Building a Collaborative Culture: Study of a High School Cross-Curricular

Professional Learning Community

by

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ABSTRACT

The importance of teacher collaboration and professional growth are highlighted by their inclusion in the 2015 Every Student Succeeds Act (ESSA). In ESSA, it is recommended that teachers are provided with opportunities to collaborate and participate in learning communities. The purpose of this action research study was to address the problem of practice of a lack of teacher collaboration and professional learning community (PLC) at Sun Valley High School (SVHS); a 9th-12th grade public school in southern California. Through previous cycles of research, an online collaborative space to foster and support teacher collaboration was created; the PLC Team Hub. This study examined the attitudes and experiences of three teachers participating in a first-year, cross-curricular PLC Team and their interaction with the PLC Team Hub. Data gathered includes survey data, teacher interviews, audio of PLC Team meetings, teacher-generated artifacts, and digital researcher journal. Results suggested that the PLC Team Hub was effective in facilitating teacher collaboration and communication for these teachers. Further, teachers reported that they observed evidence of cross-curricular student engagement and learning as a result of their participation in the PLC Team Hub. Recommendations focus on the future of the innovation and the need for institutional and administrative support to continue the PLC Team Hub at SVHS.

DEDICATION

I dedicate this work to two people whom I owe everything in my life to, my parents.

To my dad, Ferenc Szabó: Thank you for giving me confidence, teaching me determination and the importance of justice, and filling my childhood with charm and laughter. *"You either got it, or you don't."* I love and miss you every day apuka. Thank you for everything.

To my mother, Maria Graves Szabó: All of who I am, I owe to you mama. You were the definition of strength, beauty, and resilience. Thank you for teaching me to always endeavor to be my best self, to never give up, to always strive to be kind, and to show up every day giving my best. I could never have accomplished this without your guiding voice and light. I love you. I miss you. I cherish you. Always.

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A special thank you must be given to my sister Erzsebet. I simply would not have survived the past three years without my best friend. She has been the encouraging voice of my parents in my ear and giver of the best big sister hugs. I love her beyond words and don't know what I'd do without her and her infectious laugh, humor, and singing.

My final and most important thank you goes to my husband Chris. For the past three years he has held it down in every way imaginable. He has filled the role of personal chef, house cleaner, launderer, therapist, and every other role that was needed so that I could concentrate on my writing. He held me together when I was convinced I couldn't keep going and picked up all of my slack. He is my ride or die, my biggest cheerleader, and simply the most caring human I have ever encountered. I love and cherish him beyond words and measure. His love has buoyed me throughout this process. I am the luckiest woman to have you, Chris.

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CHAPTER 1

INTRODUCTION

At the beginning of March 2020, I started my journey as an informal teacher-leader at my school. Through firsthand experiences and discussions with colleagues, I was able to start my first steps toward constructing an action research project that addressed the concerns of my colleagues and myself regarding the lack of a collaborative community in our local context. This action research dissertation project addresses the local problem of practice of a lack of a collaborative community and proposes a solution in the form of the innovation of a *PLC Team Hub*. In this introductory chapter I will discuss the larger national context, local context, problem of practice, research questions, prior cycles of research, and the overall purpose of this project.

National Context

In the United States, K-12 schools receive significant attention regarding standards, achievement, funding, and the never-ending quest to "fix" the myriad of challenges that plague schools. School improvement efforts are plentiful and many initiatives that are adopted with great enthusiasm by stakeholders are quickly abandoned for the next new quick fix. However, despite a large sum of funds spent on these improvement efforts in U.S. schools since the passage of the Elementary and Secondary Education Act (ESEA) in 1965, research conducted by the National Assessment of Educational Progress (NAEP) in 2002 showed there was still a significant achievement gap between high- and low-income students in U.S. schools (U.S. Department of Education, 2004, p. 6). The NAEP research also showed that America's lowest education

performers have shown only slight improvement in academic achievement (U.S. Department of Education, 2004, p. 6). In response to this national issue, an education reform act was proposed and passed by the United States Congress in 2002. The purpose of this act, titled No Child Left Behind (NCLB), was to improve student achievement and close achievement gaps in the U.S. education system (U.S. Department of Education, 2004, p. 1). The goals of NCLB were to create a culture of accountability in schools, raise student achievement, close the achievement gap, and ensure the recruitment and employment of "highly-qualified" teachers (U.S. Department of Education, 2004, pp. 6-9). In 2015, NCLB was replaced with Every Student Succeeds Act (ESSA). This new law has many of the same goals as NCLB and focuses on "rigorous and comprehensive state-developed plans designed to close achievement gaps, increase equity, improve the quality of instruction, and increase outcomes for all students" (U.S. Department of Education, n.d.).

In ESSA, the federally mandated requirement for schools to employ highly qualified teachers was eliminated and replaced with the minimum requirement that teachers acquire an applicable state certification and fulfill licensure requirements (California Department of Education, 2020). Although the term "highly qualified" teacher was eliminated in ESSA, the act still emphasizes the need for excellent and effective educators (U.S. Department of Education, 2016, p. 3). In the ESSA guidance document published by the U.S. Department of Education (2016), schools are encouraged to implement high-quality induction and mentoring programs for teachers to support and increase teacher retention and to improve student achievement. According to ESSA, schools should also offer teachers more opportunities to engage in teacher leadership

opportunities, and the opportunity to "exercise increased responsibility and to grow professionally" (U.S. Department of Education, 2016, p. 13). ESSA recommends that schools provide teachers opportunities to participate in learning communities and peer observation, engage in collaborative planning and professional development, and mentor new teachers (U.S. Department of Education, 2016, pp. 13-14).

The goals and recommendations of teacher collaboration and professional growth made by the ESSA continue to be examined by education researchers studying professional learning communities (PLCs). A prominent expert in PLCs, education researcher Richard DuFour, defined PLCs as "an ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve" (DuFour et al., 2010 What Are Professional Learning Communities section). In *Professional Learning Communities at Work: Best Practices for Enhancing Student Achievement* (DuFour & Eaker, 1998), the authors described authentic PLCs as a learning community which share the following characteristics: a shared mission, vision and values, engagement in collective inquiry, collaboration for a common purpose, are action orientated and willing to experiment, seek continuous improvement, and are results orientated. With increased attention on the challenges teachers face such as dissatisfaction and disengagement, educational researcher Michael Fullan (2016) suggests that the cultivation of PLCs can be the answer, as well as the key to the successful implementation and support of educational changes. Fullan also explains that a strong indicator of successful school change and innovation can be found in the collegiality among teachers in a school and points out that "virtually every research study on the topic has found this to be the case" (p. 107). Despite this

knowledge, the implementation of effective PLCs on a large scale continues to be a challenging innovation for schools (Fullan, 2016).

In addition to the benefits of collegiality and collaboration noted previously, teachers can also positively influence student achievement by engaging in a PLC. In the process of participating in a PLC, teachers can participate in intensive collaboration and exchange of knowledge, which in turn is likely to contribute to a positive influence on student achievement (Basileo, 2018). Creating assessments to check student learning is also a key component of a PLC. When teachers collaborate on assessment criteria it can have a positive outcome on classroom instruction and student achievement; when creating assessments, teachers decide not only what to teach but what not to teach (DuFour & Eaker, 1998).

As the popularity of developing and implementing PLCs in schools expanded, DuFour (2004) cautioned that the three big ideas of ensuring that students learn, promoting a culture of collaboration, and a focus on results were not lost in implementation. Pirtle and Tobia (2014) recommended a structured approach in building PLCs, including specific tools and protocols to effectively implement PLCs in schools and districts. The authors also recommended following six specific insights to support PLC implementation. The six insights included: provide a clear structure and purpose for PLC meetings, address the most pressing instructional challenges, provide support from all levels of the school system, foster an atmosphere of trust, monitor the work of PLC and provide members constructive feedback, and support teachers' sense of efficacy and level of professionalism (Pirtle & Tobia, 2014). If PLCs are well implemented, "they minimize teachers' isolation, support their instruction, improve their school as an

organization, and increase students' learning" (Johnson, 2019, p. 98). The implementation and support of PLCs can establish a collaborative culture that supports both teacher growth and student achievement.

Currently, schools across the U.S. are adapting back to in-person learning after the COVID-19 pandemic. This global pandemic, which began in early 2020, upended teaching and learning for students and teachers and presented new challenges for teachers faced with transitioning from in-person instruction to distance learning. As teachers began returning to classrooms for the 2021-2022 school year, many were confronted with additional job demands coupled with a lack of job resources such as social support (Marshall et al., 2022). Faced with this work environment of new demands and stressors, teachers increasingly experienced feelings of burnout (Pressley, 2021). All of these factors have contributed to high teacher turnover and teacher shortages in K-12 schools.

Local Context

At the beginning of the 2019-2020 school year, I was a new hire teacher to Sun Valley Middle School (pseudonym), a 6th-8th grade school located in the Desert Unified School District (DUSD) (pseudonym) in southern California. Upon my hiring at DUSD, I was given the opportunity to build relationships with other fellow new teachers in the district, as well as other new teachers at my school site, through the district's new teacher induction program. Through my conversations with teachers, I observed that a majority felt overwhelmed, "out of the loop" with the school culture and communication, upset that they had no time for planning or collaboration with other teachers, and were unclear of their classroom expectations. Through my own experience, as well as the information gathered from other teachers, it was clear that there was limited communication and

collaboration among colleagues at my school site of Sun Valley Middle School. This lack of collaboration and communication among colleagues was concerning and made me reflect on my previous professional experiences with teacher collaboration. Through my past experiences of participating in PLCs at other school sites I was able to gain much needed support from my colleagues, leadership and guidance from mentor teachers, and resources to support and improve student learning.

Throughout the school year I also observed that the allotted time for collaboration, which is built into the school calendar and schedule, was not in practice treated as authentic teacher collaboration time. The allotted time for collaboration consisted of one professional development meeting scheduled for one day every month. Sun Valley follows a half-day schedule on these scheduled professional development days and at the end of the day the faculty meet in the school's cafeteria. During these meetings, the principal of Sun Valley led the meetings and disseminated information from the front of the cafeteria while teachers sat at tables and listened to the information. Most of these meetings were used to disseminate information to faculty, complete administrative to-do tasks, announce changes that were being implemented, and notification of upcoming events. After the meeting, teachers were sometimes instructed to meet with their curriculum department to collaborate. With no clear guidance on what exactly was to take place during this collaboration time, and depending on the department, this was interpreted differently in many ways. My experience as a member of the social studies department involved everyone going back to their own classrooms to work independently. As a new teacher at the school, I felt I was missing out on important connections with my colleagues by not participating in any collaboration or PLC

practices. From my previous experiences of participating in high-functioning and effective PLCs, I have witnessed how first year teachers to veteran teachers benefit from participating in PLCs. With current research overwhelmingly supporting the importance of PLCs for educators and schools (DuFour, 2015), it was concerning that Sun Valley did not employ this professional practice.

At the end of the 2019-2020 school year, I was given the opportunity to transfer from Sun Valley Middle School to Sun Valley High School (SVHS). SVHS is a 9th-12th grade high school which is also located in the Desert Unified School District (DUSD). As a 10th grade social studies educator at SVHS, I was again able to observe the school culture, professional learning opportunities, and policies and programs, as I did at Sun Valley. Through my observations I learned that like Sun Valley Middle School, SVHS did not utilize any formal PLC practices at the school. There were instances where I observed teachers coming together to collaborate informally, but they would not be recognized as a PLC that is defined by researchers and practitioners. From my experience of teaching at SVHS, it became apparent that there was a lack of collaboration among colleagues.

Problem of Practice

SVHS can be described as an "egg-crate" school with classrooms on opposite sides facing each other, similar to an egg crate structure, which isolates teachers and discourages collaboration, limits teacher growth, and curtails a collective responsibility to the school (Johnson, 2019). However, with the implementation of a PLC protocol at SVHS, teachers can have the opportunity to break out of the egg-crate. When teachers are given the opportunity to meet with colleagues and collaborate, they report that it is a

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"welcome change from the isolation and focus on individual effort that characterize the traditional professional context of education" (Annenberg Institute for School Reform, 2004). Teachers who participate in PLCs also report that by participating in an open and honest PLC, they feel they can be vulnerable and share with their colleagues not only their successes, but their failures too (Johnson, 2019). In my previous experience participating in PLCs, I valued the trust that was built with my colleagues that allowed me to be open and vulnerable in asking for support and guidance in my professional practice.

After identifying the problem of practice in my local content, an added impediment to teacher collaboration appeared. Due to the COVID-19 global pandemic which began in February of 2020, SVHS was mandated by the State Department of Education to begin the 2020-2021 school year virtually. Teachers and students were unable to meet in-person and instead engaged in distance teaching and learning. Teaching can be an already be an isolating profession (Johnson, 2019) and this added impediment of not having contact with colleagues exacerbated this issue. During the 2020-2021 school year at SVHS, many weeks passed where I had limited to no interaction with my colleagues. With no scheduled collaboration time put in place and the absence of a collaborative culture, I found myself isolated at home with little to no support from colleagues. Due to the added obstacles of not being able to meet in-person because of COVID-19 restrictions, combined with virtual meeting fatigue, collegial discussion and collaboration among teachers became even more scarce.

In the fall of 2021, SVHS returned to in-person instruction and learning. With this return to campus, there were a range of concerns voiced by teachers during faculty and

curriculum department meetings. These concerns included integrating the new 1:1 computer technology effectively in the classroom, the social and emotional needs of students, and learning realignment that occurred due to the challenging nature of distance learning during the 2020-2021 school year. Wanting to address these challenges, I was looking forward to discussion and addressing these concerns with colleagues. However, the disruptions and instabilities continued, and minimal collaboration time or opportunities were made available. The need for teacher collaboration became even more apparent.

Prior Cycles of Action Research Informing this Dissertation

Action research allows teachers to conduct a systematic inquiry into their practice to improve their effectiveness as an educator and offers opportunities to reflect on their practices (Mertler, 2020). Researchers focus on a specific and practical issue and seek to find solutions to the problem to improve the operation of the educational setting, improve teaching, and improve student learning (Creswell & Guetterman, 2019). Within the scope of schools, action research can also be used for staff development, teacher development, and to address schoolwide problems. The emphasis in this type of research is "taking action" by practitioners and participating in research (Creswell & Guetterman, 2019). The process of conducting action research includes the following four steps: identifying an area of focus, collecting data, analyzing and interpreting the data, and developing a plan of action. As action research is a cyclical process, the researcher-practitioner completes these four steps in multiple cycles.

Two cycles of action research led to this dissertation, Cycle Zero and Cycle One. For Cycle Zero of research for this study, I conducted semistructured interviews with four

teachers at SVHS. From this data I identified two areas of focus to investigate further: teacher collaboration and professional learning communities (PLCs). After further analysis of the interview data and factoring in the absence of participants in Cycle One, I then developed an action plan that included the innovation of a PLC protocol, (Appendix A), to implement at SVHS.

During the Cycle Zero of research for this study, I identified the two focus areas of teacher collaboration and professional learning communities (PLCs) to investigate. I then collected data by conducting semi-structured interviews with four teachers at SVHS. From the data gathered from the interviews, three central themes regarding teacher collaboration and PLCs emerged. Participants indicated that (a) there is some formal and informal teacher collaboration occurring at the departmental level, (b) teacher collaboration efforts that are occurring are not always effective, and (c) they are open and interested in more structured collaboration.

Depending on the content department, teacher collaboration is occurring both formally and informally. Comments from participants included, "We meet as a department on Zoom once a week," and "We are in constant communication through a group chat that we are all in." Responses indicated that the math department has a higher level of collaboration than other content departments at SVHS. Participants commented that the math department "...Get together frequently to go over course sequence, various activities, and to create common assessments, and that "We share as much as possible." One teacher from outside of the math department also commented that "The math department really works together."

Although there is some collaboration occurring at SVHS, participants indicated that the collaboration efforts are not always effective. Comments from participants included, "Collaboration is somewhat effective, but not very effective when people do not follow-through," and "Collaborating within my team is good, but outside of team, not great." One respondent candidly noted that "Everyone is an island at this school...collaboration that is 'divide and conquer' is frowned upon." This respondent also commented that teachers "Don't find a benefit to collaboration."

For the collaboration that is occurring at SVHS, respondents indicated that they were open and interested in more structured collaboration. One participant commented that "PLCs would be useful if they are used in the way they are intended to be." Another respondent commented that "Collaborating with my team is great but more structure would be nice, but in a way that still feels organic." Also, in general, respondents indicated that they are interested in more collaboration within and outside of their department. Comments from respondents included, "It would be nice to reach out to other districts and communicate with them to see what they are doing," "I wish we got together with other districts," and "My goal is to work together as much as math does."

After analyzing the data I gathered from these interviews, I then developed a PLC Team Protocol, to implement at SVHS for Cycle One of this inquiry. The intentions of Cycle One were to gather data from study participants of their attitudes and perceptions of teacher collaboration before and after the implementation of the PLC Team Protocol, to integrate feedback provided from participants on the efficacy of the PLC Team Protocol form, and to analyze observation data collected to inform future iterations of the PLC protocol.

In preparation for the intervention, I held a virtual meeting to introduce and train teachers on the use of the PLC Protocol at the beginning of the second semester of the 2020-2021 academic year. The participation in this training was completely voluntary. I unfortunately did not have any volunteer participants. With no volunteer participants, I re-assessed my next steps and met with my school administrator to discuss a re-direction for my study. I then decided to pivot from a voluntary PLC Team, to targeting a specific department to gauge their willingness to participate in a pilot PLC Team project. The 10th grade teachers of the English Language Arts department expressed their interest in a cross-curricular PLC Team with the 10th grade Social Studies department. With their participation secured, the planning began for this next cycle of research.

Purpose of the Project

Overall, the evidence from my observations, experiences, and prior cycles of action research suggests that the *problem of practice* driving this project is the lack of a PLC structure to foster and support teacher collaboration. In response to this evidence, an innovation that provides teachers guidance and support to effectively collaborate with their colleagues is needed at my school site. Thus, the purpose of this action research dissertation is to address the problem of practice and to implement a *PLC Team Hub* at SVHS.

Research Questions

Through the implementation of the *PLC Team Hub*, this study will work to answer the following research questions:

RQ 1: How does implementation of the *PLC Team Hub* at SVHS affect teachers' perceptions of collaboration?

RQ2: How does implementation of the *PLC Team Hub* at SVHS affect teachers'

perceptions of (a) student engagement and (b) student learning?

RQ 3: How effective is a *PLC Team Hub* at facilitating teacher collaboration?

RQ 4: What is the experience of an "insider" teacher-leader developing and

implementing the *PLC Team Hub*?

CHAPTER 2

REVIEW OF SCHOLARLY AND PRACTITIONER KNOWLEDGE INFORMING

THE STUDY

The previous chapter discussed the larger national context, the local context, problem of practice, research questions, prior cycles of research, the overall purpose of this project, and the need for teachers to engage in collaboration with their colleagues in professional learning communities (PLCs). This chapter will discuss the scholarly and practitioner knowledge informing the study and is presented in two sections:

1. theories, concepts, and frameworks guiding the inquiry, and

2. the implications of these on this dissertation.

Theory, Concepts, and Frameworks Guiding the Inquiry

The following four primary concepts are combined to make up the theoretical framework of my study: Communities of Practice, teacher collaboration, PLCs, and Guskeys's theory of teacher change**.** In this section I provide an overview of each theory, concept, and framework including their definition and background, related research and criticism, and their application to the study.

Communities of Practice

Definition and Background.

When teachers come together to share lessons, teaching strategies, and their expertise, they are engaging in a social learning group that matches shares many characteristics with Étienne Wenger's (1998) Communities of Practice (CoP) theory. Wenger described CoP as communities of people that participate in collective learning together in pursuit of a shared passion or enterprise (Wenger, 1998). The foundation of

the CoP theory was constructed in 1990 by Wenger and fellow educational researcher and theorist Jean Lave. In their work, *Situated Learning: Legitimate Peripheral Participation*, the core ideas of CoP were developed as well as the theory's connection to Vygotsky's theory of social learning (Learning Theories, 2021). Lave and Wenger initially referred to their theory as "communities of practitioners," and described the role of newcomers learning from experienced practitioners through peripheral participation. The researchers coined the term CoP in 1991 while studying "apprenticeship as a learning model" (Wenger, 2011, p. 3).

The CoP model includes four interdependent components-community, practice, meaning, and identity. The component of community is characterized by mutual engagement, joint enterprise, and shared repertoire (Wenger, 1998).

Figure 1

Community of Practice Components
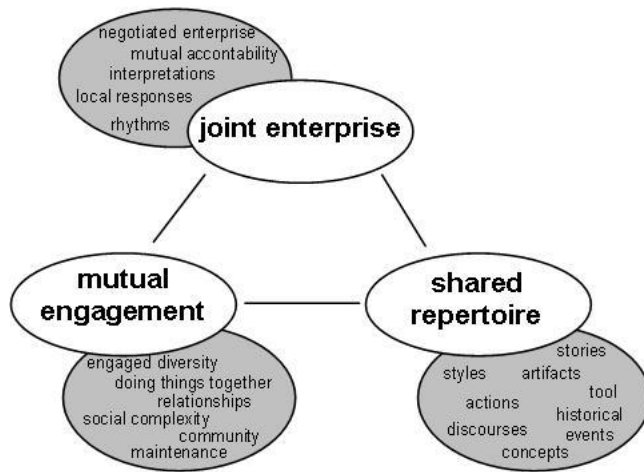
Note. Taken from *Communities of Practice* (Wenger, 1998, p.73)

Wenger (1998) stressed that membership in a community of practice is a matter of mutual engagement and what defines the community; members of the community engage in actions "whose meanings they negotiate with one another" (p. 73). Wenger also stressed that membership in a community of practice is not automatic nor bound by geographic proximity and is not synonymous with a group or team (Wenger, 1998). Through their mutual engagement, members in a community of practice collectively negotiate a joint enterprise. The enterprise is "never fully determined by an outside mandate, by a prescription, or by an individual participant" (Wenger, 1998, p. 80). In their community, participants develop a shared repertoire characterized by the unique discourse found in a community of practice. The shared repertoire includes "routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts" (Wenger, 1998, p. 83), produced or adopted by the community over the time of its existence.

Related Research and Criticism.

The CoP key principles of shared learning and mutual collaboration in the pursuit of a shared enterprise can be found in the concepts of teacher collaboration and PLCs. Graham (2007) conducted a case study that investigated the structured collaboration efforts of teachers at the first-year Central Middle school. Through Graham's interviews with teachers, the researcher learned that "teachers share instructional strategies, make decisions about curriculum and assessment practices, and analyze student achievement data" (pp.11-12). Through their collaboration in PLCs, teachers were provided with opportunities to learn from each other, and one teacher expressed that, "I've had ten times more growth this year than in previous years because I'm seeing things through at least

ten other eyes" (Graham, 2007, pp. 11-12). This mutual engagement and learning from colleagues through PLCs aligns well with the CoP framework.

Cuddapah and Clayton (2011) also investigated teacher collaboration through the CoP lens by examining the cohort professional development experience of new teachers in an urban school district. The purpose of the study was to evaluate the efficacy of the cohort model based on the theoretical framework of Wenger's CoP. Cuddapah and Clayton collected data through observational field notes and found through their data coding that the participants of the study engaged in the three concepts of practice, meaning-making, and identity linked to Wenger's theory. Although the cohort was designed by the school district, which is considered an outside participant of the CoP, the community grew organically and engaged in collaborative activities. The authors found that participants frequently shared classroom problems and experiences during their meeting sessions and engaged in mutual problem solving. With teachers willingly offering and accepting their experiences and expertise, this displays the concepts rooted in Wenger's social learning theory of CoP.

Although the CoP theory and ideas have been integrated into many organizations, researchers Hodkinson and Hodkinson (2004) of the Lifelong Learning Institute offered a critique of the theory and identified its shortcomings. One shortcoming highlighted by Hodkinson and Hodkinson is that CoP does not deal adequately with workers as individuals, although Wenger focuses a large part of the theory on the concept of identity (Hodkinson & Hodkinson, 2004). Additionally, Hodkinson and Hodkinson claim that Wenger leaves out inequalities, such as status, social, or economic inequalities, that may affect an individual's ability to learn in their community.

Application to Study.

Despite the criticism put forth, the CoP theory is important to my study because it centers on learning from experienced practitioners. Veteran teachers possess a wealth of knowledge from which apprentice teachers can learn and benefit from. This theory not only discusses the benefits of newcomers learning from experienced practitioners, but also how knowledge and expertise is built through shared learning in a community. This is an important component as it relates to my study of teachers communicating, collaborating, and building knowledge with each other in a professional community.

Wegner's CoP theory is foundational to my study for two reasons. One, Wenger (1998) stresses that membership in a community of practice is a matter of mutual engagement and is what defines the community; members of the community engage in actions "whose meanings they negotiate with one another" (p. 73). Membership in a community of practice is not automatic or bound by geographic proximity and is not synonymous with a group or team. With my proposed innovation of implementing a *PLC Team Hub* at Sun Valley High School, teachers will have the opportunity to collaborate in communities described by Wenger and can also connect with other CoP inside and outside of the local context. Second, Wenger explains that through their mutual engagement, members in a community of practice collectively negotiate a joint enterprise. The enterprise is "never fully determined by an outside mandate, by a prescription, or by an individual participant" (Wenger, 1998, p. 80). In their community, participants develop a shared repertoire; the unique discourse found in a community of practice. The shared repertoire includes "routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts" (Wenger, 1998, p. 83), produced

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or adopted by the community over the time of its existence. Although my proposed intervention of a PLC Protocol is in its essence a practice that is proposed from outside of their community, members will have the freedom to create their joint enterprise and purpose using the shared repertoire unique to their department, curriculum, or grade level content.

Teacher Collaboration

Definition and Background.

Teacher collaboration and its potential benefit to positively impact student achievement, school improvement initiatives, and professional growth, started to gain national attention in the early 1990s. Cultivating a collaborative culture has been viewed as one of the first and most important priorities for those seeking to improve school effectiveness (Eastwood & Louis, 1992). Contemporary school reformers have called for an increase in teacher collaboration and collaborative cultures, but teachers must be provided training, guidance, and support for successful collaboration to take place (DuFour & Eaker, 1998). Hargreaves (1994) provides a useful distinction between collaborative cultures and the opposing concept of *contrived collegiality*. In contrived collegiality, collaboration is compulsory, occurs in a fixed time and space, has predictable outcomes, and there is a focus on implementation rather than development. Datnow (2011) investigated the issues of teacher collaboration and contrived collegiality. Datnow's comparative case study of two school districts, one located in California, and the other in Texas, found that authentic and effective teacher collaboration can occur if properly supported by school and district administrators. Datnow also found that mandated collaboration may begin as contrived collegiality but has the potential to

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develop into a collaborative culture. Once a collaborative culture is established, and trust is built within that culture, teachers are provided with opportunities for continuous improvement and career-long learning to improve their effectiveness (Fullan, 2016).

Related Research and Criticism.

Schneider et al. (2012) conducted case studies on three high schools in three different school districts in the midwestern United States to investigate the types of activities of the three schools in their implementation of PLCs and their effectiveness in promoting academic achievement of English Language Learners (ELLs). The authors explained the characteristics of effective PLCs and how the development of professional teams improved the instruction of ELLs. The authors conclude,

> Effective PLCs are focused by a commitment to improve learning, informed by recognized principles, structured by the norms and inquiry processes that team members establish, and guided by school leaders who support teams and help them envision goals worth pursuing (Schneider et al., 2012, p. 373).

Although the power of teacher collaboration is found in "virtually every research study on the topic..." (Fullan, 2016, p. 107), effective collaborative cultures are difficult to establish and maintain. McLaughlin and Talbert (2001) found this especially true for most high school departments which lack a culture of collaboration and sharing of practices. McLaughlin and Talbert also stated that even though teachers may engage in strong collaborative cultures, it does not always translate into effectiveness if methods that do not get results are reinforced. Both McLaughlin and Talbert's, and Schneider et al.'s studies show that developing, implementing, and sustaining a collaborative culture

takes focused work, but equally important is the collaborative activities done inside them.

Application to Study.

The concept of teacher collaboration is important in my study as my innovation of a PLC Team Protocol focuses on teachers coming together to effectively collaborate in sharing ideas with each other for the purpose of improving student learning. As my study includes an innovation where teachers meet with the goal of discussing teaching strategies, pedagogy, and student learning, the concept of teacher collaboration is foundational to the ultimate goal of increased effective teacher collaboration in my context. Fullan (2016) encouraged teacher collaboration to increase collegiality and stressed the positive influence it can have on student achievement. With my study examining the attitudes and experiences of teachers coming together to collaborate, the concept of teacher collaboration is key to understanding if the PLC Team Protocol innovation is an effective form of collaboration.

Professional Learning Communities (PLCs)

Definition and Background.

As research developed around teacher collaboration, researchers began using the term professional learning communities (PLCs) to describe the process of teacher collaboration. In 1995, researcher Dr. Milbrey McLaughlin, an expert in the field of teacher collaboration, addressed the annual conference of the National Staff Development Council and stated that the most promising strategy for school improvement is the ability of school personnel to function as a professional learning community (All Things PLC, 2020). In *Professional Learning Communities at Work: Best Practices for Enhancing*

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Student Achievement (DuFour & Eaker, 1998) the authors described authentic PLCs as a

learning community which share the following characteristics: shared mission, vision,

and values, engagement in collective inquiry, collaboration for a common purpose, are

action oriented and willing to experiment, seek continuous improvement, and are results

orientated (DuFour & Eaker, 1998). Teachers who are a part of a productive PLC are

open to feedback, work toward improvement in their practices, and have an unwavering

focus on student learning (Louis & Kruse, 1995 as cited by Hord, 1997).

As the popularity of developing and implementing PLCs in schools grew,

DuFour (2004) cautioned that the three big ideas of ensuring that students learn,

promoting a culture of collaboration, and a focus on results was not lost in

implementation. Pirtle and Tobia (2014) recommend a structured approach in building

PLCS, including specific tools and protocols to effectively implement PLCs in schools

and districts. The researchers also recommend following six insights to support PLC

implementation including: provide a clear structure and purpose for PLC meetings,

address the most pressing instructional challenges, provide support from all levels of the

school system, foster an atmosphere of trust, monitor the work of PLCs, provide

constructive feedback, and support teachers' sense of efficacy and level of

professionalism (Pirtle & Tobia., 2014). If PLCs are well implemented, "they minimize

teachers' isolation, support their instruction, improve their school as an organization, and

increase students' learning" (Johnson, 2019, p. 98).

Related Research and Criticism.

Implementing and sustaining effective PLCs is complex work and can face

considerable barriers. In their study of six high schools, Wells and Feun (2007) found

several challenges high schools face when implementing PLCs. One central challenge involved the professional culture of the school. For example, Wells and Feun found that "working with a negative culture that is strong and that can be either silent or passive without implementation of the innovation or vocal and disruptive, resulting in threatening the progress of implementation" (Wells & Feun, p. 156). Another challenge to implementing and sustaining effective PLCs concerns the precious teacher commodity of time. In their study of the implementation of a middle school PLC protocol, researcher Slack (2019) explained how the issue of time was a recurring challenge for teachers. Teachers expressed their concern of not being able to commit to attendance of all meetings due to a lack of time and how they were not open to collaboration and sharing of teaching strategies as they were already feeling overwhelmed by other tasks. Slack remarked that "for transformative PLCs to be sustainable, there needs to be dedicated time that is held sacred." Johnson (2019) reinforced the importance of dedicated time for teachers to meet with colleagues to collaborate and recommended common planning time (CPT) organized by content areas.

To increase the efficacy of PLCs, consistent support and evaluation of PLC effectiveness is required. Graham (2007) found this to be true in their study of Central Middle school's first year of PLC implementation. Graham found that for PLCs to be effective, a solid and supportive foundation must be laid at the beginning of PLC implementation, and teachers must be provided continual support for improvement (Graham, 2007). This support must be provided by organizational leadership at all levels. Graham's (2007) interviews of the middle school's 24 teachers indicated that same-grade,

same-subject PLC activities "had an impact on their professional improvement, and the indicated catalyst was most often the opportunity to collaborate with others" (p. 8).

In their study, Muñoz and Branham (2016) examined the implementation fidelity of a PLC process in 10 elementary schools and three middle schools in the Jefferson County Public Schools (JCPS) in Louisville, Kentucky. Muñoz and Branham investigated the implementation of PLCs and conducted fidelity checks by checking student results. Muñoz and Branham found that well implemented PLCs coupled with effective professional development and actionable data can lead to positive outcomes in student learning. Muñoz and Branham described the PLC implementation process as a journey more than a destination and recommend providing a clear definition and description of a PLC and a dependable measure of implementation to gauge success at the beginning of the journey.

When PLCs have successful implementation, effective collaboration, and are supported by organizational leadership, it can positively impact student achievement and teachers' professional growth. However, if these conditions are not met, PLCs may not yield positive results. Sims and Penny (2015) found this to be the case in their study of a Texas high school's PLCs where the researchers found the PLCs had too narrow of a focus and mission of analyzing student data. By just focusing on student data, the PLCs failed in their mission of increasing student achievement (Sims & Penny, 2015). PLCs have the risk of failure if collaboration does not include the sharing of pedagogical knowledge and practice. In collaborative cultures teachers provide support to one another to support and improve instruction, share ideas, solve problems, and evaluate ideas in relation to student learning (Kohm & Nance, 2009). These professional activities can take

the form of team teaching, peer coaching, collaborative planning, or collaborative action research (Hargreaves, 1994).

Application to Study.

When schools foster and support these activities in a collaborative culture, it leads to innovation implementation success and longevity, higher levels of trust and respect among colleagues, higher achievement levels for all students, and improved instructional practices and professional knowledge (Fullan, 2016; Waldron & McLeskey, 2010). These goals and the concept of PLCs are central to my study and proposed innovation of a PLC Team Protocol. My proposed innovation of a PLC Team Protocol integrates the core tenets of PLCs with teachers meeting together to collaborate with the purpose of increasing student learning.

Guskey and Fostering Change

Definition and Background.

The introduction and implementation of a PLC Team is a significant change to the current culture at Sun Valley High School. Guskey's (1985) model of teacher change notes that organizational change "is a slow, difficult and gradual process for teachers" (p. 59). Guskey explained that teachers will not accept a new change in their practice until they see the evidence reflected in their students' learning. Guskey's model recommended small and modest changes that can demonstrate student improvement in a short period of time. Guskey (1985) stated that "when teachers see that a new program or innovation works well in their classrooms, change in their beliefs and attitudes can and will follow" (p. 59). With the innovation of the PLC Team, teachers will be making a small adjustment to their weekly

schedule and if their collaboration efforts are noticeable in their students' learning, they will be more likely to adopt the intervention. Guskey's theory of teacher change also emphasized the need for continuous support and follow-up after initial training and flexibility when implementing a change.

Related Research and Criticism.

What is the order of change in teacher classroom practices; the belief in the efficacy of the innovation or does the change come after teachers see the results of the innovation reflected in student learning Zambak et al., (2017) investigated this question in their one-year study of middle school science in-service teachers. The researchers investigated the effect of a one-year professional development (PD) program on the teachers' instructional practices, beliefs, and their students' achievement. The PD program served to support teachers in the implementation of inquiry-based instruction (IBI) in their classroom. In their findings, Zambak et al noted the complexity of teacher change. Although they found that the PD experience was effective in enabling teachers to change their beliefs and instructional practices and their student's achievement, they note that more research is needed to support the claims of interconnectedness of components found in Guskey's model. Opfer and Pedder (2011) echoed this claim and stated that teacher change is not dependent on teacher learning and that it can't be claimed that PD is the sole cause of change in the classroom.

Application to Study.

Although the PLC Team provides a framework to facilitate collaboration, teachers will still need the flexibility to engage in different collaboration activities while still receiving support and training throughout the implementation process. With teachers

engaging in collaboration through the *PLC Team Hub* innovation, I can examine how and to what extent their perceptions about collaboration are affected.

Implications for the Study

Implementing, encouraging, and supporting a collaborative culture among professionals can be a transformative practice that results in increased professional capital; growth of human capital, social capital, and decisional capital (Fullan, 2016). With this knowledge, I have used CoP as the foundation to build my study on. Taking the core idea of professionals creating a community and learning together and from one other while giving meaning to their actions, I then incorporated the concept of teacher-specific collaboration. How teacher collaboration can be implemented and what effective teacher collaboration looks like. To receive feedback from the participants in the collaborative community, I turned to Guskey's theory of teacher change to allow space for participants to evaluate if the *PLC Team Hub* innovation is an effective innovation for increasing collaboration and student learning. Lastly, to create a structure that helps and supports collaboration, I used the specific PLC framework created by DuFour et al. (1998). With the implementation of the *PLC Team Hub*, teachers will be able to engage, collaborate, learn, and share their expertise with their professional community.

After considering the scholarly and practitioner knowledge that informed this study, I applied this knowledge to my research process. Figure 2 displays the research process summary. This process will be discussed in further detail in the following chapter.

Figure 2

Research Process Summary
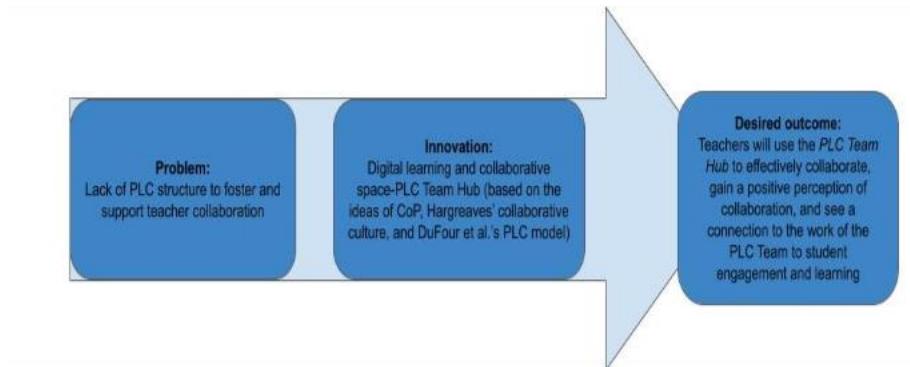
CHAPTER 3

METHOD

The previous chapter provided theoretical framing and related research to support the need for this study as well as the implications for the study. This chapter will provide the specific setting of this inquiry, participants, my role as a researcher-practitioner, a description of the innovation, data collection and analysis methods, and a timeline with procedures for the study.

Setting

This study took place at Sun Valley High School (SVHS) in southern California. SVHS is located in the Desert County School District that serves a population of 1,300 students and employs 52 teachers. The 9th-12th grade campus includes a large population of Hispanic students, which make up 85% of the student population. The percentage of students achieving proficiency on the state's end of course 10th grade English Language Arts (ELA) test for the 2020-2021 academic year was 71%. Due to the COVID-19 pandemic, the 2020-2021 academic year was conducted through distance learning. Teachers delivered instruction through an online learning management system and all students engaged in distance learning using school issued laptops. For the 2021-2022 school year, students and teachers returned to in-personal learning but still utilized the 1:1 technology and the learning management system (LMS) Canvas to create a blended learning environment. This study started at the beginning of the 2022-2023 school year; the 2022-2023 school year saw a return to in-person learning. Students continued to use their school-issued computers and teachers continued using Canvas to deliver course content.

Participants

The original participants of the *PLC Team Hub* included three 10th grade ELA teachers and one 10th grade social studies teacher. However, the social studies teacher had to exit the study two weeks in due to maternity leave. In my role as a 10th grade social studies teacher, I also participated in the study as a researcher-practitioner and member of the PLC Team. With my participation in the *PLC Team Hub* there was a total of four members participating in the PLC Team. Below, I will provide a brief description of each participant.

- Veronica is an ELA teacher with two years of teaching experience. She has been a teacher at SVHS for two years and teaches two courses: 9th-12 grade English Language Development (ELD) and 10th grade Honors ELA. Veronica shared that she is comfortable with creating and sharing digital learning resources.

- Diego is a newly certified teacher who recently transitioned from a career as an Information Technology (IT) manager. He is a first-year teacher and teaches one course: 10th grade ELA. Diego shared that he is very comfortable with creating and sharing digital learning resources.

- Isabel is an ELA teacher with over fifteen years of teaching experience. She has been a teacher at SVHS for ten of those years and teaches one course: 10th grade ELA. Isabel shared that she is comfortable with creating and sharing digital learning resources.

Role of the Researcher

In action research, the researcher can participate in the study as a fully functioning member of the community in addition to their role as researcher (Glense, 2006, as cited in Mertler, 2020). In my role as a researcher-practitioner, I collected survey and interview data from study participants, led professional development sessions to introduce the *PLC Team Hub*, and provided support to implement the innovation and engage with the *PLC Team Hub*. I also attended the *PLC Team Hub* meetings to observe and participate in the collaboration process and recorded the meetings for future analysis.

Description of the Innovation

As the study developed through prior cycles, I wanted to respond to the changing landscape of teacher expectations due to the COVID-19 pandemic. As teachers returned to the classroom during the 2021-2022 school year, new requirements for instruction, job expectations, and classroom environments were added to their already full workload (Pressley, 2021). These new stressors and anxiety related to the COVID-19 pandemic have significantly contributed to teacher burnout (Pressley, 2021). In May 2022, Marshall et al. conducted a nationwide survey to examine the effects of two years of teaching during the COVID-19 pandemic. The survey asked teachers about the support they received, challenges faced, their morale and mental health, and how they perceived changes made during the pandemic. Over half of the teachers reported low levels of morale and one-third of the teachers reported mental health concerns. However, teachers who felt respected and trusted to make decisions about their teaching were more satisfied with their jobs (Marshall, et al., 2022). The researchers also found that teachers who have "supportive administrators and the space and flexibility to do their professional work are

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less likely to consider leaving the classroom" (Marshall, et al., 2022, p. 8). To ease stress for teachers it is also recommended to make sure their voice is heard and to have more control over their time (McCarthy, et al., 2022). To help ease teacher anxiety and stress, I wanted to create a supportive and flexible learning environment. Based on the previous research on teacher burnout and stress, I wanted to make sure their voices were heard, and they had autonomy to direct their collaboration. To address this, I created an online learning and collaboration space for the PLC Team, called the *PLC Team Hub*. The *PLC Team Hub* is a blended learning and collaborative environment for participants of the study to collaborate in. The *PLC Team Hub* also hosted a discussion board where teachers could comment with questions and ideas or create a discussion thread on a topic of their choice. This discussion board was created to build a collaborative and collegial culture between the PLC Team members.

Inside the *PLC Team Hub* there was guidance for the PLC Team to facilitate discussion and effective teacher collaboration that also provided flexibility as teachers navigated the innovation. The *PLC Team Hub* was hosted on the LMS Canvas, which all PLC Team members had access to. To begin the collaboration process, teachers utilized the PLC framework form (Appendix A) as a starting point for collaboration (DuFour et al., 2010). This form included a guideline for teams to develop team meeting norms, a mission statement, goals, meeting roles, as well as four critical PLC questions to guide their collaboration. During the first PLC Team meeting, the team created their meeting norms and mission statement, which I posted on the *PLC Team Hub* homepage. Next, teachers identified an instructional unit to develop using the PLC framework form to guide their collaboration. This unit was called "Taking a Stand" and focused on the State

10th grade social studies standard of the Industrial Revolution and the State 10th grade ELA standard of argumentative writing. At the beginning of each meeting, the participants completed the Google Document form by answering the following questions, based on the four critical PLC questions of the PLC framework:

- What is it we want our students to learn?

- How will we know if each student has learned it?

- How will we respond when some students do not learn it?

- How can we extend and enrich the learning for students who have demonstrated proficiency? (DuFour et al., 2010, p. 19)

  - At the bottom of the Google Document there was an additional area for teachers to document questions and concerns regarding the PLC framework. These documents can be found in Appendix F to reference how the PLC framework was used and the agenda for the individual meetings.

After completing the PLC framework form, I created a monthly online module in Canvas where I placed the PLC framework form, teacher artifacts such as formative and summative assessments, and curriculum maps created by the PLC Team. Teachers had access to edit the *PLC Team Hub* and also uploaded assignments and modules from their courses. The three phases of the innovation are detailed in Table 1.

Table 1

PLC Hub Phases and Data

Phase 1 (September 2022)	**Artifact(s) analyzed**	**How Data was Analyzed**

• Introduction to teacher collaboration, PLC Team, and *PLC Team Hub*
 	
 • Completion of PLC framework form
 	
 • Identification of instructional unit to focus PLC Team collaboration
 	
 • Conduct initial teacher interviews
 	
 • Collect pre-innovation PLCA-R questionnaire responses
	• PLC framework form
	
	 • Teacher interviews
	
	 • PLCA-R questionnaire responses
	
	 • Researcher digital journal
		• First and second round coding
		
		     • In-vivo coding
		
		     • Focused coding
		
		     • Categories (Saldaña, 2016)
		
		 • PLCA-R interpretation steps

Phase 2 (October 2022)	Artifact(s) analyzed	How Data was Analyzed
• Write in researcher digital journal		

• Continue use of PLC framework form
 	
• Continue collaboration in PLC Team Hub
 	
• Develop cross-curricular unit matrix
 	
• Develop formative and summative materials for instructional unit
 	
• Continue in-person and online
	• Cross-curricular unit matrix
	
	• Formative assessments
	
	• Summative assessments
	
	• PLC meetings audio recordings
	
	• Researcher digital journal
		• First and second round coding (Saldaña, 2016)
		
		  • In-vivo coding
		
		  • Focused coding
		
		  • Categories (Saldaña, 2016)

collaboration via *PLC Team Hub* • Discuss instructional needs • Collect *PLC Team Hub* artifacts • Audio record in-person PLC Team meetings • Write in researcher digital journal		
Phase 3 (November-December 2022)	**Artifact(s) analyzed**	**How Data was Analyzed**
• Continue use of PLC framework from • Continue collaboration in PLC Team Hub	• PLC framework form • Formative assessments	• First and second round coding (Saldaña, 2016) • PLCA-R interpretation steps (Appendix D)

• Application of formative and summative materials in courses	• Summative assessments	• Comparison of data points
• Reflection on materials, effectiveness, and improvements	• PLC Team meetings audio recording	
• Identification of next instructional unit to focus PLC Team collaboration	• Post-innovation teacher interviews	
• Audio record in-person PLC Team meetings	• Post-innovation PLCA-R questionnaire responses	
• Conduct post-innovation	• Researcher digital journal	

teacher interviews • Collect post-innovation PLCA-R questionnaire responses • Write in researcher digital journal		

Data Collection and Analysis

For this study I collected and analyzed both quantitative and descriptive qualitative data. The overview of collection and analysis procedures will be described here and the results will be presented in Chapter 4. Practitioners who conduct action research often use multiple forms of data as it can provide a better understanding of the research problem than either data set could complete alone (Mertler, 2020). The qualitative data provides a narrative structure for analysis and the quantitative data serves a complementary role to add a second layer of depth to the analysis. Table 2 provides a grid to illustrate the alignment between the study's research questions and the types of data collection and data analysis. After the table, I will discuss the data collection and data analysis process in greater detail.

Table 2

Study Research Questions and Data Collection and Analysis Alignment

Research question	Data Collected	Data Analysis
RQ 1: How does implementation of the *PLC Team Hub* at SVHS affect teachers' perceptions of collaboration?	Pre and post-innovation implementation PLCA-R questionnaire (Appendix B)	• PLCA-R interpretation steps (Appendix D)
	Pre and post-innovation implementation teacher interviews (Appendix C)	• Condensed transcription (Paulus et al., 2014) • First and second round coding (Saldaña, 2016)
RQ2: How does implementation of the *PLC Team Hub* at SVHS affect teachers' perceptions of (a) student engagement and (b) student learning?	Pre and post-innovation implementation teacher interviews (Appendix C)	• Condensed transcription (Paulus et al., 2014) • First and second round coding (Saldaña, 2016)
	Audio recordings of PLC Team meetings	• Condensed transcription (Paulus et al., 2014)

		• First and second round coding (Saldaña, 2016)
RQ 3: How effective is a *PLC Team Hub* at facilitating teacher collaboration?	Audio recordings of PLC Team meetings	• Condensed transcription (Paulus et al., 2014) • First and second round coding (Saldaña, 2016)
	PLC framework form (Appendix A) *PLC Team Hub* artifacts Researcher journal	• First and second round coding (Saldaña, 2016)
RQ 4: What is the experience of an "insider" teacher-leader developing and implementing the *PLC Team Hub*?	Researcher journal	• used to triangulate and assist the coding process

Quantitative Data Collection

From the population of all teachers at SVHS, a sample of three teachers participated in this study. From a quantitative perspective, the sample size is small, however, the survey used was a preexisting survey that underwent validity procedures in a variety of different contexts and provided a starting point to observe where this study's group of participants landed within this measure. As data-driven decision making has been at the forefront of improvement efforts in K-12 education (Daniels, et al., 2019), I felt it was important to gather this quantitative data. The survey data collected served as a useful reference to assist in interpreting and complementing the qualitative data collected.

Participant survey data consisting of pre-and post-innovation was gathered through an online questionnaire. The questionnaire used was the Professional Learning Community Assessment-Revised (PLCA-R). Created by researchers Olivier and Hipp (2010), this questionnaire measures staff perceptions of school practices in relation to six dimensions of a PLC and its related attributes. The PLCA-R is composed of 52-items organized into six constructs, with each construct consisting of five to 11 questions. The responses are reported on a 4-point Likert scale with the following range: 4=strongly agree, 3=agree, 2=disagree, and 1=strongly disagree. The questionnaire's six constructs include:

- Shared and supportive leadership
    - Sample Statement: Staff members are consistently involved in discussing and making decisions about most school issues.
- Shared values and vision

- Sample Statement: A collaborative process exists for developing a shared sense of values among staff.

- Collective learning and application

  - Sample Statement: Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work.

- Shared personal practice

  - Sample Statement: Opportunities exist for staff members to observe peers and offer encouragement.

- Supportive conditions-relationships

  - Sample Statement: Caring relationships exist among staff and students that are built on trust and respect.

- Supportive conditions-structures.

  - Sample Statement: Time is provided to facilitate collaborative work.

The complete questionnaire is provided in Appendix B.

Quantitative Data Analysis

Data collected from the PLCA-R was used to augment the qualitative data that was collected. The questionnaire data was analyzed using descriptive statistics and comparing pre-and post-intervention survey results. Since the PLCA-R illustrates school-level practices, individual items as well as the PLC dimensions were reviewed for strengths and weaknesses of PLC practices. The PLCA-R interpretation steps that are recommended by the developers of the questionnaire were followed (Appendix D).

Qualitative Data Collection

Interviews

Participant interviews are an essential component of qualitative research that can help to understand the participants' viewpoint and reveal the meaning of their experiences (Brinkmann & Kvale, 2015). For this study, semistructured interviews were conducted with each PLC Team member to learn about their perceptions and experiences of teacher collaboration, PLCs, and the *PLC Team Hub*. The semistructured interview protocol (Appendix C) included several base questions with options to follow up with alternative or optional questions (Mertler, 2020). Since social interaction is a key component of research interviews, it is important to follow-up on subjects' answers to structured questions, and to clarify and extend the interview statements (Brinkmann & Kvale, 2015).

PLC Meeting Recordings

When the PLC Team met in-person, I recorded the meetings using an audio recorder app on my iPhone. The goals of recording the meetings were to investigate the extent to which the PLC Team implemented the PLC Team framework form and the *PLC Team Hub* as well as review any questions or challenges the team discussed.

PLC Team Digital Artifacts

One of the aims of this study was to evaluate how effective the PLC Team Hub is in facilitating teacher collaboration. To aid in this evaluation, artifacts that were produced by the PLC Team were gathered. PLC Team artifacts included such items as formative

and summative assessments, curriculum maps, daily lesson plans, and PLC Team framework forms generated by the PLC Team.

Researcher Journal

Lastly, I documented my experiences as a teacher leader developing and implementing a PLC Team through a digital journal. The purpose of this digital journal was like a data journal; a way to reflect on my professional practice, maintain a narrative account, and record my feelings and interpretations of the phenomena being studied (Mertler, 2020). In qualitative research, researcher journals can be used as a reflexive approach that allows researchers to evaluate their assumptions and present their findings with transparency (Ortlipp, 2008). Throughout the study timeline I wrote in and updated my journal periodically to capture my thoughts, experiences, challenges, and wonderings as I engaged in the study process. As with many processes, the reasoning behind decisions and emotions can be lost without documentation; this journal served as an anchor and repository I re-visited throughout the study process (Engin, 2011).

<div align="center">Qualitative Data Analysis</div>

A grounded theory informed approach and constructivist design was used to discover emerging themes based on the qualitative data collected. Grounded theory is a research design that fits the specific situation that is being studied, reflects the individuals in the setting, and encompasses all the complexities found in the process (Creswell & Guetterman, 2019). This approach is especially useful for qualitative researchers since it offers a "step-by-step, systematic procedure for analyzing data" (Creswell & Guetterman, 2019, p. 434). Grounded theory can be used in a variety of settings including studying a process, explaining actions of people, and explaining the interaction among people.

While I did not engage in theory building in this dissertation, my actions were informed by five specific tenants of grounded theory:

1. Conducting data collection and analysis simultaneously in an iterative process.

2. Analyzing actions and processes rather than themes and structure.

3. Use comparative methods.

4. Drawing on data (e.g., narratives and descriptions) in service of developing new conceptual categories.

5. Develop inductive abstract analytical categories through systematic data analysis (Charmaz, 2014).

I embraced constructivist design for this study since I engaged in an active role as a researcher-participant in the study. By using this approach, I was able to create an explanatory narrative of the experiences and feelings of teachers participating in the study (Creswell & Guetterman, 2019). After collecting data from interviews and the PLC Team meeting audio recordings, I employed the transcription approach of condensed transcription. Condensed transcription is a type of gisted transcription where a researcher reports the highlights of the data collected in a simplified, condensed, version (Paulus et al., 2014). To transcribe the audio recordings of the PLC Team meetings and interviews, I used the online transcription tool Happy Scribe. After collecting this data, as well as the PLC team artifacts and my researcher journal, I began the coding process. In the first phase of data analysis, I used an iterative process of examining the data that was gathered and engaged in initial coding to split the data into individually coded segments (Saldaña, 2016). For the second phase of coding, I used focused coding to search for the most

frequent or significant codes to develop the most cogent categories from the initially coded data (Saldaña, 2016).

Timeline and Procedure

At the beginning of the 2022-2023 academic school year, in August, I emailed participants the PLCA-R questionnaire and collected their online responses. In August I also conducted pre-innovation interviews with the participants of the study. In preparation for the innovation, training on the PLC framework form and the *PLC Team Hub* was conducted at the beginning of September and support for using the innovation was provided throughout the timeframe of the study. The PLC Team met in-person once a month in the school library. Over the course of the study, I monitored the *PLC Team Hub* to collect artifacts and I also recorded my thoughts and experience in my digital researcher journal. At the end of the first semester of the 2022-2023 academic school year, in December, I conducted post-innovation interviews with the study's participants and administered the post-innovation PLCA-R questionnaire through email and collected the online responses. A grid with the study timeline, researcher actions, and procedures is provided in Table 3.

Table 3

Timeline and Procedures of the Study

Timeframe	Researcher Actions	Procedure
Beginning of 2022-2023 Academic School Year- August 2022	• Administered pre-innovation	• Disseminated electronic survey through email

	PLCA-R questionnaire	
August-September 2022	• Conducted pre-innovation interviews • Training session on innovation	• Audio recorded interviews • Training in PLC framework form and *PLC Team Hub*
September-December 2022	• Held PLC Team monthly meetings and monitored *PLC Team Hub*	• Audio recorded PLC Team meetings • Wrote in digital researcher journal • Collected PLC Team artifacts
Mid-December 2022	• Conducted post-innovation interviews	• Audio recorded interviews

Mid-December 2022	• Administered post-innovation PLCA-R questionnaire	• Disseminated electronic survey through email
August 2022-December 2022	• Data analysis • Triangulation of data	• PLCA-R interpretation steps • Transcription • First and second round coding

Boundaries of this Study

As with any research study, the design and scope of the inquiry was subject to certain boundaries. First, the problem of practice that was examined in this study can be classified as a "wicked problem"; a particularly tricky problem that possesses no definitive formula to follow or solution and can have many causes that contribute to the manifestation of the problem (Rittel & Webber, 1973). Problems in education tend to be particularly wicked because of the difficulty of framing and conceptualizing problems due to issues of context-dependence, subjectivity, different stakeholders, and having no clear right or wrong solutions (Jordan et al., 2014). Participants entered the study with their own backgrounds and experiences which may have impacted their engagement with and viewpoint of the innovation. For example, participants may have believed that teacher collaboration and PLCs are beneficial, or they may prefer teaching in isolation.

However, wicked problems call for solutions to be tried to test the effectiveness of changes applied to the problem.

In addition to the classification of the problem of practice as a "wicked problem," there were additional challenges within the boundaries of the study. Ideally, I would have liked to have had a larger number of participants across the different content departments on campus, but one boundary of the study emerged at the beginning of the action research process; finding and recruiting participants. As mentioned in chapter one, teachers have experienced added stresses and feelings of burnout due to the COVID-19 pandemic and U.S. schools have also been troubled with high teacher attrition rates (Daniels et al., 2021). With teachers feeling stretched thin, it was difficult finding volunteers to participate in the study. Lastly, the study was encompassed by the boundaries of the school year timeframe, competing time commitments, and other demands of teachers during the school day.

CHAPTER 4

DATA ANALYSIS AND RESULTS

Results from the study are presented in two sections. In the first section, results from the quantitative data are presented. The quantitative data included are pre- and post-participant survey results. These surveys were administered to participants to gauge their perceptions of school practices in relation to PLCs. In the second section, results from the qualitative data are presented. The qualitative data included: pre-and post-innovation teacher interviews, PLC Team meeting audio recordings, PLC Team digital artifacts, and researcher journal. Table 4 provides a representation of the qualitative data analyzed. I chose to present the data from quantitative to qualitative since the survey data served as a reference and starting point in the data analysis process. Chapter five will be spent mapping the quantitative and qualitative data back on the research questions.

Table 4

Description of Qualitative Data Sources

Data Source	Amount or Minutes	Remarks
Pre-innovation Teacher Interviews	25 minutes	Conducted and recorded one-on-one pre-innovation interviews with all three teachers, totaling 25 minutes for all three interviews.
Post-innovation Teacher Interviews	25 minutes	Conducted and recorded one-on one post-innovation

		interviews with all three teachers, totaling 25 minutes for all three interviews.
PLC Team Meetings Audio Recordings	189 minutes	Recorded all three in-person PLC Team meetings, totaling 189 minutes for all three meetings.
PLC Team Digital Artifacts	26 artifacts	Collected PLC Team digital artifacts from PLC Team Hub and Google Drive, totaling 26 artifacts total.
Researcher Journal	854 words	Recorded my thoughts and experience during the study in a digital researcher journal, totaling 854 written words.

Quantitative Results from the PLCA-R Survey

The PLCA-R survey was administered to participants to gather data on their perceptions of school practices in relation to PLCs and related attributes. The purpose of administering the PLCA-R survey was to use it as a gauge to interpret what happened within the innovation. After following the interpretation steps prescribed by the PLCA-R survey creators (Appendix D), a review was conducted between the six PLCA-R

dimensions to identify those dimensions which have a majority of high or low scoring items.

Figure 3 displays the pre-innovation and post-innovation survey mean score responses across the six PLC dimensions. The survey data shows a modest increase of mean scores across the following four PLC dimensions: (a) supportive conditions-structures; (b) supportive conditions-relationship; (c) shared personal practice; and (d) collective learning and application. Previous PLCA-R administration reliability and validity procedures are provided in Appendix E.

Figure 3

PLCA-R Survey Results N=3
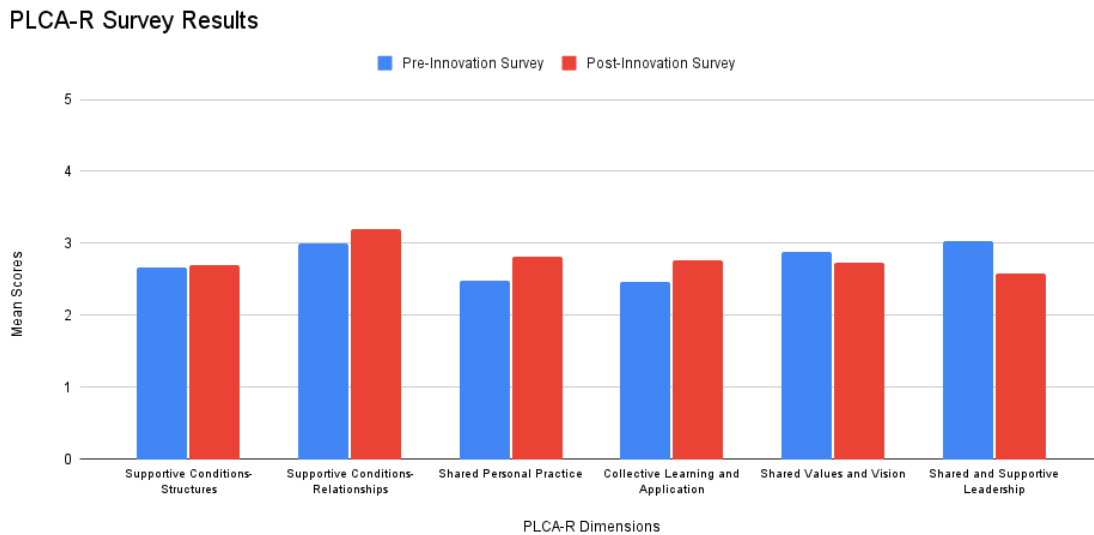
Supportive conditions-structures. The ten-item dimension of supportive conditions-structures mean score for the pre-innovation survey was 2.67. The post-innovation mean shows a rise of .02 to 2.69. A possible explanation for this slight increase could be the introduction at the beginning of the school year of a school-wide

professional development plan that focused on the sharing of student assessment data with the focus on improving student achievement. Time was scheduled during designated school professional development days to facilitate this task.

Supportive conditions-relationships. The five-item dimension of supportive conditions-relationships mean score for the pre-innovation survey was 3. The post-innovation mean shows a rise of .19 to 3.19. This slight increase may be due to the establishment of a respectful and caring atmosphere that was cultivated during the cross-curricular PLC Team meetings, which is reflected in the open sharing between the participants of the PLC Team.

Shared personal practice. The seven-item dimension of shared personal practice mean score for the pre-innovation survey was 2.47. The post-innovation mean shows a rise of .34 to 2.81. This slight increase may be due to a combination of sharing and collaboration that occurred in the cross-curricular PLC Team and the sharing and discussion of student data that took place during school professional development days. In both instances, teachers came together to share instructional practices and engaged in collaborative review of student work.

Collective learning and application. The ten-item dimension of collective learning and application mean score for the pre-innovation survey was 2.46. The post-innovation mean shows a rise of .30 to 2.76. This slight increase may be a reflection of teachers coming together in the PLC Team and *PLC Team Hub* to share professional practices, teaching materials, and collective learning through discussions.

Shared values and vision. The nine-item dimension of shared values and vision mean score for the pre-innovation survey was 2.88. The post-innovation mean shows a

decrease of .15 to 2.73. This dimension focuses on the school having a process where teachers can provide input to create shared vision and values for the school and school-wide decisions that are made are in alignment with the shared vision and values. This slight decrease in the mean score of this dimension may likely be due to the absence of an input process for teachers to create a school vision and values and the lack of opportunities for teachers to participate in school-wide decision making.

  Shared and supportive leadership. The eleven-item dimension of shared and supportive leadership mean score for the pre-innovation survey was 3.02. The post-innovation mean shows a decrease of .45 to 2.57. This dimension is closely related to the previous dimension, shared values and vision. Both dimensions focus on teachers having the ability to contribute and collaborate on school-wide decisions. The shared and supportive leadership dimension also focuses on teachers having opportunities to lead change and innovation and are rewarded for their leadership. The slight decrease of the mean score for this dimension may be contributed to teachers feeling they do not have a voice on campus to affect or lead change.

Qualitative Data

  In this section, results from qualitative data are presented. I began the qualitative data coding process during the first phase of the study and continued through to the end of the third phase. To begin the coding process, I began with in-vivo coding. In-vivo coding is useful for qualitative researchers who want to capture and place emphasis on the spoken words of the participants (Saldaña, 2016). As I collected data, I updated these codes with new labels to reflect the new level of analysis. For the second round of coding, I used focused coding to identify recurring patterns among the codes. Lastly, for

the third round of coding, I analyzed the recurring patterns and sorted and labeled the

data groups into themes. In the analysis of the qualitative data sources, 22 total codes

were initially identified. These initial codes were further grouped into eight themes. The

themes were (a) need for teacher collaboration; (b) challenges and barriers to teacher

collaboration; (c) sharing of content material and student engagement strategies; (d)

discussion of students; (e) effects of *PLC Team Hub;* (f) *benefits of PLC Team Hub;* (g)

collegiality and communication; and (h) continuation of *PLC Team Hub*. Table 4 displays

the themes, theme-related components, and assertions. Then, each of the themes is

discussed, including quotes from participants to support the assertions.

Table 4

Themes, Theme-related components, and Assertions

Themes	Theme-Related Components	Assertions
Need for teacher collaboration	Prior to participating in the PLC Team, teachers expressed a desire for more teacher collaboration with their colleagues.	1. Prior to the implementation of the *PLC Team Hub*, there was a lack of collaboration among teachers.
	Prior to participating in the PLC Team, teachers	

	expressed concerns for the lack of collaboration on campus.	
Challenges and barriers to teacher collaboration	Prior to participating in the PLC Team, teachers perceived content commonality, efficiency, and personality conflicts as challenges to teacher collaboration.	2. The primary challenge for teachers was finding dedicated time to attend and prepare for PLC Team meetings.
	After participating in the PLC Team, lack of time and scheduling conflicts were observed barriers to teacher collaboration.	
Sharing of content material and student engagement strategies	Teachers shared formative and summative unit lesson materials to the *PLC Team Hub* and shared Google Drive Folder.	3. Participation in PLC Team meetings and the *PLC Team Hub* promoted greater

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		teacher
	During PLC Team meetings,	collaboration.
	teachers discussed and	
	shared student engagement	
	strategies.	
Discussion of students	During PLC Team meetings,	4. Teachers used
	teachers shared and	PLC Team meeting
	discussed student behavior	time to discuss
	concerns and student	concerns regarding
	interests.	student behavior
		and learning.
Effects of PLC Team Hub	Teachers expressed the	5. Teachers made
	various effects the *PLC*	connections
	Team Hub had on student	between their
	learning and engagement.	participation in
		collaboration in the

		PLC Team and the effects on student learning and engagement.
Benefits of PLC Team Hub	Teachers cited the *PLC Team Hub* as helpful with connecting cross-curricular learning for students.	6. Professional learning and collaboration opportunities were broadened as a result of participating in the PLC Team.
	Teachers cited feeling more connected with colleagues.	
	Teachers cited the PLC Team as helpful for generating new ideas for teaching.	
Collegiality and communication	Teachers used PLC meetings to discuss and share personal and professional challenges and concerns.	7. Teachers utilized and trusted the PLC Team community as a

		safe space to
	Teachers expressed the usefulness of PLC Team meetings and PLC Team Hub to communicate with colleagues.	engage in personal and professional discussion.
Continuation of PLC Team Hub	Teachers expressed interest in continuing PLC Team meetings and *PLC Team Hub* and discussed future plans for another cross-curricular unit collaboration.	8. Teachers show motivation and interest in continuing the *PLC Team Hub* beyond the time frame of the study.

Need for teacher collaboration. *Assertion 1- Prior to the implementation of the PLC Team Hub, there was a lack of collaboration among teachers.* Prior to the implementation of the innovation, teachers were interviewed and asked about their perceptions of teacher collaboration. Their responses provided feedback for this theme. For example, during their pre-innovation interview Veronica stated, "I wish we had more teacher collaboration...would be nice to have a dedicated part of the day to discuss student behavior." The following theme-related components comprise the theme that led to assertion one: (a) prior to participating in the PLC Team, teachers expressed a desire

for more teacher collaboration with their colleagues; (b) prior to participating in the PLC Team, teachers expressed concerns for the lack of collaboration on campus.

Desire for more teacher collaboration. All three teachers who were interviewed stated a desire for more teacher collaboration. For example, during the initial interview Isabel shared her thoughts about teacher collaboration at SVHS. Isabel stated,

> I love it [teacher collaboration], and I wish there was a whole lot more. I do feel
> that because there's such a lack of collaboration that sometimes teachers are like,
> for example...you and I are so excited to talk to each other about the stuff that
> goes on. So that's clearly an indication that there isn't enough.

Diego shared his view on teacher collaboration and his desire to keep collaboration brief. Diego stated,

> I don't think there's enough of it, to be honest, but I think it goes too long. I don't
> think it should necessarily be every week... I think more wouldn't hurt, even if it's
> just like a quick zoom or something. Like, hey, how's it going? What did you do?
> What worked? What didn't work? Oh, I had that same problem. Maybe we can
> figure something out.

Concerns for lack of collaboration. In addition to expressing a desire for more teacher collaboration, teachers also shared their concerns for the lack of collaboration at SVHS. Veronica expressed a desire for more teacher collaboration and shared her frustration with a lack of collaboration since returning to in-person learning during the 2021-2022 school year. When asked about teacher collaboration at SVHS Veronica stated, "It was difficult with COVID and I was a little upset how little it happened last year, but I've always thought it was a good thing."

Isabel also expressed her concern for the lack of collaboration on campus and reflected on her previous experiences with teacher collaboration at her previous school. Isabel shared,

> At the previous district I worked at, there was a lot of collaboration. A lot. We would meet over lunch and have meetings. We had common preps. We would meet after school...it gave me a lot of reassurance in the classroom. I know who I could rely on to communicate with if I had a question at all. So, when I came here, I definitely felt discouraged a lot and I can get an attitude towards it because I'm like, nothing is going to get done.

Challenges and barriers to teacher collaboration. *Assertion 2- The primary challenge for teachers was finding dedicated time to attend and prepare for PLC Team meetings*. Prior to the implementation of the innovation, teachers were interviewed and asked about challenges and barriers to teacher collaboration. At the conclusion of the study, teachers were again interviewed and asked about challenges and barriers to teacher collaboration. Their responses provided feedback for this theme. For example, prior to participating in the PLC Team, Isabel shared what she believed are the challenges of PLCs. Isabel stated,

> I think the challenge is the efficiency. Making sure that we have a target, we have a time frame, and that's the bullet point target within that time because we don't want to just not get things done. So, everyone preparing to show up and get it done.

The following theme-related components comprise the themes that led to assertion two: (a) prior to participating in the PLC Team, teachers perceived content

commonality, efficiency, and personality conflicts as challenges to teacher collaboration; (b) after participating in the PLC Team, lack of time and scheduling conflicts were observed barriers to teacher collaboration.

Perceived challenges before innovation implementation. When the study participants were asked their thoughts on the perceived challenges of participating in PLCs, all three teachers expressed a different challenge. Veronica shared,

I think sometimes it's a little difficult to find commonalities between each other and the subjects we teach or the specific classes we teach make it a little difficult to get on the same page.

Diego shared his concern for personality conflict:

Because there's different personalities in any group and there are those that love to talk and will talk and those that are more introverted, like myself, might not feel comfortable just trying to talk over to get their chance to speak and might just be left unheard.

Perceived challenges after innovation implementation. During post-innovation interviews, teachers expressed new challenges that had a common thread between them: time. Veronica expressed her concern and stated, "We're so busy finding time...to actually get together." Diego echoed Veronica's concern and explained, "A recurring theme...just coordinating everybody's schedules, trying to get everybody there.

Isabel also shared her concerns with time; not with finding time to meet but meeting the learning goal time frame. For example, due to her schedule, Isabel was unable to administer the common summative assessment before the end of the first semester. Isabel explained,

Meeting with you guys, the amount of time that we met was easy. Once a month, that was super easy. We all seem to agree. None of that was difficult. I think for me personally in the classroom, I had difficulties, which I mentioned I co-teach. So that kind of leads me strays me a little bit from completing things the way, I guess, more rigidly and on time.

Sharing of content material and teaching strategies. *Assertion 3- Participation in PLC Team meetings and the PLC Team Hub promoted greater teacher collaboration.* Audio recordings of PLC Team meetings and observations of engagement with the *PLC Team Hub*, provided insight for this theme. For example, during one meeting Veronica shared,

I was planning on argumentative as well. And we're going into ego, all of that because my honors unit is slightly different, but still has a lot of the same ideas behind it. Civic duty versus personal responsibilities. So, we're opening with Julius Caesar. I'm doing my first Socratic seminar tomorrow. I just pressed them today, and I'll probably be utilizing that a lot going forward, along with debate will fit nicely with this unit.

The following theme-related components comprise the themes that led to assertion three: (a) teachers shared formative and summative unit lesson materials to the *PLC Team Hub* and shared Google Drive Folder; (b) during PLC Team meetings, teachers discussed and shared student engagement strategies.

Sharing of unit lesson materials. Over the course of the three phases of the PLC Team Hub, teachers attended three in-person meetings, each lasting approximately one hour. During this time, teachers discussed and shared formative and summative lesson

materials related to the cross-curricular unit: "Taking a Stand." Discussion included

myself explaining and sharing the formative lesson I conduct in class centering around

labor unions:

> I do a labor union activity where they're working at a company and they work like
>
> 12-14 hours shift, and they're only getting paid so much money. And then they
>
> have to come up with a list of demands and try to negotiate with the owners of the
>
> company for better working conditions. So, it's about being collective and
>
> working together.

> Diego shared his intention to use an argumentative essay for the summative essay,

which the rest of the team adopted to constitute the common cross-curricular

assessment.

> I was probably going to do an argumentative essay because I have my ILP
>
> (Individualized Learning Plan). My question is using sentence frames to get them
>
> to learn how to use what's it called? Mixed citations. So, like, part of the citations
>
> basically improving their citation. My pre assessment is an argumentative [essay],
>
> and then the post is going to be the same.

> **Discussion of student engagement strategies**. During the PLC Team meetings,

teachers also shared various student engagement strategies and recent learning activities

that were effective in their classrooms. When the discussion turned to concerns over

keeping students' attention focused on the day's lesson or activity, Veronica shared her

strategy when showing videos, listening to podcasts, or listening to audiobooks,

I guide them a lot. I don't let the audio go too long... then they'll get super

distracted. So, I'll stop probably anywhere from every minute to five minutes,

depending on what we're tackling.

I also shared my concerns with students' attention spans and shared my

observation that I believe that the minutes students can focus has changed over time.

Instead of showing a 40-minute informational video straight through as I have done

previous years, I shared that now, "We watch for ten minutes. I stop. I have them turn to

a neighbor and share their answers and talk and discuss, then resume for another ten

minutes."

Discussion also focused on teaching strategies and curriculum content. Isabel

shared an introductory writing activity she completed in her classroom at the beginning

of the school year; a work application for a clerical job. Isabel shared,

It had such incredible power over them. It was just a simple PDF that I found, and

it was really a filler. But I could not believe the impact it had on them because

they took it so seriously. They were writing. They were engaged.

Isabel and I discussed how we could connect this activity with the labor union

activity that I was planning on completing later in the week with my students. As the

discussion progressed, the teachers discussed the connections that could be made within

the content of the cross-curricular unit.

Discussion of students. *Assertion 4- Teachers used PLC Team meeting time to*

discuss concerns regarding student behavior and learning. Throughout the innovation, I

kept a journal to document my experience in leading and participating in the PLC Team.

My journal entries, combined with the transcripts of audio recordings of PLC Team

meetings, provided information for this theme. For example, Veronica shared with the group her concerns about students not completing the assigned reading or questions for the assigned book, "Animal Farm." Veronica stated,

> For me, the work production has been very low. They're not submitting their questions. They're reading, but some are not reading because I did allow them to read chapter three and four on their own, whether they chose to listen to it or read it silently in class. And the work is just not getting done, really.

The following theme-related component led to assertion four: (a) during PLC Team meetings, teachers shared and discussed student behavior concerns and student interests.

Discussion of student behavior concerns and interests. During the PLC Team meetings, teachers shared various concerns regarding student behavior. Veronica shared her concerns regarding student work habits and behavior:

> They were very simple questions, just getting them to interact with the text. 7th period came in, and she was like, are we actually doing as much work as I heard we are?

During the PLC Team meetings teachers also shared and commiserated student behavior that they were struggling with in class. Throughout the phases of the study, Isabel and I shared during our concerns regarding a particular student. We discussed concerns our concerns during about this student as well as strategies to help him succeed. Isabel shared with the team,

> He's an angry kid. I don't know what his traumas are, but I can't address them. He just won't engage. He won't make eye contact. And then anytime I try to say,

okay, you need to do this is all I'm getting is him saying 'You're in my way.
You're the one talking to me right now, so it's your fault that I can't do it.'

Effects of PLC Team Hub. *Assertion 5- Teachers made connections between their participation in collaboration in the PLC Team and the effects on student learning and engagement.* At the conclusion of the study, teachers were interviewed and asked about the effects of participating in the PLC Team on student learning and engagement. Their responses provided feedback for this theme. For example, Veronica shared that the PLC Team,

> Made me more aware of the fact that there is a lot of cross curriculum content that works, and it's got me thinking about next semester already. Like, what are going to be the similarities?

The following theme-related component led to assertion five: (a) teachers expressed the various effects the *PLC Team Hub* had on student learning and engagement.

Student Learning and Engagement. When asked how they viewed the effects of the PLC Team Hub on student learning and engagement, the teachers commonly shared their appreciation for having a space discuss student learning. Veronica commented on the effects of the PLC Team on the instruction of her English Language Learner (ELL) students. Veronica stated,

> Yes, it gave us a space, but it also gave space to talk and find that common point, which then made it so much easier as an ELD [English Language Development] teachers because I had some of Diego's kids coming in and being like, hey, I have like, this going on and need help.

Isabel also commented on the creation of a space to discuss student learning. Isabel stated,

> I think it's really refreshing just to have a place to touch base, especially for me, that it's just been a year of chaos. Another year of chaos. So just to kind of have the security of, like, checking in with each other and what our plan was is super nice. Also, it was really nice, and I'm seeing it now where the cross curricular discipline is shining through. In their writing. A lot of them are talking about industrialization in their essays.

Benefits of PLC Team Hub. *Assertion 6- Professional learning and collaboration opportunities were broadened as a result of participating in the PLC Team.* At the conclusion of the study, teachers were interviewed and asked about the benefits of participating in the PLC Team on student learning and engagement. Their responses provided feedback for this theme. For example, Isabel shared that "It was interesting to have students contribute to discussions with what they learned in history class and connecting it to what we were doing in class." The following theme-related component led to assertion six: (a) teachers cited the *PLC Team Hub* as helpful with connecting cross-curricular learning for students; (b) teachers cited feeling more connected with colleagues; (c) teachers cited the PLC Team as helpful for generating new ideas for teaching.

Connecting cross-curricular learning. When asked about the benefits of participating in the *PLC Team Hub,* all teachers remarked on their observations of the cross-curricular connections their students displayed both through discussion and their assignments. Diego shared,

It was interesting for them. Like, when we did the "*Newsies*" bit, they were really

interested in the history. I think kids expect a certain thing when they arrive in a

certain class, and when they get something that they're not expecting, their

interest is peaked.

More connected. Another benefit that was repeated by all three teachers was

feeling more connected with their colleagues. When asked about the benefits of

participating in the PLC Team Isabel shared,

I think for me, it's just the security of collaborating with other human beings

because some many of our pieces [lessons] are so rooted in history. I think it's

super nice. Also, just touching base with the history teacher and knowing that

we're covering things at the same time or that it's already been covered by the

time we cover it. That's a really nice cushion support.

Veronica echoed Isabel's sentiments;

I think there's a lot of benefits. Like it was nice first to get to know you because

we don't have a lot of chances to interact really outside staff meetings and then we

don't get to at staff meetings. And you're on the other end of campus. And then

just like the space to talk about some things where half of it was actual content.

What are we teaching? What can we do? And then the other half was just like

trauma bonding.

Generating new ideas for teaching. Two teachers, Veronica and Diego, both

commented on the PLC Team helping them with generating new ideas for teaching.

Veronica stated,

It was nice to just have a space to talk about that as well. And then really great

knowing we're all kind of doing similar things. It's not all the same. We all put our

own spin on it. But it's helpful really. That ability to help an ELD student is

something that I really loved because I'll be able to help with research papers too.

Like, there's that connection between history and English which I think so many

of them don't figure out until later.

Diego shared,

It gave me new ideas. I think it's kind of nice connecting with colleagues because

it kind of empowers you in the classroom, knowing that if you have a question or

you're confused about something or you just want to bounce an idea off someone,

you establish these relationships where you feel, like, comfortable with them.

Collegiality and communication. *Assertion 7- Teachers utilized and trusted the*

PLC Team community as a safe space to engage in personal and professional discussion.

Throughout the innovation, I kept a journal to document my experience in leading and

participating in the PLC Team. My journal entries, combined with the transcripts of audio

recordings of PLC Team meetings, provided information for this theme. For example,

Isabel shared with the team a loss in her family and that she "Will be out for bereavement

leave next week."

The following theme-related components comprise the theme that led to assertion

seven: (a) teachers used PLC meetings to discuss and share personal and professional

challenges and concerns; (b) teachers expressed the usefulness of PLC Team meetings

and PLC Team Hub to communicate with colleagues.

Personal and professional sharing. During the PLC Team meetings, discussion varied between personal and professional conversation. For example, in one meeting a teacher shared that their grandfather passed away and that they would be out on bereavement leave. All teachers shared medical concerns and diagnoses; two teachers were out on sick leave for a week each due to COVID-19. But I'm also going to be out on bereavement. Concerns about a lack of planning time were discussed with Isabel commenting, "I'm just curious, how do you feel with everything that has to be accomplished? I'm starting to feel like we need a revolution. I'm serious. Like, the prep is just not enough," and Veronica agreed stating, "That's why I said the prep is not enough."

Communication with colleagues. Through my observations I noted in my digital journal, communication between the teachers who participated in the PLC Team increased. Teachers would stop by each other's classrooms, email each other, and sit with each other and engage in conversation at faculty meetings. During the post-innovation interview when asked about the benefits of participating in the PLC Team Diego commented on this effect as well. Diego shared,

> Yes, for sure. You say hi to each other as you're passing each other and then you're like, I don't know that person's name or what they teach or where they are, why they're here. But, like, us getting together and getting to know each other and knowing our individual teaching styles and what we have a lot more communication. I'm an introvert. I'm not going to go out and be like, oh, hello, tell me your name. It was helpful.

Continuation of PLC Team Hub. *Assertion 8- Teachers show motivation and interest in continuing the PLC Team Hub beyond the time frame of the study.* At the conclusion of the study, teachers were interviewed and asked about future plans for the PLC Team. Their responses, combined with their discussions transcribed from the PLC Team meetings audio recordings, provided information for this theme. For example, during the PLC Team meeting Diego stated "It would be nice to create a complete cross-curricular unit with complete lessons divided up and taught by each teacher."

The following theme-related component led to assertion eight: (a) teachers expressed interest in continuing PLC Team meetings and *PLC Team Hub* and discussed future plans for another cross-curricular unit collaboration.

Future plans for PLC Team. During the PLC Team meetings and the post-innovation interviews with teachers, there was discussion regarding the future of the PLC Team. Veronica was hopeful for starting off the next academic year with a more solid foundation for the *PLC Team Hub.* During the interview Veronica stated,

> I feel like next year we could be super set. Like, teaching paraphrasing, actually. I could do that at the beginning of the year next year and give us a practice. So then when you come around to this for essays, they're a little bit more equipped, especially with those writing documents.
>
> And during the last PLC Team meeting the team discussed plans for a second cross-curricular unit on the Holocaust. Isabel commented,
>
> I think a big focus will be that carryover of World War Two that we're going to see. I will be getting through that very quickly. So we can also see what else we can bring in as well. Because we are done with *Night* by February.

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CHAPTER 5

DISCUSSION AND IMPLICATIONS

The previous chapter discussed the results and analysis of the quantitative and qualitative data collected for this study. This chapter will discuss my research journey, a discussion of the data in relation to the research questions, outcomes related to previous research and theory, the limitations and boundaries of the study, implications for the school and district, and next steps.

Research Journey

My research journey began with my own frustration of feeling disconnected from colleagues and with a concern with the lack of communication and collaboration with my colleagues at SVHS. I initially set out with a plan to implement a school-wide PLC plan where all teachers on campus would participate in a *PLC Team Hub* with their content departments however, due to various circumstances that plan was not able to come to fruition. Despite this setback at the early stages of my research, I was able to meet and connect with a small group of colleagues who were interested in participating in a collaborative process. After finding teachers to participate, I continued with the original purpose of this research study; to investigate and address the problem of practice of a lack of teacher collaboration at SVHS. In response to the evidence examined during previous cycles of research, I developed and implemented the innovation of a *PLC Team Hub* to provide the participants guidance and support to effectively collaborate with their colleagues. Over the course of the *PLC Team Hub* phases, I was able to examine the use

of the *PLC Team Hub* and its influence on teachers' perceptions of teacher collaboration, student engagement, and student learning.

Discussion of Data and Theory in Relation to Research Questions

The purpose of this action research dissertation was to address the problem of practice and to implement a *PLC Team Hub* at SVHS. All the research questions for this study sought to answer the effect of the *PLC Team Hub* on teachers and teacher collaboration at SVHS. The approach of triangulation of the quantitative and qualitative data sets was employed to enrich the quality of conclusions made from the results (Ivankova, 2015). Results from this study reveal complementarity in the areas of teachers' perceptions of collaboration, teachers' perceptions of (a) student engagement and (b) student learning, and the effectiveness of PLC Team Hub in facilitating teacher collaboration. Results from this study also affirms the findings of previous research in two areas: (a) PLCs are difficult to implement and maintain and need supportive structures from school and district administration, and (b) teachers can learn and grow professionally through collaboration with colleagues.

RQ 1: How does implementation of the PLC Team Hub at SVHS affect teachers' perceptions of collaboration?

Before the implementation of the *PLC Team Hub,* teachers completed the PLCA-R survey to gauge their beliefs regarding PLCs and teacher collaboration. The most significant increases in the mean responses were in the survey dimensions of: (a) supportive conditions-relationship, (b) shared personal practice, and (c) collective learning and application. These results are corroborated by the teachers' responses during their pre-and-post-innovation interviews. Before the implementation of the *PLC Team*

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Hub, teachers expressed their concerns over a lack of teacher collaboration and communication at SVHS. Results from the post-innovation survey suggest a change in teachers' perceptions of collaboration; collaboration increased over the course of the *PLC Team Hub* phases. These results are echoed in the post-innovation interview responses where teachers expressed a beneficial increase in the amount of collaboration accomplished through the innovation.

These three dimensions and their related attributes can be identified in the discussions that took place during PLC Team meetings. Teachers came together during the PLC Team meetings to discuss and collaborate on a common unit of study. For teachers to come together and openly share and discuss their teaching and the learning in their classrooms suggests there was a creation of a supportive environment where teachers trusted and respected each other. During the PLC Team meetings, teachers collaborated on creating new formative and summative assessments, as well as learned from each other's expertise in different areas. This finding was enhanced by the qualitative data responses from the teachers during the post-innovation implementation interviews. Their responses suggested that the *PLC Team Hub* provided a useful space for collaboration and helped to increase communication of professional practices with their colleagues.

Consistent with findings in the Graham (2007) study, participants in the *PLC Team Hub* were provided with opportunities to learn from each other and engaged in mutual sharing of instructional strategies and pedagogical knowledge. The willingness to be open and share with each other would not have been possible without a foundation of trust that was built within the PLC Team (Fullan, 2016). This trust enabled teachers to

grow and learn from each other through their shared enterprise (Wenger, 1998). During the post-innovation interviews, participants in the *PLC Team Hub* consistently expressed how much they learned from each other and how they appreciated getting to discuss their teaching practices with their colleagues. This positive perception of collaboration and the usefulness of the *PLC Team Hub*, likely contributed to the teachers' continued participation with the innovation (Guskey, 1985).

In my role as an "insider" teacher-leader participating in the *PLC Team Hub* I was given the opportunity to observe, review, and interpret the results of the study. Through my experience I feel I can confidently report that the *PLC Team Hub* was a helpful tool to increase collaboration and show the usefulness to teachers of coming together with the purpose of collaboration. This was a good starting point for positively affecting teachers' perception of collaboration, however this is a first step on a long road to an effective and sustained collaborative culture.

RQ2: How does implementation of the *PLC Team Hub* at SVHS affect teachers' perceptions of (a) student engagement and (b) student learning?

At the conclusion of the study, teachers were interviewed and asked how participating in the *PLC Team Hub* affected student engagement and student learning. All three teachers responded that after participating in the *PLC Team Hub,* they were able to observe the effects of cross-curricular learning in their students. The three teachers also reported a change in student engagement from previous years due to students making connections between their learning in their ELA class and World History class. This finding was echoed in the qualitative data collected and coded; the highest amount of

coded data centered on: cross-curricular unit content, formative and summative assessments, and teaching strategies.

As in the Schneider et al. (2012) study, participants in the *PLC Team Hub* had a focus on improving student learning which is one of the characteristics of an effective PLC. The data collected and analyzed from the PLC Team meetings display a consistent focus on sharing techniques and content to support student engagement and learning. This is also found in the collaborative artifacts produced by the PLC Team. For example, teachers collaborated on a unit of study and created a cross-curricular learning map, shared formative assessments and activities, and collaborated on a summative unit assessment. With this cross-curricular collaboration, teachers were able to see their collaboration reflected in their students' engagement and learning. By witnessing this change in student engagement and learning, the teachers may be more likely to continue this process in the future (Guskey, 1985).

Through my experience as an "insider" teacher-leader I was also able to observe the effect that the *PLC Team Hub* had on teachers' perceptions on student engagement and learning. Through conversations that occurred during PLC Team meetings, I recorded multiple incidents of teachers discussing how students were referencing what they had learned in their world history class and connecting it to what they were learning in their ELA class. I also experienced my students making connections to their learning in their ELA class and asking me for help and insight for their ELA writing assignments. Although the PLC Team did not meet their deadline of administering a coordinated summative assessment to their students to compare student learning data, the cross-

curricular collaborative work still provided insight into cross-curricular student engagement and learning.

RQ 3: How effective is a *PLC Team Hub* at facilitating teacher collaboration?

Prior to the implementation of the *PLC Team Hub,* teachers reported they wished that there was more teacher collaboration at SVHS. With the implementation of the PLC Team Hub, teachers were provided with a digital space to share and collaborate with colleagues. The effectiveness of the *PLC Team Hub* at facilitating teacher collaboration can be seen in the teacher-created artifacts housed in the *PLC Team Hub.* This finding is corroborated by the post-innovation interview responses by teachers and the discussion and actions displayed by teachers during PLC Team meetings. During the post-innovation interviews, all three teachers commented that the *PLC Team Hub* helped to facilitate teacher collaboration and provided a space to easily communicate with each other. This finding is further corroborated by the collaborative discussions during the PLC Team meetings and the actions of submitting artifacts and collaboratively working on artifacts during and after PLC Team meetings. Figures 4-6, for example, show collaborative artifact examples housed in the *PLC Team Hub*.

Figure 4

PLC Team Hub Home Page

PLC TEAM HUB
10th Grade Social Studies & ELA

Home
Announcements
People
Pages
Modules
Files
Google Drive
Assignments
Discussions
Grades
BigBlueButton
Outcomes
Syllabus
Rubrics
Collaborations
Quizzes
Settings

PLC Team Mission Statement: *Our mission is to engage in effective cross-curricular collaboration to deepen the understanding of key concepts for the 10th grade students at Imperial High school and to grow professionally in our area of expertise.*

PLC Team Goals: *The goal of the PLC Team is to create a cross-curricular unit of study with a common summative assessment to assess student learning.*

PLC Team Roles:

- Facilitator (Develops agenda and facilitates the meeting)-Zsuzsa
- Recorder (Records meeting notes in PLC Team Agenda)-Isabel
- Time-Keeper (Monitors agenda time, topics, and keeps group focused)-Veronica
- Reporter (Reviews norms at start of meetings and acts as communication liaison for school to team communication)-Zsuzsa

PLC Team Meeting Norms:

-Active participation

-Start and end on time

-Have a goal

-Goal-driven

PLC Team Schedule: Schedule Staff Meetings Days (Once monthly) and virtually

Figure 5

Collaborative Modules in Canvas

Figure 6

Cross-Curricular Unit Map

Subject	Topic	Activity (Formative)	Vocabulary	Connections/Synthesis
ELA	Malala	Unit Introduction - Essential Question - Malala Malala-Speech video-Annotation Malala-Written Assignment Malala-Creative Work Animal Farm Introduction / Reading Instructions / Anticipation Guide Sentence Frames - Integrated Citation - Reflection Quiz - Short Response Animal Comparison - Real Life Your Position - Small Group Discussion Newsies Read - Film Scene - Annotation - Free Write Protest Project Intro Protest Project Group Work Protest Project Group Work Protest Project Presentation	Industrial Revolution Resources Industry Industrialization Steam Engine Immigration Urbanization Factory Mass production Economy Capitalism Socialism Communism Labor Unions	Students will be able to make connections between individuals taking a stand and taking action to affect change.

Although data suggests that the *PLC Hub* was effective in facilitating teacher collaboration, the need for supportive structures to maximize teacher collaboration is also noted. Previous studies examining the implementation of PLCs have concluded that PLCs need supportive structures from school and district administration in order to be successful (Graham, 2007; Datnow, 2011; Johnson 2019). Implementing and maintaining PLCs face considerable barriers and need consistent and solid support by organizational leadership at all levels (Wells & Feun, 2007; Slack, 2019; Graham, 2007). These previous findings are consistent with the challenges faced by the PLC Team. The recurring theme of the need for more time to meet to collaborate repeated throughout the qualitative data and represented a significant barrier to more collaboration. Prior to implementation of the innovation, the school administration expressed support for setting apart dedicated time for the PLC Team to meet. However, a new school collaboration

goal centering on ELD student data demanded more time from the PLC Team

participants and took away time for the PLC Team to meet. This lack of support is aptly

summarized by a comment made by a participant in the comments section at the end of

the PLCA-R survey:

> Teachers are satellites who occasionally run into each other but otherwise simply
>
> orbit the school on their own trajectory. There is no sense of collaboration or that
>
> staff is capable of influencing change at the administrative level.

My perspective as an insider who implemented the *PLC Team Hub* is echoed in the data

collected. The *PLC Team Hub* was an effective tool to facilitate teacher collaboration.

Teachers regularly uploaded modules, formative and summative assessments, and student

activities to the *PLC Team Hub.* I would check into the *Hub* daily for updates and to also

see what students would be working on in their ELA classes. Although the *PLC Team*

Hub was effective in facilitating teacher collaboration, there were significant challenges

that inhibited further collaboration. As the teachers who participated noted, the *PLC*

Team Hub is a good starting point to increased collaboration, but more time and

structural support is needed to fulfill its potential.

> **RQ 4: What is the experience of an "insider" teacher-leader developing and**
>
> **implementing the PLC Team Hub?**

Throughout the study I recorded my experience of developing and implementing

the *PLC Team Hub* in a digital journal. After reviewing my journal entries, I was able to

revisit the challenges and accomplishments I encountered throughout the development

and implementation process of the P*LC Team Hub.* One personal challenge that I

recorded multiple times in my journal was the internal tension I felt regarding my

leadership on the PLC Team. I was often torn between "taking charge" and steering the conversation during the PLC Team meetings or stepping back to let the PLC Team discussion and our workflow more organically in alignment with the Communities of Practice theory. I tried to create a balance between providing leadership and training while also allowing the space for teachers to direct our PLC Team goals and monthly objectives.

A conclusion I made during the process was the way that we the PLC Team communicated and worked collaboratively. At the beginning of the PLC Team Hub phases, teachers were mostly sharing in our shared Google Drive space. However, as the study progressed, the *PLC Team Hub* became the centralized digital space where teachers not only shared curriculum plans but also uploaded unit modules and daily activities. I also recorded my observation that teachers often communicated through email and through the commenting capability provided in Google Documents.

A revelation I found after analyzing my journal was the sense of astonishment that I felt throughout the process to find colleagues who not only participated in the *PLC Team Hub* but wanted to continue working together at the conclusion of study phases. I remarked that although we had never met or worked directly with each other before, we were all sharing our lessons and resources and collaborating to create new formative and summative assessments. Throughout the process I was able to create new friendships with my colleagues and felt comfortable in being vulnerable with them. Through the process of professional collaboration, I was able to create new, and hopefully lasting, friendships.

Overall, my digital journal served as a useful data point to triangulate the other qualitative data collected. By recording my experience and observations, I was able to review and synthesize my experience with my collected data and analyses. My digital journal also served as a reliable record that I could reference at the conclusion of the *PLC Team Hub* phases to recall what the team struggled with and what was accomplished by the team as well.

Limitations and Boundaries

Before reflecting and discussing the implications of this study, it is important to recognize the factors that may have influenced the outcomes. The most significant limitation that should be noted is the length of this study. This study was conducted over the first semester of the academic year of 2022, which runs the length of 15 weeks. Over the course of the study the perceptions of teacher collaboration and the usefulness of the PLC Team Hub in facilitating teacher collaboration were examined. However, teachers need continuous support when implementing a change in their practice and need to see evidence of the practice reflected in their students' learning (Guskey, 1985). Previous studies and research reflect this belief in PLCs which state that teachers need constant organizational support and a focus on student learning to be successful (Graham, 2007; Pirtle & Tobia, 2014; DuFour, 2014). Ideally, a longitudinal study would allow for more time to examine the organizations support of the *PLC Team Hub* and the extent to which teachers perceive changes in student learning through the use of the *PLC Team Hub.* Because this study was only one semester, more extensive data on student learning, outside of teacher reported student learning, was not collected.

Another important limitation of this study that bears mentioning was the continued disruption of the COVID-19 pandemic. The PLC Team agreed to conduct in-person meetings once a month in addition to our digital collaboration completed in the *PLC Team Hub*. However, the scheduled November PLC Team meeting had to be cancelled due to two teachers being out on sick leave with COVID-19. Within the time parameters of this study, this was a significant limitation as there was limited time to reschedule the meeting. Additionally, when the teachers returned to school, they had to push back their scheduled curriculum due to time constraints. This again demonstrates the challenges for teachers during the COVID-19 pandemic and their increased feelings of burnout as they attempt to balance professional and personal responsibilities (Westphal et al., 2022).

Lastly, a boundary of this study was the quantity of participants. At the beginning of the study, I sent out a recruitment email to all faculty members inviting them to participate in the *PLC Team Hub*. From this initial recruitment email, I was able to identify three to four potential participants that expressed interest in participating in the study. As I am not in an official leadership role, such as an administrator, I could not mandate that any teacher participate in the study. I also wanted to keep in alignment with the CoP theory that informed this study and ensure that participants voluntarily engaged with the *PLC Team Hub* (Wenger, 1998). Although the quantity of participants can be viewed as a boundary, I believe it is important to note that PLCs can thrive in small teams and school-instituted "schoolwide subject-based teams" do not necessarily lead to effective collaboration (Johnson, 2019, p. 87).

Implications for the School and District

Action research is a systematic inquiry of a practitioner's practice with the goal of improving the quality or effectiveness of their practice (Mertler, 2020). My hope and goal at the beginning of this study was to make a positive impact at my school by facilitating effective teacher collaboration and encouraging collegial communication between teachers. As I reflect on the implementation and the outcomes of the *PLC Team Hub*, I have tempered anticipation and enthusiasm that the *PLC Team Hub* will continue at SVHS. All three teachers who participated in the innovation expressed their desire to continue the *PLC Team Hub* and are currently making plans to meet over the summer break to create plans for new cross-curricular activities. However, through my observations and data analyses it became apparent that teachers need structural support to maximize their ability to collaborate.

This study suggests that for the *PLC Team Hub* to continue to be used and to be effective, institutional and administrative support is needed. As I explained in Chapter 4, the lack of time for collaboration was a recurring theme in the data collected. Previous studies and research have emphasized the importance of dedicated collaboration time that cannot be interfered with (Pirtle & Tobia, 2014; Johnson, 2019; Slack 2019). District and school leadership may facilitate this change by creating a grade-level or departmental common planning time schedule, suggested by Johnson (2019). In addition to this change, district and school leadership may consider allowing teachers who participate in the PLC Team Hub the opportunity to create their own professional development plan.

Next Steps

When embarking on my dissertation journey, my deepest hope was that I would be able to facilitate a positive change at my school that teachers would embrace. Currently, the PLC Team is continuing to meet and is now working on a cross-curricular project centered on resistance figures of the Holocaust. The teachers who participated in the study continue to use *PLC Team Hub* innovation and have also discussed plans for the next academic year. This indicates to me that the *PLC Team Hub* shows promise to further facilitate teacher collaboration and communication. I will continue to participate in the PLC Team and plan to continue my role as a practitioner-researcher. I believe it is important to continue in my role for several reasons that I will discuss.

Further Development of Research Methodology

As a practitioner-researcher, it is important to continue to develop and refine research methods to ensure the validity and reliability of results. As I reflect on this study, I have identified areas of my methodology that I would like to improve on as I further examine teacher collaboration and the *PLC Team Hub.* Specifically, I would like to create a shorter survey to examine the usefulness of the PLC Team Hub and find more ways to include teacher voice in my data collection. For example, in the next round of inquiry I would have teachers post a post-PLC Team meeting reflection in a discussion board in Canvas as well as conduct group interviews instead of individual interviews so teachers can hear and add-on to each other's thoughts. Lastly, I would have teachers observe the PLC Team members' instruction in their classroom and discuss what they observed.

Expansion of the Study

This study was constructed within the boundaries of my role as a new teacher at my school and with the number of volunteers I was able to recruit to participate. Despite this, the process of conducting this study reinforced to me previous findings on teacher leadership; teacher leaders on school campuses have the power to foster and affect change (Johnson, 2019). The cultivation and fostering of teacher collaboration was a significant culture change at SVHS however, the successes of the *PLC Team Hub* have the power to influence others to adopt the *PLC Team Hub* and possibly "scale up" the innovation school-wide (Sutton & Rao, 2014). Looking forward, I believe in the potential for further research to expand upon the findings. There are future possibilities of increasing the participant pool or implementing the *PLC Team Hub* innovation in other established PLCs on campus.

Engagement with Stakeholders

The findings of this study have implications for educators and policymakers, and it is important to engage with these stakeholders to ensure that the research is considered and potentially put into practice. Sutton and Rao (2014) examined the challenges that leaders and organizations face with scaling up; "spreading constructive beliefs and behavior from the few to the many" (para. 1). Organizations can face multiple difficulties of labelling challenges, developing solutions, and spreading effective practices. Sutton and Rao's seven-year research project focused on multiple businesses and organizations in both the public and private sector and their efforts in scaling up. Through their efforts Sutton and Rao developed a set of scaling principles for organizations to follow in order to successfully scale up and spread and preserve excellence. One of these principles included developing compelling solutions to the problem of practice. The main idea

behind scaling up is cultivating and spreading best practices through an organization. Through sharing my findings from this study, I can hopefully influence effective change at SVHS.

First, I would like to present my findings to the school administration to increase the potential of structural support to continue the *PLC Team Hub.* Second, I believe it is important to share the study findings with the school faculty. My hope is also inviting the teachers who participated in the study to participate in the presentation to the school faculty to ensure their voice and experience are heard. Third, it is important to share my findings with the district administration to hopefully aid them in future decisions regarding teachers and PLCs. I look forward to sharing my findings and hope that the *PLC Team Hub* and teacher collaboration will continue at SVHS.

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APPENDIX A

PLC TEAM FRAMEWORK FORM

10th Grade ELA and Social Studies PLC Team Meeting
Date:

PLC Team Mission Statement:

PLC Team Goals:

PLC Team Roles:
- Facilitator-
- Recorder-
- Time-Keeper-
- Reporter-

PLC Team Meeting Norms:

PLC Team Schedule:

Unit/Objectives/Items to Discuss:

Which PLC question are we focusing on today?

1. What is it we want our students to learn?
2. How will we know if each student has learned it?
3. How will we respond when some students do not learn it?
4. How can we extend and enrich the learning for students who have demonstrated proficiency?

PLC Team Activities Completed:

APPENDIX B

PROFESSIONAL LEARNING COMMUNITIES ASSESSMENT-REVISED (PLCA-R

QUESTIONNARIE

Survey Identifier Directions

<u>Survey</u> To protect your confidentiality, please create a unique identifier known only to you. To create this unique code, please record the first three letters of your mother's first name and the last four digits of your phone number. Thus, for example, if your mother's name was Sarah and your phone number was (602) 543-6789, your code would be Sar 6789. The unique identifier will allow us to match your post-intervention survey responses and your retrospective, pre-intervention responses when we analyze the data. My unique identifier is: _____ _____ (e.g., Sar 6789, see paragraph above)

Professional Learning Communities Assessment – Revised

Directions:

This questionnaire assesses your perceptions about your principal, staff, and stakeholders based on the dimensions of a professional learning community (PLC) and related attributes. This questionnaire contains a number of statements about practices which occur in some schools. Read each statement and then use the scale below to select the scale point that best reflects your personal degree of agreement with the statement. Shade the appropriate oval provided to the right of each statement. Be certain to select only one response for each statement. Comments after each dimension section are optional.

Key Terms:

▪ Principal = Principal, not Associate or Assistant Principal

▪ Staff/Staff Members = All adult staff directly associated with curriculum, instruction, and assessment of students ▪ Stakeholders = Parents and community members

Scale: 1 = Strongly Disagree (SD)

2 = Disagree (D)

3 = Agree (A)

4 = Strongly Agree (SA

Professional Learning Communities Assessment - Revised

STATEMENTS		SCALE			
	Shared and Supportive Leadership	SD	D	A	SA
1.	Staff members are consistently involved in discussing and making decisions				

	about most school issues.				
2.	The principal incorporates advice from staff members to make decisions.				
3.	Staff members have accessibility to key information.				
4.	The principal is proactive and addresses areas where support is needed.				
5.	Opportunities are provided for staff members to initiate change.				
6.	The principal shares responsibility and rewards for innovative actions.				
7.	The principal participates democratically with staff sharing power and authority.				
8.	Leadership is promoted and nurtured among staff members.				
9.	Decision-making takes place through committees and communication across grade and subject areas.				
10.	Stakeholders assume shared responsibility and accountability for student learning without evidence of				

		SD	D	A	SA
	imposed power and authority.				
11.	Staff members use multiple sources of data to make decisions about teaching and learning.				
COMMENTS:					

STATEMENTS		SCALE			
	Shared Values and Vision	SD	D	A	SA
12.	A collaborative process exists for developing a shared sense of values among staff.				
13.	Shared values support norms of behavior that guide decisions about teaching and learning.				
14.	Staff members share visions for school improvement that have an undeviating focus on student learning.				
15.	Decisions are made in alignment with the school's values and vision.				
16.	A collaborative process exists for				

	STATEMENTS	SD	D	A	SA
	developing a shared vision among staff.				
17.	School goals focus on student learning beyond test scores and grades.				
18.	Policies and programs are aligned to the school's vision.				
19.	Stakeholders are actively involved in creating high expectations that serve to increase student achievement.				
20.	Data are used to prioritize actions to reach a shared vision.				
COMMENTS:					

STATEMENTS		SCALE			
	Collective Learning and Application	SD	D	A	SA
21.	Staff members work together to seek knowledge, skills and strategies and apply this new learning to their work.				

22.	Collegial relationships exist among staff members that reflect commitment to school improvement efforts.				
23.	Staff members plan and work together to search for solutions to address diverse student needs.				
24.	A variety of opportunities and structures exist for collective learning through open dialogue.				
25.	Staff members engage in dialogue that reflects a respect for diverse ideas that lead to continued inquiry.				
26.	Professional development focuses on teaching and learning.				
27.	School staff members and stakeholders learn together and apply new knowledge to solve problems.				
28.	School staff members are committed to programs that enhance learning.				
29.	Staff members collaboratively analyze multiple				

	STATEMENTS	SCALE			
		sources of data to assess the effectiveness of instructional practices.				
30.	Staff members collaboratively analyze student work to improve teaching and learning.				
COMMENTS:					

	STATEMENTS	SCALE			
	Shared Personal Practice	SD	D	A	SA
31.	Opportunities exist for staff members to observe peers and offer encouragement.				
32.	Staff members provide feedback to peers related to instructional practices.				
33.	Staff members informally share ideas and suggestions for improving student learning.				
34.	Staff members collaboratively review student work to share and improve instructional practices.				
35.	Opportunities exist for coaching and mentoring.				
36.	Individuals and teams have the opportunity to apply learning and				

	share the results of their practices.				
37.	Staff members regularly share student work to guide overall school improvement.				

COMMENTS:

STATEMENTS		SCALE			
	Supportive Conditions - Relationships	SD	D	A	SA
38.	Caring relationships exist among staff and students that are built on trust and respect.				
39.	A culture of trust and respect exists for taking risks.				
40.	Outstanding achievement is recognized and celebrated regularly in our school.				
41.	School staff and stakeholders exhibit a sustained and unified effort to embed change into the culture of the school.				
42.	Relationships among staff members support honest and respectful examination				

	of data to enhance teaching and learning.			
COMMENTS:				

STATEMENTS		SCALE			
	Supportive Conditions - Structures	SD	D	A	SA
43.	Time is provided to facilitate collaborative work.				
44.	The school schedule promotes collective learning and shared practice.				
45.	Fiscal resources are available for professional development.				
46.	Appropriate technology and instructional materials are available to staff.				
47.	Resource people provide expertise and support for continuous learning.				
48.	The school facility is clean, attractive and inviting.				
49.	The proximity of grade level and department personnel allows for ease				

	in collaborating with colleagues.				
50.	Communication systems promote a flow of information among staff members.				
51.	Communication systems promote a flow of information across the entire school community including: central office personnel, parents, and community members.				
52.	Data are organized and made available to provide easy access to staff members.				
COMMENTS:					

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APPENDIX C

INTERVIEW PROTOCOLS

<center>**Pre-Innovation Interview Questions**</center>

Briefing Statement

Thank you for agreeing to participate in this interview. In the interview, I will be asking

you questions about teacher collaboration and professional learning communities (PLC).

Please respond with your own thoughts about the questions.

Request

May I audio record this interview?

As you respond to the questions, please do not mention names of individuals in your responses.

1. What is your attitude toward teacher collaboration?
2. How has your attitude toward teacher collaboration changed over time?
3. Have you ever participated in a professional learning community (PLC)? If so, how did (does) participating in a PLC affect your instruction?
4. From your perspective, what is the purpose of PLCs?
5. What are some of the strategies that you have used to increase student engagement and learning?
6. What are the challenges of participating in PLCs?
7. What additional training in teacher collaboration would benefit you?
8. Is there anything else you would like to add?

Debriefing Statement
Thank you for your responses and your time today. I appreciate it very much. I will be using your responses to inform my work this semester and future efforts.

<center>**Post-Innovation Interview Questions**</center>

Briefing Statement

Thank you for agreeing to participate in this interview. In the interview, I will be asking you questions about teacher collaboration and professional learning communities (PLC). Please respond with your own thoughts about the questions.

Request

May I audio record this interview?

As you respond to the questions, please do not mention names of individuals in your responses.

1. What is your attitude toward teacher collaboration?
2. How has your attitude toward teacher collaboration changed over time?
3. How did participating in the *PLC Team Hub* affect your instruction?
4. From your perspective, was the *PLC Team Hub* helpful in facilitating collaboration with colleagues?
5. From your perspective, how did participating in the PLC Team Hub affect student engagement and learning?
6. What were the challenges of participating in the PLC Team?
7. What were the benefits of participating in the PLC Team?
8. What additional training in teacher collaboration would benefit you?
9. Is there anything else you would like to add?

Debriefing Statement

Thank you for your responses and your time today. I appreciate it very much. I will be using your responses to inform my work this semester and future efforts.

APPENDIX D

PLCA-R INTERPRETATION STEPS

- View attributes (item statements) first individually – determine the highest and lowest scores;
- Next, focus on the Dimension sections; determine those dimensions which have a majority of high or low scoring attributes;
- Focus on the overall results at the Dimension levels to determine if there is a pattern of high or low scores;
- Scores of 3.0 or higher show general agreement with the attribute;
- Refer to the calculated Standard Deviation (SD) in order to account for the outliers (variance within the group);
- A smaller SD indicates greater agreement, while a larger SD shows more variance among respondents (less agreement);
- You may have an outlier or two, but still have an overall strong level of support for the dimension.
- Use these scores to determine next steps for school leaders as they develop their schools as PLCs.

APPENDIX E

PLCA-R RELIABILITY AND VALIDITY PROCEDURES PERFORMED BY PLC

ASSOCIATES

The most recent analyses of the PLCA-R survey "confirmed internal consistency resulting in the following Cronbach Alpha reliability coefficients for factored subscales (n=1209):

- Shared and Supportive Leadership (.94);

- Shared Values and Vision (.92);

- Collective Learning and Application (.91);

- Shared Personal Practice (.87);

- Supportive Conditions-Relationships (.82);

- Supportive Conditions-Structures (.88); and

- A one-factor solution (.97)." (PLC Associates, 2023).

The creators of the PLCA-R have also stated that the survey went through construct validity and yielded satisfactory internal consistency for reliability (PLC Associates, 2023).

APPENDIX F

PLC FRAMEWORK FORMS

10th Grade ELA and Social Studies PLC Team Meeting
Date: Thursday, October 6th 2022

PLC Team Mission Statement: *Our mission is to engage in effective cross-curricular collaboration to deepen the understanding of key concepts for the 10th grade students at Imperial High school and to grow professionally in our area of expertise.*

PLC Team Goals: *The goal of the PLC Team is to create a cross-curricular unit of study with a common summative assessment to assess student learning.*

PLC Team Roles:
- Facilitator (Develops agenda and facilitates the meeting)-Zsuzsa
- Recorder (Records meeting notes in PLC Team Agenda)-Michelle
- Time-Keeper (Monitors agenda time, topics, and keeps group focused)-Sabrina
- Reporter (Reviews norms at start of meetings and acts as communication liaison for school to team communication)-Zsuzsa

PLC Team Meeting Norms:
-Active participation
-Start and end on time
-Have a goal
-Goal-driven

PLC Team Schedule: Schedule Staff Meetings Days (Once monthly) and virtually

Unit/Objectives/Items to Discuss: We will be doing a check-in regarding the ELA team's 2nd quarter unit of study and revisit our discussion regarding our focus on either the Industrial Revolution or Age of Imperialism.

Which PLC question are we focusing on today?

1. What is it we want our students to learn? Focus on shared unit and student learning goals.
2. How will we know if each student has learned it?
3. How will we respond when some students do not learn it?

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4. How can we extend and enrich the learning for students who have demonstrated proficiency?

PLC Team Activities Completed:
*Animal Far*m is back into the plan at each teacher's discretion. There has been limited time to decide on which stories to cover.

Summative assessment discussed. Argumentative Essay will likely be used. Prompt to be determined- should be a common prompt. Students will be able to use their essay for both History and English- score will be the same.

-All formative assessments requested to be submitted in shared folder so that a concrete summative assessment can be determined.

-Next meeting will be October 12 on Minimum Day after Professional Development.

-At follow

Team questions and/or concerns:

10th Grade ELA and Social Studies PLC Team Meeting
Date: Monday, December 12th 2022

PLC Team Mission Statement: *Our mission is to engage in effective cross-curricular collaboration to deepen the understanding of key concepts for the 10th grade students at Imperial High school and to grow professionally in our area of expertise.*

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4. How can we extend and enrich the learning for students who have demonstrated proficiency?
We will be looking at shared summative assessment for the "Taking a Stand"/"Industrial Revolution and Imperialism" Unit.

PLC Team Activities Completed:
- Shared summatives assessment materials in PLC Team Hub
- Discussion of student learning goals
- Debrief of semester learning

Team questions and/or concerns:
- Timeline of next unit (the Holocaust)