

**VOICES FROM THE FIELD: EDUCATORS' PERSPECTIVES OF PROFESSIONAL
LEARNING COMMUNITIES IN RURAL ELEMENTARY SETTINGS**

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ABSTRACT

This qualitative single case study examines how small, rural elementary school educators perceive the influence of professional learning communities (PLCs) on their instructional practices and professional growth. Framed by Socio-Constructivism and Communities of Practice, the study investigates the benefits and challenges of implementing PLCs in settings with limited staff, resources, and collaboration opportunities. Data were gathered from four rural schools through interviews, observations, and documents. Using open and a priori coding, the analysis used a case study framework and incorporated strategies to ensure trustworthiness, including triangulation and member checking. Findings indicate that while educators view PLCs as valuable for collaboration and student-focused planning, their effectiveness depends heavily on leadership support, structured time for collaboration, and access to meaningful data. Participants described gains in instructional alignment, professional confidence, and collective responsibility but also noted barriers such as scheduling difficulties and limited facilitation. This study offers insight into how PLCs function in rural contexts and underscores the importance of adapting professional learning models to meet the unique needs of small schools. The results may inform school leaders and policymakers seeking to strengthen collaboration and continuous improvement in rural education.

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CHAPTER ONE

INTRODUCTION AND GENERAL INFORMATION

Professional learning communities (PLCs) have emerged as a widely adopted strategy in education, offering structured opportunities for teachers to collaborate, reflect on their practice, and work toward shared goals for student learning (DuFour et al., 2008). More than just scheduled meetings, effective PLCs foster meaningful dialogue, encourage knowledge sharing, and support sustained professional growth among educators (Hord, 1997; Brown et al., 2018). While collaboration is central to PLCs, their success often hinges on the support and vision of school leaders, who play a critical role in shaping school culture, allocating time and resources, and promoting collective responsibility for student outcomes (Eaker, 2020; DuFour & Fullan, 2013).

At their best, PLCs strike a balance between honoring each educator's individual experiences and promoting the shared commitments of a professional community. Teachers contribute unique instructional styles, classroom contexts, and students' needs—yet through collaborative structures, they build common understandings and work together toward improvement. This dynamic reflects principles of socio-constructivist learning theory, which emphasizes that learning is socially constructed through interaction with others and one's environment (Vygotsky, 1978; Bruner, 1996). The concept of communities of practice (Wenger, 1998) further supports this view, highlighting the value of mutual engagement, joint enterprise, and shared practice in fostering meaningful professional learning.

Although PLCs have been widely studied in urban and suburban contexts, relatively little research has examined their implementation in small, rural elementary schools (Penner-Williams

et al., 2020; Voelkel & Chrispeels, 2017). These settings pose unique challenges, including limited staffing, fewer peer collaborators, resource constraints, and professional isolation. Teachers in such schools often serve as the sole educator at their grade level or subject area, which can complicate opportunities for collaboration. Despite these constraints, rural schools also present opportunities to explore more flexible and context-sensitive models of professional learning that may better reflect their unique strengths and needs (Mohan et al., 2017).

This study centers on the perceptions of teachers working in small, rural elementary schools—specifically, how they understand PLCs, how they experience collaboration, and how they believe these structures influence their instructional practices. Teachers’ perceptions are critical to understanding not just the implementation of PLCs, but their impact. These perspectives influence whether teachers feel invested in the process, see value in shared work, and ultimately adapt their practices in ways that benefit student learning (Zepeda, 2019; Vescio et al., 2008).

Within small school settings, PLCs often include grade-level or interdisciplinary teams that meet to review student data, plan instruction, and address learning gaps. Research underscores the importance of frequent and structured collaboration in fostering continuous improvement (Leane et al., 2022; Hansen, 2015). Facilitators or instructional coaches may provide additional support, yet much of the success depends on teachers’ commitment to mutual accountability and collective growth (Voelkel & Chrispeels, 2017). When effectively implemented, PLCs contribute to a culture of professional renewal and shared efficacy, ultimately supporting both teaching quality and student outcomes (Eaker, 2020; Antinluoma et al., 2021).

Overview of Professional Learning Communities

Data-driven decision-making is a foundational element of professional learning communities (PLCs), enabling educators to make informed instructional choices, identify areas for improvement, and evaluate the impact of their teaching on student outcomes (Villeneuve & Yamina Bouchamma, 2023). Within PLCs, ongoing professional development is often embedded through collaborative workshops and shared learning experiences that are directly tied to practice (Voelkel & Chrispeels, 2017). Rather than working in isolation, educators assume shared responsibility for student achievement, reinforcing a collective commitment to improvement. These communities also emphasize reflective inquiry, encouraging teachers to consistently examine student progress, evaluate instructional approaches, and adapt strategies based on evidence (Oo et al., 2023). However, the success of these collaborative practices depends heavily on strong and consistent leadership. Effective leaders play a critical role in sustaining PLCs by fostering trust, guiding discussions, and promoting a culture of open communication and continuous learning (Antinluoma et al., 2021). In this way, leadership becomes a driving force behind the development and long-term success of meaningful professional collaboration.

The benefits of PLCs are numerous. According to Kim et al. (2022), collaboration and sharing of best practices lead to improved teaching methods, while data-driven decision-making enables personalized instruction to address individual student needs, ultimately enhancing student learning outcomes. Engaging in PLC activities fosters a sense of community and professional support among educators, contributing to higher job satisfaction and reduced teacher turnover (Kim et al., 2022). PLCs also promote a positive and supportive school culture, where teachers work together towards a common goal and celebrate successes as a team (Eaker, 2020).

Additionally, they help identify specific areas for targeted professional development, maximizing the efficient use of school resources (Antinluoma et al., 2021).

Despite their many advantages, implementing professional learning communities (PLCs) is not without its challenges. One of the most persistent obstacles is time—teachers often manage demanding schedules filled with instructional responsibilities, planning, and administrative tasks, leaving little room for consistent, focused collaboration (Nguyen et al., 2023). In these situations, effective leadership is critical. School administrators play a central role in prioritizing collaborative time, structuring PLC agendas, and allocating resources that make sustained engagement possible (Voelkel & Chrispeels, 2017).

Equity and inclusivity are also essential considerations. Without intentional planning, some educators may find themselves marginalized in PLC discussions, and student populations may not benefit equally from the strategies developed (Kozleski & Proffitt, 2019). Ensuring that PLCs reflect diverse perspectives and address a range of student needs is key to their success. Resistance to change can present additional hurdles. Educators accustomed to working independently may be hesitant to embrace shared practices or may question the value of collaborative inquiry (Errida & Lotfi, 2021). In these cases, leadership must foster a supportive environment, offering encouragement and professional development that help build trust and openness to new ideas.

Nonetheless, the promise of PLCs remains strong. When implemented thoughtfully, they serve as a catalyst for professional growth, reflective practice, and collective responsibility (Antinluoma et al., 2021). Through regular collaboration, teachers learn from one another, refine their instructional strategies, and work together to enhance student learning outcomes. As

schools continue to emphasize both academic excellence and equity, PLCs will likely remain a central tool in the effort to cultivate effective and inclusive learning environments (McLaughlin & Talbert, 2010).

Sustaining effective PLCs in small, rural schools requires tailored approaches that account for their unique contexts. These schools often operate with limited staff, tight budgets, and fewer opportunities for grade-level collaboration, making it difficult to replicate models used in larger districts (Mohan et al., 2017). Yet, these same constraints can foster innovative adaptations. For instance, cross-grade teams, virtual PLCs, or district-wide networks may offer alternative ways to support professional learning and maintain momentum. Rural educators often bring a strong sense of community and commitment to their students, which can serve as a foundation for building authentic collaborative cultures (Preston & Barnes, 2017). To remain sustainable, PLCs in these settings must be supported by flexible leadership, a shared vision among staff, and structures that are both manageable and meaningful. Without this intentional design, PLCs risk becoming routine or performative rather than transformative. As rural schools continue to adapt and evolve, the ability to sustain dynamic, context-sensitive PLCs will be essential to long-term instructional improvement and teacher retention.

Problem Statement

Historically, professional development (PD) for teachers has remained detached from actual classroom application, leading to its limited effectiveness in creating lasting transformations in teachers' instructional methods (Dana & Yendol-Hoppey, 2014; Guskey, 2002). One contributing factor to this disconnect is the tendency of PD to neglect the practical integration of new learning into teachers' unique classroom contexts. A study conducted by

Mohan et al. (2017) yielded significant insights from teachers' perspectives of their professional development, that PD is crucial for sustaining pedagogical changes regardless of teachers' experience levels; distinct PD requirements exist for rural and urban educators, and the cornerstone of effective PD lies in providing teachers the chance to collaborate and exchange ideas (Mohan et al., 2017).

A conventional illustration of traditional professional development (PD) involves teacher in-service training that takes place outside regular school hours and often neglects to address crucial issues relevant to teachers' day-to-day instructional needs (Ayvaz-Tuncel & Çobanoğlu, 2018). Given that the objective of PD is to bring about meaningful shifts in teaching beliefs and practices—such as adopting more student-centered instructional strategies, differentiating instruction to meet diverse learner needs, integrating data-driven decision-making, and promoting reflective teaching—the effectiveness of PD initiatives is paramount (Mohan et al., 2017). Without this efficacy, educational reforms introduced through PD are likely to encounter resistance and fall short of enhancing both teaching methods and student learning outcomes. Desimone's (2009) research outlined specific criteria for effective PD, which include coherence with school goals, a strong content focus, opportunities for collective participation, active engagement in meaningful learning experiences, and sufficient duration to support sustained change. Professional learning communities (PLCs) represent a model of PD that inherently aligns with these criteria. PLCs are purposefully designed to foster collaborative inquiry, sustained reflection, and shared accountability for improved instructional practice. Furthermore, a strong correlation exists between PD and PLCs, particularly regarding their structural

implementation, collaborative processes, and intended outcomes aimed at continuous school improvement (DuFour et al., 2014).

The underlying principle of PLCs is that new learning is integrated within the unique contexts of each teacher (Leane et al., 2022). The invested time in these societies enables educators to meld their newfound knowledge with the intricacies of their present classroom dynamics (Dana & Yendol-Hoppey, 2014; Vescio & Adams, 2015). The outcomes of collaborative professional development facilitated through PLCs have the potential to fulfill the criteria proposed by Desimone (2009), which may ultimately lead to transformative shifts in teaching practices, thereby resulting in enhanced student learning outcomes.

The degree to which educators' perceptions of the effectiveness of PLCs alignment with student performance outcomes, in elementary school settings employing the PLC model, remains uncertain. Researchers (Tam, 2014; Zhang et al., 2016) have conducted studies to compare teacher viewpoints across different school levels and systems, as well as to juxtapose administrators' and teachers' perspectives on the adoption of the PLC framework. Tam (2014) and Zhang et al. (2016) offer insights into the successful integration of diverse PLC strategies across various schools and identify prevalent PLC characteristics in higher-performing schools. However, additional research is required to delve into teachers' perceptions of the efficacy and shortcomings of PLCs in professional growth and in enhancing student learning in various school sizes (Voelkel & Chrispeels, 2017). As educators are the implementers of these practices in the classroom, gaining insight into their perspectives on optimizing the utilization of time and resources for PLCs, could refine the learning and teaching experiences within the classroom (Mhlongo et al., 2023).

Purpose of the Study

The purpose of this qualitative study is twofold: (a) to examine how elementary school teachers in small, rural schools perceive their experiences working within an established professional learning community (PLC), and (b) to explore teachers' perceptions of their professional growth and learning within these PLC structures.

Research Questions

1. What are the perceptions of teachers in small, rural elementary schools on the established professional learning communities in their school?
2. How do teachers in small, rural elementary schools perceive their professional learning within established PLCs in their school?

Definition of Key Terms

To support clarity and consistency, the following key terms are defined as they are central to the focus and scope of this study:

Professional Learning Communities (PLCs): Structured groups of educators who collaborate regularly to reflect on practice, share expertise, and work collectively to improve teaching and student learning outcomes (DuFour et al., 2008; Hord, 1997).

Collaboration: Purposeful, structured interactions among educators within PLCs that promote shared decision-making and collective responsibility for student success (DuFour et al., 2016; Hord, 2004).

Socio-Constructivism: A theory of learning that emphasizes the role of social interaction and cultural tools in the construction of knowledge, with foundational work by Vygotsky (1978) and Bruner (1996).

Communities of Practice: A concept developed by Wenger (1998) describing groups of people who share a concern or passion for something they do and learn how to do it better through sustained interaction.

Small, Rural Elementary Schools: Schools with enrollments under 250 students, located in non-metropolitan areas with limited access to professional development resources and often characterized by minimal staff per grade level (Howley & Howley 2014; National Center for Education Statistics, 2022).

Professional Development (PD): Educational experiences designed to enhance teachers' knowledge, skills, and instructional practices, traditionally delivered through workshops or seminars, but increasingly integrated into daily teaching through models like PLCs (Desimone, 2009; Darling-Hammond et al., 2017).

Reflective Inquiry: A process within PLCs where educators examine their teaching, assess student learning, and adjust strategies based on evidence and collective feedback (Dana & Yendol-Hoppey, 2014; Langer, 2000).

Data-Driven Decision Making: The use of student performance data to guide instructional planning, interventions, and collaborative discussions within PLCs (Merler, 2016; Mandinach & Gummer, 2016).

Instructional Practices: Methods and strategies used by teachers to facilitate learning, including lesson planning, assessment, and differentiated instruction (Marzano et al., 2001; Hattie, 2009).

Collective Efficacy: The shared belief among a group of educators in their collective power to positively affect student achievement (Bandur, 1997; Goddard et al., 2004).

Collaborative Inquiry: A structured process of joint investigation by teachers to explore problems of practice, implement solutions, and assess outcomes (Timperley et al., 2007; Cochran-Smith & Lytle, 2009).

Shared Vision: A unifying goal or purpose that guides the work of PLCs and fosters a cohesive and focused professional culture (DuFour & Eaker, 1998; Hord, 2004).

Cross-Grade Collaboration: Cooperative work among teachers from different grade levels, particularly useful in small schools with limited same-grade peers (Pellegrino et al., 2015; Leane et al., 2022).

Interdisciplinary Teams: Teams composed of teachers from multiple subject areas who work together to address shared instructional goals (Beane, 1997; Friend & Cook, 2013).

Instructional Coaches / Facilitators: Individuals who support PLCs by guiding discussions, providing expertise, and helping teams stay focused on student learning (Knight, 2007; Mangin & Dunsmore, 2015).

Equity and Inclusivity in PLCs: The principle that all educators should have a voice in collaborative work and that PLC strategies should address the diverse needs of all student populations (Darling-Hammond, 2010; Theoharis, 2007).

Significance of the Study

Significant studies on professional learning communities (PLCs) and their outcomes are now more than a decade old, highlighting the need for updated research that reflects the evolving demands of schools and teachers. While PLCs have been linked to improvements in student achievement (DuFour et al., 2008), relatively few recent studies have examined how participation in PLCs contributes to teachers' professional growth and instructional practices

(Van Driel & Berry, 2012). Prenger et al. (2017) emphasized that educators' perceptions are critical in shaping the effectiveness of PLCs, yet research in this area remains limited, particularly in rural contexts. Despite increasing interest in collaboration and collective efficacy, there is a clear gap in the literature addressing how PLCs function in small rural schools—especially those where only one or two teachers serve each grade level. This study aims to help fill that gap by focusing specifically on how educators in these settings experience and interpret PLC participation.

PLCs have gained significant attention in educational settings as a means to improve teaching practices and student outcomes. While numerous studies have examined the impact of PLCs on student achievement, there remains a gap in understanding educators' perceptions of these collaborative structures, particularly within small, rural elementary schools. Despite the widespread implementation of PLCs, little is known about how teachers in rural contexts perceive their participation, the challenges they face, and the ways in which PLCs influence their instructional practices. Moreover, much of the existing research emphasizes quantitative measures of PLC effectiveness, often overlooking the qualitative insights, attitudes, and lived experiences of educators themselves. Addressing this gap is essential for understanding how PLCs function in resource-limited environments and how they might be adapted to better meet the unique needs of rural educators and their students.

Theoretical Frame

For this study, I am using Socio-Constructivism and Communities of Practice to frame my research. Socio-Constructivism, developed by scholars such as Lev Vygotsky and Jerome Bruner, emphasizes the social and interactive nature of learning, positing that knowledge is

constructed through meaningful engagement with others and the environment (Zhou, 2020). Communities of Practice, introduced by social learning theorists Jean Lave and Etienne Wenger, similarly explores how individuals with shared interests, expertise, and goals come together to learn collaboratively (Lave & Wenger, 1991). While both frameworks highlight the essential role of social interaction in learning, Socio-Constructivism focuses more broadly on the cognitive processes underpinning individual learning through social contexts, whereas Communities of Practice emphasizes the formation of sustained groups engaged in collective inquiry and shared practice. Together, these frameworks provide a robust foundation for examining how professional learning communities support teacher growth, collaboration, and the co-construction of instructional knowledge in small, rural elementary school settings. I will further elaborate on these theoretical frames in my literature review.

Delimitations

For the purpose of this study, the sample will be limited to educators and their direct administrators from four elementary schools within a single school system. The study will focus specifically on *small* schools, defined as those with total student enrollments under 250, and *rural* schools, identified by their location in non-metropolitan areas with limited access to district-wide professional development resources. These schools are also characterized by a *limited* number of teachers per grade level—typically one or two—resulting in minimal opportunity for same-grade collaboration. Only staff members who are actively engaged in professional learning communities (PLCs) within these settings will be included. By narrowing the scope to these parameters, the study aims to capture the distinct experiences and perceptions of educators working in environments where professional isolation, reduced peer interaction, and

multi-grade responsibilities are common. These delimitations are intended to ensure the findings are contextually grounded and directly applicable to similarly structured rural educational settings.

Summary

Chapter One provided the foundation for this study by presenting the background, problem statement, purpose, research questions, significance, theoretical frameworks, delimitations, and limitations. A review of existing literature demonstrated the enduring relevance of professional learning communities (PLCs) in fostering collaboration, continuous professional development, and improved instructional practices. Although the concept of PLCs is well established in educational research, this study emphasizes the importance of examining their implementation and perceived effectiveness within small, rural elementary school settings—contexts that present unique challenges and opportunities.

The theoretical frameworks of Socio-Constructivism and Communities of Practice provide a lens through which the social and collaborative nature of PLCs can be understood and analyzed. Existing research supports the role of PLCs in promoting both teacher growth and student achievement; however, gaps remain, particularly regarding how educators in rural schools' experience and interpret these collaborative structures. By addressing this gap, the present study aims to contribute valuable insights that can inform future practices and policies around professional learning communities in similar educational contexts.

Chapter Two will provide a comprehensive review of the literature related to professional learning communities, effective professional development practices, and the theoretical

foundations guiding this study, thereby setting the stage for the research design and methodology.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter presents a review of the literature relevant to professional learning communities (PLCs) and their impact on instructional practices and professional development, particularly within small, rural elementary school contexts. The chapter begins with an overview of the search methods employed to locate and select relevant scholarly sources. Following this, a historical perspective on the development of PLCs is provided to establish the origins and evolution of this collaborative model within educational settings. An overview of key literature examining the factors influencing the effectiveness of PLCs in elementary schools is then discussed, with particular attention given to the unique conditions present in rural environments, such as limited staffing, geographic isolation, and resource constraints.

The literature review is organized into several key sections: (a) the historical development of PLCs; (b) an overview of PLC structures and purposes; (c) the theoretical foundations underpinning PLCs, including socio-constructivism and communities of practice; (d) the conditions necessary for successful PLC implementation; (e) emerging trends and innovations in PLC practices; and (f) critiques and limitations identified within current research. Throughout the review, special emphasis is placed on understanding how these factors manifest in small, rural schools, where the need for meaningful collaboration and sustained professional growth is both critical and challenging.

Literature Review Methods

To conduct the literature review for this study, I utilized the University of Tennessee's online education databases, accessing articles and reports from platforms such as EBSCOhost (including ERIC and ProQuest) and JSTOR. The university's e-journal database was also employed, yielding articles from a variety of peer-reviewed scholarly journals. Additional databases, including EBSCO, LibCat, Google, and Google Scholar, were searched for scholarly papers published between 2015 and 2024. Google Scholar was specifically utilized to locate publications from the U.S. Department of Education and other relevant peer-reviewed sources.

Key search terms included *professional learning communities*, *elementary schools*, *singleton collaboration*, *small rural schools*, and *teachers' perspectives*. The search results were evaluated based on criteria of currency, relevance, accuracy, and purpose. Reference lists, literature reviews, and abstracts within retrieved articles were examined to identify additional sources pertinent to the study.

In addition to journal articles, several books were located through searches on LibCat, including *Singletons in a PLC at Work* by Brig Leane and Jon Yost; *Professional Learning Communities at Work* and other works by Richard DuFour; *How to Develop PLCs for Singletons and Small Schools* by Aaron Hansen; and *Yes We Can!* by Heather Friziellie, Julie Schmidt, and Jeanne Spiller. These books were reviewed for their applicability to the research focus and served as important sources for understanding the development, implementation, and challenges of PLCs, particularly in small, rural educational settings.

Historical Development and Evolution of Professional Learning Communities

This literature review gives a thorough overview of the major contributions, emerging themes, and gaps in the field by synthesizing and critically analyzing research on PLCs. The section explores among other topics the history, theoretical frameworks, benefits, challenges, obstacles, impacts and future directions of PLCs in schools. Through exploring diverse aspects in PLCs, this section aims to clarify the ways in which these communities impact the teaching profession and aid in the ongoing enhancement of educational frameworks.

The origins of PLCs in education can be traced back to the 1960s and 1970s, when educational theorists and researchers began to explore alternative models of school improvement (Denicolo & Kompf, 2005). Scholars like Ted Sizer emphasized the importance of student-centered learning and the need for collaborative teacher practices (Jarvis et al., 2003). During this time, the concept of "teacher teams" emerged, promoting collaboration and shared decision-making among educators (Ronfeldt et al., 2015).

During the 1980s, both the corporate sector and the public education system started focusing on the impact of work environments on employees. In 1989, Rosenholtz introduced the concept of teacher workplace dynamics into discussions about teaching quality, arguing that educators who felt supported in their personal growth and classroom methods exhibited greater dedication and effectiveness compared to those who lacked such support. This sense of teacher efficacy in meeting students' needs was bolstered by teacher collaboration, interaction with colleagues, and the development of professional roles. Rosenholtz's research revealed that instructors with a strong belief in their own effectiveness were more inclined to experiment with

innovative classroom approaches, and this confidence also played a role in their commitment to remaining in the teaching profession.

McLaughlin and Talbert (1993) validated Rosenholtz's results, showing that experienced educators who participated in collaborative inquiry and related learning activities constructed a shared reservoir of teaching expertise that could be broadly disseminated. Darling-Hammond (1996) expanded on this dialogue by emphasizing collaborative decision-making as a catalyst for curriculum reform and the reconfiguration of teaching responsibilities in specific educational institutions. In these schools, specific time slots were allocated for teachers to collaborate on lesson planning, observe each other's classes, and offer constructive feedback. In the 1990s, the New London Group, led by educational theorists Bill Cope and Mary Kalantzis, further advanced the collaborative learning idea in education. The work highlighted the significance of communities of practice, where learning occurs through social interactions and collective knowledge construction (Cope et al., 2017).

It was during the early 1990s that Richard DuFour and Rebecca DuFour began to popularize the concept of PLCs as a powerful model for school improvement. Their book *Professional Learning Communities at Work: Best Practices for Enhancing Student Achievement* (2009) played a pivotal role in introducing the term "PLCs" to the educational community. They emphasized that PLCs are not a one-time professional development event but a sustained and collaborative approach to improving teaching methods and student learning outcomes (DuFour & Eaker, 2009). Richard DuFour and his colleagues further refined and expanded the concept of PLCs, identifying four essential pillars: collective inquiry, focus on learning, action orientation, and collaborative culture (DuFour & Eaker, 2009). These pillars became the foundation of the

PLC model, guiding educators in creating a culture of collaboration, data-motivated decision-making, and continuous improvement. The concept of PLCs gained significant traction in education in the late 1990s and early 2000s (Little, 2002). It became a prominent model for school improvement and PD in various educational systems worldwide (DuFour & Eaker, 2009).

Since then, the concept of PLCs has continued to evolve, with educators and researchers adapting and refining the model to suit the specific needs of their schools and educational contexts (Little, 2002). According to Schaap and de Bruijn (2017), PLCs remain a popular and influential approach to school improvement, emphasizing collaborative learning, data-motivated decision-making, and a shared commitment to enhancing student learning outcomes. As education continues to evolve, the concept of PLCs plays a key role in shaping the way educators collaborate, learn, and work together to create positive and transformative learning environments (Horn & Little, 2010).

Importance and Relevance of PLCs in Education

Professional Learning Communities (PLCs) have become an indispensable aspect of modern education, serving as a transformative approach to enhancing teaching and learning (Brown et al., 2018). Their increasing prominence is attributed to various reasons that collectively make them highly valuable in educational settings. One of the key strengths of PLCs is their ability to foster collaboration and harness collective expertise among educators (Serviss, 2022). By bringing teachers together, PLCs create an environment where experiences are shared and perspectives are exchanged, leading to the advancement of more effective and innovative teaching practices. The diverse backgrounds and varied insights of colleagues contribute to a richer learning experience for both teachers and students (Serviss, 2022).

Furthermore, PLCs stand out for their commitment to data-driven decision-making (Little et al., 2019). Informed by student data analysis, PLCs ensure that instructional strategies are tailored to meet the needs of each student. This targeted approach has a profound effect on student learning outcomes and academic success, as educators can effectively address learning gaps and provide differentiated instruction. The emphasis on data also helps teachers continuously evaluate and refine their teaching methods to achieve better results (Lai & McNaughton, 2016).

Continuous professional development is a hallmark of PLCs, offering educators structured and ongoing opportunities to enhance their skills. Engaging in reflective practices and disseminating best practices within the PLC community enable teachers to stay updated on the latest educational research and pedagogical techniques. The result is a dynamic and responsive teaching force that continuously evolves to meet the evolving needs of students and the education landscape. With a deeper comprehension of their student's needs and preferences, teachers can provide more personalized instruction, catering to individual learning styles and abilities. This level of customization fosters a more involving and effective learning experience for students, ensuring that no one falls through the cracks (Leane et al., 2022).

Beyond the immediate impact on teaching and learning, PLCs also play a crucial role in enhancing overall teacher satisfaction and retention. By cultivating a sense of community, support, and collective ownership, PLCs create a positive and collaborative environment for educators. This, in turn, reduces burnout and increases job satisfaction, contributing to higher teacher retention rates. A strong and supportive school culture emerges as educators work

collaboratively towards common goals, fostering improved communication, morale, and an overall positive school climate (Nguyen et al., 2023).

PLCs are effective instruments in aligning educational efforts with school and district goals. By directly relating professional development initiatives to the strategic priorities of the institution, PLCs ensure that efforts are purposeful and targeted. This alignment strengthens the overall educational mission and vision, bringing coherence and direction to the school's trajectory (Schaap & de Bruijn, 2017). Perhaps one of the most enduring strengths of PLCs lies in their ability to cultivate a culture of continuous improvement. Encouraging educators to engage in regular reflection, seek feedback, and adapt their instructional methods as needed, PLCs instill a growth mindset among teachers. This culture of improvement benefits both educators and students, creating an environment where learning and progress are valued and celebrated (Prenger et al., 2017). Moreover, PLCs offer fertile ground for leadership development. By providing opportunities for teacher leadership and shared decision-making, educators can expand their roles beyond the classroom. As they take on leadership responsibilities within the PLC community, they develop their leadership skills, which can have a positive and lasting impact on the broader educational context (Esteves, 2020).

PLCs have emerged as a cornerstone of modern education, offering numerous benefits that enrich teaching and learning (Serviss, 2022). According to Mhlongo et al. (2023), promoting collaboration, data-informed decision-making, continuous professional development, and personalized instruction, PLCs elevate the educational experience for both educators and students. Additionally, PLCs contribute to positive and supportive school culture, improve teacher satisfaction, and align educational efforts with institutional goals. As education continues

to evolve, PLCs remain indispensable in empowering educators to provide high-quality learning experiences and cultivate a bright future for all students (Schaap & de Bruijn, 2017).

The Foundations of a Well-Established PLC

The concentration and commitment to learning attained by each and every student under the supervision and care of the teacher and school should be at the heart of any learning community (DuFour et al., 2019). There must be a common purpose for why teachers and staff come to school each day. The shared purpose should then become the driving force in carrying out the group's tasks. These collective commitments assist in clarifying for PLC members the role and contributions for which they are responsible. These shared basic structures of a common mission, vision, values, and goals assist educators by focusing their efforts on how to enhance their schools. Furthermore, they jointly reaffirm the moral purpose and collective duty that clarifies why their everyday job is so vital, not only on the first day of school but every day following (DuFour et al., 2019).

A PLC's foundation is a shared mission, vision, and goals. Then, in every firm, a collaborative culture of teamwork acts as the primary building element for a PLC. DuFour et al. (2019) defined collaboration as a set of collaborative teams whose members work jointly to achieve common goals. These objectives must be related to the overarching goal of learning for each and every learner. Similarly, members of the organization must hold one another accountable for accomplishing those common goals.

Educators who participate in a true professional learning community (PLC) are proactive in their approach. Rather than remaining passive observers, they take initiative and responsibility for driving meaningful change within their schools. These educators understand that the most

impactful learning—for both themselves and their students—occurs through action and engagement. DuFour et al. (2019) emphasize that this mindset underscores the importance of working collaboratively in teams and engaging in collective inquiry, which serves as a catalyst for purposeful action and sustained improvement.

For educators involved in a professional learning community (PLC), it is essential to recognize that the true measure of success lies not in the intentions behind their work, but in the results it produces. Every aspect of PLC engagement—whether developing a shared mission, collaborating with peers, or engaging in continuous improvement—must ultimately lead to meaningful outcomes. Good intentions alone are not enough. To ensure that PLC efforts are purposeful rather than performative, educators must regularly assess whether their work is translating into tangible improvements in student learning. As DuFour et al. (2019) aptly noted, "unless initiatives are subjected to ongoing assessment on the basis of tangible results, they represent random groping in the dark, not a purposeful improvement." This emphasis on results helps ensure that PLCs remain focused, effective, and accountable to the very students they are designed to support.

Since the term PLC gained significant attention in the field of education, a substantial portion of the literature between 2003 and 2015 has focused on three principal themes: the connection between PLC outcomes and student achievement, teachers' perceptions of PLC impacts on their teaching practices, and the influence of teacher collaboration within PLCs on student achievement (Supovitz and Christman, 2003; Reichstetter, 2006; Vescio et al., 2008; Feger and Arruda, 2008; Cormier and Oliver, 2009; Lomos et al., 2011; Carpenter, 2015).

A prevailing topic in current literature is the potential enhancement of cognitive processes in knowledge generation among educators through technology. This arises from the growing recognition of the role of social interaction in professional learning (Zhang et al., 2017). According to Zhang and colleagues (2017), facilitating interactions with experienced peers empowers teachers to engage in knowledge creation. In general, research indicates that online activities can effectively stimulate advanced knowledge construction among educators by facilitating activities and fostering discussions that improve knowledge co-creation. This is achieved by expanding and improving their social networks.

Contemporary schools are tasked with equipping students with the knowledge and abilities essential for success in an unpredictable and ever-evolving world. As a result, educators are required to cultivate teaching methods and practices that cater to the diverse needs of 21st-century learners, leading to an ongoing need for their own professional growth. While a significant body of research has been conducted on Professional Learning Communities (PLCs), the focus has predominantly centered on theoretical and conceptual aspects of the PLC model. Collaborative efforts are widely recognized in the educational field as contributing to teachers' learning, thereby enhancing instructional methods and ultimately advancing student learning (Riveros, 2012).

In the discourse of school reform, the notion that collaborative teacher efforts can elevate their practice has become a commonplace observation. Authors discussing school reform generally do not advocate for isolated teaching practices (Riveros, 2012, p. 605). PLCs have now become "a predominant feature of teacher organization within schools" and have achieved nearly universal adoption in K-12 education (Kruse & Johnson, 2017, p. 589).

At the core of a PLC lies the commitment of educational participants to maintaining high standards in addressing the academic requirements of every student (Ho et al., 2020). The school's mission should mirror the essential need for educators to work toward the attainment of students' heightened academic ambitions (Gurley et al., 2015). Adapting to the unique needs of each student necessitates a transition from teaching-focused to learning-centered approaches, a perspective embraced by educational stakeholders (DuFour, 2016). PLCs facilitate a transition from a traditional teaching-centric environment to a student-centered approach, empowering students to drive their own learning experiences (Cheng & Ding, 2020). Educators bear the responsibility of comprehending students' learning requirements and actively seeking out meaningful and pertinent teaching strategies for the classroom (Ho et al., 2020).

Benefits PLCs in Elementary School Context

Historically, the teaching profession, particularly in elementary education, has been characterized by a significant degree of professional isolation. Professional learning communities (PLCs) address many of the primary motivations that draw individuals to elementary teaching—such as collegiality, connectivity, and the desire for community (Antinluoma et al., 2021). According to Antinluoma et al. (2021), ongoing teacher development is a key ingredient in successful school reforms, particularly at the elementary level where foundational learning is critical. Traditionally, professional development for elementary teachers often involved passive participation in workshops led by external experts. PLCs, however, offer a different approach by positioning teachers as active contributors to collective knowledge, fostering collaboration and replacing professional development patterns that historically promoted privacy and isolation (Tam, 2014).

School conditions such as culture and leadership significantly impact elementary teachers' motivation to participate in PLC activities (De Neve & Devos, 2016). Leaders who can recognize and nurture these professional connections play a vital role in advancing both "human and educational development," shaping a school context that profoundly influences teaching and learning (Lambert et al., 2002, p. 35). In elementary schools, PLCs sustain these values by positioning teachers as continual learners, using collaborative inquiry and collective reflection as tools to strengthen instructional practices across grade levels.

Research suggests that elementary educators are better able to address classroom challenges when their schools prioritize opportunities for structured collaboration through PLCs (Pellegrino et al., 2015). The fulfillment educators derive from meaningful collaboration within PLCs can contribute to greater job satisfaction and help reduce early attrition from the elementary teaching profession (Antinluoma et al., 2021). Furthermore, elementary schools that function as active PLCs offer rich professional learning environments that encourage teachers to implement more innovative and ambitious instructional methods (Pellegrino et al., 2015). Administrators in these settings play a crucial role in expanding teachers' leadership capacities, building internal expertise, and promoting strong professional ties among staff (Pansiri, 2008). PLCs thus create spaces for "professional self-renewal," cultivating a culture that supports both individual growth and collective school improvement (Rosenholtz, 1991). Principals, in particular, are critical in unlocking the full potential of PLCs by fostering mutual respect, trust, and confidence among staff members (Well & Feun, 2008).

Improved Teacher Collaboration and Collective Efficacy

In elementary schools, PLCs provide a structured framework that encourages teachers to collaborate, engage in professional dialogue, and learn from one another's expertise. Through regular meetings, shared planning sessions, and collaborative problem-solving, elementary educators have opportunities to exchange ideas, share successful instructional strategies, and co-create resources that are developmentally appropriate for young learners (Mofield, 2019). This ongoing collaboration cultivates a sense of collective ownership and a commitment to continuous improvement within the school community. As elementary teachers work together, they are better equipped to address the diverse academic and social-emotional needs of their students, leading to stronger instructional practices and enhanced student learning experiences (Esteves, 2020).

Collective efficacy—defined as the shared belief among educators in their ability to positively impact student learning—is another significant outcome of effective PLCs (Voelkel & Chrispeels, 2017). Within elementary PLCs, teachers collaborate to establish common instructional goals and work collectively toward achieving them. As they observe the tangible impact of their shared efforts on student outcomes, their collective sense of agency and commitment grows (Olivier & Huffman, 2016). This culture of collective efficacy empowers elementary teachers to take instructional risks, experiment with new teaching strategies, and persist through challenges. In turn, it fosters greater motivation and resilience among staff and strengthens the overall school climate (Farnsworth et al., 2016).

The combination of improved collaboration and heightened collective efficacy within elementary PLCs yields several positive outcomes. Educators benefit from the adoption of

research-based instructional strategies, enhanced reflective practice, and the use of data-driven decision-making to target areas of student need (Hudson, 2023). By continually assessing student performance and refining their instructional practices, elementary teachers working within PLCs can more effectively close learning gaps and elevate overall achievement (Olivier & Huffman, 2016).

Enhanced Student Learning Outcomes and Academic Achievement

Within PLCs, the emphasis on data-driven decision-making and shared instructional goals plays a vital role in enhancing student learning outcomes and academic achievement. These collaborative environments enable educators to work together to examine student data, identify learning gaps, and design targeted interventions that address the specific needs of their learners (Villeneuve & Yamina Bouchamma, 2023). By sharing best practices and engaging in collective problem-solving, teachers develop more effective strategies for differentiated instruction (Leane et al., 2022). PLCs support the continuous monitoring of student progress through formative assessment and reflection, helping educators make timely, informed adjustments to their teaching. As a result, students benefit from more personalized learning experiences, increased support, and improved engagement—contributing to stronger academic performance overall (Gentry et al., 2013).

PLCs encourage a growth mindset among educators, where they are continuously seeking opportunities to learn and improve their instructional methods. Teachers engage in professional development, attend workshops, and participate in collaborative learning experiences within the PLC. As educators enhance their own knowledge and skills, they become better equipped to support their students effectively. According to Doğan and Adams (2018), research has

consistently shown that schools with strong PLCs experience higher student achievement and improved learning outcomes. The collective efforts of educators, guided by a common goal to maximize student success, lead to a supportive and positive learning environment. In such a culture, there is a more likelihood of students feeling supported, engaged, and motivated to achieve their academic goals (Esteves, 2020).

The benefits and impacts of PLCs in education extend to enhanced student learning outcomes and academic achievement. By fostering collaboration, data-driven decision-making, and a collective commitment to student success, PLCs create a powerful synergy among educators that positively impacts student learning (Hudson, 2023). As teachers continuously improve their instructional practices and address individual student needs, students receive a more personalized and effective learning experience. The collaborative culture of PLCs, with its focus on shared responsibility and continuous improvement, lays the foundation for improved academic performance, higher student achievement, and a thriving learning community (Defise, 2013).

Positive Impact on School Culture and Climate

Professional learning communities (PLCs) cultivate a collaborative and supportive environment in which educators work collectively to refine teaching practices and improve student learning outcomes. This collaboration fosters a culture of trust, respect, and shared responsibility, ultimately contributing to a stronger sense of camaraderie and a more positive overall school climate (Voelkel & Chrispeels, 2017). Within these communities, educators engage in open and constructive professional dialogue, sharing successes, challenges, and pedagogical insights in a spirit of mutual learning and continuous improvement (Huijboom et al.,

2023). Such an environment encourages teachers to seek support from their peers, promoting a collective commitment to student achievement. As collaboration deepens, the school culture shifts toward inclusivity and shared purpose, emphasizing collective progress over individual accomplishments (McGrath et al., 2019).

The positive impact of PLCs on school culture also extends to the attitudes and behaviors of students. According to Falcon et al. (2023), when teachers feel supported and engaged in their professional growth, they are more likely to bring enthusiasm and passion to their classrooms. This positive energy is contagious and influences the students' learning experience. As students witness their teachers collaborating and working together to improve their instruction, they are more likely to feel valued and supported in their learning journey (Lantz-Andersson et al., 2018).

Research has consistently shown that schools with strong PLCs experience a more positive school climate characterized by collaborative relationships, trust, and a focus on student success (Steyn, 2017). The culture of collaboration and shared responsibility within PLCs fosters a sense of belonging and pride among educators and students alike. As educators work collectively towards shared goals and celebrate their successes together, the overall school culture becomes more cohesive, supportive, and conducive to student learning (Esteves, 2020).

Challenges in Establishing Effective Professional Learning Communities

Challenges of PLCs in an Elementary School Context

PLCs have emerged as a potent strategy for driving school improvement and fostering ongoing professional development for teachers (McConnell et al., 2012). Despite being recognized as a preferred approach for meaningful professional development of teachers, various barriers often hinder the successful implementation of PLCs in an elementary school context.

Challenges highlighted by McConnell et al. (2012) encompass limited time for shared meetings and a scarcity of educators who share common subject areas or objectives (p. 267). Additionally, Zhang et al. (2016) recognized obstacles identified by educators in establishing PLCs, including inadequate time for collaboration, ineffective leadership in schools, unfavorable accountability policies, and lack of a professional culture that promotes collaboration. Furthermore, educators and school leaders both have concerns regarding PLC development, hindering the creation of a supportive, collaborative environment conducive to teacher growth (Zhang et al., 2016).

Time Constraints and Workload Pressures

Despite the intention of professional learning communities (PLCs) to foster collaboration and shared responsibility among educators, finding time for meaningful professional dialogue can be a significant challenge, particularly given the demanding nature of teachers' daily responsibilities (Leane et al., 2022). Elementary educators often face jam-packed schedules filled with classroom instruction, lesson planning, grading, and administrative tasks, leaving little opportunity for regular, sustained collaboration during the school day. Although PLC meetings are intended to support continuous professional development, they require dedicated time that is not always readily available, leading to persistent time constraints (Zepeda, 2019).

Coordinating schedules for PLC meetings presents additional logistical difficulties. Teachers' varied instructional and extracurricular responsibilities frequently clash with potential meeting times, complicating efforts to organize collaborative sessions that are convenient for all participants (Keiler, 2018). Aligning multiple schedules often demands compromises and flexibility, further exacerbating existing time pressures and limiting the consistency of collaborative activities. Moreover, balancing individual professional growth goals with the

collective aims of the PLC can add another layer of complexity. While teachers may recognize the benefits of collaboration, they may simultaneously pursue personal development objectives that compete for their limited time and attention (Stephens & Johnson, 2014; Wilson, 2016).

Workload pressures further intensify these challenges. The demands of covering extensive curriculum requirements, meeting academic standards, and supporting the diverse needs of students leave teachers with little additional capacity for engagement in professional learning opportunities (Darling-Hammond et al., 2020). The burden of these responsibilities can be overwhelming, often depleting educators' time and energy for activities such as PLC meetings, reflective dialogue, and collaborative planning (de Jong et al., 2021). Additionally, many teachers take on extracurricular duties—such as leading student clubs, serving on committees, or coaching—which further limit their availability for participation in PLC initiatives (Esteves, 2020).

Collectively, these time and workload challenges highlight the need for intentional administrative support, strategic scheduling, and realistic expectations to ensure that PLCs remain a viable and effective component of professional learning within the demanding context of elementary education.

Insufficient Resources and Funding for Professional Development

Professional learning communities (PLCs) require ongoing and meaningful professional development to equip educators with the skills, knowledge, and tools necessary for collaborative learning and data-driven decision-making. According to Hu et al. (2022), limited resources and funding can hinder the implementation of comprehensive and sustained professional development programs, ultimately impacting the success and sustainability of PLC initiatives.

Among the most critical resources needed for effective PLCs is time. Without sufficient time built into the school schedule, educators may struggle to fully engage in PLC activities. Time functions as a resource that enables meaningful collaboration, allowing teachers to meet regularly, share ideas, analyze data, and engage in reflective dialogue (Voelkel & Chrispeels, 2017). When educators are overwhelmed with existing instructional and administrative responsibilities, the lack of protected time for PLC work can significantly hinder participation and diminish the collaborative learning environment essential for PLC success.

Jones et al. (2013) emphasize that PLCs benefit from access to relevant data and research to inform instructional decisions. Obtaining and analyzing data requires access to appropriate tools and resources, which may require additional funding. Without access to data, educators may find it difficult to effectively assess student progress, identify areas for improvement, and implement evidence-based instructional strategies (Lai & McNaughton, 2016). Inadequate funding for professional development can also impact the quality and scope of training available to educators. Comprehensive training is essential to support educators in developing the skills necessary for effective collaboration, data analysis, and shared decision-making within PLCs. However, limited funding may result in one-off or superficial training sessions, which may not fully prepare educators for the complexities of PLC implementation (Esteves, 2020).

Conditions Needed for Successful PLCs

Leadership and Facilitation Roles in PLCs

Effective leadership is essential for establishing a clear vision, fostering a collaborative culture, and guiding educators toward shared goals. School leaders, such as principals or instructional coaches, often take on leadership roles within PLCs. Their active involvement and

consistent support are instrumental in creating a conducive environment for collaboration and professional growth (Galdames-Calderón, 2023). A strong PLC leader sets the tone for the group by promoting a culture of trust, openness, and respect, encouraging educators to share their ideas, experiences, and expertise freely within a safe and supportive space for constructive dialogue (Dinsdale, 2017).

In addition to cultivating trust, effective PLC leaders emphasize collective accountability. They help establish clear expectations for participation, goal-setting, and follow-through, ensuring that collaboration is not only meaningful but also results-oriented. By monitoring progress toward shared goals and maintaining a focus on student outcomes, leaders hold educators—and themselves—responsible for the group's learning and improvement efforts. Furthermore, strong leaders promote a growth mindset by encouraging educators to view challenges as opportunities for learning, modeling continuous professional development, and seeking feedback from colleagues to refine their own leadership practices (Vanblaere & Devos, 2016).

Through their facilitation, PLC leaders ensure that discussions are productive, inclusive, and focused on actionable outcomes (Pashmforoosh et al., 2023). In addition to school leaders, teacher leaders also play an important role in sustaining and guiding PLCs. Teacher leaders are educators who take on informal or formal leadership roles within the community, supporting their colleagues in collaborative problem-solving and promoting professional growth. Because of their deep understanding of the day-to-day instructional challenges faced by their peers, teacher leaders serve as valuable facilitators who can bridge administrative goals with classroom realities (Zepeda, 2019).

Whether leadership is exercised by administrators or teacher leaders, effective facilitation is critical not only for organizing collaboration but for fostering accountability, modeling reflective practice, and promoting collective ownership of professional goals. Through consistent modeling, fostering accountability, and promoting collective ownership of goals, effective leaders ensure that PLCs are not merely temporary initiatives, but enduring structures that drive continuous professional growth and improved student learning outcomes.

Trust, Openness, and Communication Within the Community

Trust, openness, and communication form the foundation of any successful professional learning community (PLC). When trust is present, educators feel safe to be vulnerable—to admit uncertainties, ask questions, and share honest reflections. This level of openness creates opportunities for real professional growth, where feedback is not only received but sought after. Trust allows teachers to collaborate authentically, knowing their colleagues are invested in their success and the success of their students. It also supports a culture where risk-taking is welcomed—an essential ingredient for innovation in teaching and learning (Rimm-Kaufman & Sandilos, 2015; Defise, 2013).

Openness naturally follows trust. In thriving PLCs, educators demonstrate a willingness to engage with new ideas, welcome differing perspectives, and challenge their own assumptions. This openness fosters a dynamic, inquiry-based environment that encourages experimentation and continuous improvement. When educators are receptive to feedback and committed to growth, professional conversations move beyond surface-level exchanges and begin to drive meaningful change (McIntyre Miller & Abdou, 2018).

Central to this process is clear and consistent communication. Open lines of communication help establish a shared sense of purpose and direction. They ensure that individual efforts align with the broader goals of the PLC and the school community. But communication isn't just about logistics or task management—it's about connection. When educators feel heard and understood, they develop a stronger sense of belonging and shared responsibility. This sense of community fuels the collaborative energy needed to sustain cycles of reflection, action, and improvement (Esteves, 2020; Serviss, 2022).

Moreover, communication extends beyond face-to-face meetings. The thoughtful use of digital tools—email, shared documents, collaborative platforms—can support ongoing dialogue and resource sharing, especially in small or rural schools where in-person time may be limited. Leveraging technology helps maintain momentum between meetings and reinforces a culture of continuous support and learning (Hairon et al., 2015).

Alignment of PLC Goals with School and District Objectives

PLCs are most effective when their efforts and initiatives are closely connected to the overall goals and priorities of the school or district. Schaap and de Bruijn (2017) note that when PLC goals align with broader educational objectives, it creates a sense of purpose and collective focus among educators, leading to more meaningful and impactful outcomes. Firstly, alignment ensures that the work of PLCs directly contributes to the school or district's mission and vision (Schaap & de Bruijn, 2017). When educators see a clear connection between their collaborative efforts and the larger goals of the organization, they are more motivated and invested in the PLC process. PLCs have become a strategic lever for driving school improvement, and educators recognize their role in achieving the shared vision (Cope et al., 2017).

When PLC goals align with school and district objectives, it promotes a cohesive and coordinated approach to professional development and improvement. Instead of fragmented and disconnected initiatives, PLCs become a central vehicle for addressing specific areas of need and improving student outcomes (Schaap & de Bruijn, 2017). PLCs enable educators to work collaboratively to address common challenges and leverage their collective expertise to make a significant impact on student learning (Wang & GuoAn, 2023). Alignment also supports effective resource allocation. When PLC goals are aligned with school and district objectives, resources such as time, funding, and professional development opportunities can be targeted more efficiently. This ensures that educators have the necessary support and resources to achieve the shared goals of the PLC and the broader educational community (Zepeda, 2019).

Structured and Sustainable Professional Development Strategies

PLCs foster continuous learning, collaboration, and improvement among educators. To achieve these goals, educators need ongoing and targeted professional development that is well-structured and sustainable over time (Steyn, 2017). Structured PD ensures that PLC members receive the necessary training and support to collaborate and engage in data-driven decision-making effectively (Villeneuve & Yamina Bouchamma, 2023). Structured training might include workshops, seminars, or online courses focusing on building collaboration skills, data analysis techniques, and effective communication strategies. This structured approach equips educators with the tools and knowledge to actively participate in PLC activities and discussions (Pashmforoosh et al., 2023).

Structured professional development helps ensure that PLC efforts are aligned with the school's goals and priorities. By providing targeted training on specific areas of need, educators

can focus their collaborative efforts on addressing critical challenges and significantly impacting student learning outcomes. Structured professional development also fosters a shared understanding of the purpose and focus of the PLC, enhancing the collective commitment to achieving common goals (Darling-Hammond et al., 2020). Sustainability is another critical aspect of successful PLCs. Sustainable professional development strategies provide ongoing support and learning opportunities for educators, ensuring that the momentum of the PLC is maintained over time. PLCs are not one-time events; they require continuous effort and dedication to improve teaching practices and student outcomes (Defise, 2013).

By providing ongoing support and resources, sustainable professional development ensures that PLC members have the tools and knowledge to sustain their collaborative efforts and continue their professional growth (Darling-Hammond et al., 2020). Sustainable professional development strategies enable the effective integration of PLC practices into the school's culture and routines. When PLCs become integral to the school's professional learning and improvement processes, they are more likely to become embedded in the school's fabric and endure over time (Antinluoma et al., 2021).

Structured and sustainable professional development strategies are essential factors influencing the success of PLCs. Structured training equips educators with the necessary skills and knowledge to collaborate effectively and align their efforts with school goals (Darling-Hammond et al., 2020). Sustainable professional development ensures ongoing support and learning opportunities, enabling PLCs to endure and become an integral part of the school's culture. By investing in structured and sustainable professional development, schools can create

a strong foundation for successful PLCs that drive continuous improvement in teaching practices and enhance student learning outcomes (Voelkel & Chrispeels, 2017).

Theoretical Foundations of Professional Learning Communities

The development and execution of professional learning communities (PLCs) in educational settings are grounded in several prominent theoretical frameworks. Educators' level of involvement within PLCs is shaped by their internal motivation and the perceived significance of their collaborative work (Spilt et al., 2011). Three key theories inform the design and functioning of PLCs: Communities of Practice (CoP), Social Constructivism, and Distributed Leadership.

The Communities of Practice framework, developed by Lave and Wenger (1991), emphasizes the importance of collaborative learning among groups of practitioners. In this model, learning occurs through social participation, shared activities, and the construction of a collective identity. Applied to PLCs, Communities of Practice theory highlights how educators come together to share expertise, solve problems, and build a cohesive professional community centered around improving instructional practices and student outcomes.

Social Constructivism, as described by Vygotsky and later expanded by scholars such as Zhou (2020), underscores the central role of social interaction in the process of knowledge construction. This perspective views learning as an inherently social and contextualized activity, suggesting that teachers deepen their professional knowledge through dialogue, reflection, and collaborative inquiry. In the context of PLCs, Social Constructivism supports the practice of educators collectively analyzing student data, reflecting on instructional methods, and constructing new knowledge aimed at enhancing teaching effectiveness.

The theory of Distributed Leadership further complements the operation of PLCs by recognizing that leadership is not confined to formal administrative roles but is shared among members of the organization (Galdames-Calderón, 2023). In PLCs, leadership is distributed across administrators, instructional coaches, and teacher leaders, fostering shared responsibility, empowerment, and collaborative decision-making. Distributed Leadership aligns closely with the structures of PLCs, where collective ownership of goals and mutual accountability are fundamental to sustaining meaningful professional learning.

Together, these theoretical frameworks provide a comprehensive lens through which to understand the collaborative, reflective, and growth-oriented nature of PLCs. They collectively inform the ways PLCs are organized, how learning occurs within them, and how leadership dynamics are structured to foster a culture of continuous improvement and shared responsibility within educational settings. Building on these theoretical foundations, the following section will examine Socio-Constructivism in greater depth, exploring how collaborative learning processes within PLCs are grounded in the principles of social interaction, co-construction of knowledge, and shared professional inquiry.

Socio-Constructivism and Collaborative Learning

Socio-Constructivism is a cognitive learning theory that emphasizes the inherently social and interactive nature of knowledge construction. Developed by scholars such as Lev Vygotsky and Jerome Bruner, Socio-Constructivism posits that learning occurs through active engagement with others and the surrounding environment (Zhou, 2020). Learners construct understanding through dialogue, social interactions, and collaborative activities, rather than passively absorbing information (Hairon et al., 2015). Within the context of professional learning communities

(PLCs), the socio-constructivist framework underpins the collaborative nature of educator interaction. Educators in PLCs share their knowledge, experiences, and insights in ongoing discussions that allow for the collective construction of effective teaching practices, instructional strategies, and approaches to addressing student learning needs (Schreiber & Valle, 2013). Through active participation in dialogue and reflection, teachers build upon one another's expertise, drawing from diverse perspectives to develop more comprehensive and innovative solutions to educational challenges (Schaap & de Bruijn, 2017).

Collaborative learning, an instructional approach closely aligned with socio-constructivist principles, further reinforces the functioning of PLCs. Collaborative learning involves individuals working together in small groups to achieve common goals, fostering active engagement, communication, and cooperation among participants (Stahl, 2023). In a PLC setting, collaborative learning is at the core of professional growth, as educators share teaching experiences, successes, and challenges through structured discussions and data analysis (Schreiber & Valle, 2013). These interactions allow teachers to explore a variety of instructional strategies and assess their impact on student outcomes, promoting a culture of continuous improvement and shared accountability (de Jong et al., 2019).

The relationship between socio-constructivism and collaborative learning within PLCs is fundamental. Socio-constructivist principles shape how educators interact, problem-solve, and learn from one another within these communities (Zhou, 2020). The collaborative environment of PLCs encourages joint inquiry and co-construction of knowledge, resulting in a deeper understanding of effective pedagogical practices (Harris et al., 2013). Participation in socio-constructivist collaborative learning not only enhances instructional techniques but also fosters

the development of a collective professional identity among educators (DeLuca et al., 2017). Teachers see themselves as integral members of a professional community committed to improving teaching and learning. This shared identity fosters a supportive, reflective environment where educators feel empowered to take instructional risks, explore new ideas, and continuously refine their practice (Esteves, 2020).

Overall, the principles of socio-constructivism and collaborative learning play a critical role in shaping the culture and effectiveness of PLCs. Guided by these frameworks, PLCs promote the co-construction of knowledge, encourage continuous learning, and drive collective efforts to improve student outcomes (DeLuca et al., 2017). Through meaningful collaboration grounded in socio-constructivist theory, PLCs provide a dynamic and transformative model for professional development that benefits both teachers and students (de Jong et al., 2019).

Communities of Practice

The concept of Communities of Practice (CoP), introduced by Jean Lave and Etienne Wenger, provides an important theoretical foundation for understanding professional learning communities (PLCs) within educational contexts. Communities of Practice are groups of individuals who share a common interest or domain of knowledge and who learn from one another through ongoing social interaction and collective problem-solving (Lave & Wenger, 1991). Learning within a CoP is embedded in social participation rather than formal instruction, with members developing knowledge, skills, and practices through mutual engagement (Pyrko et al., 2016).

Lave and Wenger's (1991) early work emphasized that learning is context-dependent, culturally shaped, and socially situated. This perspective aligns closely with the structure and

objectives of PLCs in schools, where teachers collaborate to improve instructional practices and student learning outcomes through shared inquiry and reflective dialogue (Wenger, 2011).

Communities of Practice are characterized by three key dimensions: a shared domain of interest, a community engaged in joint activities and discussions, and a shared practice that evolves through collaboration (Smith et al., 2017). In PLCs, these dimensions manifest as teachers uniting around the goal of improving student achievement, building supportive professional relationships, and collectively refining pedagogical strategies.

While the concept of CoPs originated in broader organizational and workplace settings, its application to education has been well established. Wenger (2011) argued that CoPs are particularly relevant to schools because they foster environments where educators can collaboratively construct knowledge and influence student achievement through ongoing professional dialogue. This connection underscores the relevance of CoP theory to the present study, which explores how small, rural elementary school educators perceive the influence of PLC participation on their professional growth and instructional practices.

By grounding PLCs in the principles of Communities of Practice, schools create structures that prioritize shared learning, distributed expertise, and mutual accountability. Just as CoPs drive organizational improvement through collective knowledge-building, effective PLCs are designed to support continuous professional growth among educators, ultimately leading to improved outcomes for students (Wenger, 1998; DuFour & Fullan, 2013).

Thus, the theoretical foundation of Communities of Practice reinforces the collaborative and inquiry-based nature of PLCs and provides a critical lens through which the processes of

professional learning and instructional improvement in small, rural elementary schools can be better understood. **Table 1** will help you better understand the comparison of CoP and PLCs.

As shown in **Table 1**, while CoPs and PLCs originate from different contexts, they share key attributes that make them mutually reinforcing. In small, rural school settings where isolation and limited staff often challenge traditional professional development models, applying the CoP framework to strengthen PLC structures can help sustain collaboration, build teacher capacity, and ultimately enhance student learning outcomes.

Emerging Trends and Innovations in Professional Learning Communities

Technology Integration and Virtual PLCs

With advancements in technology and the increasing prevalence of online communication platforms, educators now have more opportunities to collaborate and learn beyond the traditional confines of physical meetings. One significant trend is the integration of technology into PLC activities. Haleem et al. (2022) point out that technology tools, such as video conferencing platforms, collaborative online spaces, and data analysis software, have transformed how educators communicate, share resources, and analyze student data. These digital tools enable PLC members to engage in virtual meetings, even when they are geographically dispersed, facilitating real-time collaboration and communication. Through technology integration, PLCs can overcome barriers of time and distance, making it easier for educators to connect and collaborate (Townley, 2020).

Table 1**Comparison of Communities of Practice and Professional Learning Communities**

Dimension	Communities of Practice (CoP)	Professional Learning Communities (PLC)	Overlap/Connection
Origin	Developed in workplace and apprenticeship settings (Lave & Wenger, 1991)	Adapted for educational settings, particularly schools (DuFour et al., 2008)	PLCs are a specialized application of CoP theory within K–12 education
Membership	Voluntary; individuals self-select based on shared interest	Assigned or structured by school/district leadership	Both rely on shared purpose and community participation
Purpose	Learning through shared practice, reflection, and identity-building	Improvement of instructional practices and student achievement	Emphasize collaboration and continuous improvement
Structure	Informal and self-organizing; evolves organically	More formal, scheduled, and goal-oriented	Both encourage mutual engagement and collective inquiry
Learning Focus	Situated, context-based learning embedded in daily work	Evidence-based, data-informed learning tied to educational outcomes	Learning is constructed socially through dialogue and collaboration
Role of Leadership	Emergent leadership within the group	Often led by designated leaders (e.g., principals, instructional coaches)	Effective leadership in either supports collaboration, trust, and shared responsibility
Accountability	Primarily intrinsic, based on shared identity and norms	Emphasizes measurable goals, data analysis, and accountability for student performance	Both value reflection and improvement, though PLCs tend to emphasize formal accountability mechanisms
Relevance to Small, Rural Schools	Provides adaptable, informal support networks in isolated settings	Structured collaborative space to break isolation and focus on student outcomes	CoPs help sustain culture in rural schools; PLCs provide actionable structures for ongoing instructional improvement

Virtual PLCs, or online learning communities, are an emerging innovation that leverages technology to facilitate professional collaboration and growth (Nguyen et al., 2023). Virtual PLCs can bring together educators from different schools, districts, or even countries, creating a diverse and enriching learning community. These online communities provide a platform for educators to share best practices, exchange ideas, and engage in reflective discussions about their teaching experiences (Wang & GuoAn, 2023). Virtual PLCs offer greater flexibility in scheduling and participation. Educators can engage in discussions and activities at a time that best fits their schedule, making it more accessible for busy educators with competing responsibilities. The asynchronous nature of virtual PLCs enables educators to engage in deep and thoughtful discussions, as they have the time to reflect on their contributions before responding (Leane et al., 2022).

Additionally, technology integration allows virtual PLCs to utilize data analysis and educational research more effectively. Educators can access a wealth of resources and research studies online, enriching their discussions with evidence-based practices. Data analysis tools enable virtual PLCs to assess student progress, identify trends, and make informed decisions about instructional strategies (Darling-Hammond et al., 2020). While virtual PLCs offer many benefits, they also come with unique challenges. Building trust and establishing a strong collaborative culture in a virtual setting may require more intentional effort. Educators need to be proactive in fostering open communication and developing meaningful relationships, even in the absence of face-to-face interactions (Richardson et al., 2020).

Leveraging technology allows educators to collaborate and learn beyond the constraints of time and distance, facilitating real-time interactions and fostering virtual learning

communities. Virtual PLCs offer greater flexibility and access to a diverse range of perspectives and resources. As technology continues to evolve, virtual PLCs are likely to become an integral part of professional development and collaboration for educators, contributing to continuous improvement in teaching practices and enhanced student learning outcomes (Mhlongo et al., 2023).

Cross-Disciplinary and Cross-School Collaborations

Traditionally, PLCs have been organized within individual schools or departments, focusing on specific subject areas or grade levels. However, increasing recognition of the interconnectedness of learning and the value of diverse perspectives has led to the rise of cross-disciplinary and cross-school collaborations in PLCs (Li et al., 2019).

Cross-disciplinary collaborations bring together educators from different subject areas to explore common challenges, share insights, and develop interdisciplinary approaches to teaching and learning (Pennington, 2008). By breaking down the barriers between subjects, educators can gain new perspectives and ideas that can enrich their own instructional practices. For example, a science teacher might collaborate with an English teacher to develop a project that integrates scientific concepts with language arts skills, creating a more holistic and engaging learning experience for students (Darling-Hammond et al., 2020).

Similarly, cross-school collaborations connect educators from different schools within a district or across districts to foster a broader community of learning. By collaborating with colleagues from other schools, educators can access a wider range of experiences, best practices, and resources. Cross-school collaborations also promote a culture of sharing and support, where educators can draw on the expertise of a larger network of peers to address common challenges

and goals (de Jong et al., 2019). In addition to enriching the learning experiences for educators, cross-disciplinary and cross-school collaborations also have a positive impact on student learning outcomes. Students benefit from a more integrated and interconnected approach to learning, where concepts and skills from different subject areas are connected and applied to real-world contexts. Cross-disciplinary projects and activities can also foster creativity, critical thinking, and problem-solving skills in students (Townley, 2020).

Cross-disciplinary and cross-school collaborations reflect the growing emphasis on 21st-century skills, such as collaboration, communication, and adaptability. Educators working in diverse teams learn how to navigate different perspectives, communicate effectively, and adapt their practices to the needs of their students and learning environments (de Jong et al., 2019). However, implementing cross-disciplinary and cross-school collaborations in PLCs also presents unique challenges. It requires effective coordination, communication, and commitment from all stakeholders involved. Educators must be open to exploring new ideas and approaches, and school leaders must support and facilitate these collaborative efforts (Darling-Hammond et al., 2020).

These collaborations break down silos and promote a more holistic and interconnected approach to teaching and learning. By engaging in cross-disciplinary and cross-school collaborations, educators can access a broader range of perspectives, resources, and experiences, leading to continuous improvement in teaching practices and enhanced student learning outcomes. As PLCs continue to evolve, these collaborative efforts are likely to become a standard practice in professional development, fostering a culture of lifelong learning and growth for educators and students alike (Kim et al., 2019).

Critique of Professional Learning Communities and Unresolved Issues

Despite their growing popularity, Professional Learning Communities (PLCs) continue to face several practical and conceptual challenges that can limit their effectiveness. One of the most persistent barriers is the time required for meaningful collaboration. Educators often juggle heavy teaching loads, administrative duties, and other responsibilities, which can make it difficult to find consistent, dedicated time for reflective discussions and collaborative planning (DeMatthews et al., 2021). As a result, PLC meetings may be rushed or reduced to logistical updates rather than deep professional dialogue.

A second challenge involves the structural inconsistencies across PLCs. Without clear goals or skilled facilitation, some PLCs lack direction, resulting in conversations that are either off-task or dominated by a few voices (De Neve & Devos, 2016). In schools where administrative support is limited, or where teacher participation is uneven—due to scheduling conflicts or workload imbalances—the effectiveness of PLCs as a cohesive learning system can break down (Doğan & Adams, 2018). These structural issues can weaken collaboration and contribute to a fragmented professional learning experience.

Beyond logistics, concerns have been raised about whether PLCs actually deliver on their promise of improved student outcomes. Critics point out that while PLCs often aim to drive instructional change, their impact is not always clearly measured or visible in student performance data (Ayvaz-Tuncel & Çobanoğlu, 2018). In some cases, PLCs become theoretical rather than practical, with ideas discussed but never implemented in the classroom. This disconnect can be exacerbated when teachers are hesitant to engage in peer critique or are resistant to shifting long-standing instructional habits (De Neve & Devos, 2016).

Equity also remains a significant concern. Schools or districts with fewer resources may struggle to provide equitable access to meaningful PLC participation and professional development opportunities. These disparities can reinforce existing inequities in educational quality and teacher growth (Hallam et al., 2015). Additionally, critics warn that when PLCs rely too heavily on quantitative, test-based data, they risk narrowing their focus at the expense of student well-being and broader educational goals (Kozleski & Proffitt, 2019). For PLCs to truly be transformative, there must be consistent support, intentional structure, and a balanced approach to measuring success—one that values both qualitative and quantitative outcomes.

Summary

PLCs in education are collaborative networks of educators focused on improving teaching practices and student outcomes. PLCs provide a platform for educators to come together, share ideas, reflect on their teaching practices, and collaboratively work towards enhancing student learning experiences. Emphasizing shared leadership, data-driven decision-making, and reflective practice, PLCs foster a culture of continuous improvement and professional growth among educators.

At the heart of PLCs lie socio-constructivism and collaborative learning theories, which stress the value of collective expertise and learning from peers. Educators in PLCs engage in active discussions, share their experiences, and collectively construct knowledge to address common challenges and find effective solutions. By building on each other's strengths and experiences, educators can develop innovative instructional strategies that better meet the diverse needs of their students.

Central to the success of PLCs are the concepts of communities of practice and distributed leadership. Communities of practice provide a structured framework for educators to engage in regular, meaningful interactions around shared interests or goals. These communities foster a sense of belonging and encourage ongoing learning, contributing to the overall professional development of educators within the PLC. Moreover, distributed leadership ensures that the responsibility for leadership and decision-making is shared among educators, promoting a collaborative and empowering environment.

Embracing emerging trends and innovations, PLCs are witnessing teacher-led initiatives and grassroots collaborations. Educators are taking ownership of their professional development by leading their own PLCs, focusing on topics directly relevant to their teaching contexts. Grassroots initiatives further promote organic collaborations among educators within a school or district, encouraging collective problem-solving and knowledge sharing.

However, PLCs also face challenges, including time constraints, lack of administrative support, and resistance to change. The limited availability of dedicated time for collaboration can hinder in-depth discussions and meaningful planning. Furthermore, without proper support from school leaders, the full potential of PLCs may not be realized.

In conclusion, Professional Learning Communities (PLCs) offer a structured approach to fostering collaboration, reflective practice, and instructional improvement among educators. When implemented with fidelity, PLCs have the potential to support meaningful professional development and contribute to positive student outcomes. While the literature highlights promising outcomes, it also underscores the need to address practical challenges such as time constraints, equitable participation, and sustained leadership support. As educational contexts

continue to evolve, further research is needed to explore how PLCs can be adapted and strengthened—particularly in small, rural schools—so they can better meet the diverse needs of teachers and students alike.

CHAPTER THREE

RESEARCH METHODOLOGY

This study seeks to gain deeper insight into how teachers and administrators in rural contexts experience collaborative learning structures, and how these experiences influence their instructional practices and professional growth. A qualitative research design is employed for this study to explore and understand the perceptions, experiences, and professional learning processes of elementary educators participating in established PLCs within small, rural school settings. A qualitative approach is deemed appropriate because it allows for a rich, detailed exploration of participants' lived experiences, capturing the complexity of collaborative learning structures in rural educational environments. The purpose of this qualitative study is to explore the perceptions of elementary school staff in small, rural elementary schools regarding their experiences working within established professional learning communities (PLCs), as well as their perceptions of how these PLCs support their ongoing professional learning.

Given the nature of the research questions, a qualitative research design was selected to allow for an in-depth understanding of participants' lived experiences, perceptions, and interactions within PLCs. A qualitative approach is particularly appropriate for capturing the complex, context-dependent realities of professional learning in small, rural schools, where staffing structures, resource availability, and community dynamics may significantly influence the implementation and effectiveness of PLCs.

This chapter describes the research design, the selection of participants, data collection methods, data analysis procedures, and strategies to ensure the trustworthiness of the findings. It also addresses the ethical considerations related to the study.

Research Design

This study employs a qualitative single case study design to explore how teachers in small, rural elementary schools perceive the role of Professional Learning Communities (PLCs) in supporting collaboration and enhancing instructional practices. A single case study is appropriate when investigating a bounded system—such as a single school district—within its real-life context (Yin, 2018). In this study, the single case encompasses four rural elementary schools within the same school district, providing a unified yet varied lens for examining shared PLC experiences across multiple school sites.

This design allows for a deep, contextualized understanding of a specific system while capturing multiple embedded units of analysis (the individual schools). Merriam and Tisdell (2016) emphasize the value of qualitative case studies for unpacking complex educational practices within bounded, authentic settings. By focusing on this district as a singular case, the study reveals how local factors—such as leadership support, staff configuration, and resource allocation—influence PLC implementation across schools with similar demographics and constraints.

Data collection included semi-structured interviews with classroom teachers, as well as analysis of documents such as PLC meeting notes, school improvement plans, and instructional artifacts. These sources were triangulated to strengthen the study's credibility. The study is framed by Socio-Constructivism and Communities of Practice, theoretical perspectives that guided both the design and interpretation of the research. The researcher served as the primary instrument for data collection and analysis, using reflexive practices and inductive coding to identify emergent themes.

Ultimately, this single case study sheds light on how PLCs function within a rural district context and how educators experience collaborative professional learning despite challenges associated with geographic and staffing limitations. This approach provides rich, localized insights that may inform the development and sustainability of PLCs in similar rural educational settings.

Context

For this single case study, four sites within the pseudonymous “Summit County Schools” will be used. These schools—referred to as Cedar Hill Elementary, Maple Grove Elementary, Willow Mountain Elementary and Pinecrest Elementary—are similar in size and socioeconomic composition, and collectively provide a sufficient sample size for the study. Each of these schools is considered small by district standards, with a limited number of classroom teachers, administrators, and support personnel. Notably, a common characteristic across all three schools is that each classroom teacher is the sole instructor for their respective grade level and/or subject area. This structural feature presents a unique challenge to the implementation of professional learning communities (PLCs), as collaboration during PLC time must bridge varying instructional levels and content areas while maintaining a shared focus on student learning outcomes.

Cedar Hill Elementary is the largest of the four, with an enrollment of almost 250 students during the 2021–2022 school year. The school employs 15 certified teachers, one administrator, and two additional school service support staff members. Cedar Hill received Reward School status for the 2020–2021 school year. Maple Grove Elementary, with an enrollment of just over 100 students in 2021–2022, employs eight certified teachers, one

administrator, and four support staff. Similarly, Pinecrest Elementary also enrolled just over 100 students in that same year and is staffed by nine certified teachers, one administrator, and three support personnel. Willow Mountain Elementary is the smallest of the four schools. It has an enrollment of 67 students in the 2021-2022 school year, employs five certified teachers, one administrator and one support staff member. Although Cedar Hill has a larger student body and more teaching staff, it still qualifies as a small school within the district. Furthermore, while Cedar Hill includes two teachers per grade level, they are departmentalized, placing them in a similarly isolated instructional context as the teachers at Maple Grove and Pinecrest.

Participants

This study focuses on the perceptions of experienced educators regarding the implementation and effectiveness of professional learning communities (PLCs). To ensure participants have sufficient familiarity with both the school context and PLC structures, the following selection criteria will be used: the individual (1) must be a full-time public-school educator, (2) must have at least three years of teaching experience at their current school, (3) must teach in a rural community, and (4) must be employed at a small or singleton school. For the purposes of this study, *rural* refers to communities located outside of urban and suburban centers, typically characterized by lower population density and limited access to large-scale educational resources. The focus on small schools—defined as having one to two teachers per grade level—aligns with the study’s goal of exploring how educators in these unique teaching environments perceive the use and impact of PLCs. A layout is included in **Table 2**. The minimum experience requirement ensures that participants have engaged in the PLC process over time and can provide meaningful reflections on its role in their professional practice.

Table 2
Participant and School Pseudonyms

Pseudonym	Role	School (Pseudonym)	Grade Level	Years of Experience	School Description
Mrs. Taylor	Classroom Teacher	Maple Grove Elementary	1st Grade	15+ years	Small rural elementary school; <250 students; limited staffing
Mrs. Rivers	Classroom Teacher	Pinecrest Elementary	2nd Grade	20+ years	Small rural elementary school; <250 students; limited staffing
Mr. Carter	Classroom Teacher	Willow Mountain Elementary	4th Grade	10+ years	Small rural elementary school; <250 students; limited staffing
Ms. Jenkins	Classroom Teacher	Cedar Hill Elementary	5th Grade	8+ years	Small rural elementary school; <250 students; limited staffing
Ms. Holloway	Academic Coach	Maple Grove Elementary (District- wide)	N/A	18+ years (coaching + teaching)	Provides PLC support, data facilitation, and instructional leadership

To identify eligible participants, I began by reviewing school websites in the region to locate schools that met the criteria and had integrated PLCs into their weekly instructional schedules. I then contacted the district's Human Resources department to confirm which educators have been teaching in the same school for at least three years. Once potential participants were identified, I reached out to them via email to request their voluntary participation in the study, with a goal of securing a minimum of 10 participants who met the established criteria. Additionally, I employed snowball sampling by asking participants to refer other educators who also met the qualifications and may be willing to contribute to the study. Data collection then continued until thematic saturation was achieved—when no new themes or insights emerged from subsequent interviews, and the data became repetitive or redundant (Charmaz, 2006; Creswell, 2018; Lincoln & Guba, 1985).

Instrumentation

This single case study involved a real-world and currently active context. This research utilized a semi-structured interview protocol to gather in-depth qualitative data. In qualitative research, participants are asked broad, open-ended questions that allow them to express their perspectives in their own words, free from external assumptions (Creswell & Poth, 2018). Qualitative studies are not limited to a specific number of data sources; instead, they often rely on multiple forms of data to construct a rich, nuanced understanding of the research topic. As Creswell and Poth (2018) explain, drawing from multiple data points enables researchers to describe and compare information in a way that supports deeper insights into the issue under investigation.

The primary data source consisted of semi-structured interviews whereby participants shared their insights regarding the effectiveness of PLCs in improving instructional practices and student achievement. To collect in-depth qualitative data aligned with the study's purpose, a semi-structured interview protocol was developed and is provided in Appendix A. The overarching goal of the interview process was to explore teachers' perceptions of professional learning communities (PLCs), particularly in the context of small, rural elementary schools. The protocol included a series of open-ended questions designed to elicit detailed responses and allow for follow-up probing based on participants' experiences and perspectives.

The interview questions were grounded in the theoretical constructs outlined by Olivier et al.'s Professional Learning Community Assessment – Revised (PLCA-R), a validated instrument developed by the Southwest Educational Development Laboratory and revised in 2020 (Moosa, 2020). This tool identifies six key dimensions associated with effective PLCs:

1. Shared values and vision
2. Collective learning and application
3. Shared and supportive leadership
4. Shared personal practice
5. Supportive conditions—relationships
6. Supportive conditions—structures

The interview questions were carefully crafted to reflect these dimensions and to align with the overarching research questions guiding this study. Questions explored topics such as collaboration, leadership, instructional practice, and sustainability within PLCs in rural school environments.

To ensure content and construct validity, the interview protocol underwent an external review by two expert educators who were purposefully selected based on their extensive experience in both PLC research and rural education contexts. These experts were identified through professional networks and scholarly connections, with selection criteria including prior publication or presentation on PLC practices, direct experience facilitating PLCs in rural schools, and a demonstrated understanding of qualitative research design. Their expertise allowed them to evaluate the alignment of the interview questions with the study's research objectives while ensuring cultural and contextual relevance to rural school settings. Feedback from this expert panel was used to revise and clarify question wording and flow. Following this review, the protocol was piloted with a small group of rural elementary teachers who were not participants in the actual study. Their responses helped refine the clarity, pacing, and scope of the questions, ensuring they were understandable and elicited meaningful responses.

Additionally, the University's Institutional Review Board (IRB) approved the protocol to ensure ethical standards were upheld, particularly regarding participant consent, confidentiality, and data use. The interview process was designed to be flexible, allowing for follow-up questions as needed, depending on participant responses and emerging insights.

Interview data were audio-recorded with participant consent, transcribed verbatim, and analyzed using a coding process that enabled data reduction, categorization, and theme development. To further support the trustworthiness of the findings, the researcher examined responses from pilot participants to ensure alignment with the final themes, confirming that the protocol effectively elicited information relevant to the study's purpose. The complete interview

protocol, including the overarching research question and specific interview questions, is provided in Appendix A.

Data Collection

The central inquiry of this study revolves around the question: How do elementary school staff participating in PLCs perceive the impact of PLCs on effective teaching and learning practices within classrooms? To address this overarching research question, I conducted interviews with and observed teachers within four distinct PLC groups. Gathering data from these sources was essential for comprehensively addressing the research question.

Conducting a single case study using Yin's methods entails a comprehensive approach to both data collection and analysis. Firstly, Yin emphasizes the importance of rigorous data collection techniques, such as interviews, observations, and document analysis, to capture a rich and multifaceted understanding of the case under investigation (Yin, 2017). These methods allow researchers to gather diverse perspectives and contextual insights, essential for illuminating complex phenomena. Furthermore, Yin advocates for the systematic organization and documentation of collected data to facilitate subsequent analysis (Yin, 2017).

This single case study involved the utilization of various qualitative data collection techniques, including interviews both in person and via zoom, transcripts from interviews, observations of participants during a PLC at each site, and document analysis – including PLC artifacts such as agendas, PD materials, lesson plans, PLC notes etc. Employing multiple data collection methods offers the advantage of exploring a range of experiences to gain a more comprehensive understanding of the phenomenon of engaging in a PLC within a district that has implemented PLCs over a significant period (Dawadi et al., 2020).

Data Analysis

In line with Yin's (2017) approach, data analysis involves a meticulous process of coding, pattern recognition, and cross-case comparison. By iteratively coding the data and identifying recurring themes and patterns, researchers can uncover underlying relationships and dynamics within the case (Yin, 2017). Additionally, Yin encourages researchers to engage in cross-case analysis, comparing findings across multiple cases to discern commonalities and variations (Yin, 2017). This comparative approach not only enhances the depth of understanding but also strengthens the validity and generalizability of the study findings. Overall, adhering to Yin's methods ensures methodological rigor and robustness in conducting case studies, enabling researchers to derive meaningful insights and contribute to the advancement of knowledge in their respective fields.

The data analyzed included interview transcripts, observations, and documents. The analysis process followed the multi-stage qualitative approach described by Creswell (2013) and Shank (2002), beginning with repeated readings of the interview transcripts, margin annotation, and initial open coding. These codes were then organized into broader categories to facilitate the identification of emerging patterns and overarching themes. To enhance the credibility and depth of the findings, triangulation was employed by cross-analyzing data from multiple sources—including interviews, document analysis, and observation notes. This comparative approach helped identify recurring concepts, confirmed consistency across perspectives, and reinforced key thematic findings. Integrating data from these varied sources provided a more comprehensive and nuanced understanding of how PLCs are perceived and experienced within small, rural elementary school settings.

Additionally, I implemented member checking as part of the analytic process by sharing preliminary interpretations and thematic summaries with selected participants to validate the accuracy and resonance of the findings. Detailed analytic memos accompanied the coding process to track emerging insights and support cross-case comparisons. Themes that were consistently supported by all three sources—interviews, observations, and documents—were classified as overarching themes, indicating strong credibility and alignment with participants' lived experiences. This approach not only supported rigorous qualitative analysis but also aligned with the credibility strategies described later in this chapter, including triangulation, member validation, and extended engagement.

Hsieh and Shannon (2005) identified three approaches to qualitative content analysis. For this study, I employed the conventional content analysis approach, which is typically used when existing theory or literature on a phenomenon is limited. This method was appropriate for exploring the perceptions of educators in small, rural elementary schools, where prior research on Professional Learning Communities (PLCs) is less developed. According to Hsieh and Shannon (2005), conventional content analysis allows categories and themes to emerge directly from the data, without imposing preconceived theories or categories.

This approach aligned with the study's open-ended, semi-structured interview design. Interview transcripts were read multiple times to allow immersion in the data. I then derived initial codes inductively from participants' responses, staying close to the text to capture key ideas. These codes were later grouped into broader categories, enabling the identification of patterns and the development of major themes. By allowing themes to naturally emerge from the

voices of participants, this method supported a rich, grounded understanding of how educators experience PLCs in rural contexts.

Saldana (2021) is a prominent figure in the field of qualitative research, particularly known for his work on coding and data analysis methodologies. In this study, I drew upon his guidance from *The Coding Manual for Qualitative Researchers* to inform the coding and theme development process. Specifically, I used his recommended strategies for open coding during the initial review of interview transcripts, allowing key concepts and ideas to emerge directly from the data. Following this, I applied thematic coding to organize the data into broader patterns and categories. Saldana's emphasis on iterative coding and analytic memoing supported the refinement of themes and ensured that the analysis remained grounded in participants' voices. His framework helped guide the transition from raw qualitative data to meaningful interpretations that addressed the study's research questions.

Open coding served as the initial step in the data analysis process, allowing for an inductive exploration of participant responses before imposing any theoretical lens. Beginning inductively ensured that the analysis remained grounded in participants' own words and experiences, capturing unexpected insights and context-specific nuances that might be overlooked if coding began with predetermined categories. As described by Saldana (2021), open coding involves a detailed, line-by-line examination of the interview transcripts without applying any pre-established codes, enabling themes and concepts to emerge organically from the data. I applied this method to each interview transcript, identifying recurring words, phrases, and experiences that reflected participants' perceptions of PLCs in small, rural school contexts. These preliminary codes were grouped into clusters and refined into broader categories through

thematic analysis, as outlined by Shank (2002), to develop an initial framework of meaning directly grounded in participant language and perspectives.

Once this participant-driven foundation was established, I employed apriori coding—also referred to as selective or deductive coding—to connect the emergent themes to the study’s guiding theoretical frameworks: Socio-Constructivism and Communities of Practice. This deductive phase allowed me to interpret the data in light of established scholarly concepts, ensuring alignment between participants lived experiences and the theoretical underpinnings of the study (Saldana, 2021).

To strengthen the credibility and trustworthiness of the findings, I implemented triangulation throughout the analysis process. This included triangulation of data sources (e.g., interviews, observations, documents), methodological triangulation (i.e., combining inductive open coding with deductive apriori coding), and theoretical triangulation by interpreting data through multiple lenses. All data sources were analyzed using the same coding procedures to ensure consistency. Once coding was complete for each site, I conducted a cross-case analysis to identify common themes, divergent viewpoints, and overarching insights that extended across all participating schools.

A summary of the analytic process used in this study, including coding procedures, triangulation strategies, and cross-case comparisons, is presented in **Table 3**.

Credibility and Trustworthiness

Credibility

To ensure the credibility of this study, I employed multiple validation strategies, including triangulation, member checking, and extended engagement. As described by Merriam and Tisdell (2016), triangulation involves the use of multiple data sources, data collection

Table 3
Qualitative Data Analysis Process Overview

Stage	Method/Approach	Purpose	Data Sources	Key References
Data Immersion	Repeated reading, margin notes	Gain familiarity and initial insight into participant responses	Interview transcripts, field notes	Creswell (2013), Shank (2002)
Open Coding	Line-by-line coding (inductive)	Identify emerging codes and concepts without predetermined categories	Interview transcripts	Saldana (2021), Hsieh & Shannon (2005)
Thematic Analysis	Clustering and categorization	Group related codes to form themes and interpret broader patterns	All coded data	Shank (2002), Creswell (2013)
Apriori Coding	Theory-informed coding (deductive)	Link emerging data to Socio-Constructivism and Communities of Practice	All coded data	Saldana (2021)
Triangulation	Cross-source comparison	Validate themes across multiple data types for credibility and depth	Interviews, documents, field notes	Merriam & Tisdell (2016), Yin (2017)
Member Checking	Thematic summary review	Confirm accuracy and resonance of findings with participants	Summarized findings	Creswell (2013), Merriam & Tisdell (2016)

Table 3 Continued

Cross-Case Analysis	Comparative case synthesis	Identify commonalities, variations, and overarching insights	Coded data from each school case	Yin (2017), Gammelgaard (2017)
Analytic Memos	Ongoing reflective writing	Document insights and decisions during coding and theme development	Researcher's notes	Saldana (2021)

methods, or theoretical perspectives to cross-verify findings and strengthen their validity. In this study, triangulation was achieved through the integration of interview transcripts, observations, and documents. Analyzing these sources in a substantive manner involved applying consistent coding procedures across them, identifying patterns within each source, and then comparing themes across sources to determine convergence or divergence in participant experiences. When themes consistently emerged across at least three independent data types, they were considered well-supported and designated as Overarching Themes.

Member checking was also implemented to enhance the trustworthiness of the study. As recommended by Creswell (2013) and Shank (2002), this involved sharing preliminary findings and thematic summaries—rather than raw data or original transcripts—with a subset of participants. These individuals were invited to review the interpretations and provide feedback on whether the findings accurately represented their perspectives. This process was not intended to achieve consensus but rather to confirm that the analysis reflects participants' intended meanings.

In summary, triangulation through multiple data sources and methods, combined with participant validation and extended field interaction, contributed to the credibility and rigor of the findings. These strategies aligned with established qualitative research practices and helped ensure that the interpretations were grounded in the lived experiences of educators working within small, rural elementary schools.

Trustworthiness

To ensure the overall trustworthiness of this study, I implemented strategies aligned with qualitative research standards, addressing the dimensions of credibility, dependability,

confirmability, and transferability. These strategies support the methodological rigor required in a single case study design and align with Yin's (2009) criteria for case study validity and reliability.

Dependability was enhanced through the use of a detailed audit trail. This record documented the research process, including data collection procedures, coding decisions, theme development, and methodological choices. As described by Donald et al. (2006), maintaining an audit trail allows external reviewers to assess the consistency and replicability of the research process. All notes, coding frameworks, and analytical memos were stored systematically in a research logbook, supporting both transparency and accountability.

Confirmability was addressed by establishing mechanisms to reduce researcher bias and ensure findings were grounded in the data rather than the researcher's assumptions. This included the triangulation of data sources—such as interviews, documents, and observation notes—to cross-validate emerging patterns. Additionally, member checking was used to confirm that synthesized themes accurately reflected participants' perspectives. By incorporating feedback from participants during the interpretation phase, the study increased the objectivity and reliability of its conclusions (Creswell, 2013; Merriam & Tisdell, 2016).

Transferability was supported through the use of thick, rich description to present findings in context. Following Merriam's (2009) guidance, I provided detailed accounts of the school settings, PLC structures, and participant experiences. These in-depth descriptions enabled readers to assess the applicability of findings to other educational

contexts, particularly in other small, rural school environments with similar characteristics.

Together, these strategies enhanced the integrity of the study's findings and ensured the research was methodologically sound, contextually grounded, and applicable beyond the immediate cases examined.

Positionality Statement

As the researcher conducting this study on teachers' perceptions of professional learning communities, it is essential to acknowledge my own positionality and the potential for bias that may influence the research process. Currently, in my teaching role, designated PLC time is not utilized for collaborative engagement with colleagues. Instead, it primarily functions as an individual planning period carried out independently within separate classrooms. This practice diverges from the collaborative and reflective models of PLCs emphasized in the literature, which highlight the value of shared inquiry, collective problem-solving, and continuous professional growth.

My interest in this topic is rooted in both professional observation and personal reflection. I am continually considering how PLC time might be more effectively structured to benefit students, teachers, and the broader school community. In a profession that is often marked by professional isolation, I recognize the pressing need for educators to engage in meaningful collaboration—to exchange ideas, learn from one another, and adapt to the evolving demands of teaching and learning.

In addition, I was an outsider to the district in which the study took place. I had no prior professional relationship with the participating schools or their staff, which meant I had to invest

time and effort into building rapport with potential participants. In some cases, this outsider status made it more difficult to establish trust during the recruitment and interview process, as teachers were initially cautious in sharing their perspectives with someone unfamiliar to their professional community.

As Shank (2002) notes, researcher bias presents a significant challenge to the reliability of qualitative research. To address this concern, Creswell (2013) emphasizes the importance of clarifying the researcher's position at the outset of the study to allow readers to understand how personal perspectives may shape the research process and interpretation of data. To mitigate the influence of any subconscious biases, I implemented strategies such as bracketing, triangulation, and member checking (Creswell, 2013; Shank, 2002). These methods were intended to preserve the objectivity and credibility of the findings. Additionally, I maintained regular collaboration with my dissertation chair to support methodological transparency and uphold the integrity of the research.

Summary

This chapter outlined the research design and methodological framework for a qualitative single case study exploring how elementary school staff in small, rural schools perceive the role of professional learning communities (PLCs) in shaping instructional practices to enhance student achievement. In response to increasing pressures on educational institutions, PLCs have emerged as a promising strategy for collaborative professional development. However, their implementation often encounters contextual and structural challenges that merit further investigation—particularly in small and rural school settings.

The study is grounded in established qualitative research principles as articulated by Yin (2003), Merriam and Tisdell (2016), and Creswell (2013). Using a network sampling approach, participants will be selected from three distinct schools within one rural district. Data will be gathered through semi-structured interviews, observations, and document analysis. Thematic analysis will guide the interpretation of findings, using both open and apriori coding strategies to identify patterns and connect them to the study's theoretical frameworks: socio-constructivism and communities of practice.

To ensure methodological rigor and trustworthiness, the study incorporates strategies such as triangulation, member checking, and prolonged engagement. An audit trail will be maintained to enhance dependability, and thick descriptions will support the transferability of findings. The researcher's positionality and potential biases will be acknowledged and mitigated through reflexive practices including bracketing and ongoing collaboration with a dissertation chair.

Together, these strategies provide a strong foundation for conducting a valid, ethical, and meaningful exploration of how PLCs are experienced by educators in rural, singleton teaching environments. The findings of this study aim to contribute to the broader understanding of PLC effectiveness and inform practices that support collaborative professional learning in similarly situated schools.

With the research design and methodology clearly established, the study now moves to an analysis of the findings. Chapter Four presents the results of the data collection and analysis process, offering an in-depth examination of how educators in small, rural elementary schools perceive and experience professional learning communities. Through a thematic exploration of

interview transcripts, field notes, and supporting documents, this chapter highlights the recurring patterns and unique insights that emerged across the participating schools.

CHAPTER FOUR

FINDINGS

Chapter Four presents the qualitative findings of this study and addresses the following research questions:

RQ1: What are the perceptions of teachers in small, rural elementary schools on the established professional learning communities in their school?

RQ2: How do teachers in small, rural elementary schools perceive their professional learning within established PLCs in their school?

This chapter explores the analysis of narratives and perspectives shared by the classroom teacher participants, along with insights gained from reviewing supporting documents and artifacts. The data were analyzed thematically using inductive and deductive coding methods. The findings are organized into emergent themes, each presented with supporting evidence from participant interviews, document analysis, and field artifacts.

Case Description

Summit County Schools is a small, rural district located in East Tennessee, comprised of four elementary schools: Cedar Hill Elementary, Maple Grove Elementary, Willow Mountain Elementary, and Pinecrest Elementary. Each school enrolls fewer than 250 students and operates with limited staffing, often with only one teacher per grade level or subject area. As a result, teachers frequently experience professional isolation, especially in terms of collaborative planning and instructional alignment. The district emphasizes the use of PLCs as a framework for teacher collaboration and continuous improvement, although implementation varies across campuses.

The four classroom teachers who participated in this study—Mrs. Taylor (Maple Grove Elementary), Mrs. Rivers (Pinecrest Elementary), Mr. Carter (Willow Mountain Elementary), and Ms. Jenkins (Cedar Hill Elementary)—represent a range of grade levels and instructional roles. Despite differences in their assignments, all participants shared the common experience of teaching in small, rural schools where collaboration is both necessary and difficult due to structural constraints.

Also central to the case is Ms. Holloway, the academic coach based at Maple Grove Elementary. In her role, Ms. Holloway provides instructional support, facilitates data discussions, and works directly with PLCs and school leaders to strengthen collaborative practices. Her district-wide perspective offered valuable insight into how leadership, scheduling, and strategic focus influence the sustainability and impact of PLCs in rural settings.

Limitations

Several limitations are inherent in the design and scope of this qualitative study. First, the study focuses exclusively on a small sample of educators and administrators from seven elementary schools within a single rural school system. As a result, the findings may not be generalizable to larger, urban, or suburban school settings where the structure and implementation of professional learning communities (PLCs) may differ significantly. Additionally, the reliance on self-reported data collected through interviews introduces the possibility of response bias, as participants may present experiences in a more favorable or socially desirable manner.

Another limitation relates to the small number of participants, which was the result of specific selection criteria for inclusion in the study. Only educators who were currently

employed in small, rural elementary schools with established PLC structures were considered. This intentional focus ensured that all participants had relevant, firsthand experience with the phenomenon under investigation, but it also narrowed the potential pool of respondents and may limit the diversity of perspectives represented.

The homogeneity of the sample, consisting solely of educators working within small, rural schools, further limits the generalizability of the findings. While this focus allows for deep exploration of a specific context, it excludes voices from more varied educational environments. Moreover, the study is cross-sectional, capturing perceptions at a single point in time; thus, it does not account for how teachers' experiences with PLCs may evolve over a longer period. Finally, while multiple strategies such as triangulation and member checking were employed to enhance the credibility and trustworthiness of the findings, the subjective nature of qualitative data analysis always leaves some room for researcher interpretation influencing the results.

Despite these limitations, the study is designed to offer valuable insights into the professional learning experiences of educators in small, rural elementary schools and to contribute meaningfully to the existing literature on PLCs in underrepresented contexts.

Theme 1: Navigating Collaboration in Isolated Roles

In the rural district of Summit County Schools, professional learning communities (PLCs) are a standard part of school improvement efforts, yet teachers across its elementary campuses experience collaboration in notably different ways. At the core of this theme is the challenge faced by *singleton teachers*—those who are the only educator at their grade level or in their subject area—who must navigate PLCs without the benefit of a direct peer collaborator. This situation was a recurring reality at Cedar Hill Elementary, Maple Grove Elementary,

Willow Mountain Elementary, and Pinecrest Elementary, where small staff sizes often limit content-specific collaboration.

Mrs. Taylor, a fourth-grade teacher at Willow Mountain Elementary, reflected on her PLC experience with mixed feelings. “A Professional Learning Community should ideally be a collaborative environment,” she explained, “but since there’s no one else teaching the same grade level or subject, I’m often adapting general ideas discussed in the PLC to my own classroom. It’s not the deep collaboration I think would be most beneficial.” Without a teammate to share the responsibility of content planning, Mrs. Taylor frequently felt isolated within a structure designed for teamwork.

This sense of disconnection was echoed by Ms. Jenkins, a science teacher at Cedar Hill Elementary. “While I appreciate being part of a group,” she said, “PLCs often feel more like obligatory meetings than meaningful collaboration. We spend more time talking about logistics than actual instructional strategies. I came in expecting professional growth, but I often leave feeling like nothing really applies to my classroom.” For teachers like Ms. Jenkins, PLCs provide limited value when the topics are too broad or when there’s no one with a similar instructional context.

At Maple Grove Elementary, Mrs. Rivers, a veteran educator teaching across multiple grades, described the ways PLCs had both supported and stretched her. “I’ve definitely grown through PLCs,” she noted, “but being the only teacher in my subject sometimes makes collaboration hard. We’ve tried to connect with other schools virtually to compensate, but it’s not the same as sitting down with someone who knows your students and your pacing.” Her efforts to expand collaboration across school boundaries reflect a broader attempt within Summit

County Schools to provide equitable learning opportunities for all staff, even those working in relative isolation.

Similarly, Mr. Carter, a third-grade teacher at Pinecrest Elementary, shared his frustration with the practical limitations of his PLC. “The project ideas we talk about in meetings often come from people in completely different content areas. I tried to adapt one of them to my math curriculum, but it didn’t work. I ended up wasting time and energy trying to make it fit. Without someone to brainstorm with who teaches what I teach, I feel like I’m reinventing the wheel every week.”

Document analysis reinforced these sentiments. PLC agendas from Cedar Hill and Pinecrest Elementary revealed broad instructional themes—such as “formative assessments” or “increasing engagement”—but lacked grade- or subject-level planning details. Meeting notes frequently included phrases like “general discussion on student needs,” without any targeted action steps. At Willow Mountain Elementary, lesson planning forms used by PLCs included blank sections for collaboration, which were often left empty or marked “N/A” by singleton teachers. An example has been included in **Table 4**.

Observational data provided further context. In one PLC meeting at Maple Grove Elementary, a kindergarten and a fifth-grade teacher were tasked with co-planning a reading intervention strategy. Their conversation, while cordial, quickly revealed a disconnect in their instructional needs and timelines. In another observation at Cedar Hill, a group of teachers discussed data trends, but when Mrs. Jenkins asked how those trends applied to science instruction, the discussion shifted away without follow-up—highlighting again the challenges of relevance in cross-grade, cross-content PLCs.

Table 4

Illustration of the PLC Document for Cedar Hill Elementary

Document Title: *PLC Meeting Agenda – Cedar Hill Elementary (October 2024)*

Agenda Items:

1. Review of formative assessment trends (K–5)
2. General discussion on student engagement
3. Share any instructional strategies used this month

Notes:

- No grade- or content-specific breakout time.
- Ms. Jenkins asked how science instruction fits into the engagement strategies—no clear follow-up provided.
- Action item: “Continue discussion next week.”

Analysis Insight: *The agenda and meeting notes reveal a lack of differentiation by content or grade, leaving singleton teachers like Ms. Jenkins with few directly relevant takeaways.*

Despite these barriers, teachers expressed a desire to make PLCs more meaningful. Several suggested that Summit County Schools invest in virtual collaboration opportunities with other small schools or create district-wide PLCs by subject area. While limited staffing and tight schedules remain constraints, the commitment to collaboration is evident. However, without peers who share the same instructional responsibilities, PLCs often fall short of their full potential—especially in helping teachers navigate the realities of isolated roles.

Theme 2: Leadership as a Catalyst for PLC Success

In Summit County Schools, the role of school leadership emerged as a critical factor in the effectiveness of professional learning communities. While teachers across Cedar Hill, Maple Grove, Willow Mountain, and Pinecrest Elementary Schools valued PLCs as opportunities for collaboration and growth, the extent to which those opportunities translated into meaningful outcomes was often shaped by the actions—or inactions—of school leaders.

At Pinecrest Elementary, Mrs. Rivers emphasized the positive influence of her school principal. “She makes sure we always have time carved out for PLCs. It’s on the calendar, and it’s protected,” she shared. “We even have norms and rotating facilitators. There’s a purpose to every meeting.” This sense of intentionality stood in contrast to experiences at other schools where PLCs often felt aimless. “I’ve been in places where we meet just to say we met,” she added. “This is different. Our principal checks in and makes sure we’re actually using what we discuss.”

Mr. Carter, at Willow Mountain Elementary, also pointed to leadership as a driving force for meaningful collaboration. “Our principal doesn’t just set the tone—he participates,” Carter noted. “When we were struggling with how to respond to formative data, he helped guide us

back to our goals and asked, ‘How does this align with our SIP?’ That kind of leadership keeps us focused.”

Not all participants described such structured support. Ms. Jenkins, at Cedar Hill Elementary, expressed frustration at the lack of consistent facilitation. “There’s no clear leader in our PLC meetings, so we drift,” she said. “We’ve had meetings where we spend the whole time venting or sharing stories, but we leave without a plan. That’s not collaboration—it’s a time filler.”

This pattern was confirmed by Mrs. Taylor at Maple Grove Elementary. “Leadership’s been supportive, but not always strategic,” she explained. “They make space for PLCs, but they don’t always understand the needs of singleton teachers. I’ve asked for help connecting with others teaching the same content, but it hasn’t happened yet.” Her experience highlights a broader concern: that even well-meaning leadership can fall short if it doesn’t tailor PLC implementation to meet the realities of rural schools.

Insights from Ms. Holloway, an academic coach working across Summit County Schools, reinforced these differences in leadership impact. “I’ve seen buildings where principals model reflective inquiry and keep PLCs focused on instruction, and I’ve seen others where PLCs are just another meeting on the schedule,” she said. “What makes the difference is whether the principal is actively engaged—not just giving teachers time, but helping guide how that time is used.”

Ms. Holloway shared data from an internal mid-year PLC review, which showed that in buildings where administrators were present during PLCs at least biweekly, 78% of teachers reported implementing new instructional strategies as a result of those meetings. In contrast, in

schools where leaders were rarely involved, fewer than 40% reported changing their instruction based on PLC discussions. “It’s not just about scheduling,” she added. “It’s about focus, follow-up, and feedback.”

Document analysis echoed these patterns. At Pinecrest Elementary, PLC agendas were clearly structured, listing facilitators, specific topics (e.g., “adjustments based on benchmark data”), and aligned goals with SIP objectives. In contrast, PLC notes from Cedar Hill Elementary often contained vague entries like “discussed student concerns” or “shared classroom ideas,” with no clear next steps. Only Pinecrest and Willow Mountain’s records included evidence of leader-facilitated data analysis or instructional planning as shown in **Table 5**.

During observations at Maple Grove and Cedar Hill, the difference in leadership presence was also apparent. At Pinecrest, the principal attended the entire PLC, guided teachers through a protocol for analyzing student writing samples, and facilitated reflection questions. At Cedar Hill, the PLC met without an administrator, and teachers spent much of the time discussing unrelated challenges before dismissing early. No instructional decisions were made.

Still, even in less structured environments, there was recognition of leadership’s potential to shape PLCs. As Mrs. Taylor reflected, “We want our PLCs to work. We want to grow. But we need leadership to help us move from conversation to action.”

Theme 3: Shared Purpose and Professional Growth Through PLCs

Despite the many challenges of working in small, rural schools, teachers across Summit County Schools described powerful moments of growth and connection that arose when PLCs centered on a shared purpose. In settings where collaboration was structured around student needs and grounded in instructional dialogue, educators reported professional learning that was

Table 5

Illustration of the PLC Document for Pinecrest Elementary

Document Title: *Pinecrest Elementary PLC Facilitation Protocol (Revised August 2024)*

Purpose: To ensure focused and productive PLC meetings aligned with our SIP goals.

Structure:

- **Facilitator (rotates monthly)**
- **Recorder**
- **Timekeeper**

Meeting Flow:

1. Review previous action steps
2. Analyze student performance data
3. Identify instructional focus
4. Develop SMART goal for next cycle

Principal Notes (in margin): “Reminder to keep discussion aligned with SIP Goal #1: Improve math fluency by 10%.”

Analysis Insight: *This document illustrates strong leadership support for structured collaboration, with administrative involvement and clear alignment to improvement goals.*

both meaningful and motivating.

At Cedar Hill Elementary, Mrs. Taylor described how her PLC had evolved from a compliance-based meeting to a community of learners. “It used to feel like we were meeting just to say we did,” she recalled. “But now, we actually talk about what’s happening in our classrooms. We compare strategies and celebrate what’s working.” For her, the shift came when the team began focusing on schoolwide goals and using student data to guide conversations. “There’s accountability, but it’s not punitive. It’s like—we’re all in this together.”

Mrs. Rivers at Pinecrest Elementary expressed a similar sentiment. “When we all committed to the reading initiative, it gave us something to rally around,” she said. “We could track our students’ growth together and cheer each other on.” The PLC, she noted, helped her grow more confident in her instructional decisions. “I used to second-guess myself all the time. Now, I have colleagues to bounce ideas off of, and I can see the difference it’s making in my students.”

Even in schools where structural barriers remained, teachers still found value in the spirit of shared learning. Mr. Carter, the third-grade teacher at Willow Mountain Elementary, explained, “I may be the only one teaching my grade, but we’re still working toward the same goals. When we talk about engagement strategies or classroom routines, I take something back every time.” He credited his growth to the reflective nature of PLC discussions: “Just hearing how others handle things helps me think more critically about my own classroom.”

Ms. Jenkins at Maple Grove Elementary described how even occasional moments of deep collaboration fueled her professional growth. “One of the most helpful PLCs we had was when we all brought student writing samples,” she said. “We looked at them together and talked

through what we saw. That discussion stuck with me—it was real, authentic learning.” For her, the sense of shared purpose didn’t happen every week, but when it did, it had a lasting impact.

These experiences align closely with the reflections of Ms. Holloway, the academic coach supporting Summit County Schools. “When PLCs work well, there’s a sense of mission,” she said. “Teachers aren’t just sharing resources—they’re engaging in joint problem-solving.” She emphasized that professional growth occurs when teams move beyond logistics and focus on improving instruction together. “It’s not about everyone doing the same thing,” she clarified. “It’s about everyone aiming for the same outcome—better learning for kids.”

In mid-year coaching check-ins across the district, 84% of teachers in schools with a clearly stated PLC goal (e.g., “increase reading fluency,” “improve student discussion”) reported feeling more confident in their instructional decisions. In contrast, only 46% of teachers in PLCs without an articulated purpose reported the same. “That sense of direction is powerful,” Ms. Holloway said. “It builds buy-in, and buy-in builds momentum.”

Document analysis reinforced this theme. PLC agendas from Pinecrest and Willow Mountain Elementary consistently included goal-oriented language, such as “Align strategies to fluency benchmarks” or “Discuss next steps for literacy groups.” Lesson plan templates used at these schools also included reflection sections, where teachers documented how they incorporated team input into their instructional plans. At Cedar Hill, PLC norms were posted prominently in the team meeting space, including commitments like “assume positive intent,” “focus on students,” and “hold each other accountable.” Examples from these documents are shown in **Tables 6, 7, and 8**.

Table 6

Illustration of the PLC Document for Willow Mountain Elementary

Document Title: *Willow Mountain Elementary PLC Agenda – November 14, 2024*

Meeting Focus: Literacy Strategy Refinement

Agenda Items:

1. Align instructional strategies to fluency benchmark goals
2. Review results from most recent oral reading fluency checks
3. Identify next steps for targeted support groups

Action Items:

- Grade 2: Implement repeated reading with peer tracking
- Grade 3: Launch “word sprint” centers for below-benchmark readers
- All grades: Use next PLC to share progress and student response data

Note: *All strategy adjustments must be documented in team reflection section of lesson plans*

Table 7

Illustrates the PLC Document regarding Pinecrest Elementary Lesson Plan Template

Document Title: *Pinecrest Elementary Collaborative Lesson Plan Template*

Section: Team Input & Strategy Adjustments

This Week's Focus: Vocabulary Development

How PLC discussion shaped this plan:

“Based on Mr. Carter’s suggestion, I added a word wall scavenger hunt to my Monday lesson. Our team agreed it helps reinforce student ownership of vocabulary. I’ll check for engagement and share results at next week’s PLC.”

Reflection (end of week):

“Students were more active with the word wall than usual. Will use similar structure for next unit.”

Table 8

Illustration of the PLC Document for Cedar Hill Elementary PLC Norms

Document Title: *Cedar Hill Elementary PLC Norms Poster (Posted in Meeting Room)*

-
- Assume positive intent
 - Keep students at the center of every conversation
 - Stay solution-focused
 - Hold one another accountable with respect
 - Honor start/end times
 - Come prepared and ready to collaborate
-

Analysis Insight:

These documents collectively show how a shared professional culture is being fostered through structured agendas, collaborative planning tools, and posted behavioral expectations. By emphasizing alignment to academic goals, peer learning, and reflective practice, these artifacts underscore the theme of professional growth through purposeful collaboration.

Observations mirrored this shared sense of purpose. At Pinecrest Elementary, teachers used a structured protocol to analyze math assessment data, with each team member contributing insights and agreeing on next steps. At Cedar Hill, a PLC celebrated growth in student writing after piloting a new rubric together. Teachers encouraged one another and brainstormed ways to refine their instruction even further.

Across these varied settings, a common thread emerged: when PLCs were anchored in shared goals and reflective dialogue, they supported authentic professional growth. As Mrs. Rivers put it, “It’s not just about fixing problems—it’s about growing together. That’s what keeps me going.”

Theme 4: Persistent Challenges—Time, Scheduling, and Sustainability

Across the elementary schools of Summit County Schools, teachers repeatedly voiced concern about the logistical barriers that constrain the effectiveness of their professional learning communities. Despite their commitment to collaboration and improvement, educators at Cedar Hill, Maple Grove, Willow Mountain, and Pinecrest Elementary consistently described time, scheduling, and long-term sustainability as the greatest challenges to maintaining a productive PLC.

At Maple Grove Elementary, Ms. Jenkins shared how PLC meetings often felt rushed or squeezed into an already packed day. “We meet during our planning time, but planning time is already so limited. I’m constantly deciding—do I use this time for PLC or do I get my grading done? There’s no extra time. It’s all coming from the same bucket.” She emphasized that while she valued collaboration, it sometimes came at the expense of her other responsibilities.

This pressure was echoed by Mr. Carter at Willow Mountain Elementary. “There are weeks where we’re running from one meeting to the next,” he said. “By the time we sit down for the PLC, we’re mentally drained. And without clear direction, the meetings sometimes become more of a venting session than anything else.” He noted that when meetings feel unproductive, it becomes harder to stay motivated to engage deeply.

Mrs. Taylor from Cedar Hill Elementary expressed similar frustration. “We want to have meaningful conversations, but it’s hard when we’re constantly interrupted—someone has to leave to cover a duty, or there’s an announcement, or we start late because someone was pulled for testing.” These disruptions were not unique to her school. Observations confirmed that PLC meetings were frequently cut short or delayed, with interruptions ranging from lunchroom coverage issues to last-minute schedule changes.

At Pinecrest Elementary, Mrs. Rivers highlighted how these challenges particularly impact singleton teachers. “When you’re the only one teaching a subject, you’re not just collaborating—you’re also planning everything alone,” she explained. “PLC time doesn’t lighten the load. It often adds to it.” Without a partner to share planning responsibilities, PLCs can feel like an additional demand rather than a supportive structure.

These insights were reinforced by Ms. Holloway, the academic coach who supports all four schools. “In small schools, teachers wear a lot of hats,” she noted. “They’re covering duties, serving on committees, supporting extracurriculars—and trying to collaborate meaningfully on top of that. It’s a lot.” She shared data from a recent district-wide coaching reflection survey, which showed that 61% of teachers in Summit County Schools identified time constraints as the number one barrier to effective PLC implementation.

Moreover, Ms. Holloway highlighted a troubling pattern: “We often see strong starts—teachers are enthusiastic at the beginning of the year—but by winter, momentum slows. The meetings become repetitive, and without visible results or administrative reinforcement, energy fades.” Her concern aligned with evidence from document analysis. Several schools' PLC agendas began the year with goal-setting activities and data protocols, but by mid-year, notes reflected more vague agenda items like “review student progress” or “discuss challenges,” often lacking specific follow-up actions.

School Improvement Plans (SIPs) from both Cedar Hill and Maple Grove Elementary acknowledged these time challenges but offered only general solutions such as “prioritize collaboration” or “streamline meeting structures.” Observational data further underscored the issue—on more than one occasion, scheduled PLCs started late, ended early, or were replaced with other urgent tasks. At Willow Mountain, one meeting was canceled entirely due to a substitute shortage.

Despite these obstacles, teachers consistently expressed a desire for more effective collaboration—not less. “We believe in PLCs,” said Mrs. Rivers. “We just need support to do them right.” Ms. Holloway echoed this sentiment: “The challenge isn’t willingness—it’s bandwidth. When time is protected and meetings are purposeful, teachers respond. But we have to make those conditions possible.” **Table 9** demonstrates misuse of PLC time.

In small, rural schools like those in Summit County, sustaining meaningful PLCs requires more than just scheduling a weekly meeting. It calls for thoughtful planning, consistent leadership, and a recognition of the competing demands on teachers’ time. Without this, even the most dedicated educators struggle to maintain the energy and focus needed to turn collaboration

Table 9

Illustration of the PLC Document for Willow Mountain Elementary

Document Title: *Willow Mountain Elementary PLC Minutes (March 2025)*

Attendance: Only 3 of 6 members present; Mrs. Rivers and Mr. Carter pulled for testing.

Agenda:

- Discuss benchmark results
- Plan math review week

Meeting Notes:

- Started 15 minutes late due to coverage issue.
- Briefly reviewed data; ran out of time before instructional planning.
- Action item postponed to next week.

Comment (handwritten): “Too much overlap with other duties—need admin to protect PLC time.”

Analysis Insight: *This snapshot reflects the structural pressures rural schools face—interrupted meetings, limited attendance, and tasks that spill over week to week without resolution.*

into lasting change.

SUMMARY

This chapter presented the findings of the study through four key themes that emerged from interviews, document analysis, and observations: (1) *Navigating Collaboration in Isolated Roles*, (2) *Leadership as a Catalyst for PLC Success*, (3) *Shared Purpose and Professional Growth Through PLCs*, and (4) *Persistent Challenges—Time, Scheduling, and Sustainability*. These themes illuminate the complex realities of professional learning communities in small, rural elementary schools—contexts that offer both deep commitment and significant constraints.

The voices of educators revealed both the promise and the limitations of PLCs. On one hand, teachers described increased confidence, professional growth, and a sense of shared purpose when collaboration was well-structured and leadership was supportive. On the other hand, logistical hurdles such as limited time, lack of same-grade peers, and inconsistent implementation practices continue to hinder the depth and consistency of PLC impact. Documents and observations reinforced these perspectives, showing evidence of both structured collaboration and fragmented follow-through.

Taken together, these findings underscore the importance of intentional, context-sensitive design when implementing PLCs in small school settings. Without thoughtful leadership, protected time, and mechanisms for supporting singleton teachers, PLCs risk becoming routine obligations rather than transformational opportunities.

Chapter Five builds on these findings by interpreting their broader significance, connecting the emergent themes to existing literature, and examining how these insights inform the practices and policies supporting teacher collaboration and professional development in rural schools. The discussion addresses how shared vision, data-informed collaboration, and

professional inquiry can enhance teacher efficacy and student achievement, while also considering the structural and cultural challenges faced by educators in rural settings. Additionally, in Chapter Five I explain implications for school leaders, policymakers, and teacher preparation programs, offering recommendations for strengthening PLC structures to ensure equitable and sustainable teacher learning communities in similar educational contexts.

CHAPTER FIVE

SUMMARY, DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

Summary of the Study

Chapter One provided an overview of this qualitative single case study, including the research questions, problem statement, purpose, and significance of the study. Chapter Two presented a comprehensive review of the literature on Professional Learning Communities (PLCs), including theoretical foundations in Socio-Constructivism and Communities of Practice, and explored the implementation and effectiveness of PLCs in small, rural school settings. Chapter Three outlined the methodology used in the study, including the research design, participant selection, data collection methods, and analytical procedures used to examine the experiences of teachers in three rural elementary schools in East Tennessee. Chapter Four presents the qualitative findings of this study and of narratives and perspectives shared by the four classroom teacher participants, along with insights gained from reviewing supporting documents and artifacts.

Chapter Five presents a synthesis and interpretation of the findings from this qualitative single case study, which explored teachers' perceptions of Professional Learning Communities (PLCs) within small, rural elementary schools. Grounded in the theoretical frameworks of Socio-Constructivism and Communities of Practice, this study examined how teachers in isolated roles experience collaboration, professional learning, and instructional improvement through PLC engagement. The analysis revealed four primary themes: navigating collaboration in isolated roles, leadership as a catalyst for PLC success, shared purpose and professional growth through PLCs, and persistent challenges related to time, scheduling, and sustainability.

The purpose of this qualitative study was to explore the perceptions of elementary school educators in small, rural schools regarding their experiences with established professional learning communities (PLCs). The study was guided by two research questions:

1. What are the perceptions of teachers in small, rural elementary schools on the established professional learning communities in their school?
2. How do teachers in small, rural elementary schools perceive their professional learning within established PLCs in their school?

This chapter connects these findings to the existing body of literature, interprets their significance through the lens of the guiding theoretical frameworks, and discusses their implications for practice and policy. It also outlines recommendations for school leaders, district administrators, and policymakers seeking to enhance the effectiveness and sustainability of PLCs in rural educational settings. The chapter concludes with reflections on the limitations of the study and suggestions for future research.

Why This Study Was Important

The idea for this study grew out of both professional curiosity and personal conviction. As an educator working in small, rural schools, I have experienced firsthand the promise—and at times, the frustration—of participating in professional learning communities (PLCs). While PLCs are widely regarded as best practice, especially for collaborative instructional improvement, I often wondered: *Are they actually working for teachers like us?* Do they meet the needs of those teaching in small schools with limited staffing, tight schedules, and little same-grade support?

I wanted to better understand what PLCs look and feel like from the teacher's perspective. Not from a checklist or a policy manual, but from the voices of educators doing the work every day—those navigating the realities of teaching alone in their grade level, those trying to collaborate across content areas, and those carrying heavy workloads in schools where everyone wears many hats. My goal was to explore how teachers in these settings perceive their experiences within PLCs: what works, what doesn't, and what's worth refining.

This study also served a deeper purpose. As I prepare for future roles in educational leadership, I knew I needed more than just theoretical knowledge of PLCs—I needed insight. I wanted to listen to teachers and learn what truly supports their growth, what structures empower them, and what leadership practices either help or hinder meaningful collaboration. Ultimately, I hope to take what I've learned from this study into my future leadership practice to design PLCs that are more inclusive, sustainable, and impactful—especially in small schools like the ones where I began my career.

Discussion of the Findings

The findings of this study offer valuable insight into how professional learning communities (PLCs) operate within the distinctive context of small, rural elementary schools. While participating teachers expressed generally positive perceptions of PLCs as vehicles for collaboration and instructional growth, the data also revealed key factors that influence their effectiveness—particularly in schools challenged by limited staffing, geographic isolation, and constrained resources.

Interpreting these findings through the dual lenses of Socio-Constructivism (Vygotsky, 1978) and Communities of Practice (Wenger, 1998) provides a nuanced understanding of how

professional learning is shaped, sustained, and sometimes hindered in rural settings. This study does more than apply these theories; it extends them by illustrating how collaboration emerges and adapts under resource scarcity. In contexts where teacher isolation is structural, educators construct their own collaborative ecosystems, suggesting that both Vygotsky's and Wenger's models can be broadened to account for environments where the community must be intentionally assembled rather than naturally occurring. Moreover, the findings reinforce that professional learning is not a fixed construct, but a socially mediated process that shifts in form and depth depending on contextual constraints.

The document analysis revealed that while schools consistently produced agendas, meeting notes, and improvement plans, these artifacts often lacked detailed instructional substance. Many documents recorded logistical items or attendance rather than in-depth pedagogical dialogue. From a theoretical perspective, this absence limits the "shared repertoire" that Wenger (1998) describes as essential to sustaining a community of practice. It also suggests that while the *structures* of PLCs exist, their documented outputs may not fully capture the richness of professional learning, pointing to a potential disconnect between policy compliance and authentic collaboration. This gap between documented and lived practice is an important contribution to PLC scholarship, as few studies have examined the representational limits of PLC artifacts in rural settings.

The first theme—navigating collaboration in isolated roles—illuminated the creative strategies rural educators use to adapt PLC structures. Often the only teacher in a grade level or subject area, participants formed cross-grade partnerships and engaged in broader instructional dialogue. While not always content-specific, these interactions provided meaningful professional

learning. This adaptive collaboration reflects Vygotsky's (1978) assertion that learning is inherently social and most effective when individuals co-construct meaning through dialogue. Wenger's (1998) concept of mutual engagement is also evident: educators created authentic learning communities by working toward shared goals, even across disciplines. This finding expands existing theory by showing that mutual engagement can thrive without subject homogeneity, provided that trust and shared purpose are present.

These findings align with concerns raised by Leane et al. (2022), Zepeda (2019), and Tam (2014), who noted that professional isolation has long hindered collaboration in rural schools. However, this study extends the conversation by demonstrating that rural educators actively mitigate isolation through vertical teams and cross-grade collaboration. This complements Pellegrino et al.'s (2015) emphasis on structured collaboration, while adding the insight that in resource-limited contexts, PLC membership boundaries must be fluid to maintain relevance and sustainability.

The second theme—leadership as a catalyst for PLC success—underscored the pivotal role of administrative support. Teachers consistently identified strong leadership as critical to productive and sustainable PLCs. Principals who allocated time, participated actively, modeled inquiry, and followed through on goals helped maintain momentum and focus. This aligns with Wenger's (1998) idea of legitimate peripheral participation, where leadership scaffolds educator engagement, and expands it by showing that in rural contexts, leadership presence can offset structural constraints like scheduling and staffing shortages. From a socio-constructivist perspective, leaders foster the social conditions—safety, curiosity, and accountability—essential for collective learning.

Conversely, in schools where leadership was inconsistent or disengaged, PLCs often struggled with direction and sustainability. These findings reinforce the idea that school leaders are not merely facilitators of logistics, but architects of collaborative culture. They build on existing literature (DuFour et al., 2019; De Neve & Devos, 2016) by illustrating the tangible consequences of absent leadership, as well as the power of leadership to shape culture, trust, and engagement (Galdames-Calderón, 2023; Pashmforoosh et al., 2023).

The third theme—shared purpose and professional growth through PLCs—revealed how sustained collaboration drives instructional improvement and teacher confidence. Participants reported that data discussions, reflection on strategies, and development of shared goals cultivated ownership and deepened their commitment to student learning. This supports Wenger’s (1998) conception of communities of practice as spaces where members build a shared repertoire through participation, and extends it by demonstrating that shared purpose can unify educators with vastly different roles and responsibilities. It also echoes Vygotsky’s (1978) mediated learning theory, where peer interaction and collaborative reflection scaffold professional growth.

These insights affirm the foundational principles of PLCs described by DuFour and Eaker (2009): that teams committed to continuous improvement foster both individual and collective efficacy. The findings align with work by Antinluoma et al. (2021), Serviss (2022), and Prenger et al. (2017), and add the specific observation that in rural contexts, professional growth is often amplified by necessity—educators must teach multiple grades or subjects, “wearing many hats,” which increases both the breadth of topics addressed in PLCs and the need for intentional

knowledge-sharing. This multifunctional reality, while challenging, may also accelerate the diffusion of instructional practices across the school.

The fourth theme—persistent challenges: time, scheduling, and sustainability—highlighted the structural constraints that inhibit PLC effectiveness. Despite strong teacher commitment, participants frequently cited limited planning time, constant interruptions, and overlapping responsibilities as major barriers. In rural schools, “wearing many hats” magnifies these issues—teachers often balance instructional duties with extracurricular sponsorships, administrative tasks, and specialized roles such as interventionist or technology coordinator. From a socio-constructivist lens, such disruptions undermine the consistent interaction necessary for collaborative learning. Wenger (1998) similarly stressed that communities of practice require regular, purposeful engagement—conditions often compromised by scheduling issues. This theme affirms longstanding concerns in the literature (McConnell et al., 2012; Zhang et al., 2016), while offering important context about how rural conditions exacerbate these challenges. It echoes calls from Esteves (2020) and Hu et al. (2022) for systemic solutions to make PLCs feasible in low-capacity environments.

Contribution to the Literature and Addressing the Gap

Overall, the findings of this study affirm, refine, and extend current literature on PLCs by centering the rural experience. While much PLC scholarship has focused on suburban or urban contexts, this research addresses the identified gap in understanding how PLCs function in small, rural elementary schools. The study contributes new insights by:

1. Demonstrating that PLC collaboration can thrive across grade and subject boundaries when mutual engagement is prioritized.

2. Showing that strong, participatory leadership can mitigate structural constraints common in rural schools.
3. Identifying the disconnect between documented PLC activity and the actual richness of collaborative learning.
4. Illuminating how the multifunctional nature of rural teaching (“wearing many hats”) both complicates and enriches PLC work.

Importantly, these findings demonstrate that Socio-Constructivism and Communities of Practice remain powerful frameworks for understanding how professional learning unfolds—even amid resource constraints—and suggest that both theories can be expanded to account for contexts where the community must be actively constructed and maintained, as laid out in **Table 10**.

Implications for Practice

The findings of this study offer several important implications for improving professional learning practices, particularly within small and rural school settings where traditional PLC structures may not be feasible. By addressing the unique challenges and leveraging the strengths of rural contexts, schools and districts can create more equitable and impactful professional learning environments.

- **Develop Alternative Models for Collaboration**

To support singleton teachers and those in non-traditional teaching roles, schools should explore nontraditional PLC structures such as cross-campus, inter-district, or virtual communities of practice. These models expand access to grade- or subject-alike peers and offer opportunities for more meaningful collaboration, even across geographic boundaries

Table 10
Mapping Study Themes to Theoretical Frameworks

Theme	Vygotsky – Socio-Constructivism	Wenger – Communities of Practice
Navigating Collaboration in Isolated Roles	Learning as social co-construction	Mutual engagement across grades/subjects
Leadership as a Catalyst for PLC Success	Leaders create conditions for learning	Legitimate peripheral participation via leadership
Shared Purpose and Professional Growth	Peer interaction scaffolds growth	Shared repertoire built through collaboration
Persistent Challenges: Time, Scheduling, and sustainability	Interruptions undermine collaborative learning	Communities require regular engagement

Note: Themes from the study are mapped to corresponding concepts from Vygotsky's (1978) and Wenger's (1998) Communities of Practice frameworks. This visual illustrates how the findings both align with and extend these theoretical models.

(Mohan et al., 2017). Leveraging technology and regional partnerships can help mitigate professional isolation and foster consistent engagement.

- **Invest in Leadership Development**

Strong, informed leadership is essential for cultivating and sustaining effective PLCs. Principals, assistant principals, instructional coaches, and teacher leaders should receive targeted professional development in areas such as collaborative leadership, data-informed decision-making, facilitation skills, and adult learning theory (DuFour et al., 2014). When leaders model reflective practice and create psychologically safe environments for dialogue, PLCs are more likely to be sustained and effective.

- **Differentiate Professional Learning Opportunities**

PLCs should not follow a one-size-fits-all approach. Instead, collaborative learning should be tailored to the specific grade levels, subject areas, and instructional goals of participants. Differentiated professional development—especially in multi-grade or small-staff schools—ensures greater relevance, engagement, and transfer to classroom practice (Desimone, 2009). Flexible PLC structures that allow for content-specific grouping, even on a rotating basis, can help teachers derive greater value from their time together.

- **Prioritize Relationship Building and Team Culture**

Trust, respect, and relational capacity are foundational to successful PLCs. In small schools where staff often wear many hats and work in close proximity, fostering a healthy team culture is critical. Schools should intentionally build relational trust through team-building activities, shared planning time, collaborative goal-setting, and consistent,

open communication (Leane et al., 2022). Relational strength enhances psychological safety, accountability, and long-term commitment to collective goals.

- **Implement Ongoing Evaluation Mechanisms**

To ensure PLCs remain focused, impactful, and responsive to teacher and student needs, schools should adopt evaluation tools such as teacher reflection protocols, feedback surveys, peer observation rubrics, and data analysis reviews. These mechanisms promote continuous improvement and help educators and administrators assess the effectiveness and relevance of collaborative efforts (Guskey, 2002). Embedding regular reflection and accountability practices can strengthen the long-term sustainability of PLCs.

Recommendations

Based on the findings and implications of this study, the following recommendations are proposed for practitioners and school leaders seeking to strengthen professional learning communities (PLCs) in small, rural elementary schools:

1. **Formalize Flexible PLC Structures**

Districts should allow flexibility in PLC design while providing clear guidelines and expectations to accommodate singleton roles. Encouraging cross-grade or vertical teams, as well as creating cross-district networks, can connect teachers in similar roles and foster sustainable collaboration despite geographic isolation.

2. **Provide Dedicated PLC Time With a Structured Agenda**

Scheduling protected time during the regular school day—rather than relying on after-school hours—will support consistent PLC participation and reduce teacher fatigue. This

time should follow a set agenda or protocol to maintain focus, ensure equitable participation, and promote productive discussions.

3. Develop Leadership Pipelines and Administrative Supports

Districts should establish mentorship and leadership development pathways to prepare both administrators and teacher leaders to guide PLCs effectively. Providing administrators with specific tools, resources, and training will help them facilitate PLC processes, monitor progress, and address challenges proactively.

4. Implement Tiered Professional Development

Schools should offer differentiated PLC supports based on teacher experience, grade level, and content area to better meet the learning needs of all staff. Tailoring professional development ensures that both novice and veteran teachers find value in PLC participation.

5. Use Technology to Bridge Distance

Where in-person collaboration is difficult, districts should invest in digital tools and provide training that enables virtual PLCs. This can expand access, strengthen cross-district networks, and reduce professional isolation for rural educators.

6. Develop Clear PLC Evaluation Frameworks

School and district leaders should design evaluation frameworks that track PLC effectiveness using both qualitative feedback and quantitative student performance data. Such frameworks ensure accountability and guide continuous improvement.

7. Align PLC Goals with School Improvement Plans

Ensuring coherence between PLC initiatives and broader school goals will increase relevance, focus, and overall impact on student learning outcomes.

8. Embed Reflective Practice

Incorporating regular reflection protocols within PLCs encourages meaningful dialogue, inquiry-based learning, and sustained instructional growth. Reflection helps teachers assess the effectiveness of collaborative practices and make informed adjustments.

Suggestions for Future Research

While this study contributes to the expanding body of knowledge on PLCs within rural elementary school settings, several areas remain ripe for further exploration. Future research efforts could deepen understanding and enhance the practical application of PLCs by addressing the following areas:

- **Longitudinal Impact Studies**

Research examining the long-term effects of sustained PLC participation on teacher retention, instructional quality, and student achievement in rural schools is needed. Such studies could provide insight into how PLCs contribute to professional stability and school improvement over time.

- **Inclusion of Student Perspectives**

While this study focused on the experiences of teachers, incorporating student voices could offer a valuable lens into how PLC-driven instructional changes impact classroom culture, engagement, and learning outcomes. Exploring student perceptions could strengthen the connection between teacher collaboration and student success.

- **Leadership Development and Training Models**

Further research is needed to evaluate the effectiveness of leadership preparation programs specifically designed to support PLC facilitation. Studies might explore which leadership practices and training components most effectively promote sustainable, collaborative learning cultures in rural schools.

- **Virtual and Hybrid PLC Structures**

Given the growing role of technology in education, future research should investigate the design, implementation, and effectiveness of virtual or hybrid PLCs, especially in geographically isolated or low-capacity schools. Comparative studies may reveal best practices for remote collaboration.

- **Equity and Access Considerations**

Additional studies could explore how PLCs address—or inadvertently exacerbate—issues of equity in professional learning, particularly in under-resourced schools serving diverse or high-needs student populations. Research in this area could guide the development of more inclusive and responsive PLC models.

- **Comparative Case Studies Across Contexts**

Studies comparing PLC implementation across rural, suburban, and urban contexts could illuminate context-specific challenges and highlight transferable strategies. Such comparisons would offer valuable insight into how school setting influences the structure, focus, and outcomes of collaborative learning communities.

- **Funding Structures**

Further investigation into how district- and state-level mandates and funding mechanisms

influence the formation and sustainability of PLCs could inform decision-making at the policy level. Understanding these dynamics is essential for scaling and supporting effective PLC models across varied educational systems.

Collectively, these avenues for future research can deepen the understanding of PLC implementation and evolution, ensuring that professional learning communities remain equitable, sustainable, and transformative tools for educator growth and student success

Conclusion

This study contributes to a deeper understanding of how teachers in small, rural elementary schools experience and perceive Professional Learning Communities (PLCs) within the constraints and possibilities of their unique educational environments. Anchored in the theoretical frameworks of Socio-Constructivism and Communities of Practice, the findings illuminate the lived realities of rural educators who, despite professional isolation and limited resources, remain committed to collaboration, shared learning, and continuous instructional improvement.

The themes that emerged—navigating collaboration in isolated roles, the catalytic role of leadership, the impact of shared professional purpose, and the ongoing challenges of time and sustainability—highlight both the resilience of rural teachers and the conditions required for PLCs to thrive. These findings affirm that meaningful professional learning does not rely solely on access to large faculties or extensive funding, but rather on intentional design, relational trust, and leadership that cultivates space for reflective practice and mutual accountability.

Importantly, this study underscores that PLCs can be transformative, even in the most constrained settings, when educators are empowered to adapt collaborative structures to fit their

context. Flexible implementation models, differentiated support, and the strategic use of technology can bridge gaps in staffing and geography. Moreover, leadership that fosters psychological safety, encourages inquiry, and aligns PLC work with broader school goals plays a decisive role in sustaining momentum and deepening impact.

For practitioners and policymakers, the implications are clear: PLCs must be more than procedural checklists—they must be adaptive, relational, and embedded in a culture of trust and continuous learning. For rural schools in particular, systemic support—through time allocation, leadership development, and purposeful evaluation—can make the difference between performative compliance and authentic collaboration.

As the field of education continues to seek equity, innovation, and excellence, the insights from this study offer both practical direction and theoretical affirmation. Continued research will be essential in evolving PLC models that are not only sustainable but also responsive to the nuanced needs of diverse school settings. Ultimately, when educators are given the tools, time, and trust to learn together, PLCs can serve as catalysts for transformation—not just in teaching practice, but in the culture of schools themselves.

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APPENDICES

APPENDIX A

Interview Protocol

The purpose of this interview will be to gather data regarding teachers' perceptions of professional learning communities and their effects and implementation in a rural elementary school learning environment.

Overarching Question

What are teachers' perceptions of professional learning communities and their effects and implementation in a small, rural elementary school's learning environment, while focusing on their professional learning within established PLCs in their school?

Interview Questions

1. How would you define a professional learning community (PLC) in the context of your teaching experience?
2. What benefits have you observed from participating in a PLC?
3. Can you describe a specific instance where a PLC positively impacted your teaching practice?
4. How do you feel PLCs contribute to student learning and achievement?
5. What challenges have you faced when participating in PLCs, and how have you overcome them? (Guide towards challenges in small, rural school)
6. How does collaboration within a PLC influence your professional development? (Guide towards challenges of being in a singleton school)
7. What role does leadership play in the effectiveness of a PLC?
8. In what ways do PLCs support or hinder innovation in your teaching methods?
9. How do you balance the time commitments of participating in a PLC with your other professional responsibilities?

10. Can you share an example of a successful project or initiative that originated from your PLC?
11. How do you ensure that all voices are heard and valued within your PLC?
12. What strategies do you use to maintain the momentum and enthusiasm in your PLC over time?
13. How has your participation in a PLC changed your approach to lesson planning and curriculum development?
14. How do you measure the success and effectiveness of a PLC in your school?

General Question

What have you found to be the advantages or disadvantages for engaging in a professional learning community?

APPENDIX B

Summary of Themes and Aligned Theoretical Frameworks

Theme	Key Ideas	Representative Quote	Theoretical Alignment
Navigating Collaboration in Isolated Roles	Teachers adapted PLCs by forming cross-grade or vertical teams due to singleton roles.	“We share data and talk about where kids are coming from and where they need to go next.” – Ms. Carter	Communities of Practice: Mutual engagement in non-traditional contexts; Socio-Constructivism: Learning through interaction
Leadership as a Catalyst for PLC Success	Administrative support was essential for PLC effectiveness and sustainability.	“Our principal is all in... She’s part of the team.” – Mrs. Davis	Communities of Practice: Leadership supports shared domain; Socio-Constructivism: Dialogue nurtured by supportive context
Shared Purpose and Professional Growth Through PLCs	PLCs fostered reflection, data-informed decisions, and collective instructional improvement.	“We look at our data, plan interventions, and talk through what’s working and what’s not.” – Ms. Thompson	CoP: Shared repertoire and joint enterprise; Socio-Constructivism: Co-construction of knowledge
Persistent Challenges—Time, Scheduling, and Sustainability	Time constraints and inconsistent support hindered PLC participation.	“We usually meet during lunch or after school. By then, everyone’s tired...” – Ms. Carter	CoP: Sustained mutual engagement threatened; Socio-Constructivism: Interrupted dialogue limits learning

APPENDIX C

Implications for Small, Rural Schools

Recommendation	Implementation Strategy
Cross-School Collaboration for Singletons	Use virtual PLCs and regional consortia
Leadership Capacity Building	Offer coaching and PD for PLC facilitation
Content Relevance and Differentiation	Design PLC agendas by subject, grade, and student need
Relationship Building as a Foundation	Foster relational trust through informal and formal community-building activities
Evaluation of PLC Effectiveness	Implement reflective journals, peer feedback, and data review protocols

VITA

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