

Effects of Training in Collaborative Norms on the Development of
Professional Learning Communities

by

Ronald Sterr

A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

Approved April 2011 by the
Graduate Supervisory Committee:

Ray R. Buss, Chair
Patricia Roy
Stanley Zucker

ARIZONA STATE UNIVERSITY

May 2011

ABSTRACT

Much has been researched and written concerning the structure, attributes, and benefits of the professional learning community (PLC), yet many have found that this highly collaborative model is difficult to implement. One reason for this was that conflict among team members often limited communication and therefore halted collaboration. In an attempt to overcome conflict, the researcher introduced an intervention to five grade-level teaching teams at a suburban elementary school where staff had been struggling to develop teams into PLCs. The intervention consisted of training participants in the use of collaborative norms, and then tracking the use of these norms during team meetings, as well as gathering the teachers' perceptions on how their team was being affected by the use of the norms. Seven training sessions were conducted, each devoted to an individual norm such as pausing, putting ideas on the table, or presuming the positive, and so on. A mixed-methods action research model was utilized in gathering and analyzing the data in this study. Qualitative measures included reflection journals completed by the teachers, open-ended survey questions, and written responses in which the teachers described prior to the intervention and again after the intervention how their team: 1. Is like a PLC, 2. Is not like a PLC, and 3. Is becoming like a PLC. Quantitative measures included a survey of team communication that used questions regarding efficacy, conflict, and candor/trust. Quantitative measures also included an instrument developed as part of the System for Multi-Level Observation of Groups (SYMLOG) which is used for recording evidences of values observed in team members. Results demonstrated

increases in teachers' perceptions of friendliness among their colleagues, ability to deal with conflict amicably and constructively, and in teachers' perception that they were now being listened to and understood more than they had been previously. Teachers also reported that they came to think of their team as a PLC, and began to perceive that there were benefits with respect to student achievement because they were becoming a PLC. Discussion focused on lessons learned, implications for practice, and implications for research.

DEDICATION

To my wonderful and patient children, and my angelic wife Jennifer, who changed my view of life from hollow to hallowed, and who saved me from a life without the driving purpose of God and the richness of familial love. She provided my greatest source of motivation and strength in finishing this dissertation, and having married her will always stand as the crowning achievement of my life.

ACKNOWLEDGMENTS

I offer my sincerest thanks to the members of cohort two (Susan “Nan” Williams, Heather Cruz, Carter Davidson, Anne Kirby, Karen Sanders, Karl Oschner, Shelley Isai, Taryl Hargens, Lynda Johnson, Lori Shough, Kim Sims, Veronica Vasquez, Kyann McMillie, and our comic relief, Bill Nelson), and the wonderful faculty of the Litchfield Elementary School District who remained supportive and sublimely tactful during one of the most difficult periods of my life. I also wish to thank Dr. Pat Roy for her patience as a long-distance sounding board, Dr. Stan Zucker for his keen insights and kind words, and the many faculty members of Arizona State University who continually help remind me that the noblest enactment of research is as it is carried forward continuously by genuine practitioners who instill their passion and contextual insight into their quest.

I cannot leave unexpressed my deep appreciation for the work Dr. Ray Buss has done in my behalf, and in behalf of so many others. He is the unsung hero of our doctoral program, and unfailingly demonstrates the capacity to see in others qualities they have yet to discover in themselves. His ability to patiently and understandingly guide me through minor victories amid major trials stands not only as a testament to his skill as an educator, but to the quality of his generous character. It is fitting that it was he who taught me the power of writing in present tense with an eye toward the future. Thank you Dr. Buss for your insistence on excellence, your expertise, your political savvy, and most especially for your empathy.

TABLE OF CONTENTS

	Page
LIST OF TABLES.....	ix
LIST OF FIGURES.....	x
CHAPTER	
1 INTRODUCTION.....	1
Context.....	5
2 REVIEW OF LITERATURE.....	8
Collaboration.....	10
Communication and Conflict.....	12
The Role of Professional Development in Establishing a Collaborative Culture.....	14
Teachers' Values in a Collaborative Culture.....	16
The Innovation.....	17
3 METHOD.....	20
Setting.....	20
Site Selection.....	21
Participants.....	21
Survey.....	22
PLC Evaluation Instrument.....	24
Reflections.....	25
SYMLOG.....	25
Data Analysis.....	27

CHAPTER	Page
Role of the Researcher.....	28
4 RESULTS.....	29
Results from the Quantitative Data.....	30
Communication Skills Survey Results.....	30
SYMLOG Results.....	31
Results from the Qualitative Data.....	32
Collaborative Inquiry—Assertion 1.....	33
Effective Communication—Assertion 2.....	36
Collaborative Norms—Assertion 3.....	38
The PLC as a Focusing Lens—Assertion 4.....	41
Student Needs and Achievement—Assertion 5.....	44
5 DISCUSSION.....	47
Lessons Learned.....	47
Implications for Practice.....	57
Implications for Further Research.....	63
REFERENCES.....	68
APPENDIX	
A SEVEN NORMS OF COLLABORATION.....	72
B NORMS INVENTORIES.....	76
C TEAM COMMUNICATION SURVEY.....	76
D THEMES-RELATED CONCEPT MAP.....	76
E INSTITUTIONAL REVIEW BOARD APPROVAL.....	78

LIST OF TABLES

Table	Page
1. Pre- and Post-test Means and Standard Deviations for the Communications Skills Measure	31
2. Pre- and Post-test Means and Standard Deviations for the SYMLOG Measure	32
3. Themes, Theme-related Components, and Assertions Based on Analysis of Qualitative Data.....	33

LIST OF FIGURES

Figure	Page
1. Model depicting the interrelationships among themes.	48

Chapter 1 Introduction

Five years ago I accepted a position as the principal of a relatively large suburban elementary school. I began the new school year with an almost entirely new staff, some of whom I hired, but most of whom I never met until a few days before school started. Teachers were placed in teaching teams with strangers, by a stranger who didn't know their personality, strengths, or professional attributes. Some of these teams melded well and began to work together immediately; others did not.

Because all of our teaching teams were newly formed, and in light of an expanding body of literature that suggested instructional practices of teaching teams as well as individual teachers greatly influences student achievement (Darling-Hammond, 1994; Grossman, Wineberg & Woolworth, 2001; Stronge, 2002), I keenly felt the need to identify professional development methods that would help our teaching teams to coalesce into highly effective groups capable of assuring success for our students. Realizing this, a team of lead teachers and I identified a need to enact systems that embed professional development in the context of teachers' work. Professional development was shown to be a key to transforming the teaching practices, structures, and cultures of schools in which teachers practice (Shen, Zhen, & Poppink, 2007).

The purpose of the desired professional development (PD) was to support the concept of effective teaching teams so we proceeded to search for PD structures that would be embedded in their team processes, rather than externally controlled. After considering a variety of options for embedded PD, we

determined that the creation and support of Professional Learning Communities (PLCs) in our teaching teams was a viable solution. Within genuine PLCs, teachers capitalize on the shared knowledge of the group as they “collaborate by drawing upon each other’s strengths to achieve a shared goal” (Dooner, Mandzuk & Clifton, 2008, p. 565).

It should be noted that PLCs are defined in various ways depending on who is using the term. A great many schools formed teams and called them PLCs, but as Fullan (2005) pointed out, “terms travel easily... but the meaning of the underlying concepts do not” (p. 67). DuFour (2004) claimed, “...the term (PLC) has been used so ubiquitously that it is in danger of losing all meaning” (p. 6).

Because of this ambiguity, it is important to understand what a PLC is, and what it is not. For the purpose of this study, the term PLC was defined, as “a group of people that act on an ongoing basis to develop their knowledge of a common interest or passion by sharing individual resources and by engaging in critical dialogue” (Dooner et al., 2008, p. 565). This concept is closely aligned with Wenger’s (1998) concept of Communities of Practice. Nevertheless, a PLC is more formalized and procedurally driven, with an emphasis on an ongoing cycle of action research to improve practice within the PLC team. This action research cycle is by design results-oriented, “Members of a PLC realize that all their efforts in these areas—a focus on learning, collaborative teams, collective inquiry, action orientation, and continuous improvement—must be assessed on the basis of results rather than intentions” (DuFour, DuFour, Eaker, & Many,

2006, p. 5). Hargreaves (2001) further suggested, beyond being a group of people, PLCs developed an “ethos,” unalienable from every aspect of a school and its culture. Thus, PLCs became part of the culture of a school, and were expressed in the attitudes, habits, and beliefs of the staff.

A PLC, then, is not simply a group of people who meet on a regular basis and discuss lesson plans, class projects, or even student progress: There are key differences between a PLC and a group that merely collaborates: A PLC collaborates toward a common goal, using an ongoing action research cycle to continually refine their practice and achieve desired results. Simply collaborating does not make a team into a PLC; but, a PLC cannot exist without highly effective collaborative processes.

This study focused on the PLCs at my school. Given my context, I chose to investigate one of the major characteristics of a PLC: their culture of collaboration. As the staff and I have worked to establish PLCs, I observed that we were in need of strategies for improving communication within our PLCs to make the PLCs sustainable and effective. Garmston (2007) pointed out, “As collaboration in conversation develops, a collaborative culture begins to form. And culture affects learning” (p. 70). This cultural aspect highlighted the essential difference between communicating and collaborating: participants moved from communicating (sharing information and ideas) to collaborating when they began to co-labor toward a common goal or outcome. Thus, collaboration implied common vision, values, and mission (Cook & Friend, 2005).

Nevertheless, establishing a culture of collaboration can be challenging. Weick (1995) observed that as teachers go from learning about each other to learning to work with each other, natural and predictable conflicts tended to make their PLCs less functional. Teachers and other professionals tried to avoid the source of conflict, and this led to an avoidance of communication, which impedes an essential component for an effective PLC. A cycle of conflict avoidance—and thus avoidance of communication—then took over and the group by definition ceased to be a PLC, because they stopped collaborating. This avoidance of conflict has been termed a “counter-indulgent” response, and in my school often preceded counter-aggressive behaviors in PLCs (Paull, Shahbazian, & Taglioni, 2005, p. 33), further deepening the rift that limited a PLCs’ ability to collaborate. In short, conflict shut down communication, which made collaboration impossible.

Minimizing conflict in PLCs is certainly easier said than done, and although there is an expanding body of literature on PLCs and how they function, there is limited guidance available on how to overcome conflict that acts as the iceberg that sinks a PLC ship. Much of the available literature presumes that collaboration will magically occur if the PLC structure is just explained clearly enough and implemented earnestly. My experience indicated that an intervention of some kind was often needed for PLCs to surmount the hurdle of PLC team conflict.

Recognizing that conflict within PLCs adversely affected communication, and thereby limited collaboration; I wanted to investigate an innovation for

overcoming conflict to improve communication. I led a professional development series that taught collaborative norms to our teachers, and they were encouraged to use these norms in their PLC meetings and other discussions. My goal was to enable the staff to communicate in ways that minimized the destructive potential of conflict and maximized the effectiveness of their communication, enabling collaboration. My operative hypotheses were that if members of the PLCs used norms to guide their conversations, the cycle of conflict avoidance that inhibited communication (and thereby collaboration) would be averted. As the conflict cycle was disrupted, it was anticipated the PLCs would communicate more effectively, and if they communicated more effectively, they would collaborate more successfully.

Context

This study took place during my fourth year as the principal of an elementary school in which we, as a staff, established PLCs over the previous two years. Our school had six grade levels, kindergarten through fifth grade. Each grade-level team sought to apply the basic principles that underlie a PLC, with widely varying degrees of success. The administrative/office staff and I also sought to apply these same principles.

As we attempted to establish PLCs, a quandary presented itself: Collaborative groups can't be formed out of unwilling members, but we didn't have the luxury of forming groups comprised solely of willing and motivated volunteers. The groupings were not voluntary, except to the extent that some teachers chose to transfer to another grade level; however, the teachers'

involvement with implementing a PLC framework was, as a team, voluntary. All grade-level teams chose to participate, although individuals have shown a wide variation in their enthusiasm for the PLC concept. Predictably, some teams were more motivated and eager to form a PLC than others, with the teams that already collaborated more successfully being the most ready to embrace the idea.

At our school, I felt two PLC teams collaborated naturally and comfortably, as though they had prepared themselves for the concept of PLCs to come along. By virtue of their collective values, a focus on student progress and a commitment to ongoing improvement of their instructional practices, they recognized that they each occupied the dual role of learner and leader within their areas of expertise on their PLC team. Additionally, they had complementary styles that made a ready flow of communication easier to sustain—in short, they liked each other.

Other groups struggled. In one PLC group, which functioned at a high level in terms of student outcomes, group members complained their leader was a “steamroller” who, although she was often correct and spoke from a respectable depth of experience, did not tolerate alternative viewpoints. Another group was trying vigorously to implement a PLC framework, and was even innovative in its approach; Nonetheless, the members of the PLC team were continually frustrated at one group member’s tendency to “go it on her own,” which undermined the efforts of the other members of the PLC team. In another team, members avoided any personal or emotional connection to each other by maintaining a briskly officious tone and minimizing any personal or professional conversation not on

the pre-set agenda. This resulted in effectively stifling those who had good ideas to offer, but they weren't given the chance to determine what was on the agenda. These situations were rife with both overt and subtle conflict, and as a result communication was stilted, limiting or completely preventing true collaboration for some PLC teams.

Clearly the unique personalities of each PLC team, as well as the personalities of the individual members of the teams, along with their individual and collective values, had a significant effect on how PLC principles were implemented. These unique situations made a fertile ground for investigation. As principal of the school, I encouraged all groups to work collaboratively, communicate effectively, and function as true learning communities.

The purpose of this study was to introduce norms of collaboration as an innovation within PLCs at my school, and then to study the effects these norms had on communication and conflict. My primary research question was: what effect will training in norms of collaboration have on communication among teachers within PLCs in an elementary school? To answer this question, four specific sub-questions were developed.

1. How does the use of collaborative norms foster the development of PLCs?
2. How do collaboration and communication foster the development of PLCs?
3. How will training in norms of collaboration affect conflict in PLC teams?
4. How do the teachers' expressions of values change as a result of the innovation?

Chapter 2 Review of the Literature

Literature is replete with extensive definitions for what a PLC is and can be. However, for the purpose of this study, the term *Professional Learning Community* is defined more narrowly as a team of teachers sharing and critically examining their practice in a purposeful way that is collaborative, ongoing, reflective, results-oriented, and that employs an action-research cycle to inform their practice (McREL, 2003). PLCs are closely aligned with Wenger's (1998) concept of Communities of Practice. Nevertheless, a PLC is more formalized and procedurally driven, with an emphasis on an ongoing cycle of action research to improve practice within the group. In PLCs, educators are committed to working collaboratively in ongoing processes of collective inquiry and action research to achieve better results for the students they serve (DuFour et al., 2006).

Hargreaves (2001) further suggested, beyond being a group of people, PLCs instantiated an "ethos," inseparable from every aspect of a school and its culture.

To identify how this ethos can be created and sustained, it is important to understand that there is much more to a professional learning community than simply placing people with a common interest in a working team. DuFour (2007) identified a series of "critical questions" for a PLC, most of which address how we as educators measure and interpret student success. Three of these questions, however, deal with the way the team members interact:

[a] "Do we make decisions by building shared knowledge regarding best practices, rather than simply pooling opinions," [b] "does our team work independently to achieve SMART (Strategic, Measurable,

Attainable, Results-oriented, Time-bound) goals,” and (c) “do we use our collaborative team time to focus on... critical issues?” (Dufour, 2007, p. 5).

These questions are critical not only because they help define what makes a team into a PLC, but also because they point to why some PLCs might fail. The questions invite conflict by encouraging differences of viewpoint to be aired, but PLC participants are not necessarily equipped to deal with such conflict nor can they find the support necessary to overcome this conflict. As promising as PLCs may seem when they are formed, there is an almost inevitable “middle” period when the PLC members struggle to collaborate. Kanter (1997) notes,

Everything looks like a failure in the middle. Predictable problems arise in the middle of nearly every attempt to do something new... Stop an innovation because of these problems and by definition that initiative will be a failure...Change-adept organizations support initiatives though the difficult middle period. (p. 11)

Further, teachers are highly resistant to changing a school culture to which they are accustomed and with which they are comfortable. Teachers will often resist any effort to “envision, develop, implement, and sustain a new culture until there is support in the system for doing so” (Speck & Knipe, 2001, p. 60).

Perhaps the most powerful aspect of a PLC in a school is that it focuses on the needs of students by keeping the teachers focused on their primary objective—student success. With PLCs, the focus in the school shifts from *teaching* to *learning*. The “big ideas” of a PLC include:

We accept learning as the fundamental purpose of our school and therefore are willing to examine all practices in light of their impact on learning; we are committed to working together to achieve our collective purpose. We cultivate a collaborative culture through development of high-performing teams; we assess our effectiveness on the basis of results rather than intentions. Individuals, teams, and schools seek relevant data and information and use that information to promote continuous improvement. (Dufour, et al., 2006, p. 6)

Collaboration

By extracting key concepts from Dufour et al.'s (2006) big ideas, readers can discern what PLCs are expected to do and to accomplish: They learn together, they examine their practices, they work together toward a collective purpose, they collaborate, they assess their effectiveness, and they use results and data to continuously improve. Among these, *collaboration* is a lynch-pin concept, supporting and sustaining all of the practices in which a PLC engages. For those seeking school improvement, the creation of a collaborative culture is then viewed not only as the first component that must be established, but also as an absolutely essential action for sustained change (Eastwood & Seashore-Louis, 1992). McLaughlin and Talbert (2001), in a ten-year study, found that *all* effective schools or school departments establish collaborative communities (p. 15). Indeed, the concept of collaboration in schools is so prevalent in current literature that no studies were found that suggested schools are more effective or even as effective *without* a collaborative culture.

There is no shortage of books, articles, and training on the benefits of professional learning communities and how to establish them. Though collaboration is a key element in nearly all of these sources of advice, one often-missing element is explicit direction on how to help groups collaborate. The assumption seems to be that if the structure of a PLC is established, collaboration will be an automatic result. As Garmston (2007) notes, this assumption may exist because “No one right way exists to develop collaborative cultures capable of improving student learning... Where to begin depends on context, understanding the dynamics of the group, and intuition” (p. 69).

Adding to this dilemma is the fact that collaboration can be defined in myriad ways, and collaborative processes are not often clear to those who are expected to collaborate, as noted by Johnston and Hedemann (1994, as cited in DeLima, 2001). Thus, as DeLima points out,

If left unspecified, teacher collaboration... is nothing but a mere empty and overworked slogan. Different teachers and different schools endorse different views of what it means to be collaborative.... Some of them may even be obstacles to change. (p. 101)

What then does a collaborative school culture look like? Saphier and King (1985) identified an extensive list of characteristics of this culture including: (a) collegiality with peers, (b) experimentation in the workplace, (c) trust and confidence in interactions, (d) tangible support from administration and peers, (e) reaching out to a knowledge base, and (f) honest, open communication.

A defined set of collaborative norms could address both the potential for disparate definitions of collaboration and the need for a way to teach teachers to collaborate. Garmston and Wellman (1999) advocate training in the use of seven norms of collaboration (Appendix A), as developed by Baker, Costa, and Shalit (1997). These norms are:

1. Pausing
2. Paraphrasing
3. Probing for specificity
4. Putting ideas on the table
5. Paying attention to self and others
6. Presuming positive intentions
7. Pursuing a balance between advocacy and inquiry

Garmston and Wellman also suggest that “There is a marked difference between skills and norms” (1999, p. 37). The difference being the ability to do something—a skill—and that skill becoming a part of normal behavior for the group—a norm. Thus, for these skills to become norms, they must become a regular part of the PLC’s practice.

Communication and Conflict

The practice of *collaboration* and the concept of *communication* are inextricably intertwined. In the framework for collaborative processes developed by Cook and Friend (2010), the first component in learning to collaborate is a personal commitment to using collaboration as a tool in one’s work context, and the second component is communication skills, which they describe as, “The

basic building blocks of collaborative interactions” (p. 23). Garmston (2007) suggested the seven norms actually build the communication skills necessary for collaboration.

PLCs require a higher level of communication than the current level to which many teachers are accustomed. Moreover, the increase in frequency and intensity of their interactions in a PLC increases the potential for conflict (DeLima, 2001). Though PLCs are, at their very essence, designed to be collaborative groups, Jehn (1997) noted that sharing thoughts and ideas did not always help people accept or forgive one another. One obstacle to overcome in collaborative work, then, is, “The need to balance forthright and ‘open’ discussions that reap the benefits of cognitive conflict without simultaneously eliciting destructive, affective interpersonal tension” (Amason & Schweiger, 1997, p. 101). Trust plays a critical role in achieving this balance, “...if members’ relationships are built on trust, the forthright nature of the group’s practice can generate honest interactions, challenging questions, and constructive feedback” (Dooner, Mandzuk & Clifton, 2008, p. 565).

When teachers are required to work in collaborative groups, they “soon find the critical nature of the communal learning experience to be extremely challenging and surprisingly ambiguous work” (Dooner et al., 2008, p. 564). Because tension is inherent in group work, and because as members work more closely with one another, fewer assumptions are left unchallenged (Wenger, McDermott, & Snyder, 2002), and conflict is the natural result. The natural result

of change is that those who are expected to change are left feeling uncomfortable with a new and unfamiliar environment (DuFour, 2007).

Shen (1997) noted that teachers often felt a sense of isolation within their profession. According to Shen, some teachers enjoyed the individualistic nature of the profession, and that was why they stayed. By comparison, Shen suggested, “Those who may be most willing to develop a shared technical culture are most likely to leave” (p. 81). This may be one reason why consistent collaboration is difficult to sustain in schools. Simply put, many teachers may prefer to work alone, and learning to work in a PLC requires a major shift in the way many teachers traditionally work.

Although these tensions might seem like prime opportunities for discussion and learning, teachers often deal with conflict by avoiding it and engaging in “superficial politeness” (Dooner et al., 2008; Hargreaves, 2001). The collaborative process, then, proves to be unexpectedly demanding and personally challenging (Mandzuk, 1999). When teachers react to conflict by avoiding communication, the group may be apparently conflict-free, yet ineffective. On the other hand, when unrestrained conflict is tolerated, teachers react by feeling confused, by feeling personally attacked, and by putting distance between themselves and colleagues (Hargreaves, 2001).

The Role of Professional Development in Establishing a Collaborative Culture

Peter Senge (1990) states, “We each have a ‘learning horizon,’ a breadth of vision in time and space within which we assess our effectiveness. When our

actions have consequences beyond our learning horizon, it becomes impossible to learn from direct experience” (p. 23). This suggests that a kind of myopic view may exist that keeps teachers from actively considering how they interact with each other today affects how their students learn in the near and distant future. One role of professional development is to help teachers overcome this myopia by helping them actively consider and change both the way they communicate and how changing their communication could benefit their students. Indeed, Darling-Hammond (1994) contends that schools have little chance of succeeding without continual opportunities for teachers to expand their learning horizons.

Professional development comes with two sets of expectations: personal and school-wide. Personal expectations matter because they affect the way teachers approach and react to professional development. Learning experiences that many teachers might initially feel are a waste of time become very valuable and interesting to them when placed in a context that establishes both purpose and implications for their daily work. Professional development strategies must focus on the intended results (Speck & Knipe, 2001).

In the context of establishing a collaborative culture, school-wide expectations are important because they speak to the intended outcome for groups—what the goal and the process for reaching this goal will be. Effective professional development is critical in establishing a collaborative culture, partly because it helps establish these personal and school-wide expectations, but more so because it provides the opportunity to look beyond the day-to-day concerns of

running a classroom and to examine our collaborative practices with a long-range view in mind (Speck & Knipe, 2001).

Teachers' Values in a Collaborative Culture

When establishing a culture in a school, it is important to bring to the surface the values that underlie our choices and decisions. The values of the teachers and of each PLC as a whole must be examined to establish the common ground necessary for a viable school culture (Speck & Knipe, 2001). As Sergiovinni (1992) notes:

The evidence seems clear: self-interest is not powerful enough to account fully for human motivation. We are also driven by what we believe is right and good, by how we feel about things, and by the norms that emerge from our connections with other people (p. 23).

This is especially relevant when considering why a group may be experiencing conflict. One must consider how convergent or divergent group members' values may be, because shared values determine specific behaviors and attitudes (DuFour & Berkey, 1995).

As a foundation for the System for Multiple Level Observation of Groups (SYMLOG), Bales and Cohen (1979) suggested the personality traits of group members can be analyzed in three dimensions (discussed in the next chapter). Further, the ratings of group members' values can be used to plot the personality attributes of group members within these dimensions, thus giving a graphic idea of the "personality" of the entire group. These data can be used to illustrate a link

between expressed values and the behavior of individuals in the group, as well as the group as a whole (Polley, 1985).

The Innovation

The innovation in this study consisted of seven professional-development training sessions designed to introduce, practice, and reinforce the use of the seven norms of collaboration, as presented in Garmston and Wellman's (1999) *The Adaptive School: A Sourcebook for Developing Collaborative Groups*. The training relied heavily on the concepts they presented, and incorporated the use of self-reflection inventories they developed (Appendix B). These inventories were used to help teachers reflect on, and eventually improve, the degree to which they used the norms in their team interactions.

These training sessions occurred during September and October of 2009, and involved the entire teaching staff at our school. One new norm was introduced during professional development sessions each week. After the first session, the preceding norms were briefly reviewed and teachers had an opportunity to share reflections, observations, challenges, and success stories.

Garmston and Wellman noted, "There is a marked difference between skills and norms. A skill is something that someone knows how to do. A skill becomes a norm when it is 'normal' behavior for the group" (1999, p. 37). One goal was for these behaviors to become normative for members of the group as they learned to fit themselves into the established institutional practices and culture.

The research of Bruce Joyce and Beverly Showers (1988) indicated that between 10 and 15% of in-service training is transferred to actual classroom practice in the absence of on-going coaching, and that figure soars to 80% with the addition of regular coaching. With these thoughts in mind, each of the seven training sessions for this study was designed to provide a conceptual overview and rudimentary practice, so group members would have sufficient understanding of the concept to apply it when coaching was later supplied in context. The first training session focused on pausing, the second on paraphrasing, the third on probing for specificity, and so on until all seven norms had been addressed.

Each training session lasted around one hour and was structured as follows – using the first training session on the skill of paraphrasing as an example: A brief (less than ten minute) introduction of the skill of paraphrasing was presented by the researcher. A five-minute presentation of a group meeting was shown, (usually through a role-play) during which participants were to note how many times and in what ways paraphrasing was demonstrated. A round-table discussion of their observations followed the presentation. Group members then individually rated their group's current practice regarding the use of paraphrasing, using the rubric developed by Garmston and Wellman (1999) (see Appendix B). A short role-play was then enacted, modeled for the entire group by the facilitator (the researcher) and prearranged participants. Participants were then asked to critique the use of paraphrasing in the modeled conversation. Each group then conducted either a role-play or focus question discussion of their own using a partially scripted scenario with open-ended responses. As a culminating activity, the

groups discussed the ratings that they gave their group on the rubric and formed an improvement goal for the following week.

This process was then followed on a weekly basis for each of the other norms, with the addition of review and reflection on the use of previously studied norms. Based on the coaching model of Joyce and Showers (1988), follow-up consisted of ongoing questioning by the researcher, as well as the instructional coach and the assistant principal both during the training and in settings outside the team meetings. This questioning was designed to lead group members into thinking about their transfer of these skills into their actual practice.

The researcher, the instructional coach, and the assistant principal also acted as facilitators to reinforce the concepts covered during training. This included modeling the concepts on a consistent basis, both in team meetings and elsewhere, as well as using the aforementioned questioning to remind team members about the appropriate ways to use these concepts. The goal of this coaching was not to force team members to apply the concepts as an exercise in compliance, but simply to remind them to use them, and then determine whether they developed automaticity in their usage over time.

Chapter 3 Method

This action research study utilized a mixed-methods design. Both qualitative and quantitative data were collected. Quantitative methods were used to provide a measure of teachers' perceptions of the quality and effectiveness of communication in our PLC teams as well as a way to track and record the values that teachers exhibited relative to interactions with their team members. Qualitative methods were utilized to provide a view of current practice as well as changes in practice over time with respect to their communication, collaboration, and progress toward implementing the PLC concept. It was anticipated that a change in the communication in each PLC team would be realized, measured by both quantitative and qualitative methods. The working suppositions were that training in norms of collaboration would result in an increase in the effectiveness of communication for the team, that destructive conflict would be reduced, and that these changes would enable the teams to become PLCs.

Setting

This action research study took place at a large (1,200 students) suburban elementary school, located in Arizona. It occurred during the fall semester of the 2009 school year. The elementary school in which the study was conducted serves a community of mostly middle- to upper-socioeconomic status residents. It is a preschool through fifth-grade school that at the time had a 28% free and reduced lunch rate, and that number had been increasing during the previous year. At the time of the study, fifty-one percent of our students were White, 32% were Hispanic, 11% were of African descent, and the remaining 6% were of Asian or

Pacific Island descent. It was designated an inclusion school, meaning that there were three special-needs classrooms on campus for students with severe cognitive challenges, and those students were mainstreamed to regular-education classrooms with non-disabled peers at all grade levels.

Site Selection

The elementary school staff members involved in this study were already a part of teams attempting to implement the PLC concept, but were observed to be struggling to communicate effectively in their groups. Brainstorming sessions among team leaders, as well as my own observations, indicated that the groups did not collaborate well due to conflicts that had arisen around personality disputes. As these teams were already established, and the need for enhanced communication and collaboration had been recognized, this site appeared to be ideally ready for the study and innovation described here.

Participants

Participants included 40 elementary school teachers, teaching kindergarten through fifth grades. No students were studied, nor was data on students collected. All of the teachers were already organized in teaching and learning teams, and it was their communication and interactions in these teams that were studied. Of the 40 teachers in the study, 31 had been teaching 5 years or fewer, 7 had been teaching between 5 and 9 years, and 2 had been teaching more than 9 years. Three were in their first year of teaching. All were female, 30 were under the age of 30, 8 were between 30 and 40, and 2 were over the age of 40. Twelve of them were

in their first year at this school. None claims to have ever worked where they were part of a PLC, as defined previously.

In our study group of 40 teachers, 36 were White, and the remaining 4 were Hispanic. Three years prior to this study, my first year at the school, nearly the entire staff left the school site in order to open a new school with the previous principal, meaning that nearly all of the teachers were starting their first year at this school; only six had stayed from the previous year. Since that time, our turnover has been low, below 15% annually. Our school had grown significantly over the 3 years prior to the study, going from just under 600 students to nearly 1,200 students in that time period. From the beginning of the school year to the time the intervention began, we hired five more teachers to create new classrooms to keep up with growth.

Survey

Survey data were collected via the use of an online survey service that automatically compiled and categorized the data. The survey was conducted by the researcher and administered to the teachers both prior to and after implementation of the innovation, in an attempt to measure how their perceptions of their practice changed over the course of the innovation.

The team communication survey contained two sections, closed and open-ended items. The closed items were used to answer the primary research question: What effect will training in norms of collaboration have on communication? It also included questions concerning conflict in

communication, which addressed research question number 3: How will training in the norms of collaboration affect conflict in PLC teams?

The survey was used to measure teachers' perceptions of current practice in critical areas of team communication. These areas include: efficacy, or the degree to which communication leads to the fulfillment of the group's core goals; candor and trust, or the degree to which group members feel free to express their thoughts and feelings openly, that confidences are kept and that they won't experience retaliation for speaking openly; and conflict, or how frequent and prevalent are disagreements, and whether these disagreements are constructive or destructive to the group's goals and to continued communication. This survey was created by the researcher, drawing on extensive reading in effective communication.

Closed-ended survey questions took the form of statements posed with four Likert scale responses: *strongly agree*, *agree*, *disagree*, or *strongly disagree*, presented in that order. The online electronic survey instrument was configured so that it did not allow for unanswered questions, or not applicable ("n/a") answers. An example of a survey question in the efficacy category was: "The communication in our team reflects a common goal," with the four possible responses listed above. An example for candor and trust was: "I feel free to express my feelings openly in our team meetings." And an example for conflict was: "My team has procedures in place to overcome disagreements."

There were also two open-ended questions, one about respondents' perceptions of their team's communication skills, and the other about their team's

weaknesses with respect to communication. There were also two questions to identify to which team the responses apply. Survey data were collected via an online survey service that collected and categorized the data for export to a spreadsheet or data analysis program. Because responses were fully anonymous, participants were asked to provide their grade level so that these data could be categorized by team. The complete survey can be found in Appendix C.

SYMLOG

Another quantitative method for gathering data in this study was an instrument called the System for the Multiple Level Observation of Groups (SYMLOG) originally developed by Bales and Cohen in 1979, and since then revised for use in many different applications. Keyton and Wall (1989) state, “While other constructs exist for measuring communication style in organizations, SYMLOG’s main advantage is the ability to capture interaction patterns over the short and long term” (p. 563). SYMLOG is a system based on the theory that people interact in three dimensions, and that they use these dimensions intuitively (Keyton & Wall, 1989). Since there are three dimensions, they can be visualized as occupying a particular size and location within a cube, often illustrated in a three-dimensional field diagram representing this cube.

The three dimensions represented are: (a) dominance/submissiveness (up-down dimension), (b) positive/negative (right-left dimension), (c) task orientation/emotional expressiveness (forward-backward direction). These dimensions are assessed using values-based rating scales that are filled out by both the observer and can also be completed by the group members being

observed. In the SYMLOG instrument used for this study, the rating scale had 26 values statements, each representing different “directions” within the three dimensions. Both individual and group rating scales are available, and for this study the individual rating scales were used due to the small size of the groups being observed.

On the rating sheet, there is a list of values measures, and the question is asked of each, “What kinds of values does this person (or ‘do you’) show in his or her behavior?” Each of the measures is then rated as “rarely,” “sometimes,” or “often” demonstrated or observed. An example of a values measure for dominance/submissiveness is: “Individual financial success, personal prominence and power.” An example of a values measure for the positive/negative dimension is: “Friendship, mutual pleasure, recreation.” An example of a measure for the task orientation/emotional expressiveness dimension is: “Conservative, established ways of doing things.” A rating of “rarely” would indicate one direction within the cube, a rating of “often” would indicate the opposite direction, and a rating of “sometimes” would dictate a center position.

The procedure for plotting these measures within their dimensions consisted of compiling the responses from the rating scale, computing a numerical score for each of the three dimensions, and then using that score to place a circle within a grid.

PLC Evaluation Instrument

Research questions one and two concern how PLCs are fostered by the intervention and by communication/collaboration. Our school had been

attempting to establish PLCs long before the intervention was implemented. To gain an ongoing description of how our teams were progressing toward becoming PLCs, a PLC evaluation instrument was used. This provided three columns, labeled in order: 1. How is your team like a PLC? 2. How is your team not like a PLC? and 3. How is your team becoming like a PLC? It was first administered in November of 2008, and then again nearly a year later in October of 2009, shortly after the intervention was completed.

Prior to completing this instrument, a brief presentation on the definition, attributes, and indicators of a PLC was given to the teachers in a group setting. These criteria were made available to the teachers on hand-outs as they were asked to complete the instrument. This procedure was followed identically for both administrations of the instrument. For both administrations teachers were told that they were not limited to the criteria presented, and could interpret, paraphrase, amend, or expand the criteria as they saw fit.

Reflections

As a culmination to the innovation, the assistant principal conducted a series of discussion sessions in which participants were asked to reflect and then respond to the very general questions: 1. Describe what has changed for the better/worse in your team so far this school year? 2. What strategies for improvement have you and/or your team tried that worked? That did not work? 3. If you have made any changes, how have they impacted your students? They were asked to give reasons why they answered the way they did, when applicable. Respondents were given time to discuss their thoughts on these questions during a

meeting with the entire staff, but were not individually asked or required to speak, and their individual responses to the above questions were given in writing.

It should be remembered that the intervention was given in an attempt to ameliorate the effects of conflict in teams of teachers. Because of this, careful consideration was given to how best to preserve confidentiality as they were asked to answer the above questions honestly and candidly. Written responses were used over a traditional focus-group format to avoid exacerbating the effects of conflict in the teams.

Data Analysis

Survey data were collected via an online survey service that collected and categorized the data for export to a spreadsheet or data analysis program. Because responses were fully anonymous, participants were asked to provide their grade level so that these data can be categorized by team. Statistical Package for the Social Sciences (SPSS) software was used to analyze repeated measures data and run descriptive statistics that included measures of central tendency, standard deviation, and effect sizes.

Data from the PLC evaluation instrument, open-ended survey questions and individual teacher reflections were categorized by grade level and coded in two stages: (a) Initial open coding through repeated readings to identify patterns and trends and (b) axial coding, in which a initial open coding was gathered into larger categories that lead to themes, which emerged from the data.

Role of the Researcher

The researcher's role in this study was that of a participant-observer. Observations were naturalistic in the sense that the researcher was not manipulating the outcome of each observation. PLCs, though in their infancy, are already part of the expectation and culture of the school. As the primary leader in the school, it was my responsibility to provide vision and direction on how these PLCs could function best. Professional development toward this end is a normal part of our procedure, and training in norms of collaboration was already a part of our five-year plan before the conceptualization of this study. Therefore, the role of the researcher is as the guiding force behind the implementation of programs and development of the skills being studied.

Chapter 4 Results

Results for the study are presented in two major sections. Initially the quantitative results are presented followed by the qualitative findings. Quantitative measures included pre- and post-intervention surveys of communication skills for the teachers who participated in the innovation, as well as results from the three SYMLOG rating scales, which measured several indicators of group interaction. The survey of communication skills addressed aspects of effective communication, including efficacy, candor and trust, and conflict. These data were collected in an effort to answer research question 1: *How does the use of collaborative norms foster development of PLCs?* It was also designed to help answer research question number 3: *How will training in the norms of collaboration affect conflict within PLC teams?* The survey also included two open-ended questions, the results of which are included in the results for qualitative measures. The SYMLOG instrument involves ratings based on values statements, and was used to help answer research question 4: *How do the teachers' expressions of values change as a result of the innovation?* Although the SYMLOG instrument does not measure values per se, it is used to quantify expressions of values in communication, and in the present context it was employed to assess changes in those expressions over time.

Quantitative data were analyzed using descriptive statistics or repeated measures analysis of variance procedures, as appropriate. Cronbach's coefficient α was computed to determine the reliability of the SYMLOG measure, as well.

Qualitative data gathered in the study included teacher reflections gathered at the conclusion of the study to capture teachers' global perceptions of the overall influence of the intervention, rather than with an eye toward any single research question. The focus of this measure was on examining how training in the norms of collaboration affected conflict within the team. Teachers were also asked one year before the intervention and again at the conclusion of the intervention to complete an analysis of how similar or dissimilar their teaching teams were to a well functioning PLC. These data were gathered to answer research question 2: *How do collaboration and communication foster the development of PLCs?*

The qualitative data were analyzed using the constant comparative method (Strauss & Corbin, 1998). In that procedure, open coding was initially conducted to identify ideas and concepts from the teacher reflections and from the interviews. Subsequently, those open codes were gathered into larger categories using axial coding. Those larger categories led to theme-related concepts that suggested themes, which emerged from the data. The themes and theme-related components were examined and assertions were developed.

Results from the Quantitative Data

Communication skills survey results. The reliability of the subscales from the communications skills instrument was evaluated using Cronbach's α coefficient. Results from pre-intervention scores for the three subscales indicated the instrument was reliable. Reliabilities for the efficacy, candor and trust, and conflict subscales were: .84, .87, and .83, respectively. Because the data were

collected anonymously, only pre- and post-intervention means and standard deviations are reported. As noted in Table 1, there were no substantial changes for the group on the three communication skills measures. The most prominent change was in the category of candor and trust, which demonstrated an increase from a pre-test mean of 2.73, to a post-test mean of 3.04. See Table 1.

Table 1

Pre- and Post-test Means and Standard Deviations for the Communications Skills Measure

Subscale	Pre-test		Post-test	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Efficacy	2.70	0.40	2.97	0.39
Candor and Trust	2.73	0.41	3.04	0.39
Conflict	2.65	0.44	2.66	0.20

SYMLOG results. Three dimensions of group interaction were studied using the SYMLOG observation instrument: dominant/submissive, emotionally expressive/instrumentally controlled, and friendly/unfriendly. The repeated measure analysis of variance (ANOVA) for the dominant/submissive pre- and post-test scores was not significant, $F(1, 36) = 0.43, p = .51$. It is clear that the means for the dominant-submissive scores as shown in Table 2 were not different from one another. See Table 2. The repeated measures ANOVA for the emotionally expressive/instrumentally controlled pre- and post-test scores was not significant, $F(1, 36) = 0.04, p = .85$. Again, as shown in Table 2, these means are

not different from each other. By comparison, the repeated measures ANOVA for the friendly/unfriendly pre- and post-test measures was significant, $F(1, 36) = 23.90, p < .001$. The effect size, partial η^2 , was .399. This is a large effect size for a within-subjects design based on Cohen's criteria (Olejnik & Algina, 2000).

Table 2

Pre- and Post-test Means and Standard Deviations for the SYMLOG Measure

Dimension	Pre-test		Post-test	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Dominant/Submissive	0.95	3.26	1.35	2.35
Emotionally expressive/ Instrumentally controlled	2.11	3.54	1.97	2.71
Friendly/Unfriendly	5.54	4.89	9.87	3.77

Results from the Qualitative Data

An analysis of the qualitative data resulted in five themes that were based on the fifteen initial codes. These themes were: (a) collaborative integrity; (b) effective communication; (c) collaborative norms; (d) the PLC as a focusing lens; and (e) student needs and achievement. Within these themes, theme-related components existed that supported the themes. In the section that follows, the theme is described and explained, and quotes from participating teachers are provided to substantiate the themes. To clarify the findings from the qualitative data, the themes, theme-related components, and assertions resulting from those data are presented in Table 3.

Table 3
Themes, Theme-related Components, and Assertions Based on Analysis of Qualitative Data

Themes and Theme-related Components	Assertion
<i>Collaborative integrity</i> Nurturing of collaboration Listening with consideration Being open to other's ideas	Teachers exhibited collaboration skills by capitalizing on collaborative integrity as a process.
<i>Effective communication</i> Being efficient in communication Demonstrating effective communication Taking responsibility to communicate Exhibiting candor in communication	Teachers developed communication skills that were effective, efficient and that demonstrated candor.
<i>Collaborative norms</i> Norms as collaborative processes Norms and efficiency Emphasis on certain norms Perception of novice use of norms	Teachers felt they were more efficient collaborators by using collaborative norms, though they felt they needed to improve in the use of norms.
<i>The PLC as a focusing lens</i> Focus on improvement Collective focus Shared beliefs, values, and vision	Teachers became more focused on their common objectives as they developed the attributes of a PLC.
<i>Students' needs/achievements</i> Data usage PLC=sharing/support=student achievement Improved communication benefits student achievement	Teachers perceived that they were positively affecting student achievement by improving their communication and collaboration.

Note: Themes are in italic font.

Collaborative integrity—Assertion 1. Teachers exhibited strong collaboration skills by capitalizing on collaborative integrity as a process. The word “integrity” is used here to denote the concepts of strength, support and durability, rather than being a moralistic definition of integrity. This theme

encompassed demonstrated behaviors and values that served to strengthen collaboration. These behaviors and values nurtured collaborative processes, encouraged the reticent to become involved in collaboration, or inspired confidence in the use of collaboration. Initial codes included such items as, “respect for opinions,” “universal participation,” “professionalism,” and “open-mindedness” to name a few. The initial code “listening” was also included in this category in the context of open-minded consideration, though in the context of listening to gain information, it fits more properly within the theme of effective communication, which is discussed later.

Many of the initial codes were drawn from comments that reflected what may be termed a theme-related component within collaborative integrity: the egalitarian notion of equal consideration. The respondents made it clear that they valued the opportunity to be heard and to have their comments and opinions considered and discussed in a civil way. In response to the question, “In what ways does your team need to improve their communication?” one teacher wrote, “Having positive interactions and giving others time to speak. Realizing what others are saying is important, even if you disagree.” To the same question another responded, “Listening and being more open to others' ideas.”

This theme of collaborative integrity involves the root of their perceptions of the nature of their professional relationships. When asked prior to the intervention how their team is not yet like a PLC, participants offered responses such as, “There's a 'figure it out on your own' attitude,” and “We're too competitive with one another.” When asked the same question shortly after the

intervention was completed, the nature of their comments no longer focused on their professional relationships, instead focusing on the processes they had begun using to communicate more effectively such as, “[We need to] be effective communicators when modification is needed” and “We do not 'train' each other enough.”

Concurrent with this shift was an emerging emphasis on trust in their team interactions. In response to the question “How is your team becoming more like a PLC?” one teacher stated, “Trust [is] developing to share ideas, discuss weaknesses in instruction, as well as strengths with team members.” At the conclusion of the intervention, many participants identified openness and understanding as being among their team's strengths, along with seeking mutual understanding, with observations such as, “We are open to new ideas” and “We want to understand each other and strive to make sure we do most of the time.”

The most notable trend relative to collaborative integrity that was evident in the qualitative data was a decrease in the frequency with which the respondents mentioned matters of collaborative integrity (the need to be heard, respect for other ideas), such as, “All members should feel able to communicate and like their ideas are valued” as well as, “Respect each others' opinion, keep it professional.” There was a corresponding increase in the frequency with which they gave responses that belonged within the themes of Collaborative Norms and The PLC as a Focusing Lens such as, “All team members participate in discussions and put their ideas on the table” and “[As a PLC] when a teacher on

our team has very high scores in a certain area, we have the opportunity to ask her about her instructional interventions...”

A unifying concept among these three themes was professionalism, highlighted in a comment from a reflection by a fourth-grade teacher who said, “Collaborating with my team helped me become more professional by giving me the tools to become a successful team member.”

Effective communication—Assertion 2. Teachers developed communication skills that were effective, efficient, and demonstrated candor. The theme-related communication components included: efficiency, effective listening, opportunity and responsibility to communicate, and candor. Much like the theme of collaborative integrity, the theme of effective communication can be defined and demonstrated; however, ways in which the study participants viewed the effectiveness of their team's communication changed over time. Initially, various participants listed listening and efficiency with nearly equal frequency as both a strength and a weakness of their team's communication. Representative comments at the beginning of the study included, “We need to set deadlines and stick to them;” “I feel that some team members tend to keep restating what they've already said or add more information than is necessary;” and “We need more focused listening.” Along with listening and efficiency, a common initial code was conflict. Teachers offered statements such as “We should not take things said so personally;” “We do not disagree in a positive way or openly;” and with candid clarity one teacher suggested, “We don't like conflict – we're polite

and don't discuss issues or put off for other times – collaboration needs communication.”

A shift occurred after the intervention. Many participants reported that a strength of their team's communication was being able to handle disagreements amicably. This newly developed ability to deal with conflict was exemplified in the following statements, “When someone has a difference of opinion, we explain both sides without getting upset;” and “Members aren't afraid to ask questions to clarify or clear up misunderstandings.” Nevertheless, even at the conclusion of the study, many participants’ comments continued to be focused on listening skills as both a weakness and strength in their team's communication.

Participants’ perceptions of communication tended to reflect their role within the team. For instance, one teacher wrote, “Actually, being a newcomer on the team, I feel like they have communicated with me fairly well.” On the other hand, a more experienced team leader expressed that communication in their team was geared toward evaluating one another, and that she doubted they did so objectively. Another added, “I feel it is my responsibility to speak up if I do not know.”

Another emphasis within the theme of effective communication was active listening. A comment representative of this emphasis was given by one teacher prior to the intervention when she stated, “[We need to] listen more to what the person is truly saying.” After the intervention, many teachers spoke of listening carefully and “asking questions to clarify or clear up misunderstandings” as strengths of their team's communication.

It is noteworthy that the teams who readily embraced using the norms of collaboration spoke of the effectiveness of their communication as a strength of their team. By comparison, those who begrudgingly practiced the norms out of compliance tended to indicate the quality of their communication was a weakness within their team. One teacher on a highly effective team wrote, “Our team's strength is being open-minded, candid, and respectful, in talking with and listening to other team members when discussing ideas, opinions and perceptions with each other.” In comparison, a member of a struggling team noted, “My team does not agree on what's best for students or what professionalism is (sic). In order to have better communication, these things, first, need to be taken care of (sic).”

Collaborative norms—Assertion 3. Teachers felt they were more efficient collaborators by using collaborative norms, though they felt they needed to improve in the use of norms.

This theme of using collaborative norms emerged because of the frequency with which respondents mentioned behaviors associated with collaborative norms: (a) pausing, (b) paraphrasing, (c) probing for specificity, (d) putting ideas on the table, (e) paying attention to self and others, (f) presuming positive intentions, and (g) pursuing a balance between advocacy and inquiry. It could have easily and perhaps more precisely been labeled collaborative processes. This alternative perspective is mentioned to highlight a concept that gradually gained momentum as the intervention progressed. Teachers began to talk more about their team meetings becoming increasingly focused, efficient, and

manageable. According to many respondents, because meetings became more efficient, their opportunities to communicate and contribute were increased. As one teacher affirmed, “The use of norms helped us stay on track during our grade level meetings. It also made us more cognizant of others' feelings or input and provided opportunities for us to brainstorm new ideas or teaching strategies.” Although brainstorming and staying ‘on track’ were not norms upon which the project was focused, they certainly are collaborative processes that may have resulted from an emphasis on the use of norms.

In a survey of how their team is like a PLC, the initial coding of the pre-intervention data reflected a collective focus, but in the post-intervention survey, the dominant theme was collaborative norms. Illustrative of this shift is the comment one teacher made, “Implementing or being more aware of norms leads to better communication [and] understanding each other.” Interestingly, collaborative norms remained the dominant theme in both the pre- and post-intervention surveys of how their teams were not like a PLC.

Similarly, in the pre- and post-intervention surveys concerning the strengths and weaknesses of their team's communication, the percentage of respondents asserting that their team needed to improve their use of norms increased by more than half, becoming the dominant theme. The percentage of respondents’ making comments indicating that the use of norms is one of their team's strengths nearly doubled. As reflected in respondents' discussions of their use of norms, initial codes proved to be interrelated in complex ways. Respondents often tied concepts such as mutual respect, efficiency, and amicable

disagreement to the use of norms. For example, one teacher mentioned ‘pausing’ and stated, “We need to make sure that we are hearing everyone's opinion on the topics discussed,” and she continued, “[we need to improve] positive interactions and allowing others time to speak – what others are saying is important even if you disagree.”

Another teacher described in her post-intervention reflection how she was so impressed with the influence norms had on her team, that she introduced the norms to her students. With respect to her team, she related, “The norms of collaboration helped our team and changed our professional practices because we were more aware of each others' needs and quirks. They helped us focus our meetings more so that there was not so much wasted time.”

It may be noteworthy that when mentioning the norms, the teachers focused on three that involved concrete, observable behaviors—pausing, paraphrasing, and putting ideas on the table. Interestingly, these behaviors were noted without mentioning the admittedly more difficult tasks of changing attitudes, ongoing practices, or personal philosophy that may need to occur when practicing norms such as paying attention to self and others, presuming positive intentions, and pursuing a balance between advocacy and inquiry. In short, in their discussion of the norms, they readily mentioned how they behaved, but not what they felt or believed.

In post-intervention comments, respondents widely acknowledged that they felt they were novices in their use of norms. Comments such as, “Still getting used to using the norms consistently;” and “We are still working on

absorbing and practicing the norms we've learned" were typical. Some indicated that using collaborative norms did not occur automatically, and norms still had to be overtly practiced. As one teacher put it, "[We need to] continue implementing norms so they can be natural rather than forced."

The PLC as a focusing lens—Assertion 4. Teachers became more focused on common objectives as they developed the attributes of a PLC. Closely related to the use of norms was the notion that attempting to function as a PLC produced an effect in the teaching teams so they became more focused as a group on their common goals, practices, values, and beliefs. As with other themes, the initial codes from which this theme was drawn were complex in nature and interrelated. Many teachers discussed the focusing nature of PLCs in relation to student data and student achievement, whereas others related this focusing aspect to the use of norms. Nevertheless, this outcome was maintained as a separate theme because so many of the respondents at the conclusion of the study credited the formation of a PLC with the improvements they felt their team was experiencing in other areas.

When considering the perspective that the PLC structure focused participants on improvement, the symbolism of a lens seemed apt. Thus, just as otherwise diffused light rays are concentrated to a single point by an optic lens, so the respondents indicated they felt the PLC was the medium by which their diverse interests were being consolidated and concentrated on specific goals. As concisely stated by one teacher, "Being a PLC helped us know what concepts we needed to focus on."

Examples of comments that are grouped under this theme included comments related to identifying weaknesses and deficiencies and then setting measurable goals, comments about focusing on the need for both teachers and students to improve specific skills, and other general comments such as, “Meeting as a PLC helps us know what to focus on.” As part of this theme, teachers expressed an emerging practice of self and group reflection as noted in the following comment, “While discussing strategies, the team shared what was working and not working...”

During initial coding of the pre- and post-intervention data from the survey question, which asked how they are or are not like a PLC, a category labeled “collective focus” emerged, which was reflective of initial perspectives about the PLC. This was the dominant code in the pre-intervention data concerning how they are like a PLC, but was barely mentioned in how they are not like a PLC. Short, unspecific phrases such as, “[We] construct a shared vision of improvements” and “We share beliefs and values” dominated the responses. In the post-intervention data, collaborative processes had taken over as the dominant code, with collective focus still being frequently discussed in the “how we are like a PLC” responses, though only a single brief mention was made in the post-intervention of “how we are not like a PLC” responses. Many of the responses became more specific in the post-intervention data; examples include: “We are developing a shared vision. I like how the vision can change as we do,” and “We now focus our planning and meetings on students and learning – We are not a social group when the [PLC] meeting starts.”

These brief responses did not clearly tie the concept of collective focus to the attempt to establish PLCs. This link became much clearer as the teachers completed their post-intervention reflections. Many respondents made comments similar to this one made by a first-grade teacher who confirmed, “[The PLC helped us] pick an area of weakness, share strategies within our team to help improve this weakness, implement those strategies for a specific amount of time, and assess to check for growth.” Other teachers were even more specific, mentioning particular curricula on which they were “allowed” to focus with their team to meet short-and long-range goals. In contrast, two teachers focused on the pragmatic challenges of trying to implement the PLC framework as one acknowledged, “Meeting as a PLC team to collaborate is valuable, but diverse teams or classrooms sometimes make it difficult to find a common area to focus on. Some team members were more thorough with sharing their ideas with everyone than others.” Others discussed the need for more time in their schedule to do everything that is required of team that is functioning as a PLC.

Viewed more broadly, perhaps the most striking transition between the pre- and post-intervention data relative to the theme of the PLC as a focusing lens was the way in which respondents moved from generally stating that they had common values, goals, beliefs, vision, and mission—“...assumed but not expressed,” as one teacher stated—to discussing more specifically how they were developing common goals and assessing progress in a much more reflective way. This change occurred collectively, “The PLC really gave us a chance to learn from each other and plan ways to help students across the board,” and

individually, “The PLC has helped me to focus on specific skills and has provided me with strategies to improve my teaching.”

Student needs and achievement—Assertion 5. Teachers perceived that they were positively affecting student achievement by improving their communication and collaboration. Initially, this theme was included as a theme-related component within the larger theme of PLC as a focusing lens. Upon more careful review of the identified codes, it was clear that in many instances the teachers' comments relative to student needs and achievement were contextually distinct from their discussions of focus. Even when student needs and achievement were discussed relative to team focus, it was evident that this theme was distinctive due to the frequency with which it was commented on by the majority of respondents. It should be noted that when respondents mentioned gains in student achievement, these gains should be considered as perceived gains, because actual student outcomes were not gathered as part of the study.

Examples of this theme incorporate theme-related components concerning the value of data usage, improving communication and collaboration within the team to benefit student achievement, a renewed emphasis on discussing student progress over scheduling and other procedural issues, and the pooling of collective experience and expertise to improve student achievement. The teacher reflections served as the richest source of information about this theme because this format encouraged more thorough description.

Many of the respondents were careful to emphasize that because they were a PLC, they were better at sharing ideas and support, thereby affecting student

achievement. One teacher commented that meeting as a PLC provided, “a larger resource base (seven teachers) to find out how we were going to help our students become more successful.” Another noted, “As a team, we were able to provide each other support that benefited all of our students academically, as well as socially.”

In the pre- and post-intervention teacher reflection responses to the query about their group, “Are/Are not like a PLC?”, an even stronger emphasis was placed upon a new-found ability of their teams to analyze student data and use it to influence student achievement. Representative of typical responses, one teacher affirmed, “We have collectively analyzed our student data and based our lesson plans on state standards. Our lessons have increased our students' achievement.”

An increase in the prominence of the value of using data to meet student needs or affect student achievement is evident by combing the pre- and post-intervention surveys for mention of using data. In the pre-intervention data, there were no overt declarations of using data to influence student achievement or meet student needs. In response to the post-intervention question, “How is your team like a PLC?”, more than half of the respondents mentioned the use of data, and none included using data as an example of how they are not like a PLC.

More telling was the emergence of comments in the post-intervention reflection, which point to improving communication and collaboration as being directly linked to perceived improvements in student achievement. For example, one teacher acknowledged, “The collaboration of the team; being able to tap into

their knowledge and experience, (sic) and looking at my students' data has shown me a way to refine my teaching while moving my students in the direction they need to be heading.” To the post-intervention question, “What are your team's strengths with reference to communication?”, one teacher expressed a relation between her team’s improving ability to listen to other members of the team and the improvement of student outcomes as measured by their assessment data, when she offered the pithy expression, “We are listening to each other better = academic outcomes = increasing scores.”

Chapter 5 Discussion

The following discussion of research findings consists of three sections: The first section addresses lessons learned from the study results, and includes discussion of results relative to the research questions, interrelationships within themes, and collaborative processes based on the data. The second section aligns the lessons learned with their implications for current practice within the context of the study. Recognizing that by definition the mixed-methods action research model invites a continuing cycle of research, in the third section implications for further research are presented, including reflections on how this study could be improved, and ways in which this study could be built upon with further research.

Lessons Learned

Of the various possible strategies for constructing an analysis of research findings, a pragmatic approach to the eclectic nature of the findings in this study is to view the identified themes as an entity – a set with subsets – and let the themes serve to provide the scaffolding for an analysis of interrelationships.

The Greek root for the word *analysis* refers to loosening, as one unravels a knot in a string, reducing the intricate to a series of simpler steps (Ayto, 1990). In keeping with this idea of viewing the complex as a set of more basic - and therefore more easily discussed - components, Figure 1 is included (below, also larger in Appendix E). This figure is a graphic representation of the “entity” just mentioned, and depicts the sequence, conceptual basis, and scope of the following discussion.

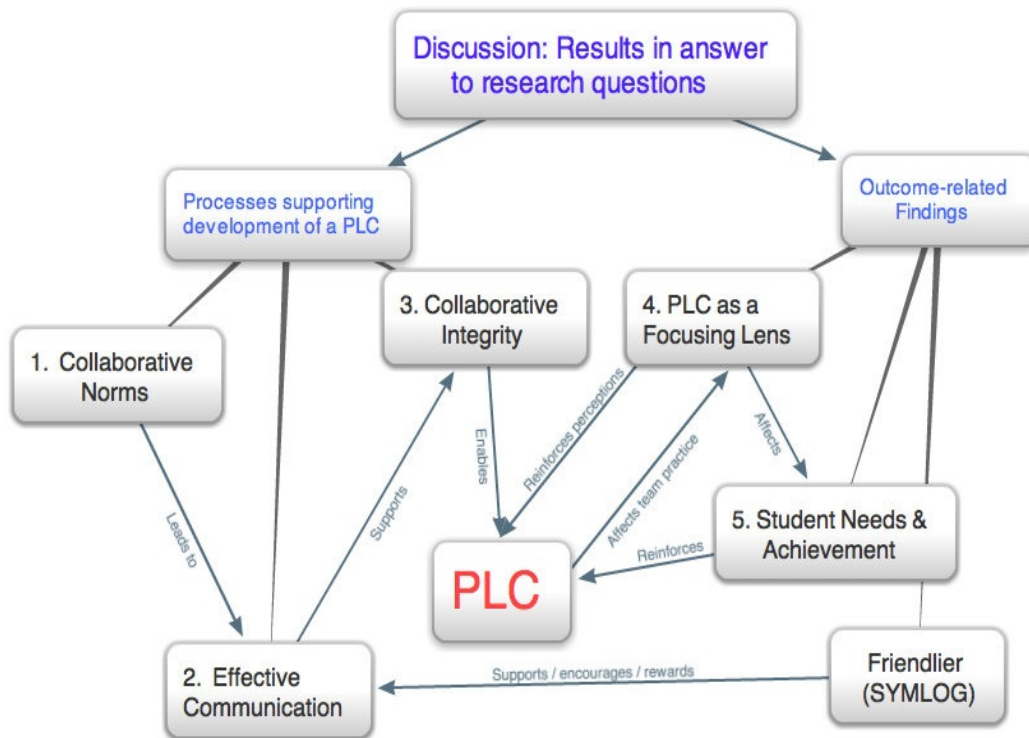


Figure 1.

Model depicting the interrelationships among themes.

In attempting to draw meaning from the results, it is vital to view the formation of PLC teams as the intended destination of the intervention. Thus, in Figure 1 the abbreviation PLC is near the center and is the unifying factor between the two areas of results that are represented. To the left, under the heading “Processes supporting development of a PLC” are three of the primary themes, and to the right, under the heading “Outcome-related findings” are the remaining two of the five themes, as well as information from the qualitative data on the SYMLOG dimension of friendliness.

With PLCs being the destination and collaboration the critical skill needed to attain the destination, conflict, or more precisely the inability to deal with conflict constructively, stands as a road block due to its ability to stifle communication and therefore impede collaboration. Considering this, an appropriate starting point for analysis of the results is to examine the relation of collaborative norms to other themes. The use of norms is the basis for the intervention, a prominent theme in participant responses, and as shown in Figure 1 is a foundational concept within the research findings. Expressed figuratively, if collaborative norms are the foundation, then collaborative integrity serves as the girders, and becoming a PLC is the pinnacle. This outcome occurs because as study participants began to use the norms, the data indicate they feel they are communicating more effectively. As this sense of efficacy in communication grows, the attribute of collaborative integrity emerges as a dominant theme in their responses. Concurrent with this emergence is the consistent expression that the teachers and teams recognize the PLC as a destination: a destination at which they feel they were beginning to arrive.

This emerging sense of arrival is rooted in a more complex set of processes. The SYMLOG data are unremarkable in two of the three indicators measured, but are strongly indicative that participants' behaviors showed a marked increase in the dimension of friendliness. It is possible that this explains why their expressions of emerging trust increased during the same period, and also why they reported that conflict in their teams had become more effective – or at least less destructive. Personal experience and common sense dictate to most

team members that when their team members are perceived as unfriendly, it is best to limit communication unless one desires conflict. Conversely, when a team member feels that the other members are becoming friendlier, they may feel emboldened to express ideas and opinions more openly, in the tacit belief that in their now-friendlier environment they are less likely to receive a negative or contentious response.

This idea of increased perceptions of friendliness leading to a greater willingness to communicate is clearly relevant to research question four, *How does the teachers' communication change as a result of the innovation?* The connection between increased perceptions of friendliness and willingness to communicate could justifiably be dismissed as speculation, as the SYMLOG data do not necessarily show that their communication changed in any way. These data are more complete when considered alongside the survey of communication in their teams. From a statistical viewpoint, the survey shows no significant change in the quality of their communication prior to the intervention and after it. This could indicate that nothing changed, but in light of the qualitative data it is probable that the nature of changes are not observable in their behaviors except as perceptions of increased friendliness and are more attitudinal.

The use of collaborative norms appears to correlate with teams engaging in more effective communication. Although teachers are noting that their teams are becoming more efficient, more aware - as one teacher stated - "...of each others' feelings, needs, and quirks," and more able to engage in conflict in a non-destructive manner, they also note that they have more opportunity to speak up

and that trust is increasing in their team. This trend invites the question: Which is antecedent and which is the result: trust or efficacy? Do they communicate more effectively because communication is easier to maintain in an environment of trust with low emotional risk, or do they feel greater trust because they now communicate more effectively? The answer is possibly found in a common but seemingly benign response within the theme effective communication: team members state that as they implement the norms they have more opportunity to speak. Considering that fear of conflict is ostensibly the cause of their failing to speak previously, it may follow that using the norms helps them gain trust and confidence in the team's ability to manage conflict, emboldening them to speak and therefore enabling more effective communication. If this is true, then trust must be developed first if one expects effective communication.

Though trust appears to be critical to the development of effective communication, more central to the development of a PLC is the link between effective communication and collaboration. The teacher who states, "Collaboration needs communication(sic)" succinctly states a primary tenet of this study – effective communication is a natural and essential component of collaboration. Elements of effective communication such as trust, candor, efficiency, and amicable conflict all support the concept of mutual learning and discovery that is central to collaboration.

The data indicate that by demonstrating these basic elements of communication, the way is made clear for the teams to demonstrate the more complex and utilitarian attributes associated with collaborative integrity, such as

demonstrating respect for others' opinions, universal participation, professionalism, and open-minded listening. With these attributes in place conflict can be constructively managed, no foreseeable obstruction stands in the way of collaboration, and it is possible to implement the PLC framework.

An ancillary theme that runs through the major themes of collaborative integrity, effective communication, and collaborative norms is listening. It is noted that of all the collaborative norms practiced as part of the intervention, the norms that involve observable behaviors are adopted and discussed by teachers far more readily than the norms that require a shift in attitude or paradigm. The teachers seem to be sending the silent message, 'I may be ready to change how I act, but I'm not ready to change how I think or feel.' Yet how they feel is changed, as evidenced by indicators of increasing trust and friendliness.

Listening may have much to do with this, and in fact the effect of improved listening may be one of the findings most suggestive of real progress in this study. As effective communication develops, so does their perception that they are being heard, and as they demonstrate collaborative integrity more frequently, they more often indicate that they feel they are being understood.

Pausing is the most frequently mentioned norm. It would be easy to assume that this norm is designed to give team members time to think and respond, but pausing may more significantly give team members a chance to absorb and consider the meaning and intent of others' words - to truly listen. The second most commonly mentioned norm is paraphrasing, which gives team

members the opportunity to demonstrate not only that they hear, but that they understand.

In the interest of clarity, it may be useful to briefly summarize the discussion so far using the left side of Figure 1 as a guide. Within the context of this study, the use of collaborative norms enables purposeful listening, perceptions of friendliness, and the development of trust in teaching teams, which leads to effective communication. Elements of effective communication such as trust, efficiency, candor, and so on support collaborative integrity. Demonstrating collaborative integrity fosters collaboration within the team, and enables the implementation of the PLC process. This leads us to the right side of the figure, outcome-based findings.

For the purpose of this analysis, “outcome-based findings” are defined as qualitative themes that result when teams perceive that they are becoming a PLC, rather than being concerned with the process of becoming a PLC. Also included in the definition are quantitative results that appear to be an outcome of the intervention-but are not directly tied to the collaborative norms - i.e. SYMLOG—which has already been discussed in relation to collaborative integrity.

The themes of the PLC as a focusing lens and student needs and achievement are so intertwined that there is a temptation to combine them into a single theme, yet a close examination of teacher responses reveals that they are hierarchal concepts. An emphasis on student needs and achievement does not emerge until they begin to see themselves as PLCs and only after they begin to use those PLCs as a lens for their collective focus. As teams develop the image of

themselves as a PLC and behave as a PLC, not only do they gain a greater sense of common purpose and goals, but they gain a greater ability to address their goals through a rudimentary action-research cycle. This leads to an incisive (to the exclusion of distractions and minutiae) focus on student needs and achievement, which is the underpinning of nearly all of their professional goals.

In considering the role of friendliness in developing a teaching team into a PLC, it becomes apparent that SYMLOG results may properly belong under both headings in Figure 1, as the dimension of friendliness in interactions appears to play a dual role in helping to establish PLCs and also sustaining a motivational cycle within them. This cycle, when examined as individual steps, provides a microscope through which to examine processes that may be spurred by the use of collaborative norms, and when taken as a whole can provide an aerial view of the overall results of using the norms. The way in which this cycle is initiated has previously been described: using collaborative norms leads to increased trust and friendliness, which leads to more effective communication; this leads to greater collaborative integrity, which fosters collaboration and enables a team to function as a PLC.

Thus begun, what appears to be a cycle of reinforcement begins, with the PLC acting as a focusing lens for the team. Responses from teachers indicated that they had begun to talk about what worked and what did not-to collect, analyze, and react to student data-and to address their common goals in a collaborative manner. This led to a perceived effect on student achievement, which reinforced in their estimation, their experience as a PLC was worthwhile

because it helped them meet their common goals. This perception led to continuing and to strengthening the PLC framework in their team, thus continuing the cycle. It should be noted that although for the purpose of this study student data were not collected and therefore any student outcomes are regarded as “perceived”, the teachers, however, did not feel that these outcomes were a perception. They were engaged in a cycle of assessing student skills, analyzing the data, reacting to the data, and then re-assessing, and they determined that the results of their assessments showed gains in student performance.

This cycle may be what Hargreaves (2001) was referring to when he described the PLC concept as an “ethos” in teaching teams. It is a self-sustaining part of their culture – self-sustaining because it provides its own motivation to continue. It is compelling to think of a collaborative structure as creating so much inertia – it leads one to wonder to what level of success that inertia could carry a team?

Another notable feature of this potential cycle is the change it seemed to affect in the nature of conflict in the team. One can discern that the theme PLC as a focusing lens is much more than simply collective focus when one examines this theme's effect on team conflict. Beyond providing collective focus, a PLC provides a constructive use of conflict. The team members, rather than arguing divisive points, are now arguing for different ways to meet their common goals. They are now arguing not because they don't get along, but rather because they agree on where they need to go, and need to work out how to get there. This kind

of conflict, rather than creating division, highlights what unifies them and is much more of a tool rather than a weapon.

In contrast to the four teams that demonstrated this cycle, two teams never seemed to get past the barrier of conflict. One team resisted efforts to implement the use of collaborative norms to the point that none of the norms ever became commonly used among them. The other team initially embraced the first few norms on which we worked, but personality conflicts and negativity continued, and an atmosphere of mockery toward those using the norms developed which seemed to succeed in painting the use of collaborative norms as a puerile pursuit. It may be confirming or disconfirming of this cycle concept that these two teams struggled; one could argue that four of six groups could represent the ratio of teams who would demonstrate the behaviors identified as part of this cycle in the absence of any intervention, or that they might not continue these behaviors – meaning it is not truly a cycle. It could also be argued that the two teams who did not appear to establish this cycle had at least one major commonality – unwillingness or inability to use collaborative norms – while those who did use the norms appeared to establish this cycle used the norms with more fidelity, and thus one could infer that the cycle is real and is likely the product of using the collaborative norms. More research would be needed to discover which argument is valid, but the evidence is compelling enough and the risks are so low as to warrant attempting to establish this cycle in other contexts.

The theme of student needs and achievement has heretofore been discussed in terms of its relation to the PLC as a focusing lens, but an important

facet of this study can be exposed by briefly isolating this theme. As an emphasis on student needs and achievement emerged in teams, members began to speak of themselves less in terms of their team-related struggles and more as a member of a group of student-centered professionals. This may be a direct outgrowth of the PLC concept. The PLC serves as a continual reminder of why the team exists and what they are to do, by emphasizing and reinforcing collaborative processes through introducing and enforcing the regular use of assessment and data in an action research process. Upon implementing the PLC concept, the teachers are no longer a community of practice that was formed more or less randomly through a common career path with common objectives foisted upon them, and they gain an identity that affects not only their professional practice, but their sense of purpose.

Implications for Practice

As situations differ from the context in which research is conducted, the likelihood diminishes that the research findings will present significant implications for practice. Noting this, the current context of the researcher must be taken into account when considering current implications. Before and during the gathering of data for this study, the researcher was embedded in the context of the study; however, during the analysis and reporting phases of the study he has moved on to a new position in a school that represents both a comparable and a contrasting context.

Both contexts are in the same school district, and it is fortunate that the researcher is able to stay in close contact with the research participants, as this makes both potential long-term outcomes of the study and comparisons of the two

contexts much easier to evaluate. It may be useful to briefly detail some similarities and differences between the context in which the study is being conducted, and the researcher's current context, hereafter referred to as the study context and the new context, respectively. The study context is a kindergarten through fifth-grade school, whereas the new context is a middle school for grades six through eight. The study context is an established school that has been in existence for many decades, the new context is a nearly-new school that has existed for just over a year. Most of the teachers in the study context have worked together for at least three years, whereas all of the teachers in the new context have been part of their team only since the school was opened and can easily count in months how long they have known their team members. In the new school an emphasis on collaborative processes and PLCs has not yet been established. It is also worth noting that though an assistant principal from the district assisted with data gathering, in the study context the researcher was ordinarily the sole administrator on campus, but is part of an administrative team in the new context.

What a richly edifying opportunity it is to be able to observe from the inside the creation of a new school and the forming of a new school culture! Despite the weight of evidence pressing the researcher to help establish PLCs in the new context, an incremental approach has been adopted due to a desire of the administrative staff to minimize teacher “burnout” from the almost crushing pace of implementation of new systems and programs in such a young school.

One of these programs, a language approach called Reading Apprenticeship, requires teachers to help their students establish collaborative norms to use during group work. The teachers are then evaluated on how well they facilitate the norms with their students. It has been more than interesting to watch them begin to effectively implement this in their classrooms, yet no transference of these skills to their own teams is observed. This would seem to indicate that implementing norms within teams is more difficult than simply convincing them that it is a good idea. Their teams are admittedly eclectic with members exhibiting widely disparate personalities, and the contrast between the functioning of their teams and the PLC teams from the study are glaringly apparent to those familiar with both contexts.

In early February of every year, the school district sends out staffing surveys which ask teachers if they will be coming back next year, and if so where they would like to work. This process has prompted several interesting discussions and none more so than three teachers who have each said separately and individually at different times that as we look at staffing for next year, they would really like to be a part of a “dream team” created with complementary personalities that will get along well. It is telling to listen to their responses when they are asked if they believe that this will eliminate conflict, and if a team of people who never disagree is really what is best for our students. Their query stems from frustration with their current team, yet fails to recognize the important place that amicable conflict holds in making decisions within teams by exposing and examining alternative viewpoints.

To the point, the contrasts that these two contexts provide also provide implications for how best to approach the formation of PLCs in the new context. First, because the contexts are similar enough to each other to be readily compared, it can be established from the study results that not only are PLCs worth the effort to establish, but it is also possible to establish them successfully in the current context. The concept of the PLC as a focusing lens is strong motivation to attempt to form PLCs in the new context, as a lack of unity and common purpose is a typical complaint among individual team members, even though the top-down directives provide more than enough common objectives on which they should focus. The possibility of a self-sustaining motivational structure that provides a focal “center” and both a rationale and a means for framing their goals also provides the impetus to begin laying the groundwork necessary for these new teams to function as PLCs.

Of course this invites the question: Which is better – to be a PLC, or to have the focus that a PLC can provide? It is possible that this focus is more important than actually establishing the formally recognized structure that defines what constitutes a PLC; perception may be key. If teachers need the PLC concept as a means for providing a focusing lens, then it just may be more important to feel like a PLC than it is to really be one.

Having established that utilizing PLCs – or at least the perception that they are becoming one – in our teaching teams is a worthwhile goal, another practical implication for practice is the synthesis of two norms – pausing and paraphrasing – into a new norm or skill that could be termed *purposeful listening*; purposeful

because it is intended to both deepen and demonstrate understanding. From the context of the study, it is apparent that much of what is expected of a functioning PLC may depend on this skill. Effective communication and amicable conflict are two indicators of a PLC for which purposeful listening appears to be critical.

Second, a better understanding of the role of listening in overcoming the negative influences of conflict and poor communication in teams may also ease the transition from teaching team to PLC. This is made clearer as we discover that the process of establishing PLCs is training-intensive at first, and functioning as a PLC may initially feel uncomfortable – even mechanical. Once the cycle discussed has begun the PLC becomes more self-sustaining as the members draw motivation from their own perception of the benefits of being a PLC. It stands to reason that, as effective communication is crucial to establishing this cycle, purposeful listening is a logical means of supporting effective communication.

One realization uncovered in this study is already affecting the manner in which professional development is planned and conducted in the new context. The responses indicating that they feel like novices at using many of the norms, yet are regularly practicing pausing and paraphrasing prompts the consideration that perhaps it is preferable to approach the norms training as mastery-based instruction in which they don't move on to the next norm until their team reaches a certain level of mastery in the currently emphasized norm. This would likely take longer, and we may have only get through a few norms in the time allotted for the study, but it also would have helped to isolate which norms have the greatest effect while allowing the teachers to establish the pace of change in their

teams to be more within their comfort level. The potential benefits of doing so are numerous, not the least of which being that it more effectively supports our goal of avoiding burnout as we attempt to find a sustainable rate of change. It is apparent that this could be applied far beyond norms training, assuming that a standard for mastery can readily be established for whatever skill is being taught.

Third, Jim Collins (2001) in his book *Good to Great* proposes that to build a great organization, the organization must get the right people “on the bus,” and the wrong people off. Ironically, getting educators “off the bus” is more difficult than in other fields, and the institutional benefits of doing so are sometimes suspect. In many cases it is preferable to find a structure and context that suits the strengths, weaknesses, and personal style of a teacher than it is to remove them from their job. There are certainly times, however, that inviting a teacher to leave is the only right thing to do. An unexpected realization of implementing the norms of collaboration is that they are very effective at identifying, figuratively speaking, who is on the wrong bus, who is in the wrong seat, how to make better passengers of them, and who could be prepared to someday drive the bus. Establishing norms as a non-negotiable part of a PLC-centered school is creating an interesting dynamic in the study context. The norms act in a diagnostic capacity – if one considers destructive conflict a disease, the norms are effective at tagging the carriers! This is manifested in many ways, but one example is the way in which some teachers reveal that they are unwilling to consider others' ideas as they continually use the norm of paraphrasing in a way

that attempts to manipulate the meaning of their team members' words to express what the paraphrasing person wants, rather than what is evidently meant.

In contrast to the teachers in the new school who ask that they be placed on a team that contains individuals with complementary personalities, the teachers in the study context now make similar requests, though theirs are based on the willingness of individuals to observe the norms to the same degree as the team, with those who spurn the norms wanting to work with others of the same ilk, and those who embrace the norms wanting to work with teachers who also do so. This sifting and sorting process may seem divisive, but may better be viewed as informative.

Implications for Further Research

As a preface to a consideration of what the next cycles of research could hold based on the results of this study, it may be useful to consider weaknesses discovered in this study. When considering this study in retrospect, there are two categories of changes or improvements that the researcher has most deeply considered: (a) How the study was conducted, including methods, data collection, and analysis, and also (b) What was studied, including the depth and scope of the research questions, the choice of intervention, and the inherent context.

In addressing how well collaborative norms facilitate the development of PLCs, it is clear that a longer period for data gathering would assist in clarifying the findings of this study. Participants responses repeatedly mention that they feel infantile in their use of norms, but those who are using them demonstrate a

willingness to continue doing so. From these comments, it appears probable that the study results would be influenced by a longer study period.

In retrospect, a greater emphasis should have been placed on uncovering the teachers' perceptions of their own interactions. Certainly the electronic survey is entirely concerned with how well they communicate, but by using the SYMLOG instrument, collecting self-evaluative data could provide confirming or disconfirming evidence for indicators of friendliness, dominance, and being instrumentally versus emotionally controlled. The insight that might be gained from this could be particularly useful when analyzing in light of research question 4: *How does the teachers' communication change as a result of the innovation?*

Another useful data set would be the gathering of observational data. The benefit of using observational data is the ability to more precisely pinpoint in time when communication changes, cultural shifts and significant events in relation to which norm is the focus of our training at the time. Thus the time line of this study, though chronological and consecutive, is not as precise as it could have been.

One overlap between the consideration of how the study is being conducted and what is being studied is the question of whether or not the research questions are adequately addressed by the study methods. In retrospect it appears that at least one layer of unnecessary complexity is included in the study design. Had the theme collaborative integrity been apparent from the beginning of the study, the attention to elements of communication may have been unneeded in order to discover what was at the heart of the study – how to foster the

development of PLCs by overcoming conflict. A closer examination of the relation between communication and collaboration at the outset of designing the study might have revealed that collaboration only needed to be studied; if collaboration is improving, the efficacy of communication is increasing by default.

Another possibly unnecessary element of the study design is the inclusion of all seven norms. Though it may be typical for a study to generate as many questions as it answers, the questions generated could be easier to isolate and address in successive studies with a more pragmatic design. Using a study design with the flexibility to let the groups choose one or two norms that they felt would help them overcome conflict would narrow the scope of the study to the point where gathering observational data is less unwieldy and more practical. Connections are more easily drawn in such a study design, and follow-up efforts after the study are more manageable.

A great many questions arise from this study which can be dealt with by further research. Some of these are simply outgrowths of implementation in the study context as well as the new context, such as: Is it better to let the teachers choose their own norms or to utilize established norms such as the ones this study used? What would result from focusing on the skill of listening instead of using the seven norms? Would explicitly teaching the concept of collaborative integrity make our PLC teams more effective at reaching and sustaining core goals? How can we best support new members of an established PLC?

Other questions arise from useful yet not directly relevant tangents that the study results presented. These could include: Which is more effective – professional development training activities that give the “whole picture” in overview and then discuss application, or mastery-based training that breaks complex subjects into logical segments and requires a certain level of competence in implementation before moving on? Could studying a job candidate's use of collaborative norms in a discussion setting serve as a better predictor for their success in a PLC team than standard interview questions? What is the role of friendship/congeniality in effective/successful teams? What is the role of conflict in effective/successful teams?

Of these many questions that could next be studied, the one most compelling from the standpoint of the researcher is the one that most relates to the original purpose of this study – to help teams become PLCs. It is shown that using norms can help teams become PLCs, and for these PLCs to develop a focusing lens for the team, the next most logical study involves the inevitable – does the PLC continue to be a focusing lens when new and unfamiliar members are added, and if not, how can this focusing influence be restored? Related to this question is whether conflict remains constructive when new members are added? This can inform practice not only in the most obvious way – by helping to maintain the benefits of PLCs despite changes in the team – but can also lead to insights about how best to form teams in the first place, and how to refine the training of PLC concepts to the simplest, most effective, and most efficient way possible. As PLCs are not just collaborative groups, but are in themselves a

means of professional development, answering how best to acclimate new members may also help to determine how teams implicitly carry on school norms, culture, and expectations.

One line of questioning that challenges the basis for the study is whether the teams that struggled were struggling because of conflict only, or were other factors at play? It was assumed by both the researcher and the participants that conflict was the primary impediment to becoming PLCs, but what if other factors, such as differences in professional experience, divergent worldviews, or cultural factors—to name a few—were as significant?

Fortunately, the next phase of research in the new context will not require a single researcher to ask these pivotal questions; the beauty of a PLC is that by design its members conduct action research on an ongoing basis. It has already been shown that they have begun the habit of asking key questions and searching for answers. With a group of burgeoning teacher-researchers engaged in this process, not only is it very likely that they will collaboratively develop the right questions, but they now have the tools to discover the best answers. This should be encouraging and exciting to any school leader employing PLCs with the goal of enacting school-wide change.

References

- Amason, A. C., & Schweiger, D. M. (1997). The effects of conflict on strategic decision making effectiveness and organizational performance. In C. De Dreu & E. Van de Vliert (Eds.), *Using conflict in organizations* (pp. 101-115). Thousand Oaks, CA: Sage Publications.
- Ayto, J. (1990). *Dictionary of word origins*. New York: Arcade Publishing.
- Baker, W., Costa, A., & Shalit, A., (1997). The norms of collaboration: Attaining communicative competence. In A. Costa & R. Liebmann, (Eds.), *The process-centered school: Sustaining a renaissance community* (pp. 119-142). Thousand Oaks, CA: Corwin Press.
- Bales, R., & Cohen, S. (1979). *SYMLOG: A system for multiple level observation of groups*. New York: Free Press.
- Collins, J. (2001). *Good to great*. New York: Harper Business.
- Cook, L., & Friend, M. (2010). *Interactions: Collaboration skills for school professionals*. Upper Saddle River, NJ: Pearson Education Inc.
- Darling-Hammond, L. (1994). *Professional development schools: Schools for developing a profession*. New York: Teachers College Press.
- DeLima, J. (2001). Forgetting about friendship: Using conflict in teacher communities as a catalyst for school change. *Journal of Educational Change*, 2, 97-122.
- Dooner, A-M., Mandzuk, D., & Clifton, R. A. (2008). Stages of collaboration and realities of professional learning communities. *Teaching and Teacher Education*, 24, 564-575.
- Dufour, R. (2004). What is a professional learning community? *Educational Leadership*, 61(8), 6-11.
- DuFour, R. (2007). Professional learning communities: A bandwagon, an idea worth considering, or our best hope for high levels of learning? *Middle School Journal*, 39(1), 4-8.
- DuFour, R., & Berkey, T. (1995). The principal as staff developer. *Journal of Staff Development*, 16(4), 2-6.

- DuFour, R., DuFour, R., Eaker, R., & Many, T. (2006). *Learning by doing: A handbook for professional learning communities*. Bloomington, IN: Solution Tree Publishers.
- Eastwood, K., & Seashore-Louis, K. (1992). Restructuring that lasts: Managing the performance dip. *Journal of School Leadership, 2*(2), 213–224.
- Fullan, M. (2005). *Leadership and sustainability: System thinkers in action*. San Francisco, CA: Corwin Press.
- Garmston, R., (2007). Collaborative culture. *Journal of Staff Development, 28*, 69-70.
- Garmston, R., & Wellman, B. (1999). *The adaptive school: A sourcebook for developing collaborative groups*. Norwood, MA: Christopher-Gordon Publishers.
- Grossman, P., Wineburg, S., & Woolworth, S. (2001). Toward a theory of teacher community. *Teachers College Record, 103*, 942-1012.
- Hargreaves, A. (2001). The emotional geographies of teachers' relations with colleagues. *International Journal of Educational Research, 35*, 503-527.
- Jehn, K. A. (1997). Performance through value-based intragroup conflict. In C. De Dreu & E. Van de Vliert (Eds.), *Using conflict in organizations* (p. 101-115). Thousand Oaks, CA: Sage Publications.
- Johnston, S., & Hedemann, M. (1994). With devolution comes collaboration, but it's easier said than done. *School Organization, 14*, 195–207.
- Joyce, B., & Showers, B. (1988). *Student achievement through staff development*. New York: Longman.
- Kanter, R. M. (1997). *On the frontiers of management*. Boston, MA: Harvard Business School Press.
- Keyton, J., & Wall, V. (1989). SYMLOG: Theory and method for measuring group and organizational communication. *Management Communication Quarterly, 2*, 544-567.
- Mandzuk, D. (1999). *Obstacles encountered in group critical reflection: Creating opportunities for developing social capital*. Winnipeg, Canada: University of Manitoba, Faculty of Education.

- McLaughlin, M., & Talbert, J. (2001). *Professional communities and the work of high school teaching*. Chicago: University of Chicago Press.
- Mid-continent Research for Education and Learning (McREL). (2003). *Sustaining school improvement: Professional learning community*. Retrieved January 21, 2011, from http://www.mcrel.org/pdf/leadershiporganizationdevelopment/5031TG_pr_oflrncommfolio.pdf
- Olejnik, S., & Algina, J. (2000). Measures of effect size for comparative studies: Applications, interpretations and limitations. *Journal of Contemporary Educational Psychology, 25*, 241-286.
- Paull, L., Shahbazian, M., & Taglioni, P. (2005). The conflict cycle – it's not just about the kids. *Reclaiming Children and Youth, 14*, 32-36.
- Polley, R. B. (1985). The diagnosis of intact work groups. *Consultation, 4*, 273-283.
- Saphier, J., & King, M. (1985). Good seeds grow in strong cultures. *Educational Leadership, 42*(8), 67-74.
- Senge, P. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday.
- Sergiovanni, T. (1992). *Moral leadership: Getting to the heart of school improvement*. San Francisco, CA: Jossey-Bass.
- Shen, J. (1997). Teacher retention and attrition in public schools: Evidence from SASS91. *Journal of Educational Research, 91*, 81-88.
- Shen, J., Zhen, J., & Poppink, S. (2007). Open lessons: A practice to develop a learning community for teachers. *Educational Horizons, 85*, 168-180.
- Speck, M., & Knipe, C. (2001) *Why can't we get it right?: Professional development in our schools*. Thousand Oaks, CA: Corwin Press Inc.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Grounded theory, procedures and techniques*. Newbury Park, CA: Sage.
- Stronge, J. H. (2002). *Qualities of effective teachers*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks, CA: Sage Publications.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. New York: Cambridge University Press.

Wenger, E., McDermott, R., & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Boston: Harvard Business School Press.

APPENDIX A
SEVEN NORMS OF COLLABORATION

Used with permission from the following:

Center for Adaptive Schools. (2011). *Inventories: Seven norms of collaboration*.

Retrieved from <http://adaptiveschools.com/inventories.htm>

Garmston R. ,& Wellman, B. (2009). *A sourcebook for developing collaborative groups*. Norwood, MA: Christopher Gordon Publishers.



Seven Norms of Collaboration

1. Promoting a Spirit of Inquiry

Exploring perceptions, assumptions, beliefs, and interpretations promotes the development of understanding. Inquiring into the ideas of others before advocating for one's own ideas is important to productive dialogue and discussion.

2. Pausing

Pausing before responding or asking a question allows time for thinking and enhances dialogue, discussion, and decision-making.

3. Paraphrasing

Using a paraphrase starter that is comfortable for you – “So...” or “As you are...” or “You’re thinking...” – and following the starter with an efficient paraphrase assists members of the group in hearing and understanding one another as they converse and make decisions.

4. Probing

Using gentle open-ended probes or inquiries – “Please say more about...” or “I’m interested in...” or “I’d like to hear more about...” or “Then you are saying...” increases the clarity and precision of the group’s thinking.

5. Putting ideas on the Table

Ideas are the heart of meaningful dialogue and discussion. Label the intention of your comments. For example: “Here is one idea...” or “One thought I have is...” or “Here is a possible approach...” or “Another consideration might be...”.

6. Paying Attention to Self and Others

Meaningful dialogue and discussion are facilitated when each group member is conscious of self and of others, and is aware of what (s)he is saying and how it is said as well as how others are responding. This includes paying attention to learning styles when planning, facilitating, and participating in group meetings and conversations.

7. Presuming Positive Intentions

Assuming that others’ intentions are positive promotes and facilitates meaningful dialogue and discussion, and prevents unintentional put-downs. Using positive intentions in speech is one manifestation of this norm.

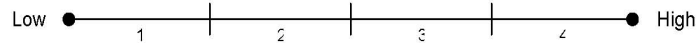
APPENDIX B
NORMS INVENTORIES

Used with permission from the following:
 Center for Adaptive Schools. (2011). *Inventories: Seven norms of collaboration*.
 Retrieved from <http://adaptiveschools.com/inventories.htm>
 Garmston R. ,& Wellman, B. (2009). *A sourcebook for developing collaborative groups*. Norwood, MA: Christopher Gordon Publishers.

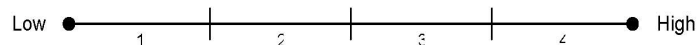


Norms of Collaboration: Assessing Consistency in a Group or Key Work Setting

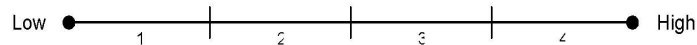
1. Promoting a Spirit of Inquiry



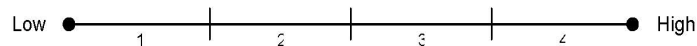
2. Pausing



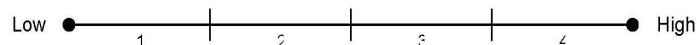
3. Paraphrasing



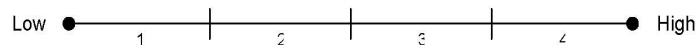
4. Probing



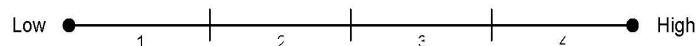
5. Putting ideas on the table



6. Paying attention to self and others



7. Presuming positive intentions



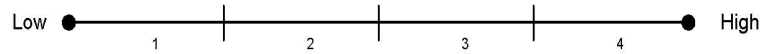


Norms Inventory: Rating the Consistency of My Personal Behavior

Place a mark on each scale, to reflect your perception of your personal behavior.

1. Promoting a Spirit of Inquiry.

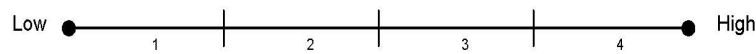
A. I inquire to explore to explore perceptions, assumptions, and interpretations.



B. I invite others to inquire into my perceptions, assumptions, and interpretations.

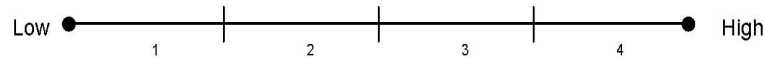


C. I inquire before I advocate.

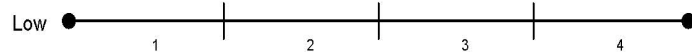


2. Pausing to allow time for thought.

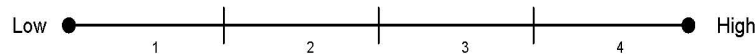
A. I pause after asking questions.



B. I pause after others speak to reflect before responding.

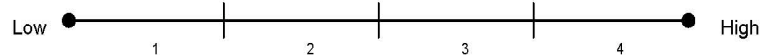


C. I pause before asking questions to allow time for artful construction.

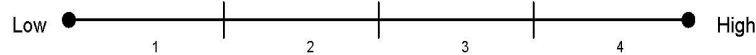


3. Paraphrasing in a pattern of pause – paraphrase – question to ensure deep listening.

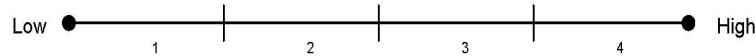
A. I listen and paraphrase to acknowledge and clarify.



B. I listen and paraphrase to summarize and organize.

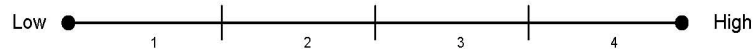


C. I listen and paraphrase to shift levels of abstraction.

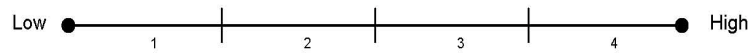


4. Probing to clarify.

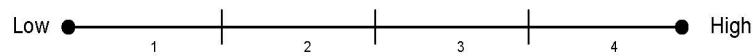
A. I seek to understand the meaning of words.



B. I seek understanding of data, explanations, ideas, anecdotes, and generalizations.

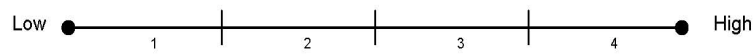


C. I explore the implications and consequences of proposals and plans..

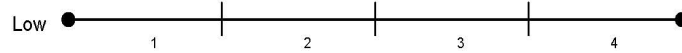


5. Putting ideas, data, perceptions on the table, and pulling them off.

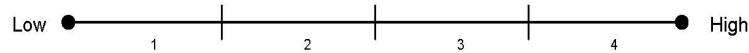
A. I state the intentions of my communications.



B. I provide relevant facts, ideas, opinions, and inferences.

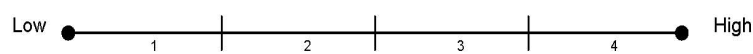


C. I remove or announce modification of ideas, opinions, and points of view.

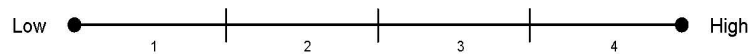


6. Paying attention to self and others to monitor our ways of working.

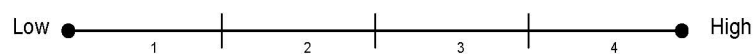
A. I balance participation and open opportunities for others to contribute and respond.



B. I restrain my impulses to respond, react, or rebut at inappropriate times & in ineffective ways.

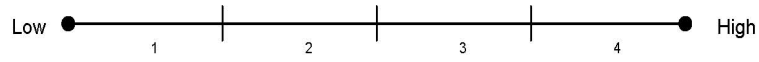


C. I maintain awareness of the group's task, processes, and development.

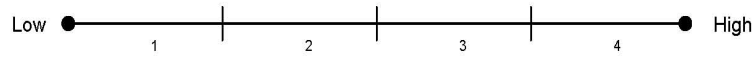


7. Presuming positive intentions to support a non-judgmental atmosphere.

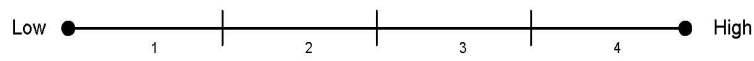
A. I communicate respectfully, whether I agree or disagree.



B. I embed positive presuppositions in my paraphrases, summaries, and comments.



C. I embed positive presuppositions when I inquire or probe for specificity.



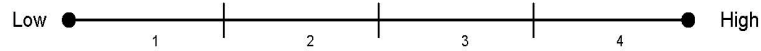


Norms Inventory: Rating the Consistency of Our Group's Behavior

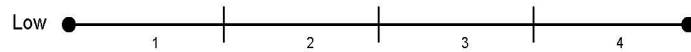
Place a mark on each scale, to reflect your perception of the group's consistency.

1. Promoting a Spirit of Inquiry.

A. We inquire to explore perceptions, assumptions, and interpretations.



B. We invite others to inquire into our perceptions, assumptions, and interpretations.

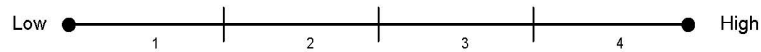


C. We inquire before we advocate.

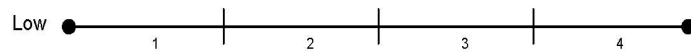


2. Pausing to allow time for thought.

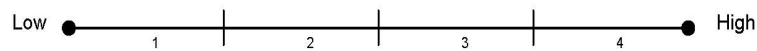
A. We pause after asking questions.



B. We pause after others speak to reflect before responding.

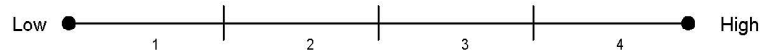


C. We pause before asking questions to allow time for artful construction.

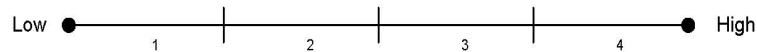


3. Paraphrasing in a pattern of pause – paraphrase – question to ensure deep listening.

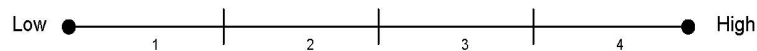
A. We listen and paraphrase to acknowledge and clarify.



B. We listen and paraphrase to summarize and organize.

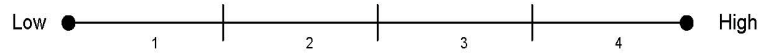


C. We listen and paraphrase to shift levels of abstraction.

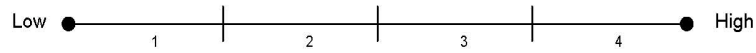


4. Probing to clarify.

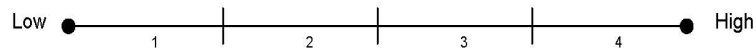
A. We seek to understand the meaning of words.



B. We seek understanding of data, explanations, ideas, anecdotes, and generalizations.

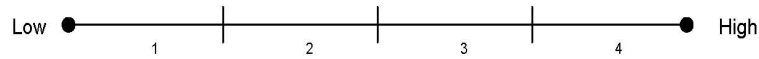


C. We explore the implications and consequences of proposals and plans..

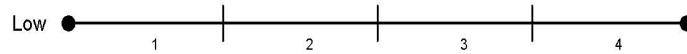


5. Putting ideas, data, perceptions on the table, and pulling them off.

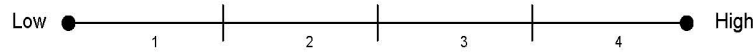
A. We state the intentions of our communications.



B. We provide relevant facts, ideas, opinions, and inferences.

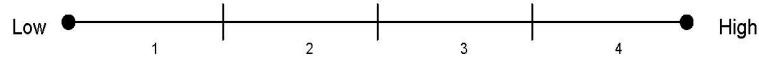


C. We remove or announce modification of ideas, opinions, and points of view.

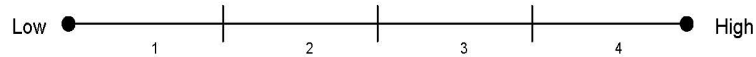


6. Paying attention to self and others to monitor our ways of working.

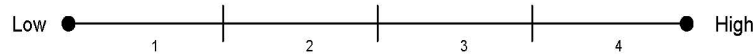
A. We balance participation and open opportunities for each other to contribute and respond.



B. We restrain our impulses to respond, react, or rebut at inappropriate times & in ineffective ways.

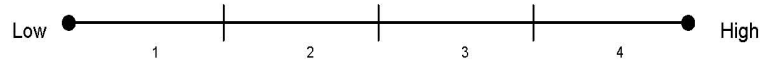


C. We maintain awareness of the group's task, processes, and development.

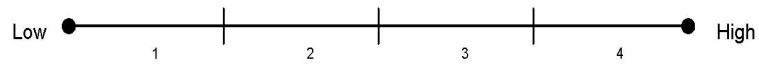


7. Presuming positive intentions to support a non-judgmental atmosphere.

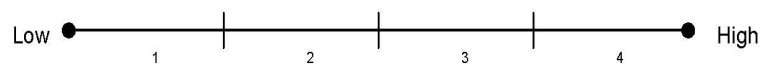
A. We communicate respectfully, whether we agree or disagree.



B. We embed positive presuppositions in our paraphrases, summaries, and comments.



C. We embed positive presuppositions when we inquire or probe for specificity.



Permission to use copyrighted materials -----

From: **Ron Sterr** <rjsterr40@gmail.com>
Date: Tue, Apr 5, 2011 at 11:23 PM
To: bwellman@miravia.com

Mr. Wellman,
I discovered a version of your training inventories at
<http://csi.boisestate.edu/Improvement/7%20Norms.pdf> which cites adaptiveschools.com
at the bottom. The last eight pages of this would be ideal as an appendix in my
dissertation, which studied the use of collaborative norms toward overcoming a conflict
cycle within learning teams. How might I gain permission to use this? Is there a
publisher that I should contact?

Thanks,
Ron Sterr
Goodyear, AZ
[623-377-6315](tel:623-377-6315)

From: <bwellman@miravia.com>
Date: Wed, Apr 6, 2011 at 3:39 AM
To: Ron Sterr <rjsterr40@gmail.com>

Ron:

Contact the Center for Adaptive Schools about this - technically
Christopher-Gordon Publishers in Norwood, MA is the publisher of the Book
(The Adaptive School) from which this is drawn -- but the inventories on
the website are widely available.

Check with Michael Dolcemascolo dolce@roadrunner.com for the best way to
obtain permission.

Best wishes for your dissertation process.

Bruce
Bruce Wellman
Co-Director Miravia LLC
229 Colyer Road
Guilford, VT 05301
[802-257-4892](tel:802-257-4892) V
[802-257-2403](tel:802-257-2403) F

From: Ron Sterr <rjsterr40@gmail.com>
Date: Sat, Apr 9, 2011 at 2:36 PM
To: dolce@roadrunner.com

To: Michael Dolcemascolo

Michael, Bruce Wellman recommended that I write to you concerning receiving permission to use materials from the Adaptive Schools website as an appendix in my dissertation (see below). Interestingly, I had emailed he and Dr. Garmston at the same time, and received a reply back from Dr. Garmston that grants permission to use the inventories in question. I want to make sure I'm doing this the right way; please advise. Thanks,
Ron Sterr

From: <dolce@roadrunner.com>
Date: Sun, Apr 10, 2011 at 5:13 AM
To: Ron Sterr <rjsterr40@gmail.com>
Cc: cmckanders@aol.com, fabob@aol.com, bwellman <bwellman@miravia.com>

Hello Ron,

We are happy to also give permission for use of the Norms Inventories in your dissertation. As you might imagine, we would appreciate the citation such as "used with permission from the Center for Adaptive Schools." Also, we would appreciate an electronic copy, or reference for your completed work, so that we might see the inventories used in context, and cite your work.

As Bruce indicated, the inventories appear on the Adaptive Schools website (copyright Center for Adaptive Schools); in the Adaptive Schools Syllabus, 5th edition by Garmston and Wellman (copyright Center for Adaptive Schools) ; and in The Adaptive School: A Sourcebook for Developing Collaborative Groups by Garmston and Wellman (copyright Christopher-Gordon Publishers).

Please let us know if we may be of further assistance, and best wishes for your dissertation.

Carolyn Mckanders and Michael Dolcemascolo
Co-Directors
Center for Adaptive Schools

----- Forwarded message -----

From: **Robert J. Garmston, Ed. D** <fabob@aol.com>

Date: Wed, Apr 6, 2011 at 10:48 AM

Subject: Re: Permission to use copyrighted materials

To: rjsterr40@gmail.com

Ron,

You have permission to use the materials you described. Please cite both the Center for Adaptive Schools and Garmston R. ,Wellman, B. (2009) A Sourcebook for Developing Collaborative Groups. Norwood, MA. Christopher Gordon Publisher.

As we are trying to keep track of work in this area, might we have a copy of the abstract or your dissertation when you are complete?

Thanks,

Bob

Robert J. Garmston, Ed. D
1846 Sapphire Way
El Dorado Hills CA 95762
www.adaptiveschools.com
www.cognitivecoaching.com

-----Original Message-----

From: Ron Sterr <rjsterr40@gmail.com>

To: fabob@aol.com

Sent: Tue, Apr 5, 2011 11:18 pm

Subject: Permission to use copyrighted materials

Dr. Garmston,

I discovered a version of your training inventories at <http://csi.boisestate.edu/Improvement/7%20Norms.pdf> which cites [adaptiveschools.com](http://www.adaptiveschools.com) at the bottom. The last eight pages of this would be ideal as an appendix in my dissertation, which studied the use of collaborative norms toward overcoming a conflict cycle within learning teams. How might I gain permission to use this? Is there a publisher that I should contact?

Thanks,

Ron Sterr

APPENDIX C
TEAM COMMUNICATION SURVEY

TEAM COMMUNICATION SURVEY

The purpose of this survey is to gauge your impression of how well your team and its members communicate. There are both multiple choice and open questions. Answers are anonymous, and will only be compiled by grade level across several schools. Individual answers will not be shared with your team members or anyone else. Please let your answers reflect true current practice, rather than ideals or goals. All questions refer to practices of communication in your regular interactions as a team.

Participation is voluntary, and there is no penalty for not participating.

School: _____

Grade Level: _____

How often does your team meet? _____

Key: SA = Strongly Agree
A = Agree
D = Disagree
SD = Strongly Disagree

Consider how effective your team is at communicating with you and with each other. Click on the response to the right that best fits how you feel about each item below.

1. The communication in my team reflects a common goal.	SA	A	D	SD
2. My team members do a poor job of listening to each other.	SA	A	D	SD
3. Most of the communication in my team is focused – we stay “on track.”	SA	A	D	SD
4. My team members give each other appropriate feedback.	SA	A	D	SD
5. My team members filter out unnecessary communication.	SA	A	D	SD
6. I usually understand what my team members are trying to communicate.	SA	A	D	SD

7. My team members display genuine interest in each other's ideas and comments.	SA	A	D	SD
8. Each of my team members is usually an active participant in our team communication.	SA	A	D	SD
9. Team members seek clarification when necessary.	SA	A	D	SD
10. Comments by team members are usually specific enough that they don't require seeking clarification.	SA	A	D	SD

Consider the degree of candor and trust in communication within your team. Click on the response to the right that best fits how you feel about each item below.

11. I feel free to express my feelings openly in our team meetings.	SA	A	D	SD
12. When I am candid, I feel that what I say is kept confidential by my team members.	SA	A	D	SD
13. One or more of my team members dominate discussions.	SA	A	D	SD
14. My team values my input.	SA	A	D	SD
15. My team members admit what they don't know and seek to find answers.	SA	A	D	SD
16. My team's communication involves a free exchange of ideas.	SA	A	D	SD
17. My team addresses uncomfortable topics directly, without avoidance.	SA	A	D	SD
18. Positive and negative observations are given equal weight in our team discussions.	SA	A	D	SD
19. Members of our team feel free to take risks by expressing their feelings and ideas openly.	SA	A	D	SD
20. Our communication is honest, not "sugar coated."	SA	A	D	SD

Consider the nature of conflict in your team. Click on the response to the right that best fits how you feel about each item below.

21. Disagreement in our team often leads members of my team avoiding communicating with other members of the team.	SA	A	D	SD
22. I often leave team meetings angry.	SA	A	D	SD
23. There are members of my team who often get angry in team meetings.	SA	A	D	SD
24. Disagreements in our team help to further our common goals.	SA	A	D	SD
25. My team has procedures in place to overcome disagreements.	SA	A	D	SD

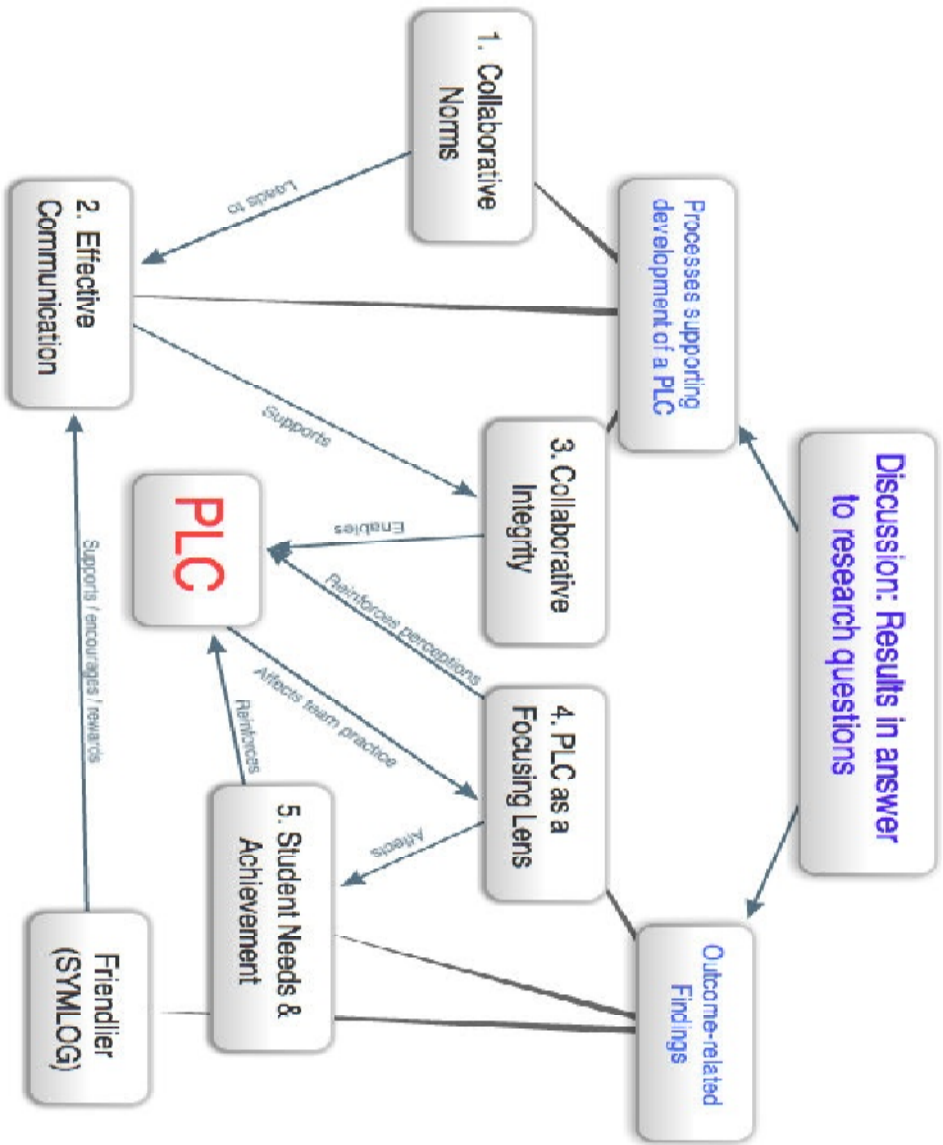
26. There are rarely disagreements in my team.	SA	A	D	SD
27. Disagreements in my team are usually based on legitimate differences of opinion.	SA	A	D	SD
28. Disagreements in my team often reflect personal or professional jealousies.	SA	A	D	SD
29. Disagreements in my team are often related to interpersonal conflicts that are unrelated to our team.	SA	A	D	SD
30. I fear how a team member or team members will react when I speak.	SA	A	D	SD

31. In what ways does your team need to improve communication?

32. What are your team's strengths with reference to communication?

APPENDIX D

THEMES-RELATED CONCEPT MAP



APPENDIX E
INSTITUTIONAL REVIEW BOARD APPROVAL

To: Debby Zambo
FAB

From: Mark Roosa, Chair
Soc Beh IRB

Date: 04/01/2009

Committee Action: Exemption Granted

IRB Action Date: 04/01/2009

IRB Protocol #: 0903003826

Study Title: Educator Study

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

