The Contribution of Professional Development
to a Middle-School Team’s Collaboration and Instructional Learning

by

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ABSTRACT

Teachers working in isolation to overcome instructional challenges are left to their own devices, but teachers working together can benefit from others’ perspectives. Teacher collaboration can increase communication and open doors to increased collective knowledge and rapport. Collaborative knowledge sharing and decision-making that focus on student achievement can go far in improving instructional learning.

This action research focused on increasing collaboration among members of a middle school team of teachers. Involving teachers in a collaboration development processes was intended to improve productive interactions and contribute to instructional learning as a professional learning team. Study participants were involved in an eight week professional development initiative that involved techniques to promote collaboration along with instructional learning tools to promote professional learning in regard to guiding students to high levels of cognition. A mixed methods set of data was generated including a research journal, artifacts, surveys, meeting transcriptions, and interviews.

Findings concluded that focusing on collaboration contributed to positive changes in the middle school team’s interactions. Setting and revisiting norms of collaboration were crucial steps in this focus, leading to increased buy-in and active participation during team meetings. Focusing on relevance contributed to multiple aspects of the team’s instructional learning. Participants valued their collaborative efforts especially when they found direct links between their professional learning and their individual classroom situations. Focusing on an
action plan also contributed to participants’ instructional learning. Setting manageable short term goals gave the team direction and fostered accountability. Finally, working as a professional learning team contributed to the team’s instructional learning. Taking the time to meet frequently allowed teachers to share classroom experiences, assist one another, and develop professionally.
DEDICATION

This dissertation is dedicated to my lovely wife, Melanie, and our beautiful daughter, Grace, for inspiring and motivating me during this entire process. I do it for her.
ACKNOWLEDGMENTS

Heartfelt thanks go to my committee, Drs. David Moore, Greg Cheatham, and Maggie Westhoff. Thank you for allowing me to learn from you, for imparting your experienced insights to me, and for being patient through many rounds of revisions. Special thanks also go to Dr. Debby Zambo. Thank you for your continued encouragement and praise. Thank you to my colleagues on the 7 Blue team for your participation in this study. Without all of you, none of this would be possible.
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Chapter 1 Leadership Context and Purpose of the Action

In my experience as a teacher, I have come to realize the importance of teachers collaborating to overcome challenges and obstacles. Five teachers working together can offer five perspectives, whereas isolated teachers are left to their own devices. Teacher collaboration can increase communication and open doors to increased collective knowledge and rapport (Butler, Lauscher, Jarvis-Selinger, Beckingham 2004; Jolly 2001; Richardson 2001). Collaborative knowledge sharing and decision-making that focus on student achievement can go far in improving instructional learning.

Context

I am working in my seventh year as the reading teacher for the 7B team at Horizons West Middle School. Horizons West utilizes the middle school model in which teams of teachers work together with the same population of students throughout the academic year (Alexander & Williams, 1965). Grade level teams share not only the same students but common planning time as well. Part of this planning time has been used in the past for the team to set student achievement goals through the use of the Data Driven Dialogue (D3, Love, 2000) process. Additionally, teachers were trained, or refreshed, in seven norms of effective collaboration (Garmston & Wellman, 1999) through a partnership with a local university to supplement the D3 process. In recent years, however, that training has ceased, and for many teachers the norms are just terms rather than practices.

1 All local names are pseudonyms
Through a collaboration with the same local university, teachers had support as they went through the D3 process. The process included the analysis of student achievement data, the identification of student weaknesses, and an emphasis on students who are on the bubble, that is students who could easily move up or down a performance level as measured by the Arizona Instrument to Measure Standards (AIMS). Students who are on the bubble could move forward from approaching the standard to meeting the standard or backwards from meeting the standard to approaching the standard. The D3 process and norms of collaboration are meant to help teachers increase the achievement of all students in general and the students on the bubble in particular by focusing on students’ weak areas and generating ideas for corresponding instruction.

The D3 process is promising, but I believe it lacks some needed structure. Although it offers some norms of collaboration and steps to follow, the structure of the process after setting the goals and identifying the students on the bubble is lacking. In recent years, the 7B team has faced difficulty moving beyond the analysis of student data, perhaps due to a lack of training in the norms of collaboration. Given the value of collaboration for professional development, I am seeking to promote stronger professional relationships among team members. Strengthening these relationships is meant to increase collaborative efforts, instructional learning, instructional planning, and eventual success towards meeting the team’s student achievement goals.
Definition of Terms

Several key terms recur in this study. The following explains the meaning of these terms according to their use in this study.

- **Collaboration**: Teachers working together towards a self-directed goal. Effective collaboration will be indicated by full participation within group activities and focus on team goals. Utilizing one another’s strengths and offering assistance when possible are two more factors that will help define effective collaboration.

- **Grade level team**: Teams of teachers who work together with the same population of students throughout the academic year (Alexander & Williams, 1965). Grade level teams share not only the same students but common planning time as well.

- **Instructional learning tools**: Tools suggested by Anne Jolly (2004) that are intended to keep teams focused on their professional learning.

- **Instructional planning**: Pertaining to the design of weekly lesson plans.

- **Instructional learning**: Teacher’s development of professional knowledge pertaining to the design and delivery of lessons.

- **Professional learning team**: A group of three to five teachers who work together systematically to increase their knowledge and skill in teaching and help their students learn at higher levels (Jolly, 2004).
Purpose

My action research focuses on increasing the amount of collaboration between members of my middle school team of teachers. It is my hope that involving teachers in a collaboration development processes will improve productive collaboration and contribute to an instructional focus on student achievement. I am using Anne Jolly’s (2004) *Facilitator’s Guide to Professional Learning Teams* in an effort to develop ourselves as a professional learning team and meet student achievement goals. This study seeks to answer the following questions:

1. What will professional development in collaboration contribute to my grade-level team’s development as a professional learning team?

2. What will the use of instructional learning tools contribute to my grade-level team’s development as a professional learning team?

3. What will working as a professional learning team contribute to my grade-level team’s instructional learning?
Chapter 2 Review of Supporting Scholarship

Several sets of ideas and information framed this study. The theoretical lens of this study centered on situated learning theory. The professional scholarship utilized in designing this study focused mainly on teacher professional development. Lastly, my three previous cycles of action research on the effects of professional learning communities informed this study.

Situated Learning Theory

Situated learning theory centers about the idea that learning comes from social interaction with others. It rejects the notion that learning is an individual experience that occurs directly as experts transmit new knowledge to students. Rather, it posits learning as a social activity that comes primarily from experience and from participating in daily life. Situated learning theory is characterized by fundamental elements that include community participation, interaction between individual and social knowledge, apprenticeship, and authenticity (Lave & Wenger, 1991).

**Community participation.** Community participation is crucial to situated learning theory. For instance, Yucatan midwives, native tailors, navy quartermasters, meat cutters and alcoholics have been shown to learn as participants in a community (Lave & Wenger, 1991). New members of each group acquired knowledge through their increased participation within the group through a social process. New members live within the community they are seeking entrance into in order to fully immerse themselves. The examples portray learning as situated practice. They show learning to be participation within a
community in an attempt to better understand the knowledge, skills and culture of the group that one is attempting to become a part of. Indeed, a basic tenant of situated learning theory is that “learning as it normally occurs is a function of the activity, context and culture in which it occurs” (Kearsley, 1994, Overview, para. 1).

Conceptualizations of communities of practice contribute much to the thinking about community participation (Lave & Wenger, 1991). A community of practice is “people who share a passion or concern for something they do and learn how to do it better as they interact regularly” (Wenger, 1996, What Are Communities of Practice? para. 2). Members of the community of practice bring their own unique set of knowledge and expertise to the community. By pooling these experiences and this knowledge into a collective whole, the group is better bound and continues to learn. A community of practice is the people and the interaction by which situated learning occurs.

I have experienced situated learning through a community of practice as I have grown as a teacher. I have realized how I have learned more on the job from colleagues than I did in all the years of teacher preparation that preceded my career. For example, it was not until I entered the first classroom with my name above the door that I realized the struggle that classroom management could be. Certainly, it was touched on at the university, but the theory learned in the university classroom and the practice of managing over two dozen adolescents in a middle-school classroom were two entirely different things. It was through
discussions with co-workers and trying new strategies that I was able to learn how to manage my classroom.

**Interaction between individual and social knowledge.** Another element within situated learning theory is the view that knowledge is constructed through interactions between individuals’ prior knowledge and socially constructed knowledge. Each member of a community of practice brings their own unique set of prior experiences and knowledge. When working within a community, members have the opportunity to share that experience and make sense of it through interaction with other members. Without this interaction, teachers might as well continue to work in isolation. Through this interaction, collective knowledge can be created that individuals can use.

**Apprenticeship.** The concept of apprenticeship with more knowledgeable others is another fundamental element of situated learning (Vygotsky, 1978). A more knowledgeable other is anyone with a better understanding or higher ability level than the learner. Lave and Wenger (1991) provided five examples of how apprentices learn a skill or a trade by participating with those who already work in that trade. For instance, their example of African tailors demonstrates how one learns to be a tailor through living with and observing experienced tailors for a length of time before even beginning participation in their work. The same holds true in education. In the above example, my on-the-job learning of practical classroom management came from my interaction with veteran teachers; those who had faced similar challenges, who developed strategies to be successful, and who allowed me to learn from them.
Apprentices begin their study by observing the practice. They become official apprentices after they develop more competencies in the field through their participation, which begins in a very limited fashion and matures to full participation through time. Thus, learning relies on a process of social interaction, and knowledge refers not to the facts and figures but to the skills of the craft.

Elements of the apprenticeship model are seen in many teacher-preparation programs. Pre-service teachers start with an internship in which they observe working teachers, then they move to a semester of student-teaching before acquiring certification and given the title of teacher. This study proposes that the apprenticeship model can be implemented to continue to improve the practice of in-service teachers as they continue to learn from one another on the job.

**Authenticity.** Learning tends to be effective when participants are involved with authentic activities in which they find immediate opportunities for application (Wagner, Kegan, Lahey, Lemons, & Garnier, 2006). Lave and Wenger (1991) gave an example of native tailors starting their apprenticeship with the simple task of ironing finished garments. Although the task seems trivial, it is a crucial step in the real-world work of tailors. Because the activity is authentic, the apprentice is not just learning how to iron but is participating in a genuine part of the overall process. The same can be said of teachers. Teachers’ learning can be applied to their craft well when they engage in authentic activity. One-shot workshops and off-site conferences have their benefits, but unless
teachers see the link to their own students, the training may lack authenticity (Darling-Hammond & Richardson, 2009; Flowers, Mertens, & Mulhall, 2002). By working together on instruction that will be utilized in each members’ classroom, teachers can see an immediate authentic link between the activity and the utilization (Wagner et al., 2006; Wenzlaff & Weiseman, 2004).

**Examples of situated learning projects.** A network for nursing science students in Open University is an example of a project grounded in situated learning theory discussed by Korhonen (2001). This program consisted of discussion groups, group work areas, and other communication channels which support learning as dialogue. Students enrolled in the nursing science program in this project kept an authentic learning diary as they participated in an online community and in small groups with a mentor. Learning came primarily through discussion, reflection, evaluation, and validation of the community’s perspective. By witnessing how others within the group were able to solve problems, members could learn as well and apply that knowledge to similar situations that they faced. Mentors fostered the development of students just as an apprentice learns. The mentors scaffold instruction, moving from the role of teacher to facilitator as members of the group gain new knowledge and skills. The interaction of individual with social knowledge was beneficial to many as seen in the learning diaries and reflections of participants. Another crucial aspect of this learning environment, as reported by the reflective diaries, was that learning was meaningful. It focused on vocational skills that could be applied directly to the workplace.
Elements of situated learning theory contributed to the success of the project just presented. First, learners participated in a community and benefited from the knowledge of others, fellow students and colleagues with similar interests. Second, learners served as apprentices with more knowledgeable others. Nurses learned from nurses within the program and from mentors. Third, learners participated in authentic activities embedded in the real world. The experience of nursing students was an integral part of their education, and it led to making a difference in their professional world.

**Teacher Professional Development**

Ongoing development is necessary for professional teachers who desire to improve their craft. Put simply, professional development is the continuing education of teachers focused on improving instruction (Darling-Hammond & Richardson, 2009). Professional conferences, workshops and collaborative work are examples of professional development efforts. Of particular interest to this study are professional learning communities and professional learning teams.

Effective teacher professional development has several features (Wagner et al., 2006; Wallin, 2003; Wenzlaff & Wieseman, 2004). Teacher learning and growth tends to be most effective when it includes hands-on practice in a social context, teachers’ input on what and how they will learn, and relationships among new learning and individual classrooms. A key feature, which is aligned with situated learning theory, involves learning in a community. This section presents learning communities, case studies of effective learning communities, and professional learning teams.
**Learning communities.** Professional learning communities can be defined in the following way:

Educators committed to working collaboratively in ongoing processes of collective inquiry and action research to achieve better results for the students they serve. Professional learning communities operate under the assumption that the key to improved learning for students is continuous job-embedded learning for educators. (DuFour, DuFour, Eaker, & Many, 2006, p. 6)

They center about collaboration because “it is difficult to overstate the importance of collaborative teams in the improvement process” (DuFour et al., 2006, p. 3).

Teachers in learning communities tend to feel empowered. They direct their own learning and find relevance to their own classrooms. This can lead to a sense of ownership. Ultimately, “learning cannot be done to teachers or for teachers” (Wenzlaff & Wieseman, 2004, p. 123).

School faculty and staff who want to restructure themselves as learning communities do well to follow several basics (Hord, 1997; McLaughlin & Talbert, 2006). These basics include enforcing norms of professionalism as well as collaboration, organizing for professional learning and equity, and using data to focus instructional improvements. Assessing one’s place in the development of the learning community is another critical ingredient.

A principal who shares leadership is another basic in the formation of learning communities. The benefits of shared leadership include increased motivation by faculty members and ownership of any change that occurs at the
school (Knowles, 1970; Mycue, 2001). Collective learning, another basic feature, focuses on working collectively to create solutions to various students’ needs. By working together, individual knowledge and experience interacts with the social knowledge of the group and the benefits of the solution are shared among all members (Kearsley, 1994; Lave & Wenger, 1991).

Lastly, according to Hord (1997), physical conditions that support a learning community are necessary to ensure the success of collaborative ventures. These physical conditions include a time and a place to meet where learning is possible. Time is set aside that is completely devoted to team learning (Louis & Kruse, 1995). A place that is rich in resources but free of distractions also contributes to a beneficial environment for team learning (Boyd, 1992). Increasing the input of each teacher hopefully will help create the conditions that foster the growth of a learning community. Following essentials like the ones just presented can help in the progress from novice, to intermediate to advanced teacher learning communities (McLaughlin & Talbert, 2006).

Case studies. Case studies of two schools that achieved cultures of sustained professional learning communities offer sensible insights (Hipp, Huffman, Pankake, & Oliver, 2008). In this study, the progression of two schools towards becoming professional learning communities are analyzed. Two schools began the complex journey of becoming sustained learning communities as part of a federal project led by Shirley Hord, Senior Researcher, at the Southwest Educational Development Laboratory. The formal project lasted from 1998 to 2000, although both schools continued their journey on their own. This study
sought to report the stories of two schools that were well advanced in the PLC journey. Both survey and interview data was collected to assess the conditions and benefits of working as a professional learning community as well as the leadership capacity necessary to flourish. Results from the case studies suggested that a focus on teamwork, learning together, and inclusive leadership that built on trust and respect were crucial to the success of a sustainable learning community. As one participant stated, “It’s amazing to watch how much people can learn just feeding off of each other” (Hipp et al., 2008, p. 180).

Participants in both schools noted that collaboration led seamlessly to shared leadership (Hipp et al., 2008). A member of one school stated that “teachers are leaders; whereas the administration is the backbone of the school” (Hipp et al., 2008, p. 183); a member of the other school noted that “we make decisions together” (Hipp et al., p. 186). I hoped to accomplish this type of collaboration and shared leadership through my innovation.

**Professional learning teams.** Anne Jolly has published numerous quality works in the area of teachers working collaboratively for professional development (see, for example, Jolly, 2001, 2008). The study reported here is fueled primarily by her work, *A Facilitator’s Guide to Professional Learning Teams* (Jolly, 2004). Shirley Hord, another expert in the field, has called this work “the most impressive and comprehensive guide” to collaboration (Jolly, 2004, p. iv). The two main foci of the workbook are teaching professionals how to apply the basic tenets of collaboration and providing tools for teachers to plan professional learning that will improve student achievement.
The first section of this guide (Jolly, 2004) provides examples of teachers working in isolation and as part of a learning team. These stories provide valuable real-world examples of the benefits of teachers working collaboratively. A section entitled *What Do the Experts Say?* (Jolly, 2004) offers a research base for the advice that is presented. Readings are paired with specific questions to prompt teachers to see the relevance of the contents to their own practice. The text also provides a skit for a learning team to read together to model the process of effective learning team meetings. This is meant to provide insight into what the process will look like moving forward. A crucial element of this text is an explanation of the importance of participation norms to be set by the team for the team. By setting norms themselves, teachers can hold each other accountable and maximize the effectiveness of their meetings.

Instructional learning will also be a part of this study, and Jolly (2004) addresses this well. Her guide provides tools for teachers to analyze student data and determine how to address student weaknesses. Tools are provided for teachers to set goals for their own learning based on student data and their current pedagogical beliefs and practices.

Once teachers have established goals for their students, they are led to producing an action plan which will guide their own professional development to coincide with the areas of student weakness. The action plan will focus on goals for the learning team, establishing a timeline and determining necessary resources. The action plan consists of determining the tasks that are necessary to
complete, including assessing student progress, in order to meet the learning
goals.

In brief, *A Facilitator’s Guide to Professional Learning Teams* (Jolly, 2004) presents a comprehensive plan that will serve as the framework of this study. The guide is aligned well with situated learning theory and the research and expert opinion on teacher professional development just reviewed here. It will fuel this study’s action. I will base my professional development efforts on the guide’s plan for promoting colleagues’ capacities to collaborate and plan professional learning.

**Previous Action Research Cycles**

Three cycles of my previous action research, each focused on creating professional learning communities or teams in some way, inform the study reported here. The first cycle occurred from August to December 2008, the second from January to April 2009, and the third from August 2009 to February 2010.

**Cycle one.** The first cycle involved content-based professional learning communities that came together to improve instruction in the given content area. Teams met by content area (language arts, math, reading, social studies, and science) specifically looking to improve test scores on the district assessment. Teachers who taught the same content met once every five to six weeks to discuss their classroom practice. Meetings were guided by protocols of topics, which included check-in and one to two pre-selected topics. I created the protocols for each group and distributed them to facilitators for the groups that I could not be a
part of. The goal of these professional learning teams was professional
development aimed at improving instruction, but ultimately became more of a
simple sharing of classroom practice.

This cycle of action research showed me our professional learning
community needed to be driven by a goal that was shared by we members.
Furthermore, although there was a structure to each session, each meeting of the
professional learning community seemed detached from the others because of the
lofty goal of raising state test scores. A more attainable goal was necessary for
the success of our professional learning community.

**Cycle two.** The second round of action research sought to improve the
interaction between teachers of my content-based professional learning
community, which consisted of reading teachers. The protocols of pre-selected
topics were abandoned for the simple question: “What would you like to discuss
during our professional learning community’s time together?” Increasing the
input of teachers on discussion topics increased the amount of interaction.

This cycle of action research showed me the importance of my colleagues’
input in their own professional development. Interaction increased, and the
meaningfulness of conversation was apparent through an analysis of meeting
transcriptions. My colleagues continued to pursue the goal of improved
instruction, and this intervention opened the doors for more meaningful sharing of
practice and application of learning.

**Cycle three.** My third cycle of action research focused on implementing
Jolly’s (2004) guide with my middle school team of teachers. The collaboration
training and instructional learning tools were piloted with the same teachers who participated in the dissertation research. Tools for measurement were piloted with a similar population of teachers.

This cycle of action research showed me the importance of having an ardent schedule to the training and the order in which different methods should be used. The methods built off one another and needed to take place in a certain order in a short enough period of time so that teachers did not forget what they learned during previous portions of the training.
Chapter 3 Method

The following describes the method used for this action research. It presents the setting, participants, action plan, and data sources and data collection.

Setting

Horizons West Middle School serves nearly 1,000 students in grades six through eight in the southwest United States. A suburban school, over half of the student population is White with the largest minority population being Hispanic (31.1%). Students perform well on the state assessment with over 70% of students meeting or exceeding the state standards each year in reading, writing, and math.

Horizons West Middle School uses the traditional middle school model in which interdisciplinary teams of teachers work with the same students over the course of a school year (Alexander & Williams, 1965). This teaming allows teachers to understand students well and plan and implement appropriate cross-curricular activities. In addition to sharing the same students, teacher teams share common planning time. Beginning in 2002, Horizons’ faculty has participated in the Data Driven Dialogue process (Love, 2000) to collaboratively identify and address student needs. This process includes the analysis of student data, the determination of student achievement goals, and the creation of an action plan to address the needs of students in general along with students in particular who could easily move up or down a performance level as measured by state assessment, the Arizona Instrument to Measure Standards (i.e., AIMS). It is common knowledge among the team that setting these goals has never been a
problem. The team has always been able to analyze the student data and set student achievement goals, but working collaboratively to achieve them has been challenging.

Participants

During this study, I was in my seventh year of teaching reading on the 7B team at Horizons West Middle School. For this study, I took on three roles: learning team member, facilitator, and researcher. The responsibilities that I had for each role varied. As a learning team member, I sought to gain professional knowledge in accordance with the plan set by the team. I wanted to improve my level of collaboration with others and my instructional learning. As a facilitator, I worked to keep the team focused not only on student achievement goals but on increasing collegiality and collaboration during team meetings. I led learning team meetings and presented tools and processes to the team to facilitate our collective learning and instructional planning. I adjusted the professional learning team process as needed. Finally, as a researcher, I observed the process, collected and analyzed data, then reported findings and implications. I made it a point to share preliminary findings, specifically SYMLOG findings, with participants during interviews.

The participants in this action research study were myself and the four other teachers of the 7B interdisciplinary team at Horizons West Middle School. The team consisted of one language arts, reading, science, math, and social studies teacher. Their teaching experience ranged from 4 to 21 years. Three of the participants had been working together on the Blue team for six years or more,
with a fourth participant having four years with the team. A final participant was in her second year on the team. All participants in this study were highly qualified teachers and held at least a Bachelor’s degree, and two held Master’s degrees. During cycle three of my action research, members of the 7B team acknowledged that their strengths were in analyzing student data and setting student achievement goals. The participants also acknowledged that sometimes they had difficulty following through with the assessment portion of the D3 process.

The participants were invited to be a part of this study because they were seeking a way to maintain focus on student achievement goals, and they were receptive to the notion of increasing collaborative interactions, thinking that it would help everyone stay focused on student achievement goals. Following the pilot of one of my action research tools, the 7B team leader approached me and thanked me for bringing this tool to the team and expressed optimism that the tools, and a better understanding of how to work together effectively, would keep the team on track better than in previous years.

Action Plan

*Action Plan*

*A Facilitator’s Guide to Professional Learning Teams* (Jolly, 2004) is designed to help leaders introduce on-the-job learning opportunities to teachers at all grade levels. The guide includes numerous tools to introduce the importance and benefits of collaboration as well as to keep teams focused on both student learning and professional learning. This guide served as the framework for my professional development initiative.
This study’s innovation was implemented once a week after school. Meetings lasted between 45 to 90 minutes each week, and were dedicated to developing ourselves as professional educators and learning to work as a professional learning team. The action began on August 5, 2010 with a formal invitation and lasted until December 6, 2010.

Two lines of action occurred concurrently, professional development in effective collaboration and the use of tools to focus instructional learning. Both lines had the same ultimate goal, improved instruction. Appendix A specifies the order of the actions conducted for each of these lines; the following presents an overview of the actions, first for the professional development in collaboration, then for the tools to focus instructional learning.

**Professional development in collaboration.** The action began on August 5, 2010 when the four other participants for this study were formally invited to participate in this study. An invitation letter (Appendix B) and an information letter (Appendix C) were distributed and discussed.

During the week of August 9, 2010, a set of readings entitled “What Do the Experts Say?” (Jolly, 2004, p. 1-13 – 1-17), which is an accessible collection focusing on the importance of teacher expertise, learning opportunities, and collaboration, was distributed to participants to be read before meeting on August 16, 2010. The goal of the first step was to increase awareness of the value of collaboration. For the purposes of this study, effective collaboration was defined as teachers working together towards a self-directed goal. Effective collaboration was indicated by full participation within group activities and a focus on team
goals. Utilizing one another’s strengths and offering assistance when possible were two more factors that helped define effective collaboration. At our August 16th meeting, four focus questions helped guide our discussion on why working in professional learning teams could be a valuable experience toward achieving professional learning goals.

Step two of this professional development in collaboration focused on understanding and establishing norms for collaboration. Drawing on several of Jolly’s tools, as well as our own experience, we set norms to govern our team meetings. For this to happen, team members were given a copy of “Norms Put the Golden Rule into Practice for Groups” (Richardson, 1999), which Jolly’s guide recommended, to be discussed at the following meeting.

We spent over an hour developing our norms. Team members were asked to brainstorm behaviors considered ideal for working on a team. Then we consulted a norm sampler, a collection of norms that are typically used by collaborative teams, along with Ash and Persall’s (as cited in Jolly, 2004) six traits of successful teams (e.g., commitment, respect, participation). The team checked off behaviors in the norm sampler that we thought were worth keeping, and we created a list of keepers, combined them with the initial post-it behaviors, and set our own norms to guide our behaviors for learning team meetings.

Step three of this training focused on how to collaborate. The team enacted a brief skit provided by Jolly (2004) and responded to some guiding questions. The skit illustrated some typical discussions and activities of a professional learning team. The purpose of this skit was to demonstrate how
learning team meetings differ from other team meetings. Once we read through the skit, we discussed what we saw and heard, shared answers to the guiding questions, and discussed how this type of collaborative meeting could work for us.

**Planning tools to focus instructional learning.** Concurrently with professional development in collaboration, we used tools to focus instructional learning. We began on September 6, 2010 by examining what counted as data. We then analyzed student data including district and state assessments from spring and fall 2010. Using one of the guide’s instructional learning tools, we examined what constituted data, disaggregated this data, and determined general student weaknesses.

We then brainstormed possible goals that could be set. We considered student motivation, differentiated instruction, and the district’s instructional profiling instrument. We thought all three of these areas would be beneficial to each of our classrooms and could guide our learning for the next few months. Ultimately, we established a professional learning goal to determine how to guide students to higher levels of cognition. This goal would be beneficial to each of our classrooms, and it was in line with district goals.

During the next session, the team used our professional learning goal as the basis for setting an action plan. We began by analyzing our current beliefs and assumptions about higher levels of student cognition. This brief questionnaire was designed to help us think through our current teaching practices. With these beliefs in mind, the team looked at focusing questions to
create an action plan, the specific steps and timeline we’d need to follow in order to achieve our professional learning goal.

The final steps in preparing my 7B team for professional learning team meetings involved the introduction of a team log form. The team log form included the team name, log number, date and time of meetings, length of the meeting, and members present. The log kept a record of the meeting activities, discussions, new ideas and information, joint work of team members, changes in classroom practice, evidence of progress, and reflections. Logs were collected and assessed for team progress towards both becoming a professional learning team and improving instruction. These logs were used to inform our professional developments efforts, and I analyzed them later as data sources for this action research study.

Finally, I presented a quick check form and a tool for revisiting the team norms, referred to as the norm review. We collectively used the quick check form after each professional learning team meeting to review how well we were working collaboratively. Each week participants were asked as a group the following questions:

- Did every member join in the team’s discussions?
- Did each member listen attentively as others were speaking?
- Did any single member (or two) dominate the discussions?
- Did all members arrive on time and stay for the entire meeting?
- Were all members prepared for the meeting when we arrived?
- Were all members totally present during the meeting?
• Did each member of the group believe that his or her time at the
meeting had been well spent?

We used the norm review to assess how well we followed the norms we
had set. The team wanted something to ensure that the norms were more than a
poster hanging in the team room. Team members responded to the tool’s
following prompts:

• Which norms do we usually observe well?

• Which norms do we seem to ignore?

• What behaviors are team members using now that seem to be
useful?

• What behaviors surprise you or make you uneasy?

• Based on our answers to these questions, what norms do we need
now?

Team members were shown both the quick check form and the norm
review and were given a choice: as the researcher and facilitator, I could fill out
the two forms on my own based on my audio recording and research journal, or
we could fill them out together at the end of each meeting. The team decided that
the final ten minutes of each meeting would be set aside for collectively
responding to these tools.

During the week of September 27, 2010, I introduced a variety of
discussion protocols that were designed to facilitate learning during future
professional learning team meetings. These guides covered a wide array of topics
that included reviewing and sharing books or articles, discussing a video,
developing a teaching activity, discussing a colleague’s observation, discussing the results of a teaching activity, examining student responses, planning for the next meeting, assessing team progress, and reflecting on meetings. The guides provided a protocol for how to share new knowledge or experiences with the team. The protocols consisted of a number of questions covering basics of observation, drawing conclusions, and making connections. An action-inquiry cycle (Appendix D) was also reviewed. The action-inquiry cycle outlined the steps for a professional learning team to utilize in order to maximize collective team learning. These tools were introduced briefly during the week but used only as needed by the team during future meetings. Between this meeting and the first professional learning team meeting on October 18th, participants spent time individually exploring higher levels of student cognition. This exploration period was the first step in the above-mentioned action-inquiry cycle.

The weeks from October 18 through December 6, 2010 were spent applying the collaboration training and instructional learning tools. Each week, the team met for 45 to 90 minutes to pursue and report on our learning towards determining how to guide students to higher levels of cognition. During these meetings, we shared what we had learned concerning the goal, discussed classroom practices and how they were changing, and made decisions moving forward in accordance with the action plan for the team. It was during these meetings that the team used protocols to share instructional strategies, scholarly articles, or other resources that fueled our learning.
Data Sources and Collection

The data sources for this study comprised a mixed-method, quantitative and qualitative set as recommended by Greene, Caracelli, and Graham (1989) and Johnson and Onwuegbuzie (2004). These data were collected both concurrently and sequentially and were analyzed in like fashion. The use of mixed-methods was to promote rich responses to the research questions that guided this study. Mixed-methods were being implemented mainly for purposes of triangulation, complementarity, and development. Triangulation seeks convergence, corroboration, or correspondence of results from multiple data sources (Greene, 2007). Complementarity seeks to elaborate, enhance, illustrate, or clarify the results from one method with the results of another method (Greene et al., 1989). Development is the use of the results from one data source to create another data source, such as the results of a survey being used to shape interview questions (Greene, 2007).

Five data sources were used for this action research, many of which were used to answer two or more of the research questions. Some were used to inform the ongoing action as well as my research on the action. The five included a research journal, artifacts, surveys, meeting transcriptions, and interviews.

Research journal. A research journal (see Appendix E) was kept throughout the course of this study. This journal served as a record of activities and behavior of the 7B interdisciplinary team and sought information on the emergence of collaborative behaviors as well as the focus on improving instruction. Throughout the course of this study, I recorded what occurred and
made reflections and inferences using a two-column notes approach.

Observations were kept in the left hand column, while my thoughts concerning the observations were kept in the right column. I used this research journal to focus on the words, actions, and interactions of the team relative to effective collaboration, the implementation of instructional learning tools, and learning team meetings. I also made note of how classroom practices were changing. My research journal entries were guided by this study’s three research questions. Data from the research journal were used to develop interview questions and were triangulated with interview responses, survey answers, and meeting transcriptions in attempts to produce trustworthy findings.

**Artifacts.** Artifacts were collected throughout this study to inform responses to all three research questions. Documents such as lesson plans, learning team logs, quick check forms, norm reviews, and minutes from regular team meetings were collected. Artifacts were used to contribute to information that was discussed during learning team meetings. These artifacts helped serve as evidence as to whether collaborative interaction was occurring in team meetings. Furthermore, artifacts helped determine changes in my team members’ instructional planning. Team logs, specifically, were informative artifacts that indicated the team’s focus on instructional learning as well as what steps were being taken to improve instructional planning and ensure it was aligned with learning goals. Artifacts were triangulated with my research journal, meeting transcriptions, and interviews. Artifacts collected during this study were also used to develop interview questions to conclude the study.
Surveys. Three different surveys utilizing both open-ended and Likert-scale items informed this study. I produced the first two surveys. They had face validity as they directly asked about the effectiveness of specific aspects of my initiative. The final survey, the Professional Learning Team Survey, was adapted from Jolly’s (2004) guide.

The first survey that was administered, the Professional Development in Effective Collaboration Survey (see Appendix F), gauged teachers’ thoughts and opinions about the activities devoted to improving the team’s collaborative interactions. This survey was administered the week of October 4, 2010. This seven item survey used open-ended questions and a four point Likert scale. Two questions were asked concerning each of the activities that were part of the professional development in effective collaboration. Participants were first asked for their thoughts concerning the activity in an open ended format, and then were asked to scale the activities effectiveness as it related to learning about effective teacher collaboration. Results from this survey were used to develop interview questions concerning the effect of professional development on the team’s collaboration. These results also complimented research journal observations.

A second survey, the Instructional Learning Tools Survey (see Appendix G), was given the week of December 13, 2010. This survey gauged teachers’ thoughts and opinions about the various instructional learning tools I introduced and which we had been using for a number of weeks. This thirteen-item survey used both open-ended questions and a four point Likert scale. Using the same format as the Professional Development in Effective Collaboration survey, this
survey asked each participant two questions concerning each of the instructional learning tools that were used during the course of this study. Participants were first asked for their thoughts on the tool in an open-ended format and were then asked to scale the effectiveness of each tool. This survey was triangulated with research journal observations and meeting transcriptions.

A third, and final, survey, the Professional Learning Team Survey (see Appendix H), was also given the week of December 13, 2010. The Professional Learning Team Survey presented a number of questions concerning the benefits of working on a professional learning team relative to instruction. This survey consisted of five- and ten-point Likert-scale items. A small number of open-ended questions were also part of this survey. This survey was used to inform results from other sources regarding teacher collaboration and instructional learning.

Meeting transcriptions. Three team meetings were audio recorded and transcribed verbatim for the purposes of this study. These transcriptions tracked the collaboration that occurred between team members as well as how much focus was put on instructional planning. The first team meeting of the year was transcribed and examined for patterns of collaborative interaction between the team members. The first professional learning team meeting was also audio recorded and transcribed. This meeting followed the conclusion of the professional development in collaboration and the setting of a professional development goal. The content and patterns of interaction seen in this transcription were compared to the initial team meeting’s transcription to
determine differences in patterns of interaction. I used the System for Multiple Level Observation of Groups (SYMLOG, Keyton & Wall, 1989) to analyze these meeting transcriptions; the SYMLOG procedures are described in Chapter Four. SYMLOG results were shared with participants in order to highlight team and individual strengths and weaknesses at two different points during this study.

The final professional learning meeting in December was transcribed, five weeks after the first learning team meeting and again compared to the first team meeting of the year. The final meeting’s transcription was used to determine differences in patterns of interaction over time, to ensure the trustworthiness of responses to the surveys, and to develop ideas to be explored during the final interviews. Additionally, the transcriptions helped determine changes in instructional planning.

**Interviews.** Three semi-structured interviews per participant were used to gather data relative to collaboration as well as instructional learning. Interviews allowed participants to describe their thoughts and opinions about the training in collaboration, the team’s actual collaboration, and the instructional learning tools. The interviews contained some items produced prior to the study and some developed in light of the group survey responses. Interviews were all conducted one-on-one and audio recorded and transcribed verbatim. On occasion, e-mail follow ups were used to gather clarifying or more specific information as needed.

The first interview, the Prior Knowledge and Experience Interview (see Appendix I), took place during the week of August 9, 2010, one week before beginning the action. This interview focused on what teachers anticipated from
the professional development in collaboration, what they already knew about collaboration, their experience with collaboration, and how they felt about using tools to focus instructional learning. This interview was used to develop questions to be asked in later interviews and was even used in the development of the innovation.

A second round of interviews, the Collaboration Development and Instructional Learning Tools Interview (see Appendix J), was developed based on my first round of interviews and research journal observations. These interviews were conducted during the week of October 18, 2010, at the conclusion of the professional development on collaboration and introduction of select instructional learning tools. These interviews again focused on what teachers anticipated after going through the training and their feelings about participating on a professional learning team. These interviews also asked participants their thoughts on collaboration in general and what specific benefits – if any – it offered the team. Interview responses were triangulated with observations from the professional development in collaboration and complimented research journal observations.

A third and final round of interviews, the Professional Learning Team Interview (see Appendix K), took place during the week of December 13, 2010, after two months of participation on the professional learning team. These interviews focused on the impact of collaboration on instructional learning in general and instructional planning in particular. Questions also focused on how well the team was functioning as a collaborative entity, as a professional learning team. Some of the questions from the first and second interviews were revisited.
at the end of the study to assess changes in opinions, beliefs, and instructional planning. I specifically sought teachers’ opinions concerning the various instructional learning tools after they had used them for a number of weeks. This interview served to complement results derived from the meeting transcription data and research journal observations.
Chapter 4  Analysis and Results

This chapter reports how the data were analyzed and the corresponding results. It includes two sections, methods of analysis and results.

Methods of Analysis

Data were analyzed in three phases, (a) following the first round of interviews (i.e. interview responses, research journal, meeting transcription), (b) following the collaboration training and introduction of the instructional learning tools (i.e. interview responses, collaboration development survey, research journal, meeting transcription), and (c) at the conclusion of the study (i.e. interviews, surveys, research journal, artifacts, meeting transcriptions). Each phase of data analysis was conducted in similar fashion.

Initial data reduction. For all quantitative data, I computed descriptive statistics, which included means, standard deviations, and confidence intervals of the means. Additionally, I paid special attention to any of the surveys’ items that demonstrated noticeable variability, and I determined each participant’s pre-post changes in SYMLOG scores.

Mean differences and effect sizes were calculated for the pre- and post-SYMLOG data. Effect sizes were calculated using Cohen’s $d$ for the differences between the means divided by the pooled standard deviation (Cohen, 1988). Effect sizes, which measure the magnitude of the outcomes of the innovation, were calculated for each of the three dimensions of SYMLOG. For statistical interpretation, I applied Cohen’s benchmarks of $d = .20$ as small, $.50$ as moderate, and $.80$ as large.
For all qualitative data, I categorized and coded items within each data source as recommended by Stringer (2007). For each qualitative data source (i.e., research journal entries, artifacts, meeting transcriptions, interviews, open-ended survey items), I unitized the data into single units of meaning. These units of meaning consisted of single words, short phrases, or, in some cases, complete interactions between participants. To do this, I read through each data source several times to obtain a general sense of the contents, then identified discrete units, or chunks, of meaning that differed from surrounding ones. Unitized data from different data sources was kept separate until the final generation of codes. At this point, individual units of meaning could overlap from one source to another.

My later rounds of reading of one data source at a time focused on the three research questions of this study. Each participant’s contributions were colored coded within each data source. During these later readings, I started circling key words and phrases that served as indicators toward possible responses to one or more of the research questions. Next, I copied the key words and phrases onto index cards. I noted the frequency and salience of each key word and, using a constant comparative method (Lincoln & Guba, 1985), grouped the key words and phrases into categories, or conceptual clusters, for later coding. The codes consisted of short phrases that expressed a central meaning of each grouping. I was open to the possibility of the categories and codes changing throughout the analysis process as I generated more data during the study. I used the same process for all data sources: read, reread, identify units of meaning,
underline/circle key words and phrases, put key words and phrases on index cards, sort key words and phrases into categories. The transcriptions and interviews took longer to analyze than the research journal, artifacts, and open-ended survey items, but the process was the same. I continued this overall analysis process until the qualitative data were saturated, when I could discern no more meaningful patterns.

**System for Multiple Level Observation of Groups.** I used the System for Multiple Level Observation of Groups (SYMLOG, Keyton & Wall, 1989) to analyze this study’s meeting transcriptions. Developed by Bales and Cohen (1979), SYMLOG measures interactions in work groups on three dimensions: dominance, friendliness, and task orientation. Team members were rated according to each of the three SYMLOG dimensions during each of the three phases of data analysis, and I took notes concerning the change to each member’s scores for each dimension. The first and third sets of SYMLOG data were compared to determine the effects of this intervention. The second SYMLOG was used to show participants the change that was occurring as a result of the professional development in collaboration that was part of this study.

The SYMLOG dominance dimension refers to one’s control of other team members’ words and actions. Team members who score high on dominance behave authoritatively during team interactions. They may command the floor more than other members or not allow everyone a chance to speak. Conversely, someone who is low on the dominance dimension behaves submissively and commands little during team discussions.
The friendliness dimension refers to how cordial and respectful interactions between group members are. A high placement on friendliness refers to a team member’s words and actions that are welcoming, responsive, encouraging, and demonstrate positive and productive intentions; a low placement refers to a team member’s words and actions that are reserved and distant and often bring negativity to the group.

Finally, the task orientation dimension refers to how focused members are on the job at hand. Members with high task orientation scores focus on completing the work; they come to meetings ready to sift through data or solve problems. A high placement in the task-orientation dimension also refers to someone taking the lead in a meeting. Conversely, those who rank low in task orientation demonstrate inattentive behaviors, focusing attention on topics other than the task at hand.

Table 1 shows an example of a SYMLOG field diagram for eight hypothetical members. H is the most dominant member, and E is the most submissive. Friendly members (B, C, D) score higher than the unfriendly member (H). Members with higher task orientation (F, G, H) score higher than members who did not demonstrate a strong task orientation (B, C, D).
Using my transcriptions from team meetings, team members were assigned values on each of the SYMLOG dimensions. This assignment is done with the use of 26 adjective phrases that represent each of the single pure dimensions and all possible permutations (Keyton & Wall, Jr., 1989). Each member was coded on each of the 26 phrases using a three-point response scale ranging from 0 (not often), 1 (sometimes), to 2 (often). To aid me in the placement of team members according to the SYMLOG dimensions, I consulted the observations and inferences I made in my research journal.

To promote impartiality in rating participants in the three SYMLOG dimensions, I utilized two critical friends who read over the meeting transcriptions, listened to the audio recordings, and used the same 26 adjective phrases to plot each participant. I then compared our three placements, averaged them, and opened a dialogue with my critical friends wherever large discrepancies were noticed in order to resolve them.

Table 1

*Example SYMLOG Dimensions by Hypothetical Participants (N=8)*

<table>
<thead>
<tr>
<th>Dimension</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominance</td>
<td>2.00</td>
<td>0.00</td>
<td>1.00</td>
<td>2.00</td>
<td>-6.00</td>
<td>2.00</td>
<td>-1.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Friendliness</td>
<td>9.00</td>
<td>16.00</td>
<td>13.00</td>
<td>11.00</td>
<td>2.00</td>
<td>8.00</td>
<td>10.00</td>
<td>-7.00</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>2.00</td>
<td>-1.00</td>
<td>-1.00</td>
<td>-4.00</td>
<td>1.00</td>
<td>8.00</td>
<td>5.00</td>
<td>7.00</td>
</tr>
</tbody>
</table>

*Note.* Maximum score = 26
Results

This section presents the results of the data analyses. Table 2 displays an inventory of all data sources collected for this study.
### Table 2

*Data Sources Inventory*

<table>
<thead>
<tr>
<th>Data source</th>
<th>Description</th>
<th>Contents</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research journal</td>
<td>Recordings were made of all professional development activities and professional learning team meetings. Audio was listened to and notes were taken in two columns, with observations on the left and interpretations on the right.</td>
<td>14 pages, single spaced in two-columns</td>
<td>420 Minutes</td>
</tr>
<tr>
<td>Artifacts</td>
<td>Lesson plans, team logs, quick checks and revisiting the team norms tools were collected to determine to what extent instructional planning and collaborative behaviors changed.</td>
<td>19 pages</td>
<td></td>
</tr>
<tr>
<td>Surveys</td>
<td>Three surveys were used in this study. These surveys questioned participants concerning the professional development in effective collaboration, the various instructional planning tools and the experience and benefits of working as a professional learning team.</td>
<td>32 pages</td>
<td>30 minutes per participant</td>
</tr>
<tr>
<td>Meeting Transcriptions</td>
<td>Three team meetings were audio recorded and transcribed for the purposes of this study.</td>
<td>46 pages, single spaced in two columns</td>
<td>125 minutes</td>
</tr>
<tr>
<td>Interviews</td>
<td>Three sets of interviews informed this study. Each interview had a different focus: prior knowledge and experience with teacher collaboration, professional development in effective collaboration and instructional learning tools, and a final survey on the experience of working as a professional learning team.</td>
<td>65 pages, single spaced in two columns</td>
<td>232 minutes</td>
</tr>
</tbody>
</table>
Survey results: Quantitative items. Table 3 lists descriptive statistics for the three Likert-scale items on the Professional Development in Effective Collaboration Survey. The three quantitative items on this survey asked participants to rate the effectiveness of the various professional development activities relative to collaboration on a scale from 1 (very ineffective) to 4 (very effective). As Table 1 shows, participants rated the training as somewhat effective and seemed to find the most benefit from the norm setting process.

Table 3

Professional Development in Effective Collaboration Survey
Descriptive Statistics (N = 4)

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>95% CI</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>How effective were the “what the experts say” readings in helping you learn about teacher collaboration?</td>
<td>2.75</td>
<td>[3.32, 2.47]</td>
<td>0.50</td>
</tr>
<tr>
<td>How effective was the process of setting norms in helping you learn about teacher collaboration?</td>
<td>3.50</td>
<td>[4.17, 2.83]</td>
<td>0.58</td>
</tr>
<tr>
<td>How effective was the modeling of a typical learning team meeting in helping you learn about teacher collaboration?</td>
<td>2.75</td>
<td>[3.32, 2.47]</td>
<td>0.50</td>
</tr>
<tr>
<td>Total</td>
<td>3.00</td>
<td>[3.27, 2.73]</td>
<td>0.27</td>
</tr>
</tbody>
</table>

Note. Maximum score = 4

Table 4 presents descriptive statistics for the Instructional Learning Tools Survey. A four-point Likert scale was used in this survey. The first three items
assessed participants’ perceptions of the tools related to instructional learning that were used as part of the professional learning team. The second three items assessed participants’ perceptions of the tools related to collaboration that were used during professional learning team meetings. The results shown in Table 3 indicate the participants’ perceptions that most of the tools were effective to some degree. A noteworthy result is the 4.00 score for the item, “How effective was the ‘revisiting the team norms’ tool?” which indicates that participants unanimously agreed that this tool was very effective.

Table 4

*Instructional Learning Tools Survey Descriptive Statistics (N = 4)*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>95% CI</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>How effective was the goal setting process?</td>
<td>3.45</td>
<td>[4.12, 2.78]</td>
<td>0.58</td>
</tr>
<tr>
<td>How effective was the “current beliefs and assumptions”</td>
<td>3.50</td>
<td>[4.17, 2.83]</td>
<td>0.58</td>
</tr>
<tr>
<td>instructional planning tool?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How effective were the learning plan and action plan tools?</td>
<td>3.00</td>
<td>[3.95, 2.05]</td>
<td>0.82</td>
</tr>
<tr>
<td>How effective were the team log forms?</td>
<td>3.00</td>
<td>[3.95, 2.05]</td>
<td>0.82</td>
</tr>
<tr>
<td>How effective was the “quick check” tool?</td>
<td>3.25</td>
<td>[3.82, 2.68]</td>
<td>0.50</td>
</tr>
<tr>
<td>How effective was the “revisiting the team norms” tool?</td>
<td>4.00</td>
<td>[4.00, 4.00]</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>3.21</td>
<td>[3.39, 3.03]</td>
<td>0.16</td>
</tr>
</tbody>
</table>

*Note.* Maximum score = 4
Table 5 reports the results of the Professional Learning Team Survey. The survey questioned participants concerning the experience, benefits, and impacts of working as a professional learning team. The table demonstrates that the participants reported overall positive feelings about the meetings.

Table 5

*Professional Learning Team Survey Reliability and Descriptive Statistics (N= 4)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Coefficient</th>
<th>$M$</th>
<th>95% CI</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Positive Feelings About Professional Learning</td>
<td>0.45</td>
<td>4.30</td>
<td>[4.55, 4.05]</td>
<td>0.22</td>
</tr>
<tr>
<td>Team Meetings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Benefits of Participating On a Professional</td>
<td>0.95</td>
<td>3.38</td>
<td>[4.18, 2.58]</td>
<td>0.70</td>
</tr>
<tr>
<td>Learning Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Success Pursuing Team Focus</td>
<td>0.77</td>
<td>3.61</td>
<td>[4.15, 3.07]</td>
<td>0.47</td>
</tr>
<tr>
<td>Impact of Participation on the Professional Learning</td>
<td>0.71</td>
<td>3.58</td>
<td>[4.04, 3.12]</td>
<td>0.40</td>
</tr>
<tr>
<td>Team</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.94</td>
<td>3.55</td>
<td>[4.04, 3.06]</td>
<td>0.42</td>
</tr>
</tbody>
</table>

*Note.* Maximum Score = 5.

Overall analysis of the three survey instruments used in this study indicate that the participants considered both phases of this innovation, the professional development in effective collaboration and working together as a professional learning team, to be effective. The participants’ unanimous, positive rating of the norm review at the end of each meeting was a noteworthy result.
SYMLOG results. Tables 6 and 7 present descriptive statistics for the SYMLOG analysis of team meeting transcripts. Table 6 shows the scores of each dimension for each participant as well as the change for each participant in each dimension. As can be seen, Participant A shows noteworthy changes, moving measurably from positive to negative positions on the SYMLOG dimensions.

Table 6

SYMLOG Scores and Change by Participant (N=5)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Participant</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>7.00</td>
<td>1.67</td>
<td>-1.33</td>
<td>0.67</td>
<td>-7.33</td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>-0.67</td>
<td>2.67</td>
<td>-2.67</td>
<td>-3.67</td>
<td>-4.33</td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>-7.67</td>
<td>+1.00</td>
<td>-1.33</td>
<td>-4.33</td>
<td>+3.00</td>
<td></td>
</tr>
<tr>
<td>Friendliness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>6.00</td>
<td>6.67</td>
<td>1.33</td>
<td>5.33</td>
<td>3.00</td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>12.00</td>
<td>12.33</td>
<td>5.67</td>
<td>7.33</td>
<td>8.33</td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>+6.00</td>
<td>+5.67</td>
<td>+4.33</td>
<td>+2.00</td>
<td>+5.33</td>
<td></td>
</tr>
<tr>
<td>Task Orientation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>7.67</td>
<td>2.33</td>
<td>-1.67</td>
<td>1.00</td>
<td>-0.33</td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>2.33</td>
<td>0.33</td>
<td>2.00</td>
<td>-2.00</td>
<td>-3.33</td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>-5.33</td>
<td>-2.00</td>
<td>+3.67</td>
<td>-3.00</td>
<td>-3.00</td>
<td></td>
</tr>
</tbody>
</table>

Note. Maximum Score = 26

Table 7 presents descriptive statistics, including mean differences and effect sizes for the group as a whole. The data presented in Table 7 show a very large positive change in the friendliness dimension. Moderate negative changes are seen in the dominance and task orientation dimensions.
Table 7

**SYMLOG Comparison for All Participants (N = 5)**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Pre</th>
<th>Post</th>
<th>$M_2 - M_1$</th>
<th>$d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dominance</td>
<td>0.13</td>
<td>-1.73</td>
<td>-1.86</td>
<td>-0.47</td>
</tr>
<tr>
<td>SD</td>
<td>5.19</td>
<td>2.82</td>
<td>[5.32, -5.06]</td>
<td>[1.09, -4.55]</td>
</tr>
<tr>
<td>95% C.I.</td>
<td>[5.32, -5.06]</td>
<td>[1.09, -4.55]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friendliness</td>
<td>4.46</td>
<td>9.13</td>
<td>4.67</td>
<td>1.81</td>
</tr>
<tr>
<td>SD</td>
<td>2.23</td>
<td>2.93</td>
<td>[6.69, 2.23]</td>
<td>[12.06, 6.20]</td>
</tr>
<tr>
<td>95% C.I.</td>
<td>[6.69, 2.23]</td>
<td>[12.06, 6.20]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Orientation</td>
<td>1.80</td>
<td>-0.13</td>
<td>-1.67</td>
<td>-0.55</td>
</tr>
<tr>
<td>SD</td>
<td>3.60</td>
<td>2.48</td>
<td>[5.40, -1.80]</td>
<td>[2.35, -2.61]</td>
</tr>
<tr>
<td>95% C.I.</td>
<td>[5.40, -1.80]</td>
<td>[2.35, -2.61]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Maximum score = 26

**Qualitative results.** From my qualitative data sources, I circled approximately 350 key words and phrases, copied them onto index cards, and grouped them into 14 categories. The majority of these key words came from my interviews which served as a rich source of data. Table 8 presents the codes and their corresponding definitions.
### Table 8

*Codes and Definitions*

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>Knowledge of what is happening in other classrooms</td>
</tr>
<tr>
<td>Buy-In</td>
<td>Commitment to a team goal</td>
</tr>
<tr>
<td>Classroom Practice</td>
<td>Pertaining to teaching methods and lessons in individual classrooms</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Interacting with colleagues to achieve a goal</td>
</tr>
<tr>
<td>Collegiality</td>
<td>Helping one another, especially by sharing ideas, better understand new concepts and their application</td>
</tr>
<tr>
<td>Curiosity</td>
<td>A desire to know about something</td>
</tr>
<tr>
<td>Engaged Participation</td>
<td>Taking an active role in learning team activities</td>
</tr>
<tr>
<td>Follow-Through</td>
<td>Taking action on previous decisions or discussions</td>
</tr>
<tr>
<td>Instructional Planning</td>
<td>Pertaining to weekly lesson plans</td>
</tr>
<tr>
<td>Norms</td>
<td>Pertaining to standards of collaboration</td>
</tr>
<tr>
<td>Professional Learning</td>
<td>Increased understanding related to education and teaching</td>
</tr>
<tr>
<td>Student Cognition Levels/Analysis</td>
<td>Focused discussion on getting student thinking levels to analysis and what activities would encourage higher order thinking</td>
</tr>
<tr>
<td>Task-Oriented</td>
<td>Behaviors that move team towards their goal</td>
</tr>
<tr>
<td>Time</td>
<td>Concerns related to pacing or frequency of professional learning opportunities</td>
</tr>
</tbody>
</table>
Chapter 5 Findings

After I interpreted descriptive statistics for the quantitative data and generated codes for the qualitative data, I conducted an integrative analysis to construct data-based assertions in response to each of my research questions. My integrative analysis and construction of assertions followed guidelines suggested by Erickson (1986) and Smith (1997).

I read the descriptive statistics and qualitative codes several times. During these readings, I was looking for patterns of meaning. This is an inductive analytic approach. Based on the patterns found among data sources, I made tentative assertions in response to each of my three research questions. These assertions served as possible answers to each of the research questions.

To strengthen my assertions, I read through the data sources several times in search of data that supported or refuted each claim. This process of rereading was done for purposes of triangulation and complementarity. All data that pertained to an individual assertion were put into a file for the later write-up. Assertions with the highest level of support, the most convergent data from multiple sources, were given the most attention and considered the strongest.

I constructed four assertions. The four are as follows:

- My grade level team’s focus on collaboration contributed to positive changes in our interactions.
- My grade level team’s focus on relevance contributed to multiple aspects of our instructional learning.
- My grade level team’s focus on an action plan contributed to our instructional learning.

- Working as a professional learning team contributed to my grade level team’s instructional learning.

**Focusing on Collaboration**

A focus on collaboration was a significant feature of my action research. The beginning part of my initiative concentrated completely on team collaboration, and throughout the semester I called attention to our collaborative efforts. The study’s results indicate that this focus on collaboration contributed to positive changes in my grade level team’s interactions.

Two specific tools I introduced in this action research, the quick check form and the norm review, played a large role in the team’s positive changes in collaboration. The optimism relating to these tools was evident early in the study. To illustrate, two participants expressed their optimism about these instruments before even actually using them. Ms. Red said this about both the tools, “I’m looking forward to the quick check and the meeting check [norm review] tool” (INT.RED.10-19-2010). This optimism was an integral part of the eventual effectiveness of these tools. Ms. Yellow went even further when she said,

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2 Parenthetical information specifies data based support for the assertions. The first letter string identifies the data source (RJ=research journal; ART=artifacts; SUR=survey; MT=meeting transcription; INT= Interview). The second letter string identifies the participant. The numerals identify the date.
I really liked, although we haven’t used them yet, the quick check and the revisiting the norms. The little updates to make sure we are doing what we said we were going to do and that we are following the norms. I think that’s going to be useful and keep us accountable. (INT.YEL.10-22-2010)

Throughout the course of this study, both the quick check and the norm review did keep us accountable to one another for our behaviors and our follow through on tasks related to the team’s professional learning goal.

**Quick check.** As noted in Chapter Three, we used the quick check tool at the end of meetings. It consisted of a series of questions about team members’ interactions. One participant defined the benefits of this tool when he said, “These are the stuff you are expected to do in a meeting, and it makes you go back and look at how you behaved in the meeting, and if you didn’t fit that behavior to make a productive meeting, it made you aware of it and pay attention to what you did the following time. This one I did like” (INT.BLU.12-20-2010).

As reported in Chapter Four, after using the quick check form for a number of weeks, team members’ responses on the Instructional Learning Tools Survey indicated that use of this tool was effective. Interview responses indicated that knowing the quick check form would be used at the end of meetings made a difference in participant’s interactions. Ms. Yellow noted that because of it, “I noticed that we probably weren’t saying comments that didn’t need to be said” (INT.YEL.12-15-2010). When asked to elaborate, she added, “[We were] less sarcastically saying things. We probably got more accomplished because of those things” (INT.YEL.12-15-2010). Lastly, one participant indicated in her survey, “I
loved that this kept me ‘in check’ with my behaviors” (SUR.GRE.12-16-2010). Mrs. Green saw the need to review the success of our meetings and appreciated the quick check’s effectiveness in keeping our behaviors productive. This participant earlier had this to say about the form:

  Just knowing that they [quick check and norm review] are there and doing those checks at the end where we say, “Did everyone participate?” Kind of looking at did someone dominate over the other, and that makes me say that if I don’t speak, then it’s going to come across like someone was dominating because I haven’t shared anything, so that’s making me think more to share and get my ideas out there. (INT.GRE.12-14-2010)

Another value of the quick check form was noticed by Mr. Blue when he commented, “The quick check reviews the team actions of the meeting. Helps me analyze my effectiveness” (SUR.BLU.12-16-2010).

Norm review. The norm review was used at the end of meetings, too. It also consisted of a set of questions that focused attention on team interactions, with particular attention to our adherence to the norms we established early in the initiative.

Although some of the participants had been trained and refreshed in the use of seven norms of effective collaboration for Horizon’s West Middle School and the entire district, my initial interviews revealed that there were some negative feelings concerning those norms. These negative feelings seemed to concentrate on two concerns, (a) some members had never been trained in how to
use the norms, and (b) focusing on only one norm for staff development activities seemed insufficient. One participant put it this way,

I don’t necessarily understand them [the existing norms on campus]. I don’t even know if I could identify them because usually they are sitting right in front of me, so I don’t have to remember them, and then someone says, “Well, here’s the one we are doing today.” (INT.GRE.8-11-2010)

A second participant added, “Some of us were never even trained in them” (INT.YEL.8-12-2010). This participant also found the practice of focusing on only one norm during staff development activities to be counterproductive, “I also feel like not focusing on one would be useful. I think it’s silly to only focus on one” (INT.YEL.8-12-2010).

As reported in Chapter Four, the Professional Development in Effective Collaboration survey revealed that the participants considered the setting of team norms to be an especially effective exercise. My research journal indicated that the team spent over an hour focusing on this step during the initial professional development session (RJ.8-23-2010). One member noted that the extra time we spent setting the norms was especially worthwhile, saying, “I think it was good that it [setting the norms] was longer” (INT.YEL.10-22-2010). Two participants also took note of the fact that everyone on the team participated in the process of setting the norms. Mrs. Green put it this way, “I think when you have the norms in place, and everyone has participated and agreed to them and follows them, that you can accomplish a lot” (INT.GRE.12-14-2010). When asked about the norm
setting process, Mr. Blue added, “Everyone contributed and participated. Norms are realistic and should be followed” (SUR.BLU.12-16-2010).

Participants’ responses to the Instructional Learning Tools Survey showed unanimous agreement that the norm review was the most effective tool we used to focus our collaborative efforts and instructional learning. As one participant explicitly stated, “I liked this best” (SUR.RED.12-16-2010).

Moreover, in my integrative analysis of the study’s results, I identified five ways that focusing on collaboration, largely through the quick check form and the norm review, contributed to the team’s semester-long interactions. The focus on collaboration emphasized in my action research contributed to the team’s semester-long interactions by: (a) increasing buy-in and ownership, (b) addressing specific weaknesses, (c) promoting changes in collaborative behavior, (d) promoting participation in on-task behavior, and (e) providing opportunities for review.

**Increasing buy-in and ownership.** An advantage of setting and focusing on the team norms we decided for ourselves was the ownership and buy-in that it created. According to one participant, “We were making it work for us. We made it ours in that situation” (INT.RED.10-19-2010). Even Mrs. Green, who had expressed very negative feelings concerning the existing norms on campus, stated that these norms were better “because we’ve bought into them” (INT.GRE.12-14-2010). When surveyed, she added, “I liked the way we chose them. They were specific to our needs, and all of us had ‘buy-in’” (SUR.GRE.10-8-2010).
The buy-in was especially evident when the team had an administrative team meeting on August 30th. The principal was in attendance and asked the team to choose a norm to focus on for the meeting. Ms. Yellow asked if we should select one of the existing school-wide seven norms of effective collaboration or one of the new norms we had set for our professional learning team. Ms. Yellow clearly preferred our new norms to the existing norms used on campus, so much so that she wanted to use them even outside the setting of our professional learning team meetings.

**Addressing specific team weaknesses.** Another advantage of our team focusing on our own norms was that it was specific to the weaknesses, or needs, of the team, itself. Survey responses from two participants expressed this idea: “I really enjoyed developing norms that are specific to our team, especially because it made us reflect on our strengths and weaknesses as a team” (SUR.YEL.12-16-2010). This participant added in an interview, “I think we kind of uncovered some stuff that our team hadn’t been talking about” (INT.YEL.10-22-2010). Here, Ms. Yellow referred to the fact that certain members did not always participate as actively as they could and that we all lacked a degree of follow through. Ms. Red, a teacher who had been at Horizon’s West for the initial training in the seven norms of effective collaboration noted, “[I] really liked that we got to come up with our own [norms] that met our own team needs” (SUR.RED.12-16-2010).

A specific weakness that deserved our attention was a lack of follow through (RJ.8-23-2010). Ms. Yellow noted this weaknesses as follows, “We
seem to have good intentions but not great follow through. This will force us to follow through” (INT.YEL.10-22-2010). When it came to the D3 process, the 7B team has always been able to set student achievement goals. However, when benchmarks were due, we often scrambled to determine if progress was being made. We didn’t always stick to the plan or the time line that was determined when setting the goals. In the early stages of working as a professional learning team, participants continued to face a lack of discipline in following through (RJ.10-18-2010).

I think it’s also been good for us to recognize that we don’t have the best follow-through, particularly when we sat down the other day and said how many people have done this, and only one person had accomplished both things. (INT.GRE.10.20-2010)

This meeting served as a reminder of the team’s weakness and the necessity of setting such a norm.

**Promoting changes in collaborative behavior.** Another benefit of setting norms involved changes in collaborative behavior. For instance, at the onset of this study Mr. Blue was known for being very quiet and rarely interacting. This is confirmed by his noticeably low SYMLOG score for dominance during the first team meeting. As he put it, “Usually, in the past, I just sit back unless it’s important or something that I would think is accepted” (INT.BLU.12-20-2010). It often would take a lot before Mr. Blue would feel comfortable enough to make his opinion heard. His dominance score rose three points over the course of this study. This change was noticed by Mr. Blue himself, “[I’m] outspoken more I
guess. Usually I’m more of a listener than a participant. This forced me to participate more rather than sit back and watch the show” (INT.BLU.12-20-2010).

My research journal contains several notes on Mr. Blue’s tendency to share more during our professional learning team meetings. Every other participant noticed changes in Mr. Blue’s collaborative behavior, too, as evidenced by these comments:

- “It was definitely bringing him out of his shell.” (INT.YEL.12-15-2010)
- “The norms are helpful because even with [Mr. Blue], we are able to say ‘OK, now it’s time to voice your opinion.’ because he wouldn’t before.” (INT.RED.12-16-2010)
- “I think so [our collaboration increased]. Even look at [Mr. Blue]. [Mr. Blue] shares, he asks questions as opposed to always you know, ‘OK, whatever.’” (INT.GRE.12-14-2010)

Mr. Blue was not the only one who demonstrated a change in the amount of collaboration. Mrs. Green also noted that, due to setting the norms, she was more prone to share ideas. As she put it, “I’m speaking up more in meetings and I think actively participating” (INT.GRE.12-14-2010). Mrs. Green credited this change to the safe environment during meetings that was created by the norms we set. In previous experience, she reported keeping in her ideas due to fear of ridicule or other team members’ negative attitudes. Setting the particular norm,
“All ideas will be considered,” seemed especially helpful in her situation (INT.GRE.12-14-2010).

**Promoting participation in on-task behavior.** In addition to an increase in collaboration from silent members, an increase in on task behavior for several was noted. Focusing on norms helped several members change some of their behaviors. Ms. Red noted that, because of the norms, “It’s just made me more intentional, limiting sidebar conversations, and I’ve been more aware if I’m on my cell phone or I’m texting during meetings” (INT.RED.12-16-2010). Ms. Yellow took the opportunity to reflect not only on her own behavior but the behavior of other group members as well,

I think the quick check and the revisiting the norms both kept me on task. Or I would like notice when someone else was off task because I knew we would have to talk about it. So I think those are good for teams that aren’t always on task. (INT.YEL.12-15-2010)

Mr. Blue commented on the decrease in side conversations this way, “You mean like side conversations? Those things happen a lot less” (INT.BLU.12-20-2010). Two participants noticed a decrease in off task behavior during professional learning team meetings. Ms. Yellow noted this as follows,

I like to throw in funny comments like all the time, and I think, because I realized I was doing that more, I kind of toned it down a little because it’s not on task behavior. It wasn’t helping us achieve anything.

(INT.YEL12-15-2010)
Mrs. Green observed, “I see us accomplishing things in our meetings” (INT.GRE.12-14-2010). She specifically referred to the fact that team members were all increasing their understanding and utilization of higher student cognition levels. Mrs. Green’s observation is supported by several notes I included in my research journal.

Several team members credited the increased task orientation to the norms. When asked about changes to his behavior, Mr. Blue stated that the norms “kept us focused on what we were doing” (INT.BLU.12-20-2010). Ms. Yellow was clear about the value of the norms with this statement, “I think how we acted in our meeting was probably due to doing those things [setting norms] beforehand” (INT.YEL.12-15-2010).

Providing opportunities for review. Checking our behaviors and revisiting the norms at the end of each meeting provided specific regular opportunities for team members to review our interactions. Participants expressed the value of these opportunities as follows:

- “I like being reminded that we set, maintain, or follow norms that are relevant to us as a team.” (SUR.GRE.12-16-2010)
- “I also liked this one [norm review]. It gave us a recap of our actions and allows for adjustment.” (SUR.YEL.12-16-2010)
- “I felt this [norm review] was important because we set the norms. Makes sure that we were following the standards we set for ourselves.” (SUR.BLU.12-16-2010)
• “I like this [norm review] a lot. It sometimes spurred further discussion and kept us focused on norms.” (SUR.RED.12-16-2010)

A compelling example of the importance of revisiting team norms came during our November 15th meeting. Like most meetings, this one focused on individual lesson plans and how they could be adjusted to reach higher student cognition levels. The team had started working on cross-curricular planning of a large interdisciplinary project called the Island Factory. However, as my research journal indicates (RJ.11-15-2010), different participants disengaged from the task at different times. The quick check tool for this meeting also showed group agreement that not everyone was totally present for this meeting (ART.11-15-2010). At the conclusion of the meeting, we worked as a group to discuss the five questions that constituted the norm review.

When discussing which norms we seemed to ignore at this meeting, the group agreed that we did not actively participate, specifically not listening attentively to one another. We agreed that we would make it a point to focus on active listening at our next meeting. The following meeting, on November 22nd, started with a reminder that we wanted to refocus on listening to one another. The norm review from that meeting indicated that we did a better job; the team unanimously agreed that we all actively listened to one another during this meeting (ART.11-22-2010).

**Focusing on Relevance**

Focusing on relevance was a key contribution to multiple aspects of my grade level team’s instructional learning. The desire for relevance became
apparent to me in the first round of interviews when all four participants indicated that quality professional development needed to have direct application to the classroom. The following interview responses to the question, “What do you think makes for a quality professional development?” make it clear that the participants wanted something relevant:

- “I think it definitely needs to be something that is useable in the classroom.” (INT.YEL.8-12-2010)
- “Something that is applicable to what I’m doing, something that I can actually apply to my classroom. Something that is relevant and useful to what is happening in the classroom at the time.” (INT.RED.8-10-2010)
- “I guess being able to leave with whatever we’ve been working on together and actually being able to implement it in class. To have something that when I take it with a particular idea that I can actually use with the kids.” (INT.GRE.8-11-2010).
- “[I want] something that is useful to the teachers.” (INT.BLU.8-10-2010)

The desire for relevance was apparent in the team’s goal setting during the beginning of the semester. Following the professional development in effective collaboration, we spent a little over a week deciding on a goal we wanted to pursue. The team wanted a goal that would maximize our professional growth and benefit students. The team especially wanted a goal that would be relevant, useful to all participants’ instruction. The team decided to focus our professional
learning on guiding students to high levels of cognition. Specifically, the team wanted to understand what indicators of the different levels were and how we could adjust our lesson plans to reach those levels.

Focusing on relevance in general, and on the goal of promoting students’ levels of cognition in particular, contributed to multiple aspects of instruction. The aspects involved (a) team interactions, (b) specific instructional practices, (c), teacher evaluation, and (d) professional knowledge.

**Team interactions.** Focusing on relevance contributed to the team’s interactions. As noted in Chapter Four, the Professional Learning Team Survey results indicated that participants believed their focus on a goal helped them gain a stronger sense of connection or support from other teachers. Further, the Instructional Learning Tools Survey revealed that participants believed the goal setting process was effective. The qualitative data supported and extended this finding. For instance, one participant indicated in an interview that he was frustrated by the length of the professional development in effective collaboration and didn’t become fully engaged until the goal was set,

The beginning was kind of frustrating for me because I like to get into something and getting a goal set, and the goal came a lot later than I anticipated, but once we got a goal set, then I was more comfortable with it [professional learning team]. (INT.BLU.12-20-2010)

My research journal and meeting transcripts reveal that participants demonstrated high levels of engaged participation during learning team meetings. This engaged participation was characterized by a goal oriented focus, with
purposeful, meaningful discussion and demonstrated curiosity. Ms. Red put it this way, “I just feel like we aren’t being glossy or over the top about stuff [our instruction], that we are getting to the real meat of stuff and having real conversations and, because it’s meaningful, that energizes me” (INT.RED-12-16-2010).

The transcription of one professional learning team meeting which lasted 45 minutes revealed that five topics were covered, and three of the topics involved crafting individual lesson plans relative to our goal of increasing student cognition levels (MT.11-3-2010). During this 45-minute meeting, participants asked 61 questions about student cognition levels. I noted in my research journal that participants in this meeting exhibited high levels of excitement (RJ.11-3-2010). After figuring out the cognition level of one lesson, one participant indicated her excitement by stating, “I like this” (MT.RED.11-3-2010). Finally, the quick check tool for this meeting indicated that all five member of the professional learning team listened attentively while others were speaking, that all members were totally present during the meeting and that all members felt their time had been well spent (ART.11-3-2010).

Specific instructional practices. Focusing on relevance in general and the goal of increasing students’ cognition levels in particular also contributed to the team’s specific classroom practices. The Professional Learning Team Survey administered at the end of this study, and presented in Chapter Four, indicated that participants shared a belief that working as a professional learning team could significantly change the way they taught. The belief that working as a
professional learning team could potentially impact instruction was evident early in the study.

Midway through my action research, I asked participants how confident they were that working on a professional learning team could change their classroom practice. One participant indicated, “I’m kind of hoping for it, and I think the whole point of it was so we can improve our instructional strategies, and I plan on using whatever we come up with (INT.YEL.10-22-2010). Another participant expressed her intention to apply the team’s focus on the goal to make a difference in her classroom,” I hope that whatever we pull out of there as we start to talk about getting to those higher levels, I hope that eventually, somehow I will find a way to integrate it into my classroom” (INT.GRE.10-20-2010).

Ms. Yellow frequently applied ideas discussed during team meetings to her instruction, moving to the experimentation phase of the action-inquiry cycle. In her final interview, she talked about the importance of professional learning being useful in the classroom, “We used it. We used our time to get something done. We used the things we talked about in our meetings in our classrooms” (INT.YEL.12-15-2010). She went on to give a specific example of struggling with students working in groups. Her plan was for students to engage in learning conversations, but it wasn’t going very well. After discussing ways to improve the student groupings for the learning conversations, Ms. Yellow reported, “The next day we did that, and it worked better, so that helped me in the classroom, and that’s what I consider being useful” (INT.YEL.12-15-2010). Another participant put it this way,
We’ve been sharing strategies about good teaching, and so we’ve been able to make those jumps. Whereas it’s not just strategies for our content or discussing what we want to accomplish in our content. We’ve been talking about good teaching, so that has been great to share and try to fit into our own content areas. (INT.RED.10-19-2010)

Participants occasionally viewed the team’s focus on relevance as potentially extending to a network of practices that went beyond instruction. As one participant put it,

I guess just hoping ways to improve and make things better. Maybe through this process of finding ways to accomplish this goal, maybe even some of my classroom management will improves as we try to get to high levels with the kids, their thinking processes. Maybe I’ll be able to tie some of those things in as well. (INT.GRE.10-20-2010)

**Teacher evaluation.** Participants also indicated that focusing on the team’s goal of guiding students to high levels of cognition helped them achieve district-mandated professional goals for the year. For instance, Ms. Yellow stated “It [increasing students’ cognition levels] matters to me because it’s part of how they evaluate us. It’s supposed to be helping the kids learn better, and that is why we are in teaching. So it didn’t seem like something frivolous. We needed it to be better teachers and because it’s something district is mandating” (INT.YEL.12-15-2010). Mr. Blue echoed this statement as follows, “It’s something that the district is bent on doing, so we might as well figure it out, and get it to a level that we understand” (INT.BLU.10-22-2010).
Focusing on the team’s goal also was thought to help participants perform well on the district’s new evaluation instrument. Mrs. Green put it this way, “It [increasing students’ cognition levels] ties in with all the changes that they are making to the evaluation instrument, and I think we are all headed in the right direction” (INT.GRE.12-14-2010). She went on to say,

Looking at the new observation instrument that we have and having talked to Kevin [the principal] and looking at the different points, where this is at, this is where you need to be, and seeing what we’ve done in here can get me to that next step. (INT.GRE.10-20-2010)

**Professional knowledge.** Finally, as with teacher evaluation, participants indicated that focusing on the team’s goal of increasing students’ cognition levels promoted their professional knowledge. Final interviews showed a consensus that participants believed that we had begun meeting our goal of guiding students to higher levels of cognition. Some participants indicated that they gained a better understanding of what the analysis level of cognition looked like and had thought more about how their lessons might fit it. According to Ms. Red, “It [the professional learning team] did help me to more think about and understand what analysis is” (INT.RED.12-16-2010). Mr. Blue expressed similar feelings about his own learning, “I got a better understanding of what they want” (INT.BLU.12-20-2010).

Ms. Yellow and Mrs. Green reported they already had a fairly clear understanding of the higher cognition levels, but they also reported that the work of the professional learning team helped them think more about the levels and
reaffirmed that they were having success guiding students to the levels.

Interestingly, Mrs. Green indicated that the team’s focus on relevance would ultimately extend beyond team meetings. This extension was made clear by the fact that she signed up for her first off campus professional development since becoming a teacher. The professional development was meant to help social studies teachers better understand higher cognition levels. Mrs. Green spoke of this in her final interview. She indicated it was a big change for her:

I actually found a professional development in January that will help with that. But going through this has made me say maybe I should go out and find some things as opposed to people just bringing me stuff, so I’m actually doing my first professional development. (INT.GRE.12-14-2010)

**Focusing on an Action Plan**

Along with focusing on relevance, particularly on the goal of guiding students to high levels of cognition, my grade level team benefited from focusing on an action plan. Creating a team action plan involved highlighting our goal, then organizing our professional development efforts into manageable goal-directed steps. The team’s action plan established the path we would follow to achieve our goal of increasing students’ levels of cognition. The value of focusing on an action plan was summed up by Ms. Red when she said simply, “Writing down specific steps and short term goals is important” (SUR.RED.12-16-2010).

The team’s action plan included steps for defining the analysis and knowledge utilization levels of cognition as well as for determining classroom activities that would guide our middle grade students to these levels. We decided
that we would have a better understanding of this topic by the end of the first month, that we would be planning for implementation by the end of the second month, and we would be experimenting with different instructional strategies to raise student cognition levels by the end of the third month. These action steps were in line with the action-inquiry cycle, which is part of working as a professional learning team. Further, we designated steps to be accomplished within each month. To illustrate, for the first month we established steps such as researching the levels of cognition online and talking to an expert.

The participants commented positively about two particular aspects of focusing on a team action plan. They reported valuing both the direction and the accountability provided by the plan.

**Direction.** Several participants reported valuing the direction, the ability to stay on track, that they gained from the team’s action plan. One participant commented that the plan “… kept us on the same page and gave us direction” (INT.RED.10-19-2010). Another put it this way, “I think when we set a goal using the right process, it keeps us on track” (INT.YEL.10-22-2010). About two months later she reaffirmed this thought as follows, “The action plan is what I believe kept us on track. It made sure our steps were in order. This helped us actually do them” (SUR.YEL.12-16-2010).

**Accountability.** Along with direction, the action plan promoted accountability. It helped team members take responsibility for accomplishing the plan’s steps toward the goal.
During the first month of professional development, little progress toward accomplishing the initial steps was becoming clear to me. So I created a poster with each of the team member’s names on it and the two short-term goals of researching student cognition levels online and talking to an expert. I hung this poster in our team room where we could all see it.

During interviews, several participants commented on the importance of this poster at creating accountability. As one said, “It’s obvious that most of us haven’t done what we are supposed to do so far, so that is keeping us accountable” (INT.RED.10-19-2010). One participant had this to say,

I think it’s also been good for us to recognize that we don’t have the best follow-through [on decisions], particularly when we sat down the other day and said how many people have done this, and only one person had accomplished both things, and some of that has been good to point out some of our weaknesses and maybe even some of our strengths as well. (INT.GRE.10-20-2010)

Following the early breakdown in accountability, one participant expressed optimism about the members of the professional learning team keeping each other accountable, “I know that there is someone who is going to be keeping us accountable for doing this, for trying this, and I know it is the purpose of this meeting (INT.RED.10-19-2010). Mrs. Green noted the benefit of putting the action steps down on paper,

It will help us keep that focus because we will be putting it on paper. It’s not just something we are saying. Now, it’s written down, we can see it,
we can go back and reflect on whether or not we did it. (INT.GRE.10-20-2010)

**Working As a Professional Learning Team**

Working as a professional learning team was the central focus of this action research. The results of this study show that we acted in a manner consistent with several features of a professional learning team. In particular we took the time to develop professionally, shared classroom experiences, and offered assistance to one another.

**Took time.** The participants in this action research took the time to improve our collaboration and learn how to guide students to high levels of cognition. The team met each Monday for seven weeks after a staff meeting that followed regular school hours. These professional learning team meetings took between forty-five and ninety minutes; sometimes it was nearly 6:00 p.m. before we finished.

During one professional learning team meeting near the end of this study, we discussed why things worked so well compared to other professional development initiatives on campus. The team talked about the importance of time devoted to the meetings (RJ.11-22-2010). On another occasion, Ms. Red individually noted the importance of time when she stated, “Actually taking the time to talk about what’s going on in the classroom and how we can make it better has improved because we have the set time to do it” (INT.RED.12-16-2010). One aspect of time that seemed to be a factor in our working as a professional learning team involved the frequency of the meetings. We met each week. Mrs. Green
referred to the value of this frequency this way, “Knowing that we are going to meet each week, I have that stuff [student cognition levels] in my mind when I’m doing my plans” (RJ.11-22-2010).

**Shared experiences.** Another action consistent with professional learning teams involved sharing classroom experiences. At the onset of this study, one participant stated that she would like to gain a better understanding of what was going on in the other classrooms. By the study’s end, several participants indicated that this sharing of classroom experiences was a positive feature of working as a professional learning team (RJ.12-6-2010). Additionally, the Professional Learning Team Survey results indicated that the participants in this study felt successful in sharing strategies they currently used as well as discussing similarities and differences in their approaches and beliefs about instruction.

Each meeting started with a brief discussion of the previous week’s activities. Teachers took turns reviewing what we covered the previous week and reporting how our classroom practices were changing, specifically related to guiding students to high levels of cognition. Following the sharing of instruction from the previous week, the team shared lesson plans for the coming week. We went over the content we were planning to teach and the instructional strategies we were planning on using. Ms. Red commented on this sharing as follows, “I think we’ve had more time to talk about specific things in our classrooms” (INT.RED.12-16-2010). This was a considerable change for the teachers on the 7B team. As one said,
We never used to really share ideas or even what was going on in our classrooms. It was like we were here doing our thing, and that was it. So I think we’ve progressed to the point where we are sharing and discussing what’s going on in our classrooms, what we are teaching, not just behaviors. (INT.GRE.12-14-2010)

**Offered assistance.** Team members offering assistance to one another is a third practice associated with professional learning teams that we demonstrated. Through our discussions with one another, teachers helped each other adjust lesson plans to meet higher cognition levels and support professional learning. Ms. Yellow expressed this practice by saying simply, “We thought of ways to help each other more.” (INT.YEL.12-15-2010). Mrs. Green described the assistance team members offered this way,

[We are] willing to say, “Here is what I’m doing this week,” or “How can you help me change it,” or even giving ideas to other people when we are sitting in those meetings and me saying, “Hey, why not try this instead?” (INT.GRE.12-14-2010)

A good example of the assistance team members offered came from our November 3rd meeting. When discussing a unit on summarizing, Ms. Yellow had run into difficulty with some of her students being off task. She had students work in groups of four to incite meaningful analytical conversations about summaries, but it wasn’t going according to plan. Reflecting on the meeting in which we discussed this activity, Ms. Yellow said, “Someone had suggested trying it in pairs so they could have better conversations” (INT.YEL.12-15-2010).
The following week, she reported that putting students into pairs instead of in
groups resulted in high level discussions between students (RJ.11-8-2010). This
reflection is the third phase of the action-research cycle used by professional
learning teams. This assistance helped Ms. Yellow better understand a grouping
strategy that could help her students reach higher cognition levels.

Taking time for professional learning team meetings, then sharing
classroom experiences and offering assistance contributed to several outcomes.
These professional learning team actions played a role in our subsequent
validation of one another, professional practices, cross curricular consistency and
interdisciplinary planning, and overall professional improvement.

Validation. One benefit of the professional learning team discussions was
the validation it contributed to individual teachers. Teachers supported and
encouraged one another often. The Professional Learning Team Survey results
indicated that teachers believed they had gained a stronger sense of connection or
support from other teachers, and the qualitative data supported this. To illustrate,
teachers cheered when someone shared a lesson that guided students to the
analysis level of cognition.

The norm review from November 15, 2010 revealed the team had become
aware of their validating each other’s successes more often (ART.11-15-2010).
One teacher, Ms. Yellow, remarked that the validation felt “delightful” (RJ.11-15-
2010). When asked about her professional learning relative to student cognition
levels, Ms. Yellow again brought up the feeling of validation when she said, “So I
think in that term it made me more confident in what I thought was learning conversations or analysis” (INT.YEL.12-15-2010).

**Professional practices.** The professional learning team discussions also helped foster participants’ professional practices. Mr. Blue acknowledged this with his muted statement that “[I] got some ideas and tried a couple lessons” (SUR.BLU.12-16-2010); he later stated, “The analysis part, coming up with ways of teaching, was kind of helpful” (INT.BLU.12-20-2010). Mrs. Red put it this way, “[The meetings are helpful] when it’s talking about other people or just having those conversations about teaching or just thinking about analysis and bringing that into the classroom.” (INT.RED.12-16-2010).

Several participants indicated that our goal of a better understanding of students’ cognition levels led them to think more about the cognition levels of their lesson plans. Mrs. Green noted, “I reflect more about where my cognition levels are” (INT.GRE.12-14-2010). She reported that this reflection did not usually come as she was designing her lesson plans; instead, she would adjust her lesson plans slightly each week following the professional learning team meeting. The change might be based on a discussion during the meeting or on how the students were responding to the lesson. Ms. Red indicated using a similar process, “It did cause me to think about my plans and how to raise cognition levels once the ‘planning’ was done” (SUR.RED.12-16-2010).

**Cross-curricular consistency and interdisciplinary planning.** The professional learning team meetings frequently enhanced cross curricular consistency and interdisciplinary planning. For instance, on November 8th, Mrs.
Green shared her lesson plan concerning the industrial revolution. One of the activities involved creating an advertisement for one invention that the students thought had the biggest impact on America (ART.11-8-2010). Two teachers explained how this lesson tied in to topics we recently had covered or we were going to cover in the near future. The three participants then discussed what the students should already know about persuasive texts and how to ensure that expectations concerning this topic were the same from classroom to classroom (RJ.11-8-2010).

Another example of cross curricular consistency and interdisciplinary planning happened when Ms. Yellow was looking for a reading passage for her students to summarize. Mr. Blue responded that he had been teaching a unit on rocks and minerals and had a number of readings tied to his content that he would not have time to present in his class. Ms. Yellow then had her students summarize the rocks and minerals passages in her language arts classroom. Later in the quarter, when Mr. Blue was giving his students directions for a lab, he had them summarize the steps, reminding them that they had been taught how to summarize in Ms. Yellow’s classroom.

**Overall improvement.** Each week’s professional learning team meeting closed with the question, “Do you feel like your time has been well spent?” The team almost always agreed that the extra hour we stayed had been time well spent. Mrs. Green affirmed that improvements could be seen when she said,

You know, I’ve heard comments when we are going to our meeting after the [staff] meeting, like people saying, “Oh I wouldn’t do that. You guys
are too nice.” But it’s like, if they knew the improvements you could see down the road as a result of it, they wouldn’t be like that. (INT.GRE.12-14-2010)

Additionally, these changes were not to just one member of the group; rather, each of us was developing professionally. As Mrs. Green stated, “It’s been great to see how well we are working together and getting this accomplished and seeing that improvement across the board” (INT.GRE.12-14-2010).
Chapter 6  Conclusion

I conducted the action research reported in this dissertation to help determine the effect of professional development on my middle-school team’s collaboration. Furthermore, I sought to discover what impact working as a professional learning team would have on the team’s instructional learning. This chapter reports the discussion of lessons learned, especially as they relate to my increased understandings of the professional literature reviewed in Chapter Two. This chapter also reports implications for my teaching practice, implications for research, and a closing word.

Discussion

This action research study started with professional development in teacher collaboration. I thought that it was necessary to demonstrate the importance and methods of effective teacher collaboration before expecting teachers to collaborate with one another to promote their instructional learning. The setting of team norms was by far the most crucial step in this process. Setting norms early in the process set the tone early for productive interactions with one another (Richardson, 1999). Setting the norms collaboratively revealed team weaknesses that would need to be addressed before true collaboration could take place. Continually reflecting on those norms also ensured that the norms were more than just a poster hanging on the wall.

The professional development in teacher collaboration was followed by the introduction of several tools to focus instructional learning. Allowing teachers to direct their own learning through a self-selected goal allowed teachers to find
relevance in their own learning as predicted by DuFour, DuFour, Eaker, and Many (2006). They make the claim that engaging faculty in reflective dialogue concerning an organization’s mission, vision, and fundamental purpose goes a long way towards improvement. This type of dialogue was the foundation of my study’s success. Wenzlaff and Weiseman (2004) further elaborate that teachers prefer learning by doing, which includes having an opportunity to decide what and how they learn and relating what was learned to their individual classrooms. Participants in my study echoed such beliefs. Setting an action plan was equally as important as setting the professional learning goal; it made the goal much more attainable.

The professional development in teacher collaboration and the use of various instructional learning tools allowed the team to work together as a professional learning team. The professional learning team experience reaffirmed much of what I had read concerning situated learning theory (Kearsley, 1994; Korhonen, 2001; Lave & Wenger, 1991; Vygotsky, 1978; Wenger, 1996), specifically as it relates to (a) the interaction between individual and social knowledge, (b) apprenticeship, and (c) authenticity.

**Interaction between individual and social knowledge.** Lave and Wenger (1996) discuss the importance of the interaction between individual and social knowledge. They claim that learning comes from this very interaction. Each member of our professional learning team came to the table with individual knowledge and experience with higher levels of student cognition. Different teachers guided their students to those higher levels in unique ways, and each had
unique understandings of what constituted the analysis level of cognition in a classroom. Through participation on the professional learning team, members shared their individual knowledge and made further sense about levels of cognition through discussions with the group. The social knowledge that was created through these discussions seems to have benefited each member of the professional learning team because the knowledge was shared. Dufour et al. (2004) refer to this sharing as the collaborative culture that must exist in order for professional learning communities to work. They go so far as to claim that the entire purpose for a team working together is to return to their classrooms with an extended repertoire of skills, strategies, materials and ideas (DuFour et al., 2004). This was clearly seen in my study. When participants left professional learning team meetings, they were armed with new ideas and strategies that could be used in their classrooms to better guide students to higher levels of cognition.

**Apprenticeship.** During this study we each served as apprentices learning from more knowledgeable others (Vygotsky, 1978). Because the different teachers had different levels of expertise in different arenas of higher order thinking, the roles rotated depending on the situation. Some teachers had more knowledge and experience concerning grouping strategies and could impart that knowledge to those with less experience. Other teachers had more knowledge and experience concerning questioning strategies that would guide students to higher levels of cognition. As each member of the professional learning team became more immersed in the work of the team, the participation and knowledge increased.
Authenticity. Lastly, one of the reasons learning was able to occur for the professional learning team is seems due to the professional learning goal being authentic. Lave and Wenger (1991) showed the importance of learning activities being authentic outside of an educational setting. My study showed me the importance of authenticity as it relates to professional learning. My team worked with people who had different levels of experience in the teaching field. My team learned from teachers, how to teach and could apply that learning to our classrooms. It was situated in our daily work as teachers and each participant saw a direct link between the learning that was occurring and our individual classrooms. This was a crucial aspect of Wenzlaff and Weiseman’s (2004) findings. They suggest that professional development activities that are not authentic “may lack meaningful group-based discourse or introspective examination of one’s own learning process” (Wenzlaff and Weiseman, 2004). Participants in my study were afforded the opportunity to open such discourse as it related to their classrooms. Teachers were not learning about guiding students to higher levels of cognition in a vacuum. Rather, we were able to apply our learning to our classrooms by adjusting our lesson plans and applying our learning with the students we serve. This echoes what Korhonen (2001) discovered concerning nursing students in Open University. Just like Korhonen’s participants, the 7B team of teachers learned about teaching from teachers through authentic activities that were embedded in the real world of teaching.
Implications for Practice

This research resulted in several ideas that might benefit Horizons West Middle School and the district as a whole. Some of the benefits of this study might even be applied to similar middle schools outside of the district. Primarily among these ideas are the importance of teams setting their own norms and having a structure for establishing a goal and the action steps to meet that goal.

When the 7B team of Horizons West Middle School set our own norms, we set the tone for the remainder of this action research study. The feelings surrounding this process were quite positive, in stark contrast to generalized feelings about the norms currently in place on campus. The team set norms that were relevant to our own specific weaknesses and bought into the norms that were set.

Because of the middle school model (Alexander & Williams, 1965), teams are expected to work together for a number of collaborative endeavors. To maximize the effectiveness of such collaboration, our team norms were set. In order for this process to work, though, we needed to be willing to take the process seriously. We came to understand the importance of setting these norms for ourselves. We entered the process with an open mind, being willing to be honest about our shortcomings and vulnerable enough to set norms that addressed those needs. Furthermore, in order for our team norms to be effective, they needed to be revisited often. These experiences might inform other middle school teams who are interested in maximizing the effectiveness of their collaboration.
The instructional learning tools used by the 7B team of Horizons West Middle School might also be used to benefit other teams on campus. All continuing teachers in the district are required to set a professional goal at the beginning of the year. The 7B team used our development and work as a professional learning team to assist in the completion of our professional goal. The goal setting process used for this study, along with the various instructional learning tools that kept us on track, could be used by other teachers to help maintain their focus on and achievement of their individual professional goals through a collaboration with other teachers with similar goals (Wagner et al., 2006; Wenzlaff & Weiseman, 2004). Furthermore, the goal setting process and the action plan could possibly replace the D3 process that is becoming outdated on campus. The increased accountability was a tremendous help to the 7B team and could probably also benefit other teams.

Because this study was designed with the needs of the participants in mind, replicating the study may involve re-ordering, omitting or even adding steps that would be more or less necessary with different populations. Although the steps could be replicated, results might vary depending upon teachers’ personalities and needs.

Implications for Research

The next logical steps for my action research are to run another cycle with a larger population and minor changes to the timeline and focus of the study. I would like to run the action research again with another team, or possibly multiple teams, in order to check the validity of my findings and perhaps add to them. I
would shorten the professional development in effective collaboration and emphasize the norm setting process above all other steps. I would also allow teams to establish a professional learning goal earlier in the process so that teams could get to the heart of the issue and guide their learning earlier.

The biggest change to the next cycle of action research would be to shorten the professional development in effective collaboration and focus on the norm setting process. I might choose to study the effects of this process alone and examine the question, What does a team setting their own norms contribute to their development as a professional learning team?

I would probably limit the professional development in effective collaboration to the norm setting process. I would then move directly to the goal setting process. Allowing teams to set their own goals probably will increase the buy-in to the process of professional learning. The goal setting along with a precise action plan and learning plan will hopefully lead to professional learning that is individualized to the team. Teachers could direct their own learning towards initiatives that mattered to them. Since this process successfully increased the buy-in and engagement of my team members, I would like determine its effects on others. Part of such a new study would involve removing myself as a participant and acting only as a facilitator and researcher. In conducting another cycle of action research I would spend more time developing my data sources. The surveys used in this study only had face validity. By developing more intricate surveys with dependable constructs, I could strengthen assertions that utilized survey data. I would also be open to the possibility of
conducting interviews both one-on-one and as part of focus groups. Lastly, the experience of sharing data with participants was a beneficial one and I would like to find more ways to disseminate results along the way.

Closing Word

The data I generated in this study suggest that the professional development in teacher collaboration and the instructional learning tools were beneficial. These two elements fused together nicely as we teachers increased our professional knowledge on the way to becoming more effective teachers. Directly linking collaboration with instructional learning seemed to be a key element. As one participant started during our final interview,

I feel like out of everything we’ve done, as far as professional development, it’s [working as a professional learning team] been one of the most effective things, and I do think part of that was because it was ours. We owned it. We picked what we wanted to work on. We picked what we wanted to do. (INT.RED.12-16-2010)
REFERENCES


Boyd, V. (1992). School context: Bridge or barrier to change? Austin, TX: Southwest Educational Development Laboratory.


APPENDIX A

TIMELINE
### Sequence of Action

<table>
<thead>
<tr>
<th>Activity / Date</th>
<th>Collaboration</th>
<th>Instructional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invitation / Information session / August 5, 2010</td>
<td>X</td>
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<tr>
<td>“What Do the Experts Say / Week of August 9, 2010</td>
<td>X</td>
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<tr>
<td>Why Collaborate? / August 16, 2010</td>
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<tr>
<td>Norms / August 23, 2010</td>
<td>X</td>
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<tr>
<td>What Collaboration Looks Like / August 30, 2010</td>
<td>X</td>
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<tr>
<td>What Are Data / September 6, 2010</td>
<td>X</td>
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<tr>
<td>Professional Goal Setting / September 13, 2010</td>
<td>X</td>
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</tr>
<tr>
<td>Current Beliefs and Assumptions, learning plan and action plan / September 20, 2010</td>
<td>X</td>
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<tr>
<td>Action Inquiry Cycle and Conversation Guides / September 27, 2010</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Professional Learning Team Meetings / Once a week, October 4 – December 13, 2010</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**August 5**

1. Distribute and read invitation letter
2. Take questions
3. Distribute and read information letter
4. Take questions

**Week of August 9**

1. Distribute copy of tool 1.6 (what do the experts say) to be read for next week’s session
2. Have members highlight information that stands out as especially useful of insightful
August 16

1. Distribute tool 1.5 (focus questions) and go over questions with group (2-3 minutes)
2. Allow time for participants to individually answer focus questions (5-10 minutes)
3. Share big ideas with the group (5 minutes)
4. Discuss answers to all four questions along with things that stood out as whole group (15-20 minutes)
5. Distribute copies of “Norms put the ‘golden rule’ into practice for groups” to be read before next session

August 23

1. Distribute sticky notes to each participant and ask teachers to brainstorm behaviors they think are ideal for working on a team (5 minutes)
2. Place sticky notes on chart paper
3. Group similar ideas together (5 minutes)
4. Distribute tool 4.1 (traits of successful team members) and discuss the importance of each of the six traits (10 minutes)
5. Distribute tools 4.2 (A norm sampler). Allow five minutes for teachers to check mark any norms they think are “keepers” (2-3 minutes)
6. Share each individuals top 4 “keepers” and develop a team list of “keepers” (5-10 minutes)
7. Use post-it groups and team “keepers” to develop team norms (30-45 minutes)
8. Distribute copies of tool 4.3 (team norms) and discuss if each area has been addressed by the team norms

9. Create and display poster of team norms in professional learning team work room

**August 30**

1. Distribute copies of tools 2.4 (What did you see and hear) and 2.6 (professional learning team scenario)
2. Review questions of what did you see and hear?
3. Assign roles and read through skit out loud (10-15 minutes)
4. Ask teachers to answer questions individually first (5 minutes)
5. As a group discuss each question and record answers on chart paper (10-15 minutes)
6. Ask teachers to answer the reflect questions individually (5 minutes)
7. Share reflections as a group (5-10 minutes)

**Week of September 6**

1. Distribute copy of “what are data?” handout.
2. Read over “what are data” (5-10 minutes)
3. Brainstorm possible goals based on district, school and classroom data

**September 13**

1. Distribute copies of tool 5.4(Deciding on a team goal) to each participant.
2. Review brainstormed goals from last week (5-15 minutes)
3. As a group answer each question to set a goal to focus professional learning team (15-30 minutes)

September 20

1. Distribute copies of tool 6.1 (current beliefs and assumptions)
2. As a group answer each of the five questions as related to the professional learning goal (5-10 minutes)
3. Share individual answers, looking for commonality to create team beliefs and assumptions (10-15 minutes)
4. Distribute copies of tools 6.2 (design a plan for learning and action)
5. As a group, work through the questions as related to the professional learning goal (20-30 minutes)

September 27

1. Distribute tool 7.3 (team log information)
2. Discuss elements that must be included in each log and information that might be included in each log (10-15 minutes)
3. Distribute copies of tool 7.4 (team log form) and discuss what will be contained in each log form
4. Distribute copies of tools 4.4 and 4.5 (quick check and revisiting the norms).
5. Discuss filling it out collaboratively (5-10 minutes)
6. Distribute copies of tool 7.1 (action inquiry cycle)
7. Review steps in the cycle and explain that these are the steps that professional learning teams use to maximize effectiveness (5-10 minutes)

8. Briefly introduce each of the conversation guides (tool 7.2) (5-10 minutes)

9. Note that these conversation guides can be further explained as needed to foster learning team discussions

October 4 through December 6

1. Work collaboratively towards learning team goals
July 1, 2010
Dear Teacher,

I am a doctoral student under the direction of Professor David Moore in the Mary Lou Fulton Teachers Collage at Arizona State University. I am conducting a research study to examine the effect of professional development in effective collaboration and the use of instructional planning tools.

I am inviting your participation in this study from August 2010 through December 2010. Your participation will include three interviews to describe your prior knowledge concerning teacher collaboration, your feelings about the professional development in effective collaboration and your thoughts about working on a professional learning team. You have the right not to answer any question, and to stop the interview at any time. Your participation will also include completing three surveys: (a) Professional Development in Effective Collaboration Survey, (b) Instructional Planning Tools Survey, and (c) Professional Learning Team Survey.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. Through participating in this study you may learn more about effective collaboration. Furthermore, you will be introduced to several instructional planning tools which may benefit you in several ways. There are no foreseeable risks or discomforts to your participation.

All participants in this study will be given pseudonyms by which they will be identified. The results of this study may be used in reports, presentations, or publications but your name will not be used.

I would like to digitally record these interviews. These interviews will not be recorded without your permission. Please let me know if you do not want the interviews to be taped; you also can change your mind after the interviews start, just let me know. The recordings will be kept on a digital recording device for three years at which time they will be erased.

If you have any questions concerning the research study, please contact the research team or Dr. David Moore, David.Moore@asu.edu or A. Michael Riskus, Mr.Riskus@hotmail.com. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Please let me know if you wish to be part of this study.

Sincerely,

A. Michael Riskus
APPENDIX C

INVITATION LETTER
July 1, 2010
Dear Teacher,

I would like to ask for your help with an action research project I am doing as part of my Doctoral program. The action research study centers on professional development on effective collaboration and instructional planning. Specifically, I am inviting you to become part of a professional learning team so that we may learn and grow together as professionals. A professional learning team’s mission is to work collaboratively to increase professional knowledge and improve teaching practice. I am hoping that your participation will lead to increased collaboration, teacher accountability, and curricular consistency in the short term and increased student achievement in the long term. Through this study I am seeking to answer the following three questions:

1. **What will professional development in collaboration contribute to my grade-level team’s development as a professional learning team?**
2. **What will my grade-level team’s collaboration contribute to our instructional planning?**
3. **What will the use of instructional planning tools contribute to my grade-level team’s instructional planning?**

With your help, through professional development in effective collaboration and instructional planning and a series of individual interviews, I will be able to gather ongoing data for this study.

Your participation in this research study is entirely voluntary. You may opt out of questions or requests for information at any time. If you choose not to participate or to withdraw from the study at any point, there will be no penalty. Additionally, your participation is completely confidential. All participants will be given a pseudonym by which they will be identified in order to maintain anonymity. The results of this study may be used in reports, presentations, class projects and possibly publications.

I thank you in advance for your consideration in taking part in this study. I hope that you will be able to participate as this research may help us better understand the impact of ongoing professional development in effective collaboration and instructional planning. Furthermore, this study will help us better understand the benefits of participation on professional learning teams.

Thank you,

A. Michael Riskus
**DEFINE:** Identify your overall purpose and long-term and short term goals.

**EXPLORE:** Gather and share research-based information from a variety of sources.

**EXPERIMENT:** Plan, develop, and try new strategies and joint teaching approaches.

**REFLECT:** Engage in rigorous reflection and dialogue about these practices.

**ASSESS:** Monitor, observe, gather evidence, analyze, document, and evaluate the effectiveness of approaches.

**SHARE:** share progress and effective practices in a variety of ways with the faculty, administrators, and others.
1. What will professional development in collaboration contribute to my grade-level team’s development as a professional learning team?

2. What will my grade-level team’s collaboration contribute to our instructional planning?

3. What will the use of instructional planning tools contribute to my grade-level team’s instructional planning?

Date: ______________________________

Learning team activity: ________________________________________

Observation          Inference
APPENDIX F

PROFESSIONAL DEVELOPMENT IN EFFECTIVE COLLABORATION SURVEY
1.) Please describe your thoughts concerning the "What the experts say" readings as it relates to teacher collaboration.

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

2.) How effective were the "what the experts say" readings in helping you learn about teacher collaboration?

( ) 1 very effective

( ) 2 somewhat effective

( ) 3 somewhat ineffective

( ) 4 very ineffective

3.) Please describe your thoughts concerning the process of setting norms to govern our professional learning team meetings as it relates to teacher collaboration.

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

4.) How effective was the process of setting norms in helping you learn about teacher collaboration?

( ) 1 very effective

( ) 2 somewhat effective

( ) 3 somewhat ineffective

( ) 4 very ineffective

5.) Please describe your thoughts concerning the modeling of a typical professional learning team meeting and the guiding questions as it relates to teacher collaboration.
6.) How effective was the modeling of a typical learning team meeting in helping you learn about teacher collaboration?
( ) 1 very effective
( ) 2 somewhat effective
( ) 3 somewhat ineffective
( ) 4 very ineffective

7.) Anything you'd like to add concerning the professional development in effective collaboration?
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Thank You!

Thank you for taking our survey. Your response is very important to us.
1.) Please describe your thoughts on goal setting process.
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

2.) How effective was the goal setting process?
( ) 1 very effective
( ) 2 somewhat effective
( ) 3 somewhat ineffective
( ) 4 very ineffective

3.) Please describe your thoughts about the "Current Beliefs and Assumptions" instructional learning tool.
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

4.) How effective was the “Current Beliefs and Assumptions” instructional learning tool?
( ) 1 very effective
( ) 2 somewhat effective
( ) 3 somewhat ineffective
( ) 4 very ineffective

5.) Please describe your thoughts on the “Learning Plan and Action Plan” instructional learning tool.
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
6.) How effective were the “Learning Plan and Action Plan” tool?
   ( ) 1 very effective
   ( ) 2 somewhat effective
   ( ) 3 somewhat ineffective
   ( ) 4 very ineffective

7.) Please describe your thoughts on the “team log.”

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

8.) How effective were the team log forms?
   ( ) 1 very effective
   ( ) 2 somewhat effective
   ( ) 3 somewhat ineffective
   ( ) 4 very ineffective

9.) Please describe your thoughts on the “quick check” tool.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

10.) How effective were the “quick check” tools?
    ( ) 1 very effective
    ( ) 2 somewhat effective
    ( ) 3 somewhat ineffective
    ( ) 4 very ineffective

11.) Please describe your thoughts on the “revisiting the team norms” tool.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

105
12.) How effective was the “revisiting the team norms” tool?
() 1 very effective
() 2 somewhat effective
() 3 somewhat ineffective
() 4 very ineffective

13.) Any other thoughts concerning the instructional planning tools?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Thank You!

Thank you for taking our survey. Your response is very important to us.
APPENDIX H

PROFESSIONAL LEARNING TEAM SURVEY
1.) School
____________________________________________

2.) Subject/Grade Level
____________________________________________

3.) How many times have you met with your learning team?
____________________________________________

4.) How many people are on your learning team?
____________________________________________

5.) on a scale of 1-10 (with 10 being most positive), what rating best describes your feelings about these meetings?

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<td>Honest communications</td>
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6.) What, if any, are the positive impacts of these meetings on your instructional planning?
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
________________________________________

7.) What, if any, negative impacts or concerns have you had with the learning team meetings?
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Rate the extent you feel you have benefited by participating on a learning team. Rating scale: 1 (not at all) to 5 (a great deal)
8.) To what extent have you gained...

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<tbody>
<tr>
<td>New knowledge about teaching and learning?</td>
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<td>New insights about how to reach certain students?</td>
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<tr>
<td>New ideas about how to improve the way you teach?</td>
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<td>New perspectives on your strengths and weaknesses in teaching?</td>
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<tr>
<td>A new outlet for expressing and sharing frustrations, concerns, and problems with teaching?</td>
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<td>Greater confidence in using a wider range or instructional and assessment methods?</td>
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<tr>
<td>A stronger sense of connection or support from other teachers?</td>
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<td>A greater sense of yourself as a professional?</td>
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With regard to your selected team focus, how successful has your group been with each activity listed below?

Rating scale: 1 (not at all successful) to 5 (extremely successful)

9.) How successful has your team been with

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<tbody>
<tr>
<td>Analyzing and discussing student needs?</td>
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<tr>
<td>Reading research about and studying successful strategies for addressing student needs, and discussing applications of what we have read/studied?</td>
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<tr>
<td>Discussing similarities and differences in teachers' approaches and beliefs about teaching?</td>
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<tr>
<td>Investigating programs, strategies, and materials that might help students?</td>
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<tr>
<td>Designing new materials, lessons, or assessments for students?</td>
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<tr>
<td>Trying out new techniques, materials, and approaches in teaching and assessing students?</td>
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<tr>
<td>Sharing successful strategies you currently use?</td>
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<tr>
<td>Assessing and sharing results of new approaches to teaching with the learning team?</td>
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</table>
Based on your experiences so far with the learning team, rate the following. Rating scale: 1 (not at all) to 5 (a great deal)

10.) I think my participation on the learning team will

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<tbody>
<tr>
<td>Improve my overall teaching effectiveness.</td>
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<tr>
<td>Improve my skills in helping students learn.</td>
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<tr>
<td>Change my perceptions about some students' learning abilities.</td>
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<tr>
<td>Increase my understanding of how to motivate students to work harder.</td>
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<tr>
<td>Significantly change how I teach.</td>
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<tr>
<td>Significantly change how I work with other teachers.</td>
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</table>

11.) Anything else you'd like to share concerning your training or experience working with a professional learning team?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Thank You!

Thank you for taking our survey. Your response is very important to us.
APPENDIX I

PRIOR KNOWLEDGE AND EXPERIENCE

WITH COLLABORATION INTERVIEW
What types of professional development have you participated in?
What do you feel makes for quality professional development?
What do you already know about norms of collaboration?
What types of things have you collaborated with others on? With who?
Do you feel that teacher collaboration is beneficial? Why or why not??
What are the potential benefits of teacher collaboration?
What do you think quality teacher collaboration looks and sounds like?
What are your thoughts about collaboration as a vehicle for teacher learning?
What do you expect to gain from the teacher collaboration training?
What are your thoughts about using instructional planning tools?
Any other thoughts on teacher collaboration?
APPENDIX J

COLLABORATION DEVELOPMENT AND INSTRUCTIONAL LEARNING TOOLS INTERVIEW
What are your thoughts on the collaboration training?
What did you gain from the different activities?
Which activities from the training did you find the most beneficial?
Which activities from the training did you find the least beneficial?
How could this training be improved?
In our first set of interviews, most of the thoughts on collaboration centered about idea sharing between teachers of the same content. What are your thoughts about idea sharing between teachers of the different contents?
What are your thoughts about the learning plan and the action plan taking us beyond idea sharing?
What are your thoughts about using collaboration as a vehicle for your own learning?
What do you think you can learn from and with your team?
Did any of the instructional planning tools stand out to you as especially useful?

<show symlog diagram explain three dimensions>

What do you see?
What do you think a team that collaborates effectively looks like in symlog space?
After going through the training in effective collaboration, what do you think the next symlog diagram will look like?

<end symlog>

What are you most looking forward to about working on a professional learning team?
Has your instructional planning changed as a result of your participation in the professional learning team? If so, how has it changed?

Do you think your collaborative behavior has changed as a result of this professional development and your participation on a professional learning team? If so, how has it changed?

Do you think your behavior has changed as a result of using the various instructional planning tools?

<show symlog diagram explain three dimensions>

What do you see?
What differences do you noticed compared to the first symlog diagram that we looked at?
What do you think might have accounted for those changes?

<end symlog>

What have you learned about teacher collaboration from your participation on a professional learning team?
APPENDIX L

INSTITUTIONAL REVIEW BOARD APPROVAL
To: David Moore  
FAB

From: Mark Roosa, Chair  
Soc Beh IRB

Date: 06/18/2010

Committee Action: Exemption Granted

IRB Action Date: 06/18/2010

IRB Protocol #: 1006006245

Study Title: The contribution of professional development to a middle-school team's collaboration and instru

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(1)(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.