

A review of research on professional learning communities:
What do we know?

Paper presented at the NSRF Research Forum
January, 2006

Vicki Vescio
Dorene Ross
Alyson Adams
University of Florida

Introduction

Over the past twenty years there has been a paradigm shift gathering momentum with regard to the professional development of teachers. Fueled by the complexities of teaching and learning within a climate of increasing accountability, this reform moves professional development beyond merely supporting the acquisition of new knowledge and skills for teachers. In their article on policies that support professional development, Darling-Hammond and McLaughlin (1995) write, “The vision of practice that underlies the nation’s reform agenda requires most teachers to rethink their own practice, to construct new classroom roles and expectations about student outcomes, and to teach in ways they have never taught before” (para 1). Darling Hammond and McLaughlin go on to note that helping teachers rethink practice necessitates professional development that involves teachers in the dual capacities of both teaching and learning and creates new visions of what, when, and how teachers should learn. This most recent model of professional development ultimately requires a fundamental change in the institutional structures that have governed schooling as it has traditionally existed.

One model that has evolved as a way of supporting this paradigm change is that of professional learning communities. Although current professional development

literature is replete with articles that extol the virtues of these learning communities, only recently has the focus of this literature shifted to empirically examining the changes in teachers' practices and students' learning as a result of professional learning communities. Although teachers' perceptions about the value of professional learning communities are both valid and valuable, understanding the outcomes of these endeavors on teaching practice and student learning is crucial, particularly in today's era of scarce resources and accountability. With this in mind, the purpose of this paper is to provide a review of the research available on the impact of professional learning communities on teaching practices and student learning. In an attempt to create a comprehensive picture we will first provide an overview of the essential characteristics of professional learning communities. After developing this foundation, we will examine the current literature as it relates to two basic questions:

- In what ways does teaching practice change as a result of participation in a professional learning community? And, what aspects of the professional learning community support these changes?
- Does the literature support the assumption that student learning increases when teachers participate in a professional learning community? And, what aspects of the professional learning community support increased student learning?

The paper will conclude with our current thinking on the implications of this research and suggestions for next steps in the efforts to document the impact of professional learning communities on teaching and learning.

Essential Characteristics of Professional Learning Communities

The concept of a professional learning community is based on a premise from the

business sector regarding the capacity of organizations to learn. Modified to fit the world of education, the concept of a learning organization became that of a learning community that would strive to develop collaborative work cultures for teachers (Thompson, Gregg, & Niska, 2004). Learning communities are grounded in two assumptions. First, it is assumed that knowledge is situated in the day-to-day lived experiences of teachers and best understood through critical reflection with others who share the same experience (Buysee, Sparkman, & Wesley, 2003). Second, it is assumed that actively engaging teachers in professional learning communities will increase their professional knowledge and enhance student learning.

Schools interested in implementing this reform began to shift the organization and structure of their professional development efforts toward integrating teacher learning into communities of practice with the goal of meeting the educational needs of their students through collaboratively examining their day-to-day practice. Newmann and Associates (1996) posit five essential characteristics of professional learning communities (PLC). First, shared values and norms must be developed with regard to such issues as the groups' collective "views about children and children's ability to learn, school priorities for the use of time and space, and the proper roles of parents, teachers, and administrators" (p. 181). A second essential characteristic is a clear and consistent focus on student learning (p. 182). DuFour (2004) reiterates this notion when he writes that the mission "is not simply to ensure that students are taught but to ensure that they learn. This simple shift – from a focus on teaching to a focus on learning – has profound implications" (para 5). The third characteristic is reflective dialogue that leads to "extensive and continuing conversations among teachers about curriculum, instruction,

and student development” (Newmann et al., 1996, p. 182). Deprivatizing practice to make teaching public and focusing on collaboration are the last two characteristics of a professional learning community (Newmann et al.).

The trend toward establishing professional learning communities in schools has not been without its struggles. DuFour (2004) laments the fact that all combinations of individuals with any interest in schools are now calling themselves professional learning communities. Everyone from grade level teams to state departments of education is framing their work in terms of professional learning communities. Yet, using the term PLC does not demonstrate that a learning community does, in fact, exist. DuFour (2004) cautions that “the term has been used so ubiquitously that it is in danger of losing all meaning” (para 2). In order to prevent the PLC model from the same dismal fate as other well intentioned reform efforts, DuFour recommends that educators continually reflect on the ways they are working to embed student learning and teacher collaboration into the culture of the schools. Ultimately, however, educators must critically examine the results of their efforts in terms of student achievement. To demonstrate results professional learning communities must be able to articulate their outcomes in terms of data that indicate changed teaching practices and improved student learning, something they have not yet established as common practice. With these two outcomes as our focus, we now turn to an examination of the empirical literature that attempts to document these vital results.

A Review of the Literature

The literature for our review comes from two key sources. First we searched the research and publications links on the websites of organizations that are at the forefront

of work with school based learning communities. Specifically, we searched the websites of the Annenberg Institute for School Reform, the National School Reform Faculty, the Coalition of Essential Schools, and the Wisconsin Center for Education Research. Our second source of literature comes from searches on both ERIC and EBSCO data bases for articles published between 1990 and 2005. Because of the nebulous terminology associated with professional learning communities, several search terms were used. These included the following: professional learning communities, teacher community, teachers and learning communities, critical friends groups, communities of practice, and then communities of practice with qualifiers that included: and teachers, and schools, and student achievement. The results of this search, although by no means exhaustive, produced 54 books and articles that included some efforts to connect learning communities with teaching practice and/or student achievement. A review of these materials provided only 10 empirical studies of the work of teachers in learning communities. These 10 studies are the focus of our analysis. The other 44 books or articles provided non-empirical descriptions of existing programs, reported self-reflective accounts of teachers' participation, or were empirical but did not document the essential characteristics of a professional learning community previously mentioned. These documents were used as additional support for a comprehensive picture of professional learning communities.

The ten primary sources used for our review can be grouped into two broad categories that correspond to the original questions we asked in our introduction. In addition, these ten sources all described efforts by schools that either explicitly or implicitly demonstrated the five essential characteristics of a professional learning

community previously discussed. When looking across these studies, all attempted to make connections between learning communities and the classroom practices of teachers. Drawing on these sources we provide a synthesis of the research on how teaching practices change due to participation in a learning community and what aspects of the learning community support this change. Additionally, six of the 10 studies attempted to add the element of student achievement data to their results. How the researchers accomplished this varied from using standardized test results to reporting interview data about achievement. See Appendix A for a summary of each article included in our analysis.

Professional learning communities and teaching practice

At its core, the concept of a professional learning community rests on the premise of improving student learning by improving teaching practice. As a result it is important to look across the reviewed studies to discern the connections between participation in a learning community and teachers' classroom practices. As a way of organizing this part of our review, we will focus on our guiding questions: In what ways does teaching practice change as a result of participation in a professional learning community? And, what aspects of the professional learning community support these changes?

In a general sense, all ten research articles used in this analysis supported the idea that participation in a learning community leads to changes in teaching practice. Because of this, it is imperative that we look more specifically at what the research conveys about how teaching practice is changed. Analyzing the literature for these specific changes was a relatively elusive activity however, as only four studies (Dunne, Nave, & Lewis, 2000; Englert and Tarrant, 1995; Hollins, McIntyre, DeBose, Hollins, & Towner, 2004;

Strahan, 2003) mentioned specific changes teachers made in their classrooms. One of these articles (Dunne, *et al.* 2000) documented the findings of a two-year study on critical friends groups commissioned by the Annenberg Institute for School Reform. In this study, the researchers used interview and observation data to compare the practices of non-participants to the practices of teachers who participated in critical friends groups. The authors concluded that the practices of participants became more student-centered over time. The authors state that participants increased the use of techniques such as added flexibility of classroom arrangements and changes in the pace of instruction to accommodate for varying levels of student content mastery. However, the researchers did not provide data about practices at the beginning of the study, which decreases the power of the reported findings. Englert and Tarrant (1995) studied changes in practice for three teachers within a learning community. One teacher in particular made substantive changes in her practice. Prior to her work with the learning community this teacher's literacy instructional practices "consisted of discrete skill sheets or tasks that required students to read or write isolated words and sentences" (p.327). Through participation in the community this teacher implemented changes such as developing an author's center with mixed age groups, implementing a new group story format, and utilizing choral reading strategies.

In the Hollins et al. (2004) study, although initial teaching practices were not specifically described, the authors talked about how early meetings of the twelve participating teachers focused primarily on the challenges of trying to successfully teach low achieving African American students. They note that by the tenth meeting, the focus had become more strategy as teachers designed a new "approach to language arts

instruction that involved letter writing, a poetry project and class books, and employed the writing process” (p.258). As a part of this process teachers used strategies that included, ‘visualization techniques’ to help children understand their reading, manipulation of site words using flash cards, and different strategies for having the children change words to make new ones (p.259). A final example comes from one of the Strahan (2003) case studies of an elementary school where all of the teachers participated in efforts to improve student achievement in reading. This case study, also, does not document specific teaching practices prior to the attempted changes, but it does provide interview data from the principal regarding the initially negative attitudes of the teachers toward student learning. As a part of the change process teachers worked collaboratively to develop a shared school mission around four guiding values that included integrity, respect, discipline, and excellence (p. 133). The author concluded that this led to the development of stronger instructional norms and made the teachers receptive to working with a curriculum facilitator in the areas of changing practices for guided reading, writing, and self-selected reading.

The other six studies we reviewed did not provide significant detail on the changes made to teachers’ practices; instead change was alluded to without explicit documentation or detail. For example, Andrews and Lewis (2003) indicated that teachers who participated in a learning community known as IDEAS (Innovative Design for Enhancing Achievement in Schools) reported changes in their practices. The authors provided several direct quotes to support these claims. The following quote is representative, “I find that my teaching has improved, I find that I understand more about what I’m doing, why I’m doing things, and I find that’s been an improvement” (p. 246).

Note that although the researchers provided a teacher's self-reported data that indicated change in practice, the teacher provided no specific information about the nature of changes in practice or thinking. This general trend was pervasive in the research studies. Instead of descriptions of specific changes in pedagogy, the researchers reported that teachers perceived their practices had changed. What the researchers typically provided was more specific information on how the teaching culture changed as a result of teachers' participation in a professional learning community.

Professional Learning Communities and School Culture

Although many of the ten studies failed to describe specific changes in pedagogy, change in the professional culture of a school is a significant finding because it demonstrates that establishing a PLC contributes to a fundamental shift in the habits of mind that teachers bring to their daily work in the classroom. All 10 of the studies cited empirical data suggesting a change in the professional culture of the school had occurred. Six of the studies drew upon quotes from participants to document this finding (Andrews & Lewis, 2002; Berry, Johnson, & Montgomery, 2005; Englert & Tarrant, 1995; Hollins *et al.* 2004; Phillips, 2003; Strahan, 2003). Three of the studies used survey data that compared participants to non-participants (Dunne *et al.*, 2000; Supovitz, 2002; Supovitz & Christman, 2003). And one used survey data generated from teachers participation in critical friends group (Whitford & Fisher, 2003).

Looking across our sample, there seemed to be characteristics inherent in learning communities that worked to promote changes in teaching cultures. These can be broadly organized into four categories that include: collaboration, a focus on student learning, teacher authority, and continuous teacher learning. It is important to note that even as we

attempt to compartmentalize the processes that are integral to the goals of professional learning communities, we recognize the complexity of this process as it plays out in different lived contexts. For the purposes of our review we are pulling out aspects of these ten studies and putting them into discrete categories, however, in reality there is a multifaceted interweaving of how these factors come together to change teaching cultures. Unfortunately, our only avenue for analysis lies in the less than desirable actions of simplifying and compartmentalizing what is actually complex and contextual.

Collaboration

We first turn our attention to elements of collaboration that promote changes in teaching cultures. In general, the research tells us that successful collaborative efforts include strategies that “open” practice in ways that encourage sharing, reflecting, and taking the risks necessary to change. A series of collective case studies (Lieberman, 2003; Whitford & Fisher, 2003; Wood, 2003; Yendol-Silva, 2003) reported the results of research funded by Lucent Technologies Foundation. The researchers reported that a survey of participating teachers indicated an overall positive effect of collaboration on the opportunities to review their practices through the use of critical friends groups. Despite a relatively vague description of their methodology, Berry et al. (2005) also reported that a learning community structure helped teachers in a rural elementary school examine their practice through such collaborative structures as sharing lessons, using protocols for decision making, and relying on systematic note taking to inform colleagues about their work. In a final example, Phillips (2003) drew on interviews with teachers in one middle school to report that funding from reform initiatives allowed the teachers to collaborate in ways that included observing each other in the classroom, videotaping and reviewing

lessons, investigating teaching problems and collectively generating new ideas for practice, engaging in literature study circles, and participating in critical friends groups. Across these studies, teachers reported an increase in collaboration as they worked in learning communities. This type of change in teacher culture, which has traditionally been described as isolationist, seems likely to lead to fundamental shifts in the way that teachers approach their work.

A focus on student learning

Each of the studies reported above focuses on the significance and nature of teacher collaboration. It is equally important to note that most of the studies document the specific focus of the teachers' collaborative efforts (Berry *et al.*, 2005; Dunne *et al.*, 2000; Englert & Tarrant, 1995; Hollins *et al.*, 2004; Phillips, 2003; Strahan, 2003; Supovitz, 2002; Supovitz and Christman, 2003). In the middle school case study of teachers collaborating to create innovative curriculum, the goal of the teachers' work was to improve learning for low and underachieving students (Phillips, 2003). The teachers in studies by Strahan (2003), Hollins *et al.* (2004), and Englert and Tarrant (1995) all had an underlying focus of improving student literacy. Finally, two overlapping articles (Supovitz, 2002; Supovitz and Christman, 2003) poignantly demonstrated the importance of focus in teachers' collaborative actions. In their report about reform efforts in both Cincinnati and Philadelphia, they state that teachers who participated on teams or in small communities that focused on instructional practice reported changes in instructional cultures. The teachers who reported that they did not use designated meeting times to focus on teaching practice did not report changes in the instructional culture. These findings reinforce the importance of persistently pursuing an instructional focus as

teachers engage in their work in learning communities.

Teacher authority

Another element of a professional learning community that helps to foster changes in teaching cultures is teacher authority. By teacher authority we mean the ability of teachers to make decisions regarding both the processes of their learning communities and aspects of school governance. A specific example demonstrating the importance of teacher authority in the overall success of a learning community came in a case study reported by Englert and Tarrant (1995). In this collaborative endeavor between three special education teachers and seven university researchers to provide “meaningful and beneficial” (p.325) literacy instruction for students with mild disabilities, the researchers encouraged the teachers to take control of the curriculum. “Teachers were given leadership in their choices about curriculum development, so that the power over the topics and change agenda might be shaped by the teachers’ concerns, interests, and questions” (p.327). In the end, at least one teacher noted the significance of being given this authority when she spoke of how it transformed her sense of ownership over the curriculum,

At the beginning, I didn’t like that [parity] at all. I wanted Carol Sue to say, “Try this,” and “Do this.” And there was none of that.... Now I can see why that was a really good way of doing that because I feel that *I’ve* [speaker’s emphasis] done it, as opposed to taking somebody else’s [ideas]. Even though I’ve used hundreds of other people’s ideas and so forth, it’s still mine, you know. (p.335)

In a second example, Supovitz (2002) reported survey data comparing team-based and

non-team-based teachers' perceptions of school culture on 33 items that were grouped into five key indicators of school culture. He found "strong and persistent evidence" that team-based teachers "felt more involved in a variety of school-related decisions" (p.1604). He concluded that giving teachers the power to be decision makers in their own learning process was essential to improving students' learning.

Continuous teacher learning

The final element of professional learning communities that supports overall changes in teaching cultures is that of continuous teacher learning. Participation in learning communities facilitates professional development that is driven by the needs of teachers as they are naturally engaged in efforts to accomplish their goals. The importance of continuous teacher learning was supported throughout the reviewed literature (Berry et al., 2005; Englert and Tarrant, 1995; Hollins et al., 2004; Phillips, 2003; Supovitz, 2002). More specifically, Hollins et al. (2004) documented that teachers involved in efforts to improve literacy in African American students sought out scholarly literature on culturally relevant teaching. Berry et al. (2005) reported that teachers in one learning community searched for outside ideas to help them solve their teaching dilemmas. And in a final example, Englert and Tarrant (1995) noted that researchers brought new ideas and strategies rooted in scholarly literature to three special education teachers attempting to change their reading instruction for students with mild disabilities.

Professional learning communities and student achievement

The literature provides modest evidence that professional learning communities impact teaching. What, however, does the evidence tell us about the effects on students? In an educational climate that is increasingly directed by the demands of accountability,

the viability of professional learning communities will be determined by their success in enhancing student achievement. This makes it incumbent upon educators to demonstrate how their work in learning communities improves student learning. Of the ten studies reviewed for this analysis, six attempted to make those connections.

Evidence of increases in student achievement

All six studies (Berry *et al.*, 2005; Hollins *et al.*, 2004; Phillips, 2003; Strahan, 2003; Supovitz, 2002; Supovitz & Christman, 2003) that examined the relationship between teachers' participation in professional learning communities and student achievement found that student learning improved. Berry *et al.* (2005) documented the progress of a rural elementary school over a four-year period. During this time, the results of grade level testing indicated that students improved from struggling – with slightly more than 50% performing at or above grade level – to rapidly improving with more than 80% of students meeting grade level standards. In a case study documenting the efforts of a middle school faculty engaged in learning community efforts to target low and underachieving students, Phillips (2003) reported that achievement scores increased dramatically over a three-year period (p.256). More specifically, in this middle school, ratings on a state-wide standardized test went from acceptable in 1999-2000 with 50% of the students passing subject area tests in reading, writing, math, science, and social studies, to exemplary in 2001-2002 with over 90% of the students passing each subject area test. In Strahan's (2003) account of three struggling elementary schools over a three-year period, results also demonstrated dramatic improvement. In each of these schools student test scores on state achievement tests rose from 50% proficiency to more than 75%.

Results from the research conducted by Hollins et al. (2004) also document improvement in achievement. Hollins et al. report that at both levels assessed (second and third grade), struggling African American students in the target school increased their achievement significantly more than comparable students in the district. For example they report:

In 1998, 45% of second graders [at the target school] scored above the 25th percentile as compared with 64% in 1999, and 73% in 2000. This is a 28% overall gain. District-wide, 48% of second graders scored above the 25th percentile in 1998, 61% in 1999 and 56% in 2000, an overall gain of 12%. Similar gains are reported for third graders. In addition, the percentage of students moving into the 50 percentile or higher in target schools exceeded district gains at both grade levels.

Finally, the studies conducted by Supovitz (2002) and Supovitz and Christman (2003) are particularly important in helping to discern the value of professional learning communities. In these studies, results of student achievement gains varied with the specific focus of the efforts of teams or small communities of teachers. In both sites, Cincinnati and Philadelphia, “there was evidence to suggest that those communities that did engage in structured, sustained, and supported instructional discussions and that investigated the relationships between instructional practices and student work produce significant gains in student learning” (p.5). It is important to note, however, that in the communities where teachers worked together but did not engage in structured work that was highly focused around student learning, similar gains were not evident.

Although few in number, the collective results of these studies offer an

unequivocal answer to the question about whether the literature supports the assumption that student learning increases when teachers participate in professional learning communities. The answer is a resounding and encouraging yes.

A focus on student learning is the key to increased achievement

Inquiry about how learning communities produced the improvement is important to the continued and future work of educators. When analyzing these six studies there seemed to be one common feature that facilitated success. This feature was a persistent focus on student learning and achievement by the teachers in the learning communities. Each of these six studies (Berry *et al.*, 2005; Hollins *et al.*, 2004; Phillips, 2003; Strahan, 2003; Supovitz, 2002; Supovitz and Christman, 2003) documented that the collaborative efforts of teachers were focused on meeting the learning needs of their students. In this section of our analysis we examine the reviewed studies to highlight the significance of this common thread for the success of professional learning communities.

Initially, the work of Supovitz (2002) and Supovitz and Christman, (2003) demonstrated inconsistent student achievement results. As noted above, this occurred because there was not a uniform effort by teachers in teams or small communities to focus on student learning. In both of the sites where the research was conducted, the authors found evidence of improved achievement but only for students whose teachers worked in teams or communities that focused on instructional practices and how they impacted student learning. Berry *et al.* (2005) reported consistent improvement for students. In this study the teachers worked in professional learning teams to develop instructional strategies that were based on student data and reinforced by professional literature, to lead to meaningful student achievement. Hollins *et al.* (2004) stressed the

importance of a facilitator who helped teachers maintain a focus on the goal of improving literacy for African American students during all group meetings. Additionally, the facilitator worked to ensure that the efforts of their collaborations were always rooted in improving test scores and other measures of student achievement. Similarly, Strahan (2003) noted that the reform efforts of the three elementary schools he studied were driven by data-directed dialogue. He explained that this meant teachers' collaborative efforts were always focused on data about student learning and directed toward increasing that learning. Finally, in the case study by Phillips (2003), interview data indicated that the teachers in this middle school continually analyzed data from each child to identify ways to affect his/her success both cognitively and affectively. Phillips concluded that the teachers "knew their students' population well, and they deliberately created culturally relevant programs to make learning more meaningful" (p.258). In the long run, the data across these studies indicate that a key element of successful professional learning communities is their pervasive attention to meeting the learning needs of their students.

Summary

The use of professional learning communities as a means to improve teacher practice and student achievement is a move that educators support and value, as indicated by the teacher perceptions of impact as cited in this review. There is also some limited evidence that the impact is measurable beyond teacher perceptions. To summarize the findings across the reviewed literature in terms of our two initial research questions: 1) Participation in learning communities impacts teaching practice as teachers become more student centered. In addition, teaching culture is improved because the learning

communities increase collaboration, a focus on student learning, teacher authority or empowerment, and continuous learning; 2) When teachers participate in a learning community, students benefit as well, as indicated by improved achievement scores on over time. All six studies reporting student learning outcomes indicated that an intense focus on student learning and achievement was the aspect of learning communities that impacted student learning. Together, these findings from the literature provide preliminary evidence of the benefit of learning communities for teachers and their students.

Conclusions

Reviewing literature is essentially an act of interpretation. That is, the reviewers elect which literature to include and which to exclude based upon the guiding questions for the review. Those decisions shape the conclusions from the review. In this review we have not reported the findings of the many reports that describe work within professional learning communities nor have we reported the results of reflective self-reports of the value of this work. In part, this is because we accept as valid and significant the perspectives of teachers and administrators that this work is valued and perceived positively (Bambino, 2002; Carver, 2004; Olson, 1998; Slick, 2002). Our focus in this paper has been to look at the empirical literature on professional learning communities that might validate these perceptions. That is, we reviewed the empirical studies that connect PLCs with changes in teaching practices and student learning. This focus clearly limited the scope of the review as few studies have looked at this impact so far. However, studies which have been done clearly demonstrate that a learning community model can have positive impact on both teachers and students. Just as important, our act of

interpreting the literature has led us to draw conclusions that are significant to future research.

The focus of a PLC should be developing teachers' "knowledge of practice" around the issue of student learning

Traditional models of professional development have focused on providing teachers with the skills and knowledge necessary to be "better" educators. These models have typically been grounded in the assumption that the purpose of professional development is to convey to teachers "knowledge FOR practice" (Cochran-Smith & Lytle, 1999). That is, the professional development is based on the premise that knowledge and expertise are best generated by university researchers outside of the day-to-day work of teaching. Through professional development, teachers acquire and then implement this knowledge. In addition, the knowledge presented is usually advocated as a prescription for better teaching. The professional learning community model represents a fundamental shift away from this traditional model of professional development. Professional learning communities at their best are grounded in generation of "knowledge OF practice" (Cochran-Smith & Lytle, 1999). That is, "it is assumed that the knowledge teachers need to teach well is generated when teachers treat their own classrooms and schools as sites for intentional investigation at the same time that they treat the knowledge and theory produced by others as generative material for interrogation and interpretation" (p. 272).

PLCs honor both the knowledge and experience of teachers and knowledge and theory generated by other researchers. Through collaborative inquiry, teachers explore new ideas, current practice, and evidence of student learning using processes that respect

them as the experts on what is needed to improve their own practice and increase student learning. Learning communities are not a prescriptive, one-size fits all approach.

However, learning communities also cannot be insular, focused only on making explicit the practical wisdom teachers already possess about teaching. Instead learning communities should support teachers in making decisions based on their contexts, their goals, current and new professional knowledge, and the needs of the students they work with.

In a research study that emphasized the representations of classroom practices, Little (2003) cautioned against the limited nature of teacher-led collaborative groups. After analyzing the language of teachers in a high school math and English department, she warned that teaching communities can be limited by their own “horizons of observation” (p.917). She defined this term as, “the extent to which elements of a work environment are available as a learning context” (p.917). She then used transcripts of meetings to analyze the discourse of teachers engaged in a learning community to improve instructional practices. Her main point was that teachers construct visions of teaching and learning based on a picture that is structured by their very positions as teachers. This can create paradigms of thinking that privilege certain voices and epistemologies based on preconceived notions of right, wrong, good, or bad in schooling. In the end, this horizon of observation can serve to limit the solutions teachers develop to improve their own practices or improve student learning.

This can also be true for university-based educators, particularly those who work closely and extensively with schools. As educators, our visions are limited by our lifetimes spent within education and Little (2003) makes a strong argument for taking

steps to ensure that the work of teachers in professional learning communities broaden the scope of their inquiry to problematize any and all aspects of the learning environment as appropriate. That is, as educators at all levels engage in the work of improving teaching and learning it is important that we seek external perspectives from other constituents (e.g. families, citizens, educators working outside our immediate environment, educational research, sociological research) so that all aspects of our practice be can be interrogated as an integral part of our efforts.

Although it is important for researchers and teachers involved in the work of professional learning communities to keep Little's (2003) caveat in mind, the reviewed studies clearly show this model is working to shift teachers' habits of mind and create cultures of teaching that engage educators in enhancing teacher and student learning. Additionally, in those studies where the work of professional learning communities is linked to student achievement, the research clearly demonstrated a strong positive connection. In each of these cases the key was collaboration around a clear and persistent focus on data about student learning. This finding is consistent with the findings of other researchers who have reviewed literature about the importance of a focus on student learning and the analysis of student work (Guskey, 1997; Little, Gearheart, Curry, Kafka, 2003). The studies in our sample documented changes in student achievement over time, in some cases up to five years. What these studies show is that working collaboratively is the process not the goal of a PLC. The goal is enhanced student achievement.

Continued research documenting the impact on teaching practice and student achievement is imperative

A great deal of the writing about professional learning communities describes the

work of these communities and/or reports teachers' perceptions of the value of this work. Teachers working within PLCs need to develop collaborative relationships with researchers to help document the impact of their efforts. Although the number of studies reviewed here was not high, what we found was encouraging. Clearly future research must continue building evidence that supports the impact of PLCs on teaching practice and achievement.

The current studies that formed the basis of this analysis were mainly qualitative, although some of them added quantitative data in the form of survey results or students' standardized test results. Most of the qualitative data reported in these studies were from interviews, observations, fieldnotes, and meeting transcriptions that were then reported in a case study format. See Appendix A for a summary of each article. Further research should draw broadly across various methodologies to document the creation of PLCs and their impact. The following kinds of studies are needed:

- Quantitative studies that document changes in teachers' perceptions of the professional culture of the school.
- Longitudinal observational studies (both quantitative and qualitative) that document changes in teaching practice as teachers work in PLCs.
- In-depth case studies of changes in teaching practice and student achievement for sample teachers working in PLCs.
- Qualitative documentation of the nature of the work teachers do as they analyze student work and how this changes over time.
- In-depth case studies of changes in student learning for sample students in classrooms of teachers working in PLCs.

- Quantitative documentation of changes in student achievement over time as teachers engage in work in PLCs.

Although the analysis of data about student achievement is time-consuming, it is essential in building the case that PLCs are powerful types of reform and with the current demands that schools collect and analyze evidence of student achievement; this analysis is less difficult than it once was. Many teachers and university collaborators note that achievement tests assess a narrow range of learning and may fail to capture the breadth of impact of a professional learning community. While we would not argue with the validity of this observation, it cannot be used as a rationale for failing to collect evidence of the impact of this work on student achievement. Data from achievement tests can be supplemented with case studies that examine changes in student work over time. In fact, these kinds of cases studies done by individual teachers working within learning communities would create a powerful picture of impact. At this point, we do not have these case studies.

Additionally there are a couple of methodological issues researchers should consider. First, researchers should carefully report research methodology and data sources. In several of the current studies, the description of methodology omitted important information (e.g. the number of teachers who participated in interviews, the nature of interview questions, the amount of interview data collected). Rigorous reporting of research methodology is essential if we are to build a credible justification for the resources necessary to sustain PLCs. And second, it is important to incorporate viable evaluation designs into our efforts. Five of the ten research studies used for this analysis are noteworthy because the evaluators were independent from those who facilitated the

work of the PLC (Andrews & Lewis, 2003; Dunne *et al.* 2000; Phillips, 2003; Supovitz, 2002; Whitford & Fisher, 2003). No matter how rigorous the methodology or how unbiased the report, research conducted by the facilitator will be suspect. To build a strong case, we must guard against the danger of researching ourselves.¹

Conducting this research, like the work itself, will take time. Just as it is difficult to shift teachers' thinking to build collaborative cultures, it is difficult to capture the essence of this contextually driven process. The studies reviewed here provide a model for these efforts and a basis for suggesting improvements. They leave us hopeful that learning communities offer an avenue to build the momentum of a shifting paradigm in the professional development of teachers and the learning of students.

¹ This particular recommendation is easy to make but very difficult to operationalize. University faculty must publish. As a result, those of us interested in working with schools find it essential to research our own efforts to meet the requirements for tenure and promotion. If external researchers are hired to document and publish the work of PLCs, this could leave facilitators with few incentives to engage in the work. Probing this dilemma is beyond the scope of this paper, however, this problem deserves attention.

References

- Andrews, D., & Lewis, M. (2002, Winter). The experience of a professional community: Teachers developing a new image of themselves and their workplace. *Educational Research*, 44(3), 237-254.
- Bambino, D. (2002, March). Critical Friends. *Educational Leadership*, 59(6), 25-27.
- Berry, B., Johnson, D., and Montgomery, D. (2005). The power of teacher leadership. *Educational Leadership*, 62(5), p.56+, [electronic version].
- Buysse, V., Sparkman, K.L., and Wesley, P.W. (2003, Spring). Communities of practice: Connecting what we know with what we do. *Exceptional Children*, 69(3), 263-277.
- Carver, C.L. (2004, May). A lifeline for new teachers. *Educational Leadership*, 61(8), p.58+, [electronic version].
- Cochran-Smith, M, & Lytle, S. L. (1999). Relationships of knowledge and practice: Teacher learning in communities. In A. Iran-Nejar & P. D. Pearson (Eds.). *Review of Research in Education* (pp. 249-305). Washington, D. C.: AERA.
- Darling-Hammond, L. and McLaughlin, M.W. (1995, April). Policies that support professional development in an era of reform. *Phi Delta Kappan*, 76(8), no pp., [electronic version].
- DuFour, R. (2004, May). What is a “Professional Learning Community”? *Educational Leadership*, 61(8), p.6, [electronic version].
- Dunne, F. Nave, B., & Lewis, A. (2000, December). Critical friends groups: Teachers helping teachers to improve student learning. *Phi Delta Kappan*, No. 28, [electronic version].

- Englert, C.S., & Tarrant, K.L. (1995, November). Creating collaborative cultures for educational change. *Remedial and Special Education*, 16(6), 325-336, 353.
- Guskey, T.R. and Sparks, D. (1996, Fall). Exploring the relationship between staff development and improvements in student learning. *Journal of Staff Development*, 17, 34-38.
- Hollins, E.R., McIntyre, L.R., DeBose, C., Hollins, K.S., and Towner, A. (2004). Promoting a self-sustaining learning community: Investigating an internal model for teacher development. *International Journal of Qualitative Studies in Education*, 17(2), 247-264.
- Lieberman, A. (2003, August). Building learning communities in underperforming schools: The tension between improvement and survival.
- Little, J.W., Gearhart, M., Curry, M., and Kafka, J. (2003, November). Looking at student work for teacher learning, teacher community, and school reform. *Phi Delta Kappan*, 85(3), 184-192.
- Little, J.W. (2003, August). Inside teacher community: Representations of classroom practice. *Teachers College Record*, 105(6), 913-945.
- McLaughlin, M.W. & Talbert, J.E. (2001). *Professional communities and the work of high school teaching*. Chicago and London: The University of Chicago Press.
- Newmann, F.M. and Associates. (1996). *Authentic achievement: Restructuring schools for intellectual quality*. San Francisco: Jossey-Bass Publishers.
- Olson, L. (1998). The importance of critical friends: Reform effort gets teachers talking. *Education Week*, 17(37), p.1, 2p.
- Phillips, J. (2003, Spring). Powerful learning: Creating learning communities in urban

- school reform. *Journal of Curriculum and Supervision*, 18(3), 240-258.
- Slick, S. (2002). Teachers are enthusiastic participants in a learning community. *Clearing House*, 75(4), pp. 198-201, [electronic version].
- Strahan, D. (2003). Promoting a collaborative professional culture in three elementary schools that have beaten the odds. *The Elementary School Journal*, 104(2), 127-146.
- Supovitz, J.A. and Christman, J.B. (2003, November). Developing communities of instructional practice: Lessons for Cincinnati and Philadelphia. *CPRE Policy Briefs*. University of Pennsylvania, 1-9.
- Supovitz, J.A. (2002, December). Developing communities of instructional practice. *Teachers College Record*, 104(8), 1591-1626.
- Thompson, S.C.; Gregg, L. and Niska, J.M. (2004, November). Professional learning communities, leadership, and student learning. *Research in Middle Level Education Online*, 28(1), 35, 20p.
- Whitford, B.L. and Fisher, H. (2003, November). Lucent learning communities in Albuquerque. National Center for Restructuring Education, Schools and Teaching. Teachers College and the University of Southern Maine.
- Wood, D.R. (2003, August). Lancaster learning communities: The challenges of creating an authentic collegial context for change.
- Yendol-Silva, D. (2003, August). In search of the perfect storm: Understanding how learning communities create power within an era of intense accountability.

Appendix A: Study Summaries

Title: The experience of a professional community: Teachers developing a new image of themselves and their workplace

Authors: Andrews, D. and Lewis, M.

Context:

- This research was conducted at a high school in Queensland, Australia that was representative of the typical school involved in the IDEAS Project; (Innovative Designs for Enhancing the Achievement of Schools). The school had 400 students, 37 teachers, and was located in a prosperous, rural community.
- Researchers were not involved in the implementation of the IDEAS Project, they were university faculty members.

Participants:

- Ten teachers volunteered to work as the core members of the IDEAS group. The work later spread to additional teachers as these core members mentored other teachers in the school.

Nature of the data collected:

- The data for this case study was collected on two separate occasions, six months apart.
- First visit: The purpose was to capture the experiences of those involved in the IDEAS group. This was accomplished through semi-structured retrospective interviews and through focus group discussions. In addition, this data was supplemented with materials from the school's documentation of the IDEAS process as well as an interview with an external facilitator of the Project.
- Second visit: Previous respondents were re-interviewed and additional data was collected from interviews with administrators and other volunteers who were not directly involved in the IDEAS group. Along with interviews, data was also collected through observations, researchers' fieldnotes, and documentation.

Brief description of findings:

- Teachers self-reported changes in the habits of mind related to collaboration, talking about pedagogy, and enacting different types of teaching strategies.
- Mentoring relationships produced additional teachers engaged in efforts to examine and change their classroom practices.
- Contributions of the internal and external facilitators were significant in providing structure for the group and promoting collaboration.
- Administrative support added legitimacy to the efforts of the IDEAS group and provided an avenue to sustain efforts over time.
- The efforts of the IDEAS group lead to changes in the organization of the school, teachers' thinking the learning of their students, and ideas of the school within the broader context of the community.

Title: Creating collaborative cultures for educational change

Authors: Englert, C.S. and Tarrant, K.L.

Context:

- The context for this study was an Early Literacy Project implemented in the primary grades. The project was focused on the literacy of children with mild disabilities.
- The researchers were from the University of Michigan and participated in the implementation of the Literacy Project.

Participants:

- Three special education teachers participated in this project. One additional teacher began the project but dropped out. The project was expanded to additional teachers in years two and three.

Nature of the data collected:

- For this case study, weekly project meetings were taped and series of these tapes covering a four month period (Jan.-April) were transcribed to form the data for analysis.

Brief description of findings:

- Changes in practice are more likely when the teachers are personally motivated and interested as opposed to being told to participate in collaborative efforts.
- The talk of the teachers demonstrated a focus on student learning as a motivational factor in examining teaching strategies and collaborative efforts. Although there was no detail on student learning other than a general statement that indicated students who “received the program” made average gains in reading of 1.3 years per school year.
- The teachers set higher expectations for their students and in the process improved their own sense of efficacy.
- The collaborative community served as a venue for both problem solving and increased risk taking with regard to teachers’ classroom pedagogy.
- Analysis of the discourse for the meeting demonstrated connections between teachers’ practical knowledge and theoretical knowledge brought to the teachers from university educators.
- Developing a collaborative community involved negotiating the roles of both the teachers and university educators.
- Divergent perspective among the teachers contributed to the construction of knowledge as a part of the collaborative process.
- Developing discourse that contributes to the type of collaborative community that supports professional development and educational change takes time.

Title: Critical friends groups: Teachers helping teachers to improve student learning

Authors: Dunne, F.; Nave, B.; and Lewis, A.

Context:

- Twelve out of sixty two schools with new critical friends groups (CFGs) in 1997-98 were selected for this study that was commissioned by the Annenberg Institute. More specifically the study included 5 high schools, 2 middle schools, and 5 elementary schools from all areas of the country and with varying sizes and populations.
- An evaluation team gathered the data for the study.

Participants:

- A specific number of teachers for whom qualitative data was collected was not given. For the quantitative aspect of data collection, a total of 1,412 teachers completed a Professional Climate Survey – 632 were CFG members and 780 were non-CGF members.

Nature of the data collected:

- Qualitative data that was collected included: observations of GFG meetings, interviews of both CFG and non-CFG teachers, and samples of student and teacher work over a two year period.
- Quantitative data included the results from the Professional Climate Survey completed by teachers both participating and not participating in CFGs.

Brief description of findings:

- Survey data indicated teachers in CFGs reported higher levels of opportunity, engagement, collaboration, adaptation, expectations, and support than teachers in non-CFGs.
- Survey data also indicated that teachers in CFGs reported lower levels of district and state influence on their instructional content and pedagogy than non-CFG teachers.
- Although no detail was given, it was stated that both the observation and interview data collected indicated a shift from teacher-centered pedagogy to student-centered pedagogy in the classroom of those participating in CFGs.
- Examples from observations and/or interviews are provided to demonstrate collaborative professional development efforts and changes in classroom instruction.
- Although no specific data is reported, there is discussion of the importance of administrative support of CFGs.
- In high stakes accountability environments it seemed as if testing and accountability issues dominated CFG meetings, preventing a focus on improving teaching practices and student achievement.

Title: Lucent learning communities: Collective case studies

Authors: Whitford, B.L. and Fisher, H.// Yendol-Silva, D.// Lieberman, A.// Wood, D.R.

Context:

- There were four different sites for this collective case study, these included: Albuquerque with a total of 7 schools (2 elementary, 3 middle school, and 2 high school); Broward County with a total of 5 schools; Seattle with a total of 3 schools (1 elementary, 1 middle school, and 1 high school); and Lancaster with a total of 5 schools (3 elementary, 1 middle school, and 1 high school).
- Documentation of the work at each site was conducted by a team of researchers.

Participants:

- Details on the number of teachers who participated at each of these sites was not provided.

Nature of the data collected:

- Qualitative data that was collected included: interviews of principals, teachers, coaches, key office staff and union personnel and observations of project related meetings.
- Quantitative data that was collected included by administering a survey to participating teachers.

Brief description of the findings:

Across all four sites:

- Teachers' participation has steadily increased over the three years of the funding.
- Overall survey data indicated teachers' positive responses to their experiences in the learning communities.
- The focus and depth of the work done in the learning communities was variable.
- The conditions surrounding the incorporation of learning communities were complex and always shifting depending on different contexts.
- Success of the learning communities was dependent upon the skills and commitment of coaches and teachers and upon the school culture promoted by its leaders.

Title: The power of teacher leadership

Authors: Berry, B.; Johnson, D.; and Montgomery, D.

Context:

- This study was reported from research done on a rural school with grades 3 through 5, serving 560 students and having 25 teachers.. Sixty percent of the students qualified for free or reduced price lunch.
- Authors/researchers were affiliated with the Southeast Center for Teaching Quality.

Participants:

- The entire school participated in this effort to improve on student attainment of grade level standards.

Nature of the data collected:

- The qualitative data that was collected for this brief case study included observations of classrooms. (This was a short article that did not include a lot of detail.)
- The quantitative data included students' scores on tests designed to determine attainment of grade level standards.

Brief description of findings:

- Over a four year period, the school progressed from a struggling school – with slightly more than half of the students performing at grade level – to a rapidly improving school – with more that 80% of the students meeting grade level standards.
- The entire school developed a strong ethos of collaborating to examine teaching practices with the goal of student learning.

Title: Powerful learning: Creating learning communities in urban school reform

Author: Phillips, J.

Context:

- This research occurred in an urban middle school serving a multiethnic student population. The school was participating in a school based reform initiative that spanned across five years.
- This research has been conducted as part of a larger research and evaluation study of a reform effort that occurred at 18 sites across the country.
- The author of the article conducted an independent analysis of the data collected for this particular reform site.

Participants:

- The students in this study attended a middle school serving grades 6-8. There were a total of 1,425 students – of these, 566 were enrolled as regular, non-magnet students and the remainder were magnet students.
- No specific detail was given regarding the number of teachers at this middle school. The article gives the impression that teacher participation, in some form, was a required part of the reform initiative.

Nature of the data collected:

- Data collected for this case study included principal and teacher interviews, classroom observations, teacher focus groups, reporting documentation, and student work products.
- Additional data from a state-wide, year-end testing program was used.

Brief description of findings:

- As the reform initiative progressed, teachers took over greater ownership and leadership with regard to the direction of their own individual and collective learning efforts.
- Teacher learning did lead to improved student achievement as state-wide tests in reading, math, writing, science, and social studies in 1999-2000 indicated 50% of the students passed each area; by 2001-2002 that number went up to 90% of the students passing each subject area test.
- Five key themes emerged from the data, these included: the importance of high quality professional development, research-based literature, shared ownership, the collaborative process, and understanding the school context.

Title: Promoting a self-sustaining learning community: Investigating an internal model for teacher development

Authors: Hollins, E.R.; McIntyre, L.R.; DeBose, C.; Hollins, K.S.; and Towner, A.

Context:

- The African American Literacy and Culture Research Project was a three year study based on the collaborative efforts of a university and a large urban school district. This research focused on one aspect of the Project: “the internal professional development model designed to enhance teachers’ ability to facilitate literacy acquisition and development for urban African American children” (p.253).
- This study occurred with an elementary school that served 300 students in grades K-5; 91% of the students were African American.
- There were 15 teachers at the school – 3 African American males, 9 African American females, 2 European American females, 1 European male, and an African American female principal.
- The researchers are mostly university faculty with only one of them being an independent research associate.

Participants:

- 12 teachers in grades K-4 volunteered to participate in the study – 10 of these teachers were African American, 2 were European American; 9 were females, 3 were males.
- Each teacher had approximately 20 children in her/his class, approximately 90% of the children were African American.

Nature of data collected:

- The qualitative data collected included: interviews, transcriptions of study group meetings, fieldnotes, and informal conversations.
- Quantitative data included: performance on the Stanford Achievement Test, 9th edition. Spring 1998 scores served as a baseline to measure gains over the subsequent 2 years. Scores were also compared with district averages.

Brief description of findings:

- Published research was successfully used as an avenue to open up discussions that helped the teachers to understand in new ways, the cultural context within which their teaching occurred.
- Student test scores for both 2nd and 3rd graders rose over the three year period and increased more than the district averages.
- Both the qualitative and quantitative data supported the internal model of professional development as a way of promoting teaching practices that lead to improved learning for African American students.
- Conversations during study group meetings shifted to a more positive tone toward the children and their culture and demonstrated increased teacher engagement in the overall process of collaboration.

Title: Promoting a collaborative professional culture in three elementary schools that have beaten the odds

Author: Strahan, D.

Context:

- Three elementary schools were included in this study: (a) Archer was a K-5 school serving 600 students, 68% of whom qualified for free or reduced price lunch; (b) Hunter was also a K-5 school, serving 410 students, 85% of whom qualified for free or reduced price lunch; and (c) North was a K-5 school serving 400 students, 79% of whom qualified for free or reduced price lunch.
- This research was conducted by a team from the University of North Carolina, Greensboro.

Participants:

- Through the course of three phases of this research over three years, teachers at each school were selected for inclusion in focus groups interviews, individual interviews, and/or observations of their classroom teaching. An exact number of teachers who ultimately participated was not given.

Nature of the data collected:

- Data collected included: individual interviews, observations, open-ended focus group interviews, and archival data such as planning documents, minutes from grade level team meetings, state mandated school improvement plans, student demographic profiles, and summary data from students' performance on state mandated assessments.
- This study presents a reconstructed case report for each school.

Brief description of findings:

- Each school demonstrated steady increases in the percentage of students performing at or above grade level in both math and reading.
- Across all three schools, teachers' collaborations consistently focused on student learning.
- Over time, teachers' collaborative efforts were driven by data on student learning. This, in turn, promoted higher expectations by the teachers for all students and cultivated a collective sense of efficacy among the teachers. This stance was communicated to all new teachers who joined the staff at these schools.

Title: Developing communities of instructional practice

Author: Supovitz, J.A.

Context:

- In 1996-97 the Cincinnati Public School system – with 79 schools and just fewer than 50,000 students – undertook a comprehensive reform plan called Students First. This was a top to bottom restructuring effort with its primary restructuring change policy being the adoption on team-based schooling.
- This article relates the findings of the Consortium for Policy Research in Education's (CPRE) evaluation of this restructuring effort. The author is both a university professor and a senior researcher for CPRE.

Participants:

- Relative to school participation: in 1998, eight schools adopted the team-based approach; in 1999, twelve additional schools adopted the initiative; in 2000, nineteen more began the team-based approach, and by 2001 a total of 41 schools in the district had adopted the initiative.

Nature of the data collected:

- CPRE conducted evaluations of team-based schools using the following data: (a) administration of an annual survey to teachers and administrators in all 79 schools in the district; (b) interviews with administrators and other key members of the Cincinnati educational community; (c) site visits to a sample of team-based schools each year – visits lasted from 4-7 days and included interviews and observations of both classrooms and team-based meetings; (d) CPRE research team members attended professional development activities designed for team-based teachers; (e) analysis of relevant documents such as sample team portfolios and team meeting minutes; and (f) analysis of student test results from district and state assessments.

Brief description of findings:

- Teachers in team-based schools reported feeling more involved in school related decisions and reported higher levels of interaction and collaboration with their peers than teachers in non team-based schools. (p.1614)
- Instructional practices of teachers in team-based schools did not differ significantly from those of teachers in non team-based schools.
- In the team-based schools, only about 25% of the teams were frequently utilizing the three dimensions of group practice (academic prep strategies, collective teaching practices, and student grouping strategies).
- Levels of group practice were stagnant from 1999 to 2000, suggesting teams did not deepen their practice over time.
- Student achievement levels were not significantly different between team-based and non team-based schools.
- Students on teams that did use of group instructional practices performed better than students on teams with low use of these practices.

Title: Developing communities of instructional practice: Lessons from Cincinnati and Philadelphia

Authors: Supovitz, J. A. and Christman, J.B.

Context:

- Information on Cincinnati is reported in the summary of the previous study.
- The Philadelphia School District serves 215,000 students in 257 schools with 80% of its students eligible for free or reduced price lunch.
- All schools in Philadelphia were asked to implement small learning communities comprised of a group of teachers responsible for 200-400 students.
- In Cincinnati, 3-5 teachers worked with between 60 and 120 students.
- In both sites, teachers were intended to stay with the students for longer than a year.

Participants:

- In both cases the participants were the teachers and students who undertook these reform efforts.

Nature of the data collected:

- Detail has already been provided on the data collection in Cincinnati.
- As this article was a policy brief that tended not to give a lot of specific detail on either research site, the extent of the data collection in Philadelphia is not provided. However, there is mention of survey data, interview data, and qualitative observations.

Brief description of findings:

Philadelphia only:

- Survey data indicated small learning communities helped teachers to feel as if their schools were more safe and orderly and gave them better opportunities to interact and collaborate with their fellow teachers.
- A literacy initiative gave small learning communities a focus that strengthened their professional community.

Across both Philadelphia and Cincinnati:

- Reform efforts influenced the culture of the schools in a positive way.
- However, this did not automatically translate into changes in teaching practices.
- Only when the collaborative efforts of the teacher communities focused on instructional practices was there actually measurable improvement in student learning.
- In many cases, teacher communities spent little time focusing on teaching practices or curriculum planning.
- “In order for an investment in community to pay off in widespread improvement in student learning, particular kinds of teacher communities are needed: those that are focused on improving the instructional core of schooling and provided with the necessary strategies, structures, and supports” (p.1).