incorporate strong school leadership, collaboration, and shared practices. "Supportive conditions determine when, where, and how the staff regularly comes together as a unit to do the learning, decision-making, problem solving, and creative work that characterize a professional learning community" (Hord, 2004, p. 10). These structural aspects can only be guided, supported, and addressed through school administrator support (Melnick & Schubert, 1997). Principals can assist in guiding the way through presentation of research, encouraging research among teachers, and providing time for teachers to investigate this type of reform (Melnick & Schubert, 1997). Principals can further demonstrate support by designing a school schedule to assist teams to working together (Jolly, 2005).

Physical and structural factors can be involved in the success of professional learning communities. The time to meet regularly as a team and meeting location are two main factors in the initiation process of professional learning communities (Louis & Kruse, 1995). Districts and principals have been creative in finding ways regarding time issues and locations to work together to ensure that professional learning communities are able to meet (Hord & Sommers, 2008). Teachers and principals can establish when professional learning communities can meet and make arrangements based on these decisions (DuFour et al., 2004). Team options can include banking time, buying time, using common planning time, free teachers of non-instructional duties, increase the number of professional days during the year for professional learning, and using current time during planning more effectively (Jolly, 2005).

Principals and teachers need to work together to determine the best and the most effective place to collaborate (Louis & Kruse, 1995). In some cases, teachers will need to use technology such as the computer, internet, and SMART Board™ to conduct research (Witmer & Melnick, 2007). Proximity to team members' classrooms can be a problem due to the distance from each other (Hord & Sommers, 2008). Finding creative ways to solve this issue can be addressed by

using areas outside of classrooms such as elective classrooms, the cafeteria, the library, or other locations would be a better alternative to meet.

### **Supportive Conditions: Human Capacities**

Supportive human conditions within the context of professional learning communities entail primarily support from the principal (Witmer & Melnick, 2007). These supports come in many different forms such as determining how to arrange time for teachers to collaborate, location to meet, and the necessary resources to accomplish their goals and to help the students (Hord & Sommers, 2008). Meeting areas with sufficient lighting, needed technology, and the proper materials can assist the team in maintaining focus (Jolly, 2005; Witmer & Melnick, 2007). Effective social relationships will help to create a successful professional learning community environment (Kruse, et al., 1994).

### **Collective Learning**

Teachers and administrators must be involved in intensive collaborative experiences as well as job embedded learning situations and discussions that improve teacher practices (Little & McLaughlin, 1993; Senge, 1990). Student performance and the areas in which students are struggling determine the type of collegial learning (Hord, 2008). Ultimately, these professional learning experiences will affect student learning abilities and skills due to the implementation and experimentation of best teaching practices and current research (DuFour, DuFour, Eaker, & Many, 2006). Hord and Sommers (2008) further explain that when new teaching and instructional practices are in place due to the learning experiences of adults, students will become more successful. Required tutoring programs and community partnerships for struggling students demonstrate the types of support programs needed to address students' academic needs (DuFour & Eaker, 1998; DuFour et al., 2004).

Teachers in professional learning communities are committed to student learning and improvement by constant involvement in learning for the betterments of students' academic success (Barth, 2001; DuFour & Eaker, 1998; Schmoker, 2006; Senge, 1990). The evolution of school organization requires all educators to continue learning on a regular basis (DuFour et al., 2006; Schmoker, 2006). If educators are willing to make the necessary changes and adjustments in teaching students, educators must demonstrate the importance of agreeing to make changes through example by being lifelong learners as well (Barth, 2001; DuFour et al., 2006). By taking the necessary steps to develop effective professional learning communities as a collective group of professionals, the education of all types of students (regular education, special education, academically gifted, and English as a second language learners) will be positively impacted. These students will truly experience proper educational opportunities and instruction (DuFour et al., 2006; Schmoker, 2006). When teachers apply high learning standards, high expectations, and shared responsibility for student achievement through the use of professional learning communities, school systems can truly state that *all students can learn* (DuFour et al., 2006; McLaughlin & Talbert, 2006).

An aspect of learning as a team is to implement and develop reflective dialogue in which teachers are involved in conversations dealing with student and teacher learning (Hord, 2004). Frequently, this aspect of professional learning communities is neglected because it needs to be scheduled into the team meetings, requires focus, and effort (Witmer & Melnick, 2007). Through reflective dialogue and inquiry, teachers actively engage in questioning of teaching practices (both individually and as teacher teams) and think about new understandings of teaching

practices which helps to refine teaching practices (Martin-Kniep, 2008). Reflecting assists teachers in meeting the needs of students (McLaughlin & Talbert, 2006). Through these types of learning experiences, teachers are more willing to be innovative, share information and resources, and realize each other's strengths (McLaughlin & Talbert, 2006). Teachers that are committed to professional learning communities and desire to enhance and improve student and teacher learning will witness continuous academic improvement (DuFour et al., 2004).

### **Shared Practice**

In professional learning communities, teachers frequently visit each other's classrooms to review classroom practices and behaviors, which are discussed at a later point (Hord, 2004). Through this type of involvement, teacher professionalism and teacher leadership are demonstrated and teacher privacy is removed from the educational environment (Little, 1988; Little, 2000). These relationships have been developed and nurtured through the collaborative learning community. The relationships demonstrate existing trust, commitment, and dedication with other teachers (Hord, 2004). In addition, this type of support system for teachers assists peers to gain insights through a trustworthy individual (Hord, 2004; Little, 1988). A number of studies by Little (1988, 2000) found that there are positive benefits from regular observations in other classroom as well as the acceptance of teacher leadership. This type of learning and sharing is a major change in how teachers and principals perceive teaching and observing (Hord, 2008).

During this observed and shared process, the teacher and peer discusses and asks about learning objectives and the purposes for particular topics as well as how this information is being presented (Hord, 2008; Little, 1988; Little, 2000). This type of activity is a type of deliberate learning experience in order to enhance and improve student achievement. Through classroom visits within a community, teachers are given not only the opportunity to learn regularly but further refine and enhance their specialty (Fullan, 2007). Shared practice is a type of professionalism in which teachers learn regularly through collegiality and learn from each other in different aspects (Hargreaves, 2003; Schmoker, 2005). The best type of learning and growth experiences come from learning through other colleagues that directly know the type of school culture and students. Job embedded learning that happens daily needs to occur for all educators in order for changes and improvements in education.

### **Teacher Leadership**

The development of teacher leadership can have a positive impact on the school community by being committed to student learning and building community (Roberts & Pruitt, 2009). Principals empower teachers by asking for help in solving school issues prior to an actual decision (Barth, 2001). Through such events, teacher leadership skills will be developed and respected by not only the principal but other teachers as well. The role of teacher leadership is directly related to the role of learning in professional learning communities through the additional authority and responsibility, which is shared by the principal (Martin-Kniep, 2008). The implementation and acceptance level of professional learning communities gives teachers leadership opportunities that would not have existed under the traditional model of education (Eaker et al., 2002). Many teachers have the potential in becoming school leaders, which will benefit the school community (Barth, 2001).

Teachers are given opportunities to make decisions as a team based on the best interests of the students and solve problems through inquiry learning (DuFour, 2004; Jolly, 2005).



Inquiry based learning helps students learn new concepts by asking questions or devising a problem, collecting information, solving problems, and drawing conclusions (Sheingold, 1987). In addition, teachers devise creative ways to accommodate students who struggle with various concepts such as after school tutoring (DuFour, 2004). Situations or helping other teachers may provide the stepping stones for leadership opportunities, which may include leading by following through support, joining a team of teachers on something teachers strongly believe in, or leading alone due to strong beliefs of a given situation or idea (Barth, 2001). Leadership can further be enhanced through specific desirable goals, being persistent, and defining successes in small steps and not the completion of the goal. Through various leadership roles and opportunities, teachers need to be recognized for these types of positions or involvement so that the teachers to be willing to continue to be a leaders (Roberts & Pruitt, 2003).

Teacher leadership capabilities are realized through professional learning communities in which leadership characteristics are accepted, encouraged, and sought out with the help and guidance of the principal (Lieberman et al., 2000). This type of job embedded learning and leadership provides teacher teams in the guidance that they need to grow as a professional and as a professional learning team (Little, 2000). Through such an opportunity, leadership skills are developed and issues with privatizing teaching are realized. These teacher leaders encourage the interactions of teachers and other adults, the need for reflective learning, and guidance of team collaboration (Roberts & Pruitt, 2003). This new role for teachers can be challenging, filled with intellectual learning opportunities and personally fulfilling (Lieberman et al., 2000). This type of change for teachers requires self-confidence, courage to make the leadership change, and an opportunity for advancement as a teacher. In order for teachers to be willingly involved in professional learning communities, leadership roles need to be seen as important and rewarding (Little, 2000).

### **Current Research on Professional Learning Communities**

In order to promote academic progress, teachers need to change teaching methods within the classroom and professional relationships (Barth, 2001; DuFour et al., 2004; Hord, 1997; Jolly, 2005; Newman & Wehlage, 1995). It is necessary for teachers to learn information that can be directly applied to their current teaching practices and assignments in order to demonstrate academic progress among all students (Barth, 2001; DuFour et al., 2004; Hord, 1997; Jolly, 2005; Newman & Wehlage, 1995). According to research studies, positive impact in student academics occurs when teachers have been involved in learning (Hord, 1997; Melnick & Schubert, 1997; Newman & Wehlage, 1995). Other areas that have been studied are the use of teacher collaboration and reflection, teaming efforts, principal's role in school change, supportive leadership, learning environments, and factors and characteristics necessary for long-term change (Hord, 1997; Katzenbach & Smith, 1993; LaRocco, 2007; Melnick & Schubert, 1997; Newman & Wehlage, 1995; Senge, 1990).

In a study conduct by Cohn and Ball (2001), found there is a relationship between new interventions and instructional improvement efforts. Based on observations made by the researchers, many improvements fail because of the complexities of teaching and learning that are not fully considered. Some of these problems can affect reform efforts are based on the varying ability levels within a given classroom, which can alter how information is presented. Resources (human or capital) can affect successful implementation of school improvement if teachers and students do not take advantage of the available resources. Change in how teachers provide instruction require effort in order to increase the student success rate.

Supovitz (2006) documented events that unfolded in Duval County Florida from 1999-2005. The school system adopted *America's Choice* reform initiative in which standards, curriculum, assessment, professional development, and the use of data to inform instruction were key aspects in reform. The school system included a number of low performing and high performing schools. The superintendent required all staff members to be involved in regularly learning new information. As part of the school change, study groups, distributed leadership, and professional learning were used. In some schools, teachers had the opportunity to visit other schools. The benefits of these visitations not only included sharing ideas to improve teaching but having the opportunity to observe other teachers. The results of this study disclosed a number of concerns and areas that needed further enhancement. Some of these areas needing further development included addressing teacher collaboration, learning from other teachers, improving instruction, and maintaining focus on professional learning communities.

Reichstetter and Baenan (2007) conducted a study in North Carolina during the district wide implementation phase of professional learning communities. Surveys were distributed in December 2006 and January 2007 to obtain baseline information. The basic categories on the survey included shared goals and visions, collaboration, team practices, goal attainment monitoring and support, and team support. Based on the results of the first year of implementation, a number of areas needed further developed and training such as the basic understanding of professional learning communities, system wide training, and the importance of proper implementation.

The study was extended for the 2007-2008 school year. Observations and focus group interviews in select schools were used to show support and progress of professional learning communities (Reichsetter, 2008). The study demonstrated the teachers were satisfied with the use of professional learning communities and progress was being made in the various areas of professional learning community structure. A new survey was created which addressed the characteristics of professional learning communities. In general, the higher results for the second year indicated teacher satisfaction, maintaining focus, collaborative opportunities, team processes, instructional strategies, and interventions.

### **Sustaining Professional Learning Communities**

In order for professional learning communities to sustain over time, teachers and administrators must first change as individuals (Fullan, 2005; Vetter, 2008). As a part of the lasting change process, the school culture needs to change starting with the principal (Reeves, 2006). It is the administrators who are involved in the implementation process of this type of reform that need to demonstrate understanding of individual needs, respect, and the willingness to listen to questions and concerns, which are critical in the process of school change (Vetter, 2008). Maintaining interest and making the necessary adjustments over time will be needed (Supovitz, 2006). According to Bolam et al. (2005), more developed professional learning communities “adopt a range of innovative practices to deal with inhibiting and facilitating factors in their particular contexts” (p. 147). The ultimate goal in sustaining professional learning communities is to realize the importance of continuous deep learning to make the necessary achievements within the schools that will produce substantive change in teachers’ and students’ (Bolam et al., 2005; Fullan 2005; Supovitz, 2006). Commitment from all whom are involved helps maintain momentum of professional learning communities and has a direct impact on its survival (Graham, 2007; Hord & Hirsh, 2008; Hord & Sommers, 2008; Jolly, 2005, 2008).

The purpose of this work was to examine the effects of professional learning communities (PLCs) after initial implementation within North Carolina Schools Systems. Professional learning communities are a group of teachers who are “composed of collaborate teams whose members work independently to achieve common goals” (DuFour et al., 2004, p. 3). The characteristics of professional learning communities consist of collective learning and application, shared leadership, shared practice, shared values and visions, and supportive conditions (Hord, 1996). The intent of this study was to investigate whether the use of professional learning communities affect change in teachers based on the five dimensions identified by Hord (1996). The School Professional Staff as Learning Community Questionnaire (SPSaLC, 1996) was used in this study.

The following research questions guided this study:

1. Is there a statistically significant difference between the pretest and posttest scores on the SPSaLC as it relates to leadership decision making?
2. Is there a statistically significant difference between the pretest and posttest scores on the SPSaLC as it relates to the school’s vision and mission?
3. Is there a statistically significant difference between pretest and posttest scores on the SPSaLC as it relates to changing the school’s learning experiences and expectations of students as well as the staffs’ ability to solve problems dealing with student learning?
4. Is there a statistically significant difference between the pretest and posttest scores on the SPSaLC as it relates to encouraging teachers to visit teacher others’ classrooms and give feedback on instructional practices based on what was observed?
5. Is there a statistically significant difference between the pretest and posttest scores on the SPSaLC as it relates to changing the school’s condition and school capacities?

### **Method**

A pretest-posttest design was used in this study to compare related groups of teachers through a paired samples *t* test. Causal comparative design was used. Descriptive statistics were included for demographic data. The methods of analysis for this study consisted of descriptive quantitative and qualitative research. The data for this study was collected through a host website, QuestionPro ([www.questionpro.com](http://www.questionpro.com)) and exported into Statistical Package for Social Sciences version 17 (SPSS, 2005). SPSS was accessed through Fayetteville State University’s database. According to Ary, Jacobs, & Razavieh (2002), the *t* test for dependent means is used when comparing samples under two different conditions. In this study, the two different conditions consisted of the pretest-posttest period. The information from these two different conditions was used to determine the progression of professional learning communities at the beginning of the school year and in the middle of the school year.

The open-ended questions from demographic questions were compared and used for additional information. The group comparisons were conducted in a narrative form. Particular patterns or topics were compared that demonstrated significance for the study. Based on important themes or patterns, the researcher reported and interpreted the information provided. The superintendents and participants were initially contacted by email through the schools’ websites. The questionnaire using QuestionPro was launched from June to September 2009. The surveys were available to the participants for a three-week period. The second survey was launched in January of 2010 for all four-school systems. Participants received multiple reminders to complete the survey. Data from each group of surveys was downloaded into SPSS. Upon completion of the second survey, *t* test information was calculated and determined. The

demographic data were used to make different comparisons as necessary and provide the researcher with additional information for the study. Each question was analyzed to determine if growth had been made in the professional learning community as a whole and/or by select groups based on the demographic information per teacher perceptions.

### **Participants**

A sample of North Carolina school systems was used in this study, which included select high schools. The high schools were selected based on the school system's involvement in professional learning communities. Professional learning community involvement was determined through the search of the internet on the schools' sites. There were 1,081 participants from 11 high schools within four North Carolina school systems. The participating high schools in this study were involved in professional learning communities prior to the research study. A review of other school systems' sites had demonstrated that other schools systems within North Carolina had implemented professional learning communities. One such school system was Wake County, North Carolina which is one of high five schools in the area that are involved in partnerships with area businesses to help promote professional learning communities (Public Schools of North Carolina State Board of Education, 2006).

### **Reliability and Validity**

SPSaLC was initially developed by Hord in 1996 at Southwest Educational Development Laboratory (SEDL) and shared with the Appalachia Education Laboratory (Hord et al., 1999; Meehan et al., 1997). The survey consists of 17 items based on the five dimensions developed by Hord (Hord et al., 1999; Meehan et al., 1997). Within each question and dimension, the survey contained three areas in which descriptors were placed for each question to represent a continuum of professional learning communities (Hord et al., 1999; Meehan et al., 1997). The questions were based on teachers' perceptions regarding the school and professional learning communities (Hord, 1996). Demographic information and open-ended questions were added to the questionnaire.

Based on data from Hord's pilot study on the SPSaLC, the instrument contained sufficient properties to conduct a field test s (Hord et al., 1999). The field test schools were located in Kentucky, Tennessee, Virginia, West Virginia, and Louisiana (Hord, Meehan, Orletsky, & Sattes, 1999). The Cronbach's Alpha was determined to be a +.92. The Cronbach's Alpha data that is at or above +.75 are considered appropriate. The tests retest was also conducted. The Cronbach's Alpha was determined to be a +.94. There were 690 participants in this study. Another study compared three professional learning community instruments (Cowley, Meehan, & Merrill, 2001). Based on the data from the study, the SPSaLC had satisfactory reliability. The instrument was tested for validity using the following types of requirements: content, concurrent, and construct. According to the data, the instrument possessed sufficient validity (Hord, et al., 1999).

### **Results**

Out of 1,081 possible participants, 111 responded to the survey. Only 14 participants completed both the pretest and posttest. Due to higher response rates for the first data set, only those results were discussed in the study. Therefore, the original research design was changed to a pure descriptive study. The means, standard deviations, and frequencies for each question were



### Findings for the Five Dimensions

The means, standard deviations, and frequencies were determined for each school system. The survey used a 5-point scale to indicate the progression of professional learning communities based on teachers' perceptions. A level of 5 indicated the most favorable or a mature professional learning community. A level of 1 indicated the least favorable or the initial stages of a professional learning community.

Dimension 1 questions involved supportive and shared leadership. Based on the results, teachers were involved in decisions making with administrators. However, improvement was still needed in this area. Sharing of power by the principal is distributed among teachers in advanced stages (McLaughlin & Mitra, 2003).

In dimension 4, questions on supportive conditions were involved. Participants provided feedback from teacher classroom visits on teaching and learning. According to the results, some staff members did provide feedback based on what was observed. An issue that may be occurring in this area is the lack of comfort in visiting classroom, the level of trust, and the willingness to share honestly. In addition, obtaining classroom coverage during these times may also pose as an issue.

### Findings from the Open-Ended Responses

The following open-ended demographic information was provided by the participants for certain questions that were found in 10 through 26. Not all questions in this range were open-ended questions

Question 10 asked the participants the following questions: How often have you been involved in training on PLCs? The responses ranged from 15 minutes daily to being provided training up to four years. Examples of responses included weekly, bi-weekly, six sessions, two times per week, fifteen hours total, and several sessions.

Question 12 asked the participants the following: What type of staff development is being provided in your PLCs? The participants provided the following information as a group: technology and curriculum, collaboration, co-teaching, team norms, and classroom management. Specific types of staff developments that are used in the schools came directly from teacher responses in the surveys (i.e. Marazo, High Yield Instructional Strategies, Baldrige Methodology, New Schools Project, and New Technology Foundation). Based on *North Carolina High School Reform*, schools that are involved in the New Schools Project receive staff developments through a grant focuses on accelerated curriculum (Fiscal Research Division, 2007). The majority of responses did not overlap with other school systems. The schools all had detailed list of the types of staff development being conducted within the schools and professional learning communities.

Question 13 asked the participants the following: How often is staff development being provided? Participants from two of the school systems provided a number of examples and periods. For the overall group, staff development was provided by one of the following: weekly, monthly, irregular, infrequently, two times per month, opening of school, and never. School systems A and B provided similar types of staff development periods. School system C provided few staff development opportunities based on participant responses.

Question 15 asked the participant the following: What type of professional conducted the training on PLCs? The participants as a group mainly included individuals within each school system. Unique to each school system were specialists outside of the school system who conducted the training. Participants from School Systems A and B provided the most information. School systems A, B, and C were provided school development from a specialist

within the school system. School system A responses also included former state teacher of the year, New Technology Foundation, New Schools Project, and Baldrige Trained Professionals, which is additional training for school reform. School system B also included university professors and Baldrige coaches. School system C included a convention as part of the staff development.

Question 23 asked the participants the following: in your opinion and personal experience, what are the benefits of professional learning community membership? A number of similar responses were repeated several times. Numerous participants listed the information regarding benefits of professional learning communities. According to the participants, the benefits of professional learning communities consists of brainstorming, working with other teachers, collaboration, sharing ideas, sharing resources, and sharing information. The majority of the benefits provided by the participants can be found in research on professional learning communities. In addition to the generalized benefits, the researcher analyzed the results per school system. The following information provides a summary of the open ended responses for each school system (see Table 2).

Table 2.

Professional Learning Community Benefits per School System

School System A	School System B	School System C
Sharing	Collaboration	Sharing Ideas
Collaboration	Sharing Ideas	
Trust	Data	
Teacher Methodology	Remediating Ideas	
Different Perspectives		
Discussing Student		
Improvement		
Learning from each other		
Smaller Class Sizes		
Brainstorming		
Support		
Best Practices		

Some of the respondents had negative experiences with professional learning communities. One respondent made the following comment, “at this stage, I feel PLCs are counter-productive. We spend too much time analyzing data and not enough time focusing on the reason we went into teaching...” Another participant’s negative experiences with professional learning communities provided the following information: “...we have not been trained correctly nor are we conducting them in the manner that they should be conducted. There is rarely positive feedback...” Another respondent had not experienced any benefits. Concerns on professional learning communities ranged from negative feedback, not being trained properly, and reading a book on professional learning communities.

Respondents were also asked the following questions: in your opinion, and personal experiences, what are the drawbacks of professional learning community membership? Participants repeated the same types of responses several times. The information provided can be supported by research. The participants as a group included drawbacks such as time constraints, paperwork, and it was a waste of time.

Respondents provided the following information for question 25: in your opinion and your personal experiences, what are some areas that your PLC(s) require additional growth. Participants felt more observations were needed, experience, keeping focused, structure, griping, time, sharing, unequal commitment, and data analysis. One participant shared “PLCs were forced on faculties across our school system”. Another participant had issues with professional learning communities being forced on the teachers. One participant questioned if professional learning communities actually work. Considerations for special populations such as special needs and academically gifted students were ignored. One participant shared that being forced to adopt professional learning communities caused many teachers to resign and leave the school system.

### **Discussion**

The goal of this work was to examine the effects of professional learning communities (PLCs) after initial implementation within North Carolina Schools Systems. This study examined the five dimensions of professional learning communities as described by Hord (1998, 2004). A number of high schools in the United States have tried to adopt professional learning communities but eventually the schools, principals, and teachers discontinued this effort due to various reasons (McLaughlin & Mitra, 2003; McLaughlin & Talbert, 2006; Witmer & Melnick, 2007). Such reasons may include the lack of administrative support (Roberts & Pruitt, 2009), strength of the learning communities, economic situations of students, types of learning experiences among teachers (Hargreaves, 2003; Reeves, 2000), school system resources and lack of financial support (Aguerrebera, 2008). According to Hall and Hord 2006, it takes three to five years to implement effective school change and given that the tenure of high school principals maybe less than this five year period (Fuller & Young, 2009), the likelihood of this reform becoming institutionalized is uncertain. This study is regarded as being significant because North Carolina Department of Public Instruction encouraged the development of professional learning communities (Greene, 2006). Of the three school systems that were used as part of this study, one school system had adopted professional learning communities a few years earlier and another that began the implementation phases more recently (during the fall of 2008).

This study may assist teachers, principals, and other school personnel in their considerations, implementations, and decisions to be to be leaders of the 21<sup>st</sup> century and make dramatic improvements and changes in the current school practices to this model. It is through prepared and scholarly leaders that the necessary transformations will occur within the educational organizations. Through professional learning communities, educational leaders can exemplify the importance of teaching and learning as the focal point of education. Educational leaders can provide the necessary support and guidance to reform schools into schools that use professional learning communities (Hall & Hord, 2006; Morrissey & Cowan, 2004). Democratic leadership is necessary in order for this type of change to occur and sustain over time. Through appropriate leadership behaviors, attitudes, and actions, schools can develop into learning schools that support professional learning communities (McLaughlin & Talbert, 2006). The vehicle for school change within schools begins and ends with the principals.

Due to the low response rates, the original research design was changed from a causal comparative design to a pure descriptive study. The response rates were higher form the pretest, therefore, only those results were used in the study. Data were organized per school system. Because of the low response rate for each individual school system, comparing school systems was not feasible; therefore, data were analyzed per individual school system. Demographic information was also included in order to provide information that was more detailed.



### **Demographic Questions Summary**

Overall, both formal and continued professional learning community training were areas that needed enhanced. In order for staff to understand the concepts of professional learning communities and in order to receive further support, this critical area needed developed in order for professional learning communities to be sustained over time. In addition, continued training can assist with fidelity monitoring. In addition, more staff development opportunities in the area of professional learning communities need to be provided within North Carolina.

### **The Five Dimensions Summary**

Based on the results from item 1, there was minimal sharing of decision making with teachers and administrators. Administrators made the final decisions even if teachers provided input on the topic. Some administrators needed further training in professional learning communities to demonstrate experiences that are more positive. This can be a difficult transition for principals as well as teachers (Hord & Sommers, 2008).

According to the results from item 2, staff members did not agree with or discuss the school's vision. In order for schools to make academic progression with students, all members of the school community need to know and understand the goals within the school community. The visions for improvement did not target students, teaching, and learning.

Item 3 from the survey focused on collective learning. All three-school systems indicated that staff never to rarely applied information from learning experiences for the benefit of students. The uniqueness of professional learning communities should have addressed the needed within the group of teachers that works with a particular group of students.

Item 4 involved classroom observations and visits. Based on the data, some visits did occur and some post discussions did occur. For the majority, staff rarely interacted after the classroom visits and observations. Many teachers do not feel comfortable in assessing their colleagues, the level of trust, and the level of honesty. By visiting peers' classes, support and application of learning can occur (Hord, 2004).

Item 5 asked about time and staff interactions (Hord, 1996). Based on the results, no time or little time was arranged for teachers to meet as a professional learning community. Time arrangements and challenges with special populations (such as special need or academically gifted students) as well as elective classes needed to be addressed.

### **Positive Aspects of PLCs**

The survey produced a number of positive attributes from participants. Participants felt PLCs built comradeship and ownership of focus. Creating teamwork to best address students' needs and to discuss all subject areas would be helpful. Through teamwork and sharing, teachers discover new ideas and new strategies in order to provide improved learning experiences for students. Teachers are more willing to develop innovative ideas through professional learning communities. Through this concept, teachers create a more student centered learning environment.

### **Negative Aspects of PLCs**

Based on the results shared from participants in the study, professional learning communities also resulted in negative attributes. A number of participants in this study did not receive proper training. Teachers no longer had a planning time or had time to work with individual students. Friction among team members did occur in some situations. Others felt PLCs were an agenda from the district and was a temporary program.

### Overall Conclusions

Based on the results, it appeared that professional learning communities were still at the novice stage within these school systems. Continued time, training, and acceptance are needed in order for professional learning communities to sustain and flourish. Numerous participants provided detailed information about experiences of professional learning communities for the open ended questions. Based on the literature review, information on professional learning communities is positive. However, some participants shared potential negative effects and experiences when professional learning communities are implemented, and how administrators treat teachers due to these types of changes. In some cases, how professional learning communities are introduced into the school systems and schools may have an impact on the positive or negative attitudes towards professional learning communities. Leaders need to be aware that this type of school change is a process and takes time (DuFour, 2004; Hall & Hord, 2006; Hord, 2004; Hord & Sommer, 2008; McLaughlin & Talbert, 2006; Vetter, 2008). It takes three to five years for successful implementation of change to occur (Hall & Hord, 2006).

### Limitations

Due to the low response rates, the original research design was changed from a causal comparative design to a pure descriptive study. The response rates were higher for the pretest, therefore, only those results were used in this study. Data analyses that were used for the study consisted of the means, standard deviations, and frequencies that were created using SPSS. Based on the low response rates, data were analyzed per individual schools.

In some cases, teachers emailed the researcher stating why they were unable to participate. In addition, the researcher was a teacher at the time and knew of the many challenges, expectations, and responsibilities that teachers have on a daily and weekly basis through personal experiences as well as interacting with peers. Some participants disclosed that he/she had a number of meetings and were unable to participate. Teachers had very little planning time, which made completing the survey a challenge even though this was not a lengthy survey. Other participants were required to complete surveys at the school and district level, therefore, they were not interested in completing the survey. The times of the year the survey came out due to additional teacher responsibilities were an issue.

### Summary

Based on this study, professional learning communities can be useful to assist teachers to work together as a team for the betterment of education and the students. Teacher relationships are built through these types of structured communities. Through this type of educational approach, PLCs provide additional teaching ideas and assist teachers in working with particular students. Teachers at all experiences and levels can benefit from learning of others. According to this study, professional learning communities can help provide teachers with student centered learning experiences.

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