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TEACHERS PERSPECTIVES ON THE IMPLEMENTATION OF PROFESSIONAL LEARNING COMMUNITIES PRACTICES IN KARAGA DISTRICT

SAYIBU IBRAHIM

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BY

SAYIBU IBRAHIM (M.ED. Training and Development)

ID No: UDS/MTD/0018/22

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FEBRUARY 2025

DECLARATION

Student's Declaration

I hereby declare that this dissertation/thesis is the result of my original work and that no part of it has been presented for another degree in this university or elsewhere.

Student's Name: SAYIBU IBRAHIM

Student's Signature:  Date: ……

Supervisor's Declaration

I hereby declare that the preparation and presentation of the dissertation/thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University for Development Studies.

Supervisor's Name: Dr. Amadu Musah Abudu

Supervisor's Signature:  Date: …….

ABSTRACT

The aim of this research was to assess teachers' perspectives on the implementation of Professional Learning Communities (PLCs) in the Karaga District. The study objectives included assessing the attitudes of primary school teachers towards PLC implementation, evaluating the level of support provided by school leaders, ascertaining the effects of PLCs on teachers' instructional practices, and examining the challenges faced by teachers during implementation. The study employed an explanatory sequential mixed-method design, with a population comprising School Improvement Support Officers (SISOs) and teachers. The study employed purposive sampling in selecting schools that met the study's criteria; simple random sampling technique was however used to select individual participants for the data collection. For quantitative data, a sample size of 109 participants was determined using the Krejcie and Morgan table, while 27 participants were selected for the qualitative data. Data collection instruments included questionnaires, interviews, document analysis, and focus group discussions, however, the analytical tools used were Analysis of Variance (ANOVA), paired sample t-test, thematic analysis, and descriptive statistics. The study revealed that most teachers exhibited commendable level of commitment, as demonstrated by consistent attendance and active participation. In addition, school leaders provided Teaching and Learning Materials (TLMs) for PLC meetings. The study also found that PLCs provide learning opportunities and skill development for teachers; these include handling bright students, lesson preparation and evaluation. Challenges such as inadequate TLMs, limited availability of teachers and time constraints, were identified. It is recommended that headteachers should provide incentives or recognition for active participation within PLCs to motivate teachers. Furthermore, SISOs should provide training for school leaders on effective facilitation and support for PLCs.

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DEDICATION

This work is dedicated to all my family members and friends.

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ABBREVIATIONS

CL Curriculum Lead

DI Differentiated Instruction

DEO District Education Office

GES Ghana Education Service

ESP Education Strategic Plan

IIT Instructional Improvement Theory

NaCCA National Council for Curriculum and Assessment

NST National Standardized Test

SBC Standard Based Curriculum

SAI Standards Inventory Assessment

SISO School Improvement Support Officers

TLC Teachers Learning Communities

TPD Teacher Professional Development

TPLCI Teacher Professional Learning and Community Initiative

TPG Teachers Professional Growth

TLM Teaching and Learning Materials

PLC Professional Learning Community

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Quality teaching is the foundation of school academic performance and pupils' achievements (Darling-Hammond, 2000). Primary school teachers are the key figures in providing education for their pupils (Baba 2020). In this, schools need teachers who apply new ways to promote and characterize the knowledge and life skills needed by students in their personal and national development (Maria, Klas, & Ulf 2021). Several interventions were implemented in an attempt to improve the quality of education, which included those targeted schools and teachers. The School Feeding Program, the Capitation Grants, the National Literacy Accelerated Program (NALAP), the School Performance Appraisal Meeting SPAM, and the School Performance Improvement Plan (SPIP) are some of these interventions (Ghana Education Service Headquarters, Schools and Instructions Division, and Japan International Cooperation Agency, 2021, p. 27). Although they were implemented, these interventions did not lead to the desired outcomes due to implementation problems (Acquah, Attila, & Yalley., 2024; Boampong, 2024; Angrist & Meager, 2023; Mogre,. Adetunji, Olalekan, Gaa, Anie, & Tayo, 2024). These challenges include logistical constraints, lack of ongoing training, and preparedness for sustained community engagement and fidelity of implementation.

Professional Learning Communities (PLCs) offers an alternative approach to enhancing methods of instructions and improving student learning outcomes. This

model serves as a strategy for implementing universal, lasting, and job-embedded professional development aimed at improving education (Owen, 2016; Julie, 2010). Professionals closest to the support of schools, as reported by Hord (1997), are seen as those who have generated the idea of PLCs. Professional Learning Communities (PLCs) originated as 'Learning Community' or 'learning teams or organizations' and refers to one of the community-based learning in schools where teachers are involved in collaborative learning by providing services mainly designed for common issues related to student achievement processes (Hord, 2004). When teachers talk about learning and involve themselves in unstructured mentoring and skill transfers without planning, it is an informal PLC (Aslamiah, Suriansyah, Amelia, & Ngadimun, 2019). PLCs are an intentional approach in which teachers collaborate on how best to teach and students can be expected to learn, they represent an embedded continuous professional development strategy (DuFour, Eaker, & Many, 2010).

The concept of PLCs originated in the United States in the late 1980s and early 1990s as a response to the isolation practiced by teachers. Teachers were asked to form small groups based on grade levels in the schools. In their group meetings, they establish rules to guide them and ensure productive discussions (Meesuk and Wongrugsa, 2021). PLCs have been widely embraced in American schools as an effective model for teacher professional development (TPD) (Vescio, Ross, & Adams 2008). In Africa, PLC adoption in basic schools is gaining support as a means to enhance teacher professional development and student results, especially in

countries like South Africa, Kenya, and Uganda (Soares & Galisson, 2021; Soares, Galisson & Laar 2020). PLCs require local context adaptation (Ismail, Ishak, & Kamaruddin 2020), taking into account elements like resource accessibility, cultural norms, and educational regulations (Owen, 2014; Brody & Hadar, 2015).

In Ghana, PLCs gained prominence around the implementation of the Education Strategic Plan (ESP) from 2010 to 2020, highlighting the importance of Teachers' Professional Growth (TPG) and learning together (Ghana Ministry of Education, 2012). The Ghana Education Service (GES) introduced the Teacher Professional Learning and Community Initiative (TPLCI) in 2017, providing a framework for developing PLCs at various levels, from schools to districts and regions. The introduction of the Standard-Based Curriculum (SBC) in 2017 by the GES further emphasized the importance of PLCs in enhancing education. To strengthen education delivery and meets the development needs of Ghanaian students, PLCs were integrated into the basic curriculum, making them a core component of the curriculum (NaCCA, 2019, p. 42). Schools were tasked with implementing PLCs to create a strong network for teachers to engage in fruitful discussions and become more effective in the classroom. Since then, the Ghana Education Service (GES) and educational stakeholders in the country have actively promoted and supported PLCs as a means to enhance Teacher Professional Development (TPD) and ultimately improve student outcomes.

However, the implementation of PLCs in primary schools is a complex process that requires the support and cooperation of teachers, school leaders, and

other stakeholders. The attitudes, leadership support, and implementation challenges faced by teachers in implementing PLCs practices are critical factors that can influence the success of these practices, hence, need to be assessed (Vescio, Ross, & Adams, 2008; Kruse, Louis, & Bryk, 2014). Good teacher attitudes towards PLCs can lead to improved teaching practices, greater professional growth, and, ultimately, good effects on student learning outcomes (Vescio, Ross, and Adams 2008). In addition, strong leadership fosters a supportive environment for collaboration, establishing a shared vision, and promoting continuous improvement, but implementation challenges such as lack of time, resources, and support from the system can pose trials to sustaining PLC initiatives (Harris & Jones, 2010). It is for this reason that this study sought to gauge the attitudes of the teachers, leadership support and implementation challenges of the PLC practices in the district. This will help to assess the perspectives of teachers towards the implementation of the Professional Learning Community and its impact on instructional strategies in the Karaga District.

1.2 Statement of the Problem

Professional Learning Communities (PLCs) provide a platform for teachers to collaboratively share their expertise, experiences, and best practices (Linder, Post, & Calabrese, 2012). This collective knowledge-sharing fosters continuous learning and skill development among members, contributing to improved teaching methods and enhanced professional competence (DuFour, 2004). Cultivation of a collaborative culture is also the significance of PLC, which extends beyond

individual growth to the establishment of a collaborative culture within an organization (Carpenter, 2018). Through shared goals, open communication, and mutual support, PLC creates an environment where professionals work together to achieve common objectives, fostering a sense of community and shared responsibility (Hord, 2009; Hallam, Smith, Hite, & Wilcox, 2020). Through collaborative dialogue, teachers gain a deeper understanding of effective instructional practices and embrace new approaches that align with research-based strategies (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010, p. 31).

Despite the recognized importance of professional learning communities (PLCs), as indicated by various scholars, there remains a serious gap concerning assessing teachers' attitudes, leadership support and implementation challenges in the PLC practices. Again with these importances of PLC no study has been done in the Karaga District to gauge these factors on PLC practices.

For instance, Atta's (2015) study explored the American experience with PLCs and its implications for Ghana and international school systems. In addition, Meesuk and Wongrugsa (2021) focused on sustainable teacher professional development through PLCs in Thailand. Their research assessed the causes, effects, and elements influencing the success and sustainability of a PLC program, finding benefits for teachers and students. Furthermore, Sari, Suryadi, and Syaodih (2018) investigated an alternative model of PLCs among primary school teachers in west Bandung.

Moreover, Hafizur (2012) conducted a case study on secondary science teachers in Bangladesh, exploring how PLCs impacted the adoption of constructivist teaching methods. More so, Carter (2008) examined the use of an academic pyramid of interventions within PLCs to improve students' academic attainment, particularly in schools facing challenges with standardized testing. Lastly, Soares, Galisson, and Laar (2020) focused on the adaptation of PLCs in Sub-Saharan Africa, specifically in Equatorial Guinea, Ghana, and Nigeria.

The studies indicated that a substantial research gap in understanding the attitudes of teachers, leadership support implementation challenges towards PLC practices has been created. Carter (2008) and Meesuk & Wongrugsa (2021) utilized quantitative study design to evaluate the effects of an academic pyramid of interventions, although a number of studies, such as those conducted by Sari, Suryadi, and Syaodih (2018), Hafizur (2012) and Atta (2015) concentrate on qualitative approaches, however, Soares, Galisson, & Laar (2020) used mixed method approach to contextualize PLC models across different regions. There is a gap in the mixed-methods research approach that can offer statistical indications of the benefits and challenges of implementing PLCs, allowing for more comprehensive decisions. This study's mixed method approach makes it possible to collect both qualitative and quantitative data, such as attitudes, challenges, and individual experiences of the teachers, as well as statistical analysis of their involvement in PLCs. By validating the results from various angles, the use of both approaches contributes to a more robust and dependable conclusion regarding the efficacy of

PLCs. While qualitative data sheds light on the underlying causes of patterns, such as teachers' views about PLCs, quantitative data can assess patterns and outcomes.

Also, no research has been conducted on assessing the attitudes of primary school teachers, leadership support and implementation challenges towards Professional Learning Community practice in Karaga District in Northern Region of Ghana. Again, report from School Performance Appraisal Meeting (SPAM) from the Karaga District Education Directorate indicated that many schools in the district have introduced PLC, but teachers' attitudes, leadership support and implementation challenges towards the implementation are not known (Karaga District Education Directorate, 2022).

In addition, the study's context is highly significant due to the low performance of pupils in the National Standardized Tests (NST) (NaCCA 2022). The Karaga District consistently reported significant numbers of pupils getting below-basic scores in both mathematics and English. Data from the 2021 and 2022 academic years of NST show that more than 50% of students do not meet the basic competency level in both subjects, demonstrating the persistence of this trend over time. This low performance of pupils in two years led to criticism of teachers by parents. The Education Directorate attributes this drop to various factors, including inappropriate implementation of interventions such as Professional Learning Communities (PLCs) and lack of commitment on the part of teachers. Bridging this gap requires research that will highlight the PLC implementation process among primary school teachers in the Karaga District.

1.3 Research Objectives

1. To assess the attitudes of primary school teachers towards the implementation of Professional Learning Communities (PLCs) in Karaga District.
2. To assess the level of support school leaders provide in the implementation of PLCs in Karaga District.
3. To ascertain the effects of PLC implementation on teachers' instructional practices.
4. To examine the challenges primary school teachers face when implementing PLCs in the Karaga District.

1.4 Research Questions

1. What are the attitudes of primary school teachers towards the implementation of Professional Learning Communities (PLCs) in Karaga District?
2. What is the level of support provided by school leaders for the effective implementation of Professional Learning Communities (PLCs) in Karaga District?
3. What is the effect of Professional Learning Communities (PLCs) implementation on the instructional practices of primary school teachers in Karaga District?
4. What are the challenges teachers face when implementing PLCs in the Karaga District?

1.5 Significance of the Study

This study is significant because it aims to explore the perspectives of primary schools teachers in Karaga District towards the implementation of PLCs practices, which is a critical component of the national education system. The study will provide insights into the attitudes, leadership support, and implementation challenges faced by teachers in implementing PLCs practices, and will inform education policymakers and practitioners on the ways to support the effective implementation of PLCs practices in primary schools.

In addition, the study will be relevant to the current education landscape in Ghana, where there is a growing emphasis on improving the quality of basic education. The government of Ghana has identified teacher professional development as a key strategy for achieving this goal, and the implementation of PLCs is a key component of this strategy. By assessing the teachers attitudes, leadership support and implementation challenges of PLCs, the study can provide insights into the effectiveness of this approach in the context of Karaga District.

Furthermore, the study will be relevant to the wider body of research on teacher professional development and its impact on student learning outcomes. PLCs have been identified as an effective approach to improving teacher professional development, but there is limited research on their implementation in the context of basic education in Ghana. By conducting this study, the findings can contribute to the existing literature on teacher professional development and inform future research on this topic.

In conclusion, the study will be relevant to the broader goal of improving the quality of education in Ghana and beyond. By understanding the teachers' attitudes, leadership support and implementation challenges of PLCs, education policymakers and school leaders can make evidence-based decisions on the allocation of resources and support for teacher professional development. This, in turn, can lead to improved teaching practices and, ultimately, improved learning outcomes for students.

1.6 Delimitation

The study is focused on primary school teachers in Karaga district in the Northern Region of Ghana. The research focused on the perspectives of the teachers, which entails assessing their attitudes, leadership support and implementation challenges towards PLC in the District. It also assessed the effects of PLC implementation on instructional practices.

1.7 Limitations of the Study

The nature of the questions may lead to a response bias from teachers and school leaders. As the study relies on self-reported data from participants, there is a possibility that respondents may provide socially desirable responses, leading to overestimation of the effectiveness of PLCs or underreporting of challenges and weaknesses in the implementation process. Additionally, the study will only focus on primary schools within the Karaga District, meaning the study is for only one district in the region out of sixteen districts, and the findings may not be generalized to other regions or contexts in Ghana or beyond. The use of a variety of instruments, such as questionnaires, interviews, focus group discussions, and document analysis

techniques, may result in inconsistent data collection, which might compromise the validity and reliability of the findings. Furthermore, the integration of results from several instruments necessitated careful triangulation and analysis, which may be difficult and time-consuming. These disadvantages highlight the necessity for the researcher to select and use research tools carefully in order to provide solid and trustworthy results.

Furthermore, the sample size may also be a limitation, as the study will be limited to a representative sample of School Improvement Support Officers (SISOs), headteachers and classroom teachers from the district and each primary school. While the sample size will be determined based on the number of primary schools within the district, the study may not capture the experiences and perceptions of all teachers within the schools. This may limit the generalizability of the findings and reduce the statistical power of the study.

However, to address these concerns the researcher has taken several steps such as using validated instruments and pilot testing to validate self- reported data. The researcher will also use simple random sampling, calculate sample size and collaborate with other researchers to ensure the data can be generalized to other context and settings. Lastly, the researcher will also establish standardized protocols as well as performs data quality checks to minimize inconsistent data collections.

1.8 Organization of the Study

The study was divided into five significant interconnected chapters. The study's history is covered in the first chapter. It examined the background to the study, the statement of the problem research objectives, the research questions, the significance of the study, the limitations, the delimitation, and the organization of the study. The second part analyzed literature pertinent to supporting the study. The third chapter dealt with the research methodology, which comprises approach, design, data collection technique, population, target population, sampling and sampling technique, research instrument, procedure for data analysis, and data quality and ethical issues and the key findings of the study are summarized and presented in chapter four in accordance with the goals that were set forth to be attained. In chapter five, the study's key findings were summarized, conclusions were formed, and recommendations were provided.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter examines and assesses the literature on theoretical frameworks, conceptual frameworks, theoretical reviews, and empirical reviews. The goal is to provide a thorough comprehension of the topic. The chapter concludes with a comprehensive summary of the collected ideas.

2.1 Theoretical Framework

Putting Professional Learning Communities (PLCs) into Practice in the field of education has gathered significant attention due to its potential to enhance instructional practices and improve student learning outcomes. To thoroughly evaluate the implementation process of PLCs, this study adopts the Instructional Improvement Theory (IIT) as a robust theoretical framework. The aim of the framework was to investigate how teachers learn and improve their teaching practices over time. The framework emphasizes the importance of teachers engaging in ongoing reflection, experimentation, and collaboration to enhance their instructional methods (An, 2021).

The theory, as outlined by Bryk, Gomez, Grunow, and LeMahieu (2015), emphasizes the importance of continuous improvement in instructional practices and student learning outcomes through collaborative efforts and reflective practices. By employing this framework, the study aims to gain comprehensive insights into the key factors, challenges, and impacts associated with the successful implementation

of PLCs. First of all, one critical aspect of the Instructional Improvement Theory is its emphasis on the continuous improvement of instructional practices (Bryk et al., 2015). Within the context of PLCs, teachers engage in collaborative discussions, actively sharing their expertise and reflecting upon their teaching methodologies (Hord, 1997). This collaborative effort serves as a catalyst for identifying and adopting effective instructional strategies, leading to tangible improvements in teaching practices and increased student engagement. Through this collaborative approach, teachers can exchange ideas, learn from one another, and collectively enhance their instructional methods.

In addition, reflective practices play a pivotal role in the professional growth of teachers and instructional improvement. The Instructional Improvement Theory highlights the significance of reflective dialogue, data analysis, and critical examination of teaching practices within PLCs (Bryk et al., 2015). Engaging in the reflective process, teachers can identify areas for growth, refine their instructional strategies, and make informed decisions that positively impact student learning outcomes (Vescio, Ross, & Adams, 2008). Through the exchange of experiences and insights, teachers can collectively foster a culture of continuous improvement and optimize their instructional approaches.

Furthermore, collaborative problem-solving and innovation are essential elements of the Instructional Improvement Theory (IIT), which directly relate to the implementation of PLCs. PLCs provide a platform for teachers to collaboratively address instructional challenges and develop innovative solutions (Bryk et al., 2015).

By actively participating in collaborative problem-solving, teachers can exchange ideas, experiment with new approaches, and adapt instructional practices based on evidence and feedback. This collaborative effort not only enhances the instructional practices of individual teachers but also promotes the overall professional growth and effectiveness of the entire PLC (Louis & Marks, 1998).

Also, data-informed decision-making is another crucial component highlighted by the Instructional Improvement Theory. Within PLCs, teachers actively engage in data analysis, utilize formative assessments, and evaluate student progress (Bryk et al., 2015). This data-driven approach enables teachers to identify areas for improvement, tailor instruction to individual student needs, and monitor the impact of instructional strategies on student learning. By incorporating data into their decision-making processes, teachers can make informed choices and optimize instructional practices for better student outcomes (Bryk et al., 2015).

The application of the Instructional Improvement Theory as a theoretical framework in this study allows for a comprehensive assessment of PLC implementation. The framework encompasses continuous improvement of instructional practices, reflective practices and professional growth, collaborative problem-solving and innovation, and data-informed decision-making within PLCs. By exploring these key factors, the study aims to provide valuable insights into the challenges, impacts, and potential areas of improvement associated with the implementation of PLCs. Ultimately, this research contributes to the existing knowledge base and offers practical recommendations to teachers, administrators,

and policymakers, promoting the effective implementation of PLCs and fostering a culture of continuous improvement within educational institutions.

More so, considering the work of Brown, Horn, and King in 2018, it indicated that in school settings, professional learning communities (PLCs) have developed into a useful framework for improving teaching methods and student results. Key elements that influence the effectiveness of PLC implementation have been found through research, particularly those conducted by Brown, Horn, and King (2018). These elements consist of collaborative leadership, time set aside for teamwork, data-driven decision-making, and continual professional growth. PLCs that are effective must have leaders that recognize the value of teamwork. Supportive leaders promote a culture of shared accountability, increase teacher engagement, and provide teachers with the tools they need to collaborate successfully. Active PLCs, teachers may have fruitful talks, share best practices, examine student data, and collaborate on lesson planning when PLC meetings and collaborative activities are given protected time.

In addition, Pirtle and Tobia (2014) emphasize additional factors for successful PLC deployment, which include collaborative structures, which are crucial for success because they provide possibilities for cooperation and collaborative problem-solving as well as clearly defined roles and duties. PLCs should have defined goals that are in line with the school's vision and a common understanding of what they are there to accomplish**.** Effective communication in PLC, open discussion, and attentive listening encourage cooperation and idea

exchange. So therefore, this study is anchored on the Instructional Improvement Theory (IIT) as presented by Bryk et al. (2015). The components listed by Brown, Horn, and King (2018) are also frameworks connected to the implementation of professional learning communities (PLCs). The continuous improvement of instructional practices via collaborative efforts and reflective practices is a key component of the Instructional Improvement Theory (IIT). Additionally, it emphasizes the need for critical study of educational practices, data analysis, and reflective discourse. Collaboration is essential for solving educational problems and promoting creativity. The idea incorporates data analysis, formative evaluations, and student progress evaluations. Effective PLCs need supportive leadership that appreciates the value of teamwork; protected time for collaboration facilitates fruitful discussions and planning, ongoing learning opportunities and pertinent courses are crucial for professional growth, and data analysis and its use in informing instructional decisions are crucial for improvement, according to Brown, Horn, and King (2018). Additional factors that support cooperation and problem-solving include clearly defined roles and responsibilities within PLCs, PLCs should have clear goals aligned with the school's vision; and open discussion and attentive listening encourage cooperation and idea exchange (Pirtle and Tobia, 2014).

In contrast, both theories place a strong emphasis on the value of cooperation, ongoing development, and data-driven decision-making inside PLCs. They understand how crucial leadership backing, setting aside time for cooperation, and continual professional growth are to PLC success. In PLCs, clear goals and efficient

communication are essential, according to both views. IIT, on the other hand, places a great focus on reflective practices and the critical analysis of instructional strategies, which are not expressly stated in the Brown, Horn, and King (2018) list of components. In contrast to IIT, Brown, Horn, and King's aspects place a stronger emphasis on continual professional growth, defined time, and leadership assistance. Collaborative problem-solving and innovation, which are suggested but not specifically acknowledged in Brown, Horn, and King's principles, are mentioned by IIT as crucial elements.

Both theories provide insightful information on PLC implementation, but they could not be all-inclusive. They don't discuss any problems or negatives that can appear when using PLC. The usefulness of these theories in actual educational contexts has not been thoroughly examined in the literature. Their credibility would be increased by real-world examples or case studies showing successful implementation. Both theories stress the value of data, but neither one goes into detail on the precise tools or processes used for data analysis and decision-making inside PLCs, leaving some space for interpretation. In conclusion, Brown, Horn, and King's (2018) components and the Instructional Improvement Theory (IIT) both provide crucial direction for the deployment of PLCs in educational contexts. They have similar philosophies around data usage, collaboration, and ongoing development. Therefore the the PLC model and the IIT are directly related and appropriate in this study.

2.2 Review of Concepts and Key Issues.

A theoretical framework comprises the theories expressed by experts in the field into which you plan to research, which you draw upon to provide a theoretical space for your data analysis and interpretation of results. Also, the theoretical framework is a structure that summarizes concepts and theories that you develop from previously tested and published knowledge that you synthesize to help you have a theoretical background or basis for your data analysis and interpretation of the meaning contained in your research data. The ideas put forth by authorities on the topic you intend to study form a theoretical framework, which you use as a philosophical starting point for your data analysis and result interpretation (Kivunja 2018).

The theoretical framework is the structure that can hold or support the theory of a research study. Your personal opinions about your study are not summarized in the theoretical framework of your thesis or research proposal. Instead, it is a summary of the ideas and key issues of celebrities in your field of study as they apply to your planned study or thesis, how you comprehend these theories, and how you intend to use these theories to interpret your data. Essentially, the theoretical framework consists of the opinions of prominent researchers in your area on your research topic and the issue you intend to study. It may also contain recommendations for how to resolve the issue, including how to interpret the results. By listening to those leaders communicate, you may create a knowledgeable, specialized perspective that you can use to look at your data, analyze it, understand

the results, talk about it, and even draw conclusions and suggestions (Swanson 2013).

This review's literature gives a complete overview of professional learning communities (PLCs) and their different aspects and components. Hord's study (1997) explains the genesis of the word "PLC" and its relationship with educational professionals. She provides historical context and go into particular PLC components or features. She mentioned supportive and share leadership, collective creativity, share values and vision, supportive condition and share personal practices as attributes of PLC. Kruse and Bryk (1995), however, in their work on educational research, distinguish between "learning community" and "professional community." They indicated that ‘learning community’ commonly refers to learning that occurs through community service, information and communication technology (ICT), higher education, and other forms of community-based learning embedded in PLC. In contrast, the "professional community" primarily focuses on research related to schools and departments as contexts for teaching (Kruse & Bryk, 1995). Their study concentrates on the context of schools and departments as instructional environments, providing a wider grasp of community-based learning and teaching research. Mitchell and Sackney (2000) and Toole and Louis (2002) provide a common description of PLCs as communities that are collaborative, reflective, and growth-oriented. Defining fundamental features such as continual reflection, cooperation, inclusion, and an emphasis on professional practices are all important. The work of King and Newmann (2001), DuFour, Eaker, DuFour, and Karhanek

(2004), and Hord (2004) define PLCs as communal organizations that place a premium on cooperation, common goals, continuous development, and results-driven actions. They stressed the importance of common values, trust, and a cooperative culture. They also emphasize the significance of collective accountability, reflective inquiry, and collaboration among PLC like Bolam (1977), CERI (1978), Abbott & Holly (1984), and Dewey (1929).

DuFour (2004) laid the groundwork for our understanding of professional learning communities (PLCs) by providing a comprehensive framework that emphasizes key elements essential for their successful implementation. This foundational work has greatly influenced subsequent research and practice in the field. At the core of DuFour's (2004) conceptual framework is the recognition that PLCs are built on collaborative teams. These teams of teachers come together with a common purpose to enhance student learning outcomes. The emphasis is on collective responsibility for student achievement, where teachers work collaboratively to analyze data, develop instructional strategies, and continuously improve their teaching practices. DuFour (2004) also highlights the significance of a shared mission and vision within PLCs. A strong sense of shared purpose fosters a collective commitment to the educational goals of the school or district. This shared mission serves as a guiding principle that aligns the efforts of all members of the PLC, promoting unity and coherence in their work. Collective inquiry is another critical aspect emphasized by DuFour (2004). Within PLCs, teachers engage in ongoing inquiry and reflection to deepen their understanding of effective

instructional practices and address student needs. By engaging in collaborative inquiry, teachers challenge their assumptions, share expertise, and continually refine their teaching strategies.

Furthermore, DuFour (2004) emphasizes the importance of establishing a culture of continuous improvement within PLCs. This culture values ongoing professional learning, encourages risk-taking, and embraces innovation. It creates an environment where educators feel empowered to experiment with new instructional approaches and learn from both successes and setbacks. Since its publication, the DuFour (2004) conceptual framework has served as a guide for practitioners and researchers alike. It has informed the design and implementation of PLCs in various educational settings. Subsequent studies have expanded on these ideas, examining different aspects of PLCs such as leadership, teacher collaboration, and the impact on student learning outcomes.

Long's (2009) research delves into the practical implementation of Professional Learning Communities (PLCs) within a basic school setting. The study closely aligns with the conceptual framework proposed by Huffman and Hipp (2003), which explains five critical dimensions and attributes integral to the success of PLCs. These dimensions encompass a shared mission and vision, supportive leadership, collaborative endeavors, an unwavering commitment to achieving measurable results, and a pervasive culture of continuous improvement. Within the context of basic school, Long's case study explores the complex dynamics and challenges encountered when striving to establish PLCs that mirror Huffman and

Hipp's 2003 framework. It underscores the profound significance of harmonizing PLC practices with these dimensions and attributes to cultivate a thriving professional learning community. The first dimension, emphasizing a shared mission and vision, entails aligning all teachers within the basic school around a common purpose and educational goals. Long's study delves into how this shared sense of mission shapes the overall tenet of the PLC and its impact on teaching and learning. Supportive leadership is the second dimension emphasized by Huffman and Hipp. In this context, Long's research probably examines the pivotal role of school leadership in fostering a conducive environment for PLCs to flourish. This includes examining the leadership practices and strategies employed to facilitate collaboration and professional growth among teachers. The third dimension revolves around collaboration, a cornerstone of PLCs. Long's investigation scrutinizes how teachers and staff within the elementary school engage in collaborative activities, share expertise, and collectively work towards enhancing instructional practices. The fourth dimension, focusing on results, underscores the importance of setting and achieving measurable objectives within the PLC. Long's study explored how data-driven decision-making and a results-oriented approach influence the professional development and effectiveness of teachers.

Finally, Long's research touched upon the fifth dimension, the creation of a culture of continuous improvement. This dimension embodies the notion that PLCs should be dynamic entities, constantly evolving and refining their practices. The study provided insights into how the school fosters a culture of ongoing reflection,

adaptation, and growth among its faculty. Long's case study not only investigates the implementation of PLCs at a basic school but also underscores the critical importance of aligning these efforts with Huffman and Hipp's framework of five dimensions and critical attributes. By exploring how these dimensions manifest in the school's context, Long's research offers valuable insights into the practical realities and challenges of establishing effective PLCs in educational settings.

Diop's (2021) research focuses on the pedagogical cells used as a form of PLCs among secondary school teachers of English in Senegal. The study investigates the impact of these pedagogical cells on teacher professional development and classroom practices. Diop's work sheds light on the adaptability of PLC concepts to diverse educational contexts. These provide a comprehensive overview of the various theories and perspectives surrounding professional learning communities. They also emphasize the importance of collaboration, reflective practice, evidence-based decision-making, and transformative potential within PLCs to enhance teacher professional development and ultimately improve student learning outcomes. These theories and insights offer valuable guidance for teachers and policymakers seeking to implement effective PLCs in their educational settings.

The literature listed gives a detailed review of diverse theories and viewpoints on professional learning communities (PLCs) in education. DuFour's work in 2004 provides the foundation for understanding PLCs. Highlights the value of collaborative teams, a common mission, collective inquiry, a culture of continuous development, and an emphasis on student accomplishment. His work has significant

influence on PLC research and practice. It provides a complete and all-encompassing view of PLCs. However, Long (2009) investigates the practical deployment of PLCs in a primary school environment. Long work is consistent with Huffman and Hipp's (2003) approach, which specifies five important aspects for effective PLCs. Their work concentrates on the difficulties and dynamics of aligning PLC practices with these aspects. They stress the significance of aligning PLC activities with a well-defined framework.

Also, work by Leithwood discusses the growth of organizational learning into the notion of professional learning communities (Louis and Leithwood, 2021). His work mentions the importance of collaborative, teacher-led communities, shared decision-making, and an emphasis on student accomplishment, which is the basis of DuFour's work. Emphasizes the transition away from top-down professional development approaches and provides insights into the evolving nature of professional development in education. Stoll (2015) highlights evidence-based and data-driven decision-making inside PLCs. He supports the use of research to inform practices, with an emphasis on student outcomes and teacher performance. He gives suggestions that evidence-based conversations lead to more focused professional development initiatives and better teaching practices. Saying there is a need for data analysis in PLCs.

In addition, Diop (2021) looks into the usage of pedagogical cells as a kind of PLC among Senegalese high school English teachers. Look at how these cells affect teacher professional development and classroom practices. He provides insights into

how PLC ideas may be applied in a variety of educational situations. He emphasizes the potential for PLCs to fulfill unique needs in various environments. In summary, these sources emphasize the significance of PLC teamwork, shared goals and vision, evidence-based decision-making, and a culture of continual improvement. They offer a comprehensive and diversified view of PLCs, extending from fundamental ideas to actual application and modification in a variety of educational situations. These findings can help researchers and educators build and implement effective PLCs in their unique environments. In conclusion, the reviewed literature provides a comprehensive historical perspective on Professional Learning Communities (PLCs), highlighting their evolution and emphasizing key qualities such as collaboration, reflective practices, and a focus on student learning, while acknowledging the positive influence of effective PLCs on teaching practices and student outcomes. PLCs are characterized as collective enterprises that emphasize the significance of collaboration and shared responsibility (King & Newmann, 2001). It includes shared mission, vision, values, and goals; collaborative teams; collective inquiry; action orientation and experimentation; continuous improvement; and results orientation (DuFour, Eaker, DuFour, & Karhanek, G. 2004). The literature review could benefit from more recent studies and a deeper exploration of the challenges and limitations of PLC implementation. Although the literature describes the components and dimensions of PLCs, it lacks detail on the interaction between these components and the contextual factors that may impact their effectiveness.

2.3 Empirical Review

Empirical review is about assessing the procedures, outcomes, and assumptions of other studies to gain an understanding of the current state of knowledge (Creswell, 2014, p. 123). This section of the literature review will therefore explore other studies to gain an understanding of the current state of knowledge regarding the Professional Learning Community (PLC). The term "PLC" is believed to have originated from professionals directly involved in the field and those providing support to schools (Hord 1997).

Educational theorists like Dewey (1929) stressed the significance of subjecting educational practices to inquiry during the early 20th century. Stenhouse (1975) expanded on this idea by calling for teachers to take an active role in curriculum creation and research within classrooms and schools. Schoon (1983), who also coined the term "reflective practitioner," emphasized the importance of professionals reflecting on and learning from their experiences. Numerous innovative ideas developed in the 1970s despite the struggle for the construction of a school-based curriculum. These included the thinking school, the problem-solving school (Bolam, 1977), and the creative school (CERI, 1978), all of which aimed to establish dynamic and forward-thinking educational environments. After that, in the 1980s, the focus switched to self-reviewing or self-evaluating schools, in which academic institutions took charge of assessing their procedures (Abbott & Holly, 1984). The concept of PLCs has evolved from various educational philosophies and movements, encompassing the ideas of inquiry, reflection, self-evaluation, and the

reflective practitioner. The terms "learning community" and "professional community" are associated with different educational contexts, contributing to a broader understanding and research in the field of teaching and learning.

However, the concept of a professional learning community lacks a universally agreed definition, as interpretations may vary across different contexts, but there is a broad international consensus that a PLC refers to a collective of individuals who come together to share and critically examine their professional practices in an ongoing, reflective, collaborative and inclusive manner (Mitchell & Sackney, 2000; Toole & Louis, 2002). PLCs are distinguished by a set of defining characteristics that contribute to their success. While the precise definition of a professional learning community may vary, its core essence still lies in individuals coming together to share and critically examine their professional practices in an ongoing, reflective, collaborative, inclusive, learning-oriented, and growth-promoting manner. In recent years, Professional Learning Communities (PLCs) have earned substantial recognition in the realm of educational research and practice, emerging as a promising and effective approach to promoting teacher collaboration, enhancing professional development, and ultimately elevating student learning outcomes.

The empirical review is relevant, especially in the context of this research, where teachers' attitudes towards PLC implementation will be assessed as well as school leaders' support for PLC implementation. Subsequently, literature will also be reviewed on the impact of PLC implementation on teachers' instructional practices

and its effects on students' learning outcomes. Lastly, the review will help in understanding the challenges associated with implementing PLCs.

2.3.1 Attitudes of Teachers towards PLC Implementation

The effectiveness of PLCs is dependent on teachers' active engagement and good attitudes toward their implementation. The purpose of this study is to investigate teachers' views towards the adoption of professional learning communities, offering light on the elements that influence their perspectives as well as the possible impact on educational results. According to research, good teacher attitudes towards PLCs can lead to improved teaching practices, greater professional growth, and, ultimately, good effects on student learning outcomes (Vescio, Ross, and Adams 2008). Teachers' attitudes are crucial in defining the success of any educational project, including the deployment of PLCs. Teachers' attitudes can have a big impact on their involvement, dedication, and readiness to participate in PLC activities. First of teachers' opinions towards PLCs might be influenced by a variety of variables. School culture, administrative support, perceived advantages of cooperation, time restrictions, and the extent to which teachers feel empowered to share their ideas within the PLC framework (Vescio, Ross, & Adams, 2008; Kruse, Louis, & Bryk, 2014).

Furthermore, the compatibility of PLC aims with teachers' particular views and instructional methodologies might influence their involvement attitudes (Kruse, Louis, & Bryk 2014). Hassan and Musa (2020) investigated the relationship between professional learning communities and teacher attitudes towards change in their

study. Within the framework of the Malaysian Education Development Plan, the study examines the link between teachers' participation in Professional Learning Communities (PLCs) and their attitudes towards change. The study is divided into two sections: the first focuses on the components of the professional learning community, and the second on teachers' attitudes towards change. The study's conclusion is that there appears to be a very faint negative link between these two factors, which is statistically insignificant. These findings have important implications for education stakeholders because they give practical insights to improve teachers' attitudes toward change through the facilitation of PLCs. According to the findings, addressing the delicate interplay of vital aspects, human resources, and structural circumstances inside PLCs can significantly increase teachers' attitudes toward change. This proposition serves as a starting point for interested parties to build strategic solutions targeted at maximizing PLCs' potential and cultivating a positive attitude towards change among teachers. This study emphasizes the complex interaction between major PLC elements and teachers' attitudes towards change, arguing for deliberate efforts to align these components for the best results. Stakeholders may use the power of PLCs to create a more positive attitude towards change among teachers by seeing teachers as change agents and recognizing the possibilities of targeted interventions. The manuscript is well-structured, with discrete sections for each research instrument, which allows readers to easily follow the flow of the study. The research appears to provide a cohesive academic outline by effectively linking the notions of professional learning communities and attitudes towards change within the context of the Malaysian

Education Development Plan. The publication lacks specifics concerning the technique utilized as well as the size and variety of the sample used in the investigation.

The study entitled Teachers' Perceptions of Professional Learning Communities as Opportunities for Professional Development, Morrow (2010). The article explores the importance of professional development for teachers in the context of educational reform, with a particular emphasis on the function of professional learning communities (PLCs) in promoting this progress. The study's goal is to investigate teachers' perspectives of PLCs as opportunities for continuing and successful professional development. Focus groups, individual interviews, and participant observations are used in the study approach. The study delves into the chosen site's PLC adoption and its alignment with the stages of growth in a professional learning community. The study discusses an important topic: the role of teachers in educational reform and the significance of professional development. The emphasis on PLCs is consistent with current instructional techniques. The outcomes of this study show that teachers see professional learning communities as platforms that provide opportunities for professional progress. The study finds numerous significant themes based on teachers' opinions, including collaboration/peer support, continuous learning, meaningful learning, increased professionalism, and change agents. These concepts are consistent with current research on effective professional development and professional learning communities. The report emphasizes teachers' critical role in promoting school development. It advises that schools implement

techniques that promote continual professional development, establishing a culture of continuous improvement. This study's findings open the way for educational institutions to build an environment that not only inspires but also promotes chances for teachers' ongoing growth. The utilization of mixed methodologies, such as focus groups, interviews, and participant observations, broadens the scope of the study. This method gives a comprehensive grasp of teachers' perspectives. While the study briefly acknowledges the use of focus groups, interviews, and participant observations, a more extensive discussion of how these approaches were used would be beneficial. More openness and replicability would be improved by providing more information about the study process. In conclusion, the article adds to our knowledge of teachers' opinions of professional learning communities as drivers of professional progress. The qualitative approach, the use of well-established methods, and the identification of major themes all contribute to valuable insights. More information on methodology, data analysis, literature integration, constraints, and practical recommendations might be included to improve the study.

Johnson (2011) published a quantitative Study of Teacher Perceptions of Professional Learning Communities' Context, Process, and Content. The purpose of this article is to explore the perceived impacts of Professional Learning Communities (PLCs) among New Jersey State licensed teachers, with an emphasis on three particular areas of the reform's implementation: content, procedure, and context. The Standards Inventory Assessment (SAI) survey tool is used in the study to collect anonymous teacher impressions of PLCs. The report presents a summary of the data

gathering procedure, which includes the use of an anonymous online Likert scale survey instrument. Mentioning that permission was obtained from certain schools improves transparency in the study process. The findings from the study showed that none of the three features of Professional Learning Communities (PLCs) studied had a statistically significant influence on teacher views throughout the duration of the one-year study. The lack of significant impacts might be attributable to the study's very short duration, which may not have allowed enough time for the alterations to take full effect. It is suggested that undertaking more study over a longer period of time, such as 3 to 5 years, may provide different results as the changes inside the PLCs become more deeply interwoven and visible. As a result, the study suggests that more research be conducted to fully analyze the impact of PLCs on teacher attitudes over time. In summary, the article fills an essential quantitative data vacuum concerning the influence of PLCs on teacher views. It explains the study objectives, methods, and conclusions effectively. Adding more contextual elements, expanding on the survey instrument, documenting the data analysis method, discussing the results thoroughly, and recommending future study topics, on the other hand, would improve the paper's quality and impact.

The study by Khamdit and Siridhrungsri (2022) indicated the importance of 21st century skills in educational management and the necessity for coordinated efforts among educational stakeholders to acquire these abilities. The major goal of the study is to explore teacher impressions of the usefulness of professional learning communities (PLCs) in cultivating 21st-century abilities among Thai students. The

major goal of this research was to investigate how Thai teachers view the function of Professional Learning Communities (PLCs) in strengthening students' 21st-century competencies. Purposive sampling was used to pick 1154 teachers from 376 schools in 17 provinces for the study. A professional learning community activity and a questionnaire evaluating teachers' attitudes are used to collect data. Percentages, mean scores, and standard deviations are all part of data analysis. The study's findings may be summarized as follows: Teachers favored using PLCs as a school management technique to nurture both skills and ethical principles relevant to the twenty-first century. The findings of the survey also highlighted the importance of collaborative involvement and the sharing of ideas among teaching staff and administrators as key elements leading to this favorable attitude. As a result, these findings provide insights that may be used in school administration methods aimed at developing students' 21st-century competencies. In conclusion, the article tackles the junction of 21st-century skills and professional learning communities in the Thai educational setting successfully. It presents the research purpose, methods, and conclusions clearly. However, offering more background, explaining the instruments in detail, addressing the results in depth, recognizing limitations, and recommending future research areas would improve the overall quality and impact of the study.

Al Shammari, Testerman, and Halimi's (2020) research work, Exploring Teachers' Attitudes towards Teachers' Learning Communities in Kuwaiti Government Schools. The study focuses on the notion of Teachers' Learning Communities (TLCs) as platforms for teachers' ongoing professional development.

The research looks at a specific scenario of a TLC that was implemented at a government school in Kuwait, analyzing the outcomes and issues that came with it. The study finds good sentiments about TLCs, but it also finds challenges such as teachers' unwillingness to apply their learning, insufficient school leadership support, and restricted teacher autonomy. The report gives ideas to improve TLC implementation, focusing on the role of school leaders in encouraging involvement, engagement, leadership support, and the application of acquired concepts. In summary, the paper successfully introduces the concept of Teachers' Learning Communities (TLCs), illustrates a case study in Kuwait, and discusses the positive attitudes and problems connected with TLC implementation. More case study details, expanding on conclusions, describing obstacles in greater depth, contextualizing the findings, recommending future research areas, and ensuring correct citations would all contribute to the paper's overall quality and impact.

Professional Learning Communities' Impact on the Instructional Climate at Flintville Elementary School in Lincoln County, Tennessee, by Golden (2017) published an article entitled The article digs into a qualitative study of teacher opinions of Professional Learning Communities (PLCs) and their influence on the instructional atmosphere at Flintville Elementary School in Lincoln County, Tennessee. The research included five instructors, one assessment supervisor, and one school parent. The implementation of Professional Learning Communities (PLCs) had a transformative effect on the educational environment at Flintville Elementary School in Lincoln County, Tennessee, according to a case study.

Teachers, a parent, and the evaluation supervisor all agreed that the emphasis on student-centered learning through PLCs improved the school. The response from study participants demonstrated that teachers were adopting increasing leadership duties and achieving success, thanks to a solid foundation of trust and support from the school's administration. This is supported by Flintville Elementary School's recognition as a rewards school, a designation gained for the first time in the school's history. This study's research emphasizes how the integration of PLCs contributed to an increase in productivity. In conclusion, the research successfully investigates teacher opinions of the effects of professional learning communities on the instructional atmosphere at Flintville Elementary School.

Unpacking the Relationship Between Teachers' Perceptions of Professional Learning Communities and Differentiated Instruction Practice (Wan, 2020). The purpose of this study is to investigate the relationship between teachers' perceptions of professional learning communities (PLCs) and their practice of Differentiated Instruction (DI) in the setting of primary education in Hong Kong. Three subsidized primary schools are included in the study, with 121 teachers engaging in questionnaires that examine their impressions of PLC involvement and DI practice. Principal component analysis and cluster analysis are used to uncover PLC engagement dimensions and various profiles of PLC engagement. The study sought to discover how teachers' participation in Professional Learning Communities (PLCs) connects to their usage of Differentiated Instruction (DI). The purpose was to determine if greater engagement in PLCs was connected to variances in DI

implementation. The study discovered that increasing levels of DI practice were substantially and positively linked with stronger participation in important features of PLCs, such as collectively concentrating on student learning, engaging in reflective dialogues, and practicing shared leadership. The findings emphasize the significance of comprehending teachers' participation in PLCs and its impact on establishing successful DI practices. According to the study, more PLC participation correlates with more robust DI implementation. However, differences in teacher participation in reflective dialogues and shared leadership were noted, emphasizing the need for PLC frameworks to be refined. To improve the paper's quality and relevance, more details about survey instruments, elaborating on dimensions of PLC engagement, explaining the cluster analysis, discussing DI practices in greater depth, connecting the findings to existing literature, and expanding on implications for policy and practice would be helpful.

In examining, evaluating, and critiquing the five research studies on teachers' attitudes and views of professional learning communities (PLCs), these studies must be considered. To start with, Musa and Hassan (2020) research the link between PLCs and teacher attitudes towards change in the context of Malaysia's Education Development Plan. Their findings indicated there is a weak negative correlation between PLC involvement and attitudes towards change, although it is not statistically significant. Their study offers practical ideas for increasing teacher attitudes towards change through PLCs, focusing on the intricate connection between

PLC components and attitudes. However, it lacks information on the study method and sample size, restricting transparency and replicability.

In addition, the Morrow (2010) study focused on investigating teachers' perceptions of PLCs as possibilities for continued professional development. He concluded that teachers have a good attitude towards PLCs, emphasizing cooperation, continual learning, professionalism, and change agency. He uses focus groups, interviews, and participant observations, which provide rich insights using a qualitative methodology. His work could benefit from a more extensive presentation of the study methodologies and data analysis, as well as more explicit addressing of limits.

Furthermore, Johnson (2011) examines the perceived effects of PLCs on teacher attitudes in New Jersey, taking into account content, method, and context. In the short-term study, none of the three analyzed components of PLCs had a statistically significant influence on teacher attitudes, but it provided quantifiable statistics on the impact of PLCs on teacher attitudes. The study's very short length is one weakness, implying the need for more thorough, long-term research and a deeper analysis of the contextual aspects involved.

Moreover Khamdit and Siridhrungsri (2022) investigate Thai teachers' perspectives on PLCs in developing 21st-century abilities in pupils. The findings of the work suggest that teachers regard PLCs as useful for developing 21st-century skills and ethical concepts. They employ a targeted sample, well-defined data

gathering methodologies, and quantitative analysis. However, more background, thorough instrument descriptions, and a more in-depth discussion of findings and recommendations would be beneficial.

Moreso Al-Shammari, Testerman, and Halimi (2020) study looks at teachers' views towards Teachers' Learning Communities (TLCs) in Kuwaiti government schools. Their findings indicated positive attitudes towards TLCs but problems such as teachers' hesitancy to implement learning and a lack of leadership support. Addresses the concept of TLCs, including a case study, and proposes ways to improve TLC implementation. The work could have included more case study information, elaborated on results, analyzed challenges in greater depth, and specifically identified future research topics.

In conclusion, the findings underline the significance of teacher attitudes towards PLCs and their potential influence on professional development and student results. Some studies are lacking in data about study methodologies, sample sizes, and restrictions, which might impact transparency and replicability. More long-term study is required to better understand the impact of PLCs on teacher attitudes. While all studies give useful information, some might benefit from more in-depth explanations of findings as well as more specific recommendations for future study and practice. It is critical to evaluate the context and location of each study, as educational systems and cultures differ greatly, impacting the generalizability of findings.

2.3.2 School Leadership Support for Implementation of PLC

Professional Learning Communities (PLCs) have emerged as a promising approach to enhancing teacher collaboration, improving instructional practices, and promoting student learning outcomes. This literature review examines research on the implementation of PLCs, drawing insights from a range of scholarly articles in the field. One area of focus in the implementation of PLCs is the integration of social media platforms for professional learning and collaboration. Goodyear, Parker, and Casey (2019) explored the use of social media in teacher PLCs and highlighted its potential to facilitate ongoing communication, resource sharing, and collaboration. The study emphasized the importance of establishing guidelines and structures to maximize the benefits of social media within PLCs. Effective leadership play a pivotal role in the successful implementation of Professional Learning Communities (PLCs).

Research conducted by Harris and Jones (2010) investigated the relationship between PLCs and system improvement, underscoring the significance of strong leadership in fostering a supportive environment for collaboration, establishing a shared vision, and promoting continuous improvement. Similarly, Buttram and Farley-Ripple (2016) explored the role of principals in PLCs, emphasizing the importance of their instructional leadership, facilitation of collaboration, and provision of resources and support. Harris and Jones (2010) conducted a comprehensive study examining the impact of PLCs on system improvement. Their research highlighted the critical role of effective leadership in the success of PLC

implementation. The authors emphasized that strong leadership is essential for creating a supportive environment that encourages collaboration among educators within PLCs. Leaders who prioritize collaboration and establish a climate of trust and open communication foster an atmosphere where educators feel comfortable sharing ideas, engaging in reflective dialogue, and collectively addressing instructional challenges. Also, Harris and Jones (2010) stressed the importance of leaders in establishing a shared vision for PLCs. Leaders must articulate a clear and compelling vision that aligns with the overall goals and mission of the educational institution. By effectively communicating this shared vision, leaders ensure that educators understand the purpose and significance of their participation in the PLC. A shared vision acts as a unifying force that motivates educators to actively contribute and work together toward achieving common goals.

In addition, Buttram and Farley-Ripple (2016) emphasized that principals play a critical role in facilitating collaboration among teachers. They create structures, such as regular meeting schedules and interdisciplinary teams that promote collaboration and collective problem-solving. Principals provide the necessary resources, time, and support for educators to engage in collaborative discussions, share best practices, and learn from one another. By fostering a collaborative culture, principals contribute to the growth and effectiveness of PLCs. The research conducted by Harris and Jones (2010) and Buttram and Farley-Ripple (2016) highlights the crucial role of effective leadership in the successful implementation of PLCs. Strong leadership creates a supportive environment for

collaboration, establishes a shared vision, and promotes continuous improvement within the PLC. Principals, in particular, demonstrate instructional leadership, facilitate collaboration, and provide resources and support to educators. By embracing these leadership qualities, educational leaders contribute to the effectiveness and sustainability of PLCs, fostering a culture of collaboration, instructional improvement, and ultimately, enhancing student outcomes. Networked professional learning communities have also been studied in terms of their effects on teacher practice and student outcomes. Prenger, Poortman, and Handelzalts (2019) investigated the effects of networked PLCs and found that they can positively influence teacher knowledge, instructional practices, and student achievement. The study emphasized the importance of building trust, promoting active participation, and providing ongoing support for teachers in networked PLCs. The research included in the review emphasizes the relevance of professional learning communities (PLCs) in educational contexts, although they focus on diverse features and dynamics within PLCs. Social Media Integration in PLCs (Goodyear, Parker, and Casey, 2019): This study investigates the possible benefits of adding social media to PLCs, such as enhanced communication, resource sharing, and instructor cooperation. It emphasizes the importance of norms and processes in order to maximize the benefits of social media inside PLCs. While the study emphasizes the possible benefits, it does not go extensively into the potential downsides or issues related to the usage of social media in PLCs. A more balanced conversation might offer a more complete picture.

Leadership in Productive Learning Communities (Harris and Jones, 2010; Buttram and Farley-Ripple, 2016): both studies stress the importance of leadership in PLCs. Effective leadership is demonstrated by the ability to foster a collaborative atmosphere, build a common goal, and drive continual progress. Key variables cited include principals' instructional leadership and promotion of teamwork. Although these studies give useful insights into the relevance of leadership, they fail to address the obstacles or impediments that leaders experience while adopting PLCs. A more in-depth investigation of leadership dynamics might improve the research. PLCs that are networked (Prenger, Poortman, and Handelzalts, 2019) the study looks at the benefits of networked PLCs and discovers that they have a beneficial impact on teacher knowledge, instructional practices, and student accomplishment. It emphasizes the need for teacher trust, active engagement, and continuing assistance in networked PLCs, whereas the study emphasizes positive outcomes, it may benefit from mentioning potential limitations or downsides of networked PLCs in order to present a more balanced perspective. Furthermore, a more extensive examination of the exact processes that enable networked PLCs to function effectively would add to the study's depth.

In conclusion, these studies contribute to our understanding of PLCs in education. They emphasize the potential benefits and crucial success criteria for PLCs, such as strong leadership, social media integration, and networked PLCs. They might, however, be improved further by addressing potential obstacles and constraints in the application of these techniques. A thorough analysis of PLC

dynamics and their influence on teaching and learning outcomes would give a more subtle knowledge of PLC dynamics.

2.3.3 Effects of PLC on Instructional Practices

Professional learning communities have evolved as an effective structure for enhancing teaching practices in educational contexts. PLCs are intended to enable teachers to collaborate on a variety of elements of education, such as curriculum creation, assessment techniques, and classroom management. Here are some major findings from other researchers on instructional practices.

To start with, the goal of Atta's 2015 research on Professional Learning Communities, the American Experience and Its Implications for Ghana and other International School Systems is to increase teachers' knowledge, abilities, instructional practices, and students' academic progress. The research focuses on Professional Learning Communities (PLCs) and how they have developed as a complete school reform program. The research investigates whether the foundation of these communities is democratic. The study analyzes the historical, conceptual, and theoretical development of PLCs, offering insight on how they have changed over time. These are some of the study's major results. PLCs are very successful in enhancing teachers' knowledge, instructional practices, and students' learning results when both school principals and teachers demonstrate commitment, particularly when principals embrace a distributive leadership style. As a result, teachers' mindsets and practices change in the course of their regular instructional activities, which results in a positive change in school culture. A shared vision, group

participation in discussions, group decision-making processes, active listening to teachers' opinions within groups, taking into account the perspectives of minorities, and opportunities for teachers to have their voices heard are all examples of democratic principles being practiced within PLCs, according to the study. In order to provide insight into the global environment, Atta performs a comparative examination of teacher education and collaboration across many nations, including Ethiopia, Namibia, Ghana, Japan, China, and Singapore. As a result, the study makes recommendations on how to successfully integrate PLCs in the Ghanaian educational system with the intention of strengthening teacher professional development and, eventually, teachers' instructional strategies and students' learning.

Lumpe (2007) conducted a study that emphasized the significance of teacher engagement in professional learning communities (PLCs). The study highlighted the positive outcomes associated with active participation, collaboration, and shared responsibility among teachers within PLCs. Engaged teachers are more likely to experience professional growth, develop a deeper understanding of effective instructional practices, and actively contribute to the improvement of teaching and learning within their school community. Expanding on this, Lumpe's findings suggest that when teachers actively participate in PLCs, they benefit from opportunities to exchange ideas, share experiences, and collaborate with colleagues. Through meaningful interactions, teachers can explore different instructional strategies, gain valuable insights, and refine their teaching approaches based on collective knowledge and reflection. This engagement within PLCs fosters a culture

of continuous improvement, as educators are motivated to implement innovative practices and adjust their instruction based on the needs of their students.

Additionally, Barton and Stepanek (2012) conducted a study that examined the impact of PLCs on both teacher practice and student outcomes. Their research revealed that effective implementation of PLCs can lead to several positive outcomes. Firstly, teachers involved in PLCs reported improved teaching strategies and instructional approaches. Collaborative discussions and shared experiences within the PLCs exposed educators to diverse perspectives and new ideas, which in turn influenced their instructional practices. Secondly, PLCs promoted increased collaboration among teachers. By working together in a supportive and collaborative environment, teachers developed a deeper understanding of the curriculum, shared resources, and collectively addressed challenges. This collaborative spirit enhanced the overall teaching and learning experience within the school community. Lastly, Barton and Stepanek (2012) found that effective PLC implementation positively influenced student achievement. The collaborative efforts of teachers within PLCs resulted in improved instructional practices, targeted interventions, and tailored support for students. By focusing on data-driven decision-making and implementing evidence-based strategies, PLCs play a vital role in enhancing student learning outcomes. Collectively, the studies by Lumpe (2007) and Barton and Stepanek (2012) emphasize the importance of teacher engagement and effective PLC implementation in driving professional growth, improved teaching practices, increased collaboration among educators, and ultimately, enhanced student

achievement. These findings highlight the valuable role that PLCs can play in creating a supportive and collaborative environment that positively impacts both teachers and students.

A study carried out by Bond (2019) discovered that professional learning communities (PLCs) played a vital role in improving instructional changes in secondary mathematics classrooms. The research demonstrated that teachers who actively participated in PLCs derived various benefits, including engaging in collaborative discussions, exchanging instructional methods, and receiving valuable feedback on their teaching practices. A notable outcome of PLC involvement was the establishment of a common understanding among teachers regarding effective teaching practices and successful curriculum implementation. Through regular interaction and the sharing of expertise, teachers gained insights into different instructional approaches, leading to a more unified approach in the classroom. Additionally, the study indicated that teachers who engaged in PLCs reported an increased sense of confidence and professional growth. By collaborating with others, educators refined their skills, expanded their knowledge, and further developed their teaching abilities. This professional development not only benefited individual teachers but also had a positive impact on the overall quality of secondary mathematics education. Through expanding their networks and actively participating in discussions, teachers were able to leverage the collective wisdom and experience within PLCs. This resulted in a broader range of instructional strategies being implemented in classrooms, promoting an environment conducive to continuous

improvement and innovation. Bond's study (2019) highlighted the positive influence of PLCs on instructional changes in secondary mathematics classrooms. Through collaborative discussions, the sharing of instructional strategies, and the provision of feedback, PLCs facilitated the development of a shared understanding of effective teaching practices and curriculum implementation. Participation in PLCs also fostered increased confidence and professional growth among teachers, ultimately enhancing the educational experience for both educators and students.

According to the research conducted by Vescio, Ross, and Adams (2008), professional learning communities (PLCs) exerted a significant and positive influence on teaching practice and student learning outcomes. The study revealed that teachers who actively participated in PLCs engaged in meaningful discussions centered on instruction, curriculum, and assessment. One of the key findings was that collaboration within PLCs played a crucial role in enhancing instructional strategies. Through open and constructive dialogue, educators were able to exchange ideas and share their experiences, resulting in the adoption of improved teaching methods. Furthermore, PLCs emphasized the importance of student-centered approaches, encouraging teachers to tailor their instruction to address the individual needs of each student. This student-focused approach helped create a more inclusive and supportive learning environment.

Additionally, the research highlighted the transformative effect of PLCs on the professional growth of teachers. By being part of a collaborative community, teachers became more reflective about their teaching practices. They were willing to

critically examine their methods, identify areas for improvement, and actively seek out new strategies. This culture of continuous improvement fostered within PLCs contributed to the overall development and refinement of teaching practices.

Furthermore, PLCs served as a platform for teachers to collectively explore innovative teaching techniques and stay abreast of the latest educational research. The collaborative nature of PLCs facilitated the exchange of best practices and the exploration of new ideas, ultimately benefiting both teachers and students. This dynamic environment encouraged educators to take risks, experiment with new strategies, and adapt their teaching methods to meet evolving educational needs. The research conducted by Vescio, Ross, and Adams (2008) affirmed the positive impact of PLCs on teaching practice and student learning. The engagement in meaningful discussions within PLCs led to improved instructional strategies, a greater emphasis on student-centered approaches, and a focus on addressing individual student needs. Moreover, PLCs fostered a culture of continuous improvement, nurturing teacher reflection and experimentation with new strategies. Overall, PLCs emerged as an effective platform for collaborative professional growth and the enhancement of educational outcomes.

A recent study conducted by Admiraal, Schenke, De Jong, Emmelot, and Sligte (2021) found that schools functioning as professional learning communities (PLCs) played a crucial role in supporting teachers' professional development. The research demonstrated that PLCs offered valuable opportunities for educators to engage in collaborative learning, share their expertise, and reflect on their teaching

methods. An important outcome of participating in PLCs was the reported increase in teachers' pedagogical knowledge. Through interactions and discussions within the community, educators were exposed to diverse perspectives and instructional strategies, expanding their understanding of effective teaching methods. This expansion of pedagogical knowledge empowered teachers to apply innovative approaches in their classrooms, leading to improved instructional skills and increased student engagement. Still, the study emphasized that PLC participation contributed to a heightened sense of professionalism among teachers. By actively engaging in collaborative learning environments, educators not only expanded their subject-matter expertise but also refined their teaching practices. This continuous professional development instilled greater confidence and competence, elevating teachers' overall professionalism and their ability to meet the diverse needs of their students. In addition to individual growth, PLCs were found to have a positive impact on the overall school climate. The collaborative nature of PLCs fostered a supportive and inclusive environment where teachers felt valued, respected, and supported by their colleagues. This positive school climate, in turn, had a ripple effect on teacher satisfaction, leading to higher levels of job fulfillment and overall well-being. Their study emphasized the significance of PLCs in supporting teachers' professional development. Through collaborative learning, expertise sharing, and reflective practices, educators experienced notable gains in pedagogical knowledge, instructional skills, and professionalism. Additionally, PLCs contributed to the cultivation of a positive school climate and enhanced teacher satisfaction, creating an environment conducive to professional growth and student success.

The research carried out by Moulakdi and Bouchamma (2020) underlined the beneficial effects of basic schools functioning as professional learning communities (PLCs) on student learning outcomes. The study demonstrated that collaborative activities within PLCs, such as lesson planning and resource sharing, played a crucial role in enhancing instructional practices. A significant finding was that teachers who participated in PLCs had access to new teaching strategies and expanded their subject-matter knowledge. Through active engagement in collaborative discussions and the sharing of expertise, educators were exposed to a diverse range of instructional approaches. This exposure allowed them to broaden their pedagogical repertoire, leading to improved instructional skills and effectiveness in the classroom. Additionally, PLCs facilitated the implementation of evidence-based instructional approaches. By staying informed about the latest educational research and collectively exploring best practices, teachers within PLCs were better equipped to make informed decisions regarding their instructional methods. This evidence-based approach to teaching resulted in improved student learning outcomes and the application of innovative teaching techniques. Another crucial aspect highlighted by the research was the development of a culture of continuous learning within PLCs. Teachers within these communities actively supported each other's professional growth by providing feedback, sharing resources, and engaging in collaborative problem-solving. This collaborative environment fostered a sense of shared responsibility for student success as educators collectively worked towards achieving the best possible outcomes for all students.

In the study conducted by Song and Choi (2017), the researchers focused on analyzing the factors that influenced professional learning communities (PLCs) in Korean elementary schools. Their investigation shed light on several crucial factors that played a significant role in the successful implementation of PLCs. These factors included the presence of a collaborative culture, the establishment of shared vision and goals, the presence of supportive leadership, and the provision of professional autonomy. Firstly, a collaborative culture was found to be an essential element in facilitating effective PLCs. Creating an environment where teachers were encouraged to work together, share their experiences, and support one another proved to be conducive to meaningful professional learning. This collaborative culture fostered open and constructive discussions, the exchange of ideas, and collaborative problem-solving, ultimately leading to improvements in instructional practices. The establishment of a shared vision and goals within PLCs emerged as another critical factor. When teachers had a shared understanding of their objectives and a clear direction for their professional development, it enhanced the coherence and effectiveness of their collaborative efforts. This shared vision and goals provided a common framework for teachers to align their instructional practices and work together towards improving student outcomes. Supportive leadership played a vital role in successful PLC implementation. The study highlighted the importance of school leaders who actively supported and encouraged the formation of PLCs. When leaders recognized the value of PLCs, provided the necessary resources, and fostered a culture that emphasized continuous learning and improvement, it created an environment where PLCs thrived and contributed to positive outcomes. Furthermore,

the study revealed that professional autonomy was a significant factor in the success of PLCs. When teachers had the freedom and autonomy to make decisions and take ownership of their professional development within the PLCs, it empowered them to actively engage in collaborative activities and make meaningful contributions. Professional autonomy allowed teachers to tailor their instructional practices to meet the specific needs of their students, leading to improved student outcomes.

Importantly, PLCs had a positive influence on instructional practices. By promoting teacher collaboration, facilitating reflective dialogue, and encouraging the exchange of teaching strategies, PLCs create a supportive environment for professional growth. Teachers who participated in PLCs reported increased job satisfaction as they felt supported, valued, and connected to a community of peers. This sense of job satisfaction translated into a greater commitment to professional growth, which in turn positively impacted their instructional practices and ultimately led to improved student outcomes.

Song and Choi's (2017) study stressed the factors that influenced professional learning communities in Korean elementary schools. The presence of a collaborative culture, shared vision and goals, supportive leadership, and professional autonomy were identified as important elements for successful PLC implementation. Moreover, the study underscored the positive impact of PLCs on instructional practices, teacher job satisfaction, professional growth, and student outcomes. The effects of PLCs on instructional practices have been a subject of debate among researchers and educators. Some argue that PLCs provide a structured framework for teachers to

collaborate and engage in reflective dialogue, leading to the improvement of instructional practices. PLCs create opportunities for teachers to share ideas, explore innovative teaching approaches, and receive feedback, which can enhance their pedagogical strategies and ultimately benefit student learning outcomes (Bryk et al., 2015). However, there is also a contrasting perspective in the debate. Critics argue that PLCs may not always result in substantial changes to instructional practices. They point out that the success of PLCs in transforming instructional practices depends on various factors, such as the quality of collaboration, the level of trust and openness among participants, and the support and resources provided by school leadership (Lieberman & Wood, 2003). Without a strong emphasis on the development of specific instructional strategies and pedagogical approaches, PLCs may not fully realize their potential for improving instructional practices. To address this debate and fill the literature gap, future research should focus on examining the specific instructional practices that are influenced by PLC participation and the conditions that contribute to their effectiveness. By investigating the strategies and approaches adopted by teachers within PLCs, researchers can provide empirical evidence on the extent to which PLCs impact instructional practices and the factors that facilitate or hinder this impact.

The research presented here examines the function of professional learning communities (PLCs) in improving teaching practices and student outcomes. PLCs have a good influence on teaching practices, according to several studies (Atta 2015, Lumpe 2007, Barton & Stepanek 2012, Bond 2019, Vescio, Ross, & Adams 2008,

Moulakdi & Bouchamma 2020, Song & Choi 2017). They contend that collaborative conversations, resource sharing, and reflective discourse within PLCs result in enhanced educational methodologies and novel approaches. PLC involvement helps teacher professional development, according to much research (Atta 2015, Lumpe 2007, Barton & Stepanek 2012, Bond 2019, Vescio, Ross, & Adams 2008, Moulakdi & Bouchamma 2020). Increased pedagogical expertise, self-assurance, and professionalism are part of this growth. PLCs give educators the chance to increase their knowledge and improve their abilities. The effects of PLCs on student learning outcomes are the subject of certain research (Moulakdi & Bouchamma 2020; Song & Choi 2017). They contend that through refining teaching practices and encouraging a culture of continuous improvement, PLCs have a favorable impact on student progress. Atta's (2015) study, which compares PLCs in various nations, stands out for its global viewpoint. Most other research, in contrast, concentrates on certain geographic areas or educational environments. Buttram and Farley-Ripple (2016) focus on the principals' involvement in PLCs in particular, highlighting their instructional leadership.

Though past research has acknowledged the value of leadership, this study analyzes principals' contributions more specifically. In order to implement a PLC successfully, Song and Choi's study from 2017 emphasizes the significance of both a collaborative culture and professional autonomy. This comparison highlights how successful PLCs may strike a balance between group participation and teacher autonomy. While the studies as a whole offer insightful information on the

advantages of PLCs, some of them such as Ghana and Korea concentrate on particular educational contexts or geographical areas, which restricts the applicability of their results to a wider audience. The methodologies employed in the research, which include surveys, interviews, and case studies, vary. The comparability of results might improve with more uniformity in study techniques. The examined studies frequently focus on the advantages of PLCs, but they might benefit from a more thorough investigation of the difficulties and obstacles that teachers have when putting PLCs into practice. For implementation to be successful, it is essential to comprehend these difficulties. The majority of research sheds light on how PLCs affect teaching methods and student results in the near term. A more thorough knowledge of the sustainability and long-term advantages of PLCs would be provided by longitudinal studies that looked at the long-term consequences.

The quality of the teacher and the instructional strategies used to impact student learning were found to be the single most important factors affecting student achievement in a meta-analysis conducted by Marzano, Pickering, and Pollock (2001) at the Mid-Continent Research for Education and Learning (McREL). The majority of schools had privatized their classrooms before professional learning communities emerged (Mullen & Huttinger, 2008). High schools, according to DuFour and Eaker (1998), are a group of self-governing enterprises linked by a shared parking lot. There was little contact among teachers when they arrived and left schools. The interactions that took place were frequently brief or unconnected to the school's mission. According to Schmoker (2006), one of the biggest obstacles to

enhancing student learning is teacher isolation. As a result of privatization, teachers could effectively shut the door and convey any knowledge they wished.

Additionally, when teachers are isolated, there is less oversight of the caliber of their work and, eventually, the effect on students' learning. The barriers to privatization must come down in order to ensure that every classroom is using high-quality instruction and assessment procedures. Deprivation is encouraged by professional learning communities, which can have a significant effect on teaching practices (DuFour & Eaker, 1998; DuFour et al., 2004; Hord, 1997; McLaughlin & Talbert, 1993). PLCs encourage peer discussion centered on the actions of the teachers (Louis & Kruse, 1995). Little (2006) discovered that teachers' cooperation pays off in the form of improved instruction and heightened confidence when they routinely participate in genuine collaborative efforts centered on clear, shared goals. PLCs allow instructors to openly discuss topics that were previously considered private, like objectives, tactics, resources, and pace (Louis et al., 1996). Higher levels of student accomplishment result from instructors' open communication about improving and refining their teaching methods. This also fosters deep team learning and enhances teachers' individual and collective classroom practices (DuFour et al., 2004).

According to Hord's (1997) research, as cited in Duling (2012), PLCs help teachers achieve the following enhanced outcomes. A stronger dedication to bolstering the school's vision and goals; less teacher isolation; shared accountability for the academic achievement of students; clarified definitions of teaching and

learning; enhanced significance and comprehension of subject matter and its bearing on student success; greater satisfaction and morale; considerable progress in making accommodations for pupils; professional rejuvenation and the drive to motivate students; dedication to implementing significant, continuous improvements; greater likelihood of significant, long-term transformation.

In summary, this research highlights the beneficial effects of PLCs on instructional strategies, teacher growth, and, occasionally, student results. Although there is agreement on the potential advantages, further study is needed to fully understand the usefulness of PLCs. This research should investigate obstacles, reduce methodological heterogeneity, and take long-term effects into account. Additionally, when extending these findings to other educational contexts, context-specific aspects need to be taken into consideration.

A professional learning community's fundamental component is its dedication to emphasis on each student's learning (DuFour & Eaker, 1998). When a district or school operates as a PLC, its teachers view achieving high standards of learning for every student as the main objective for their organization's existence (DuFour et al., 2006). Research indicates that there is a favorable correlation between student results and a sense of professional community (Newman & Wehlage, 1995). A professional culture is characterized by reflective dialogue, candid sharing of teaching strategies, creating a pool of knowledge for future development, working together to create new materials and curricula, and

establishing standards for student performance and paedagogy (Louis & Marks, 1998).

Additionally, studies show that PLCs significantly affect students' academic performance and readiness for the challenges of the twenty-first century (Blankstein et al., 2008; Hord & Sommers, 2008). According to research by Darling-Hammond (1995), schools that spoke about the efficacy of their instructional strategies and concentrated on teaching and learning saw faster improvements in academic performance than those that did not. Similar to this, Hord (1997) found that students in schools with formalized professional learning communities experienced the following benefits: smaller achievement gaps between subgroups, larger achievement gains in math, science, history, and reading, lower dropout rates, and fewer instances of absenteeism.

Three crucial components have been recognized by Schmoker (2001) as having an influence on student achievements, which are stated below: teachers openly direct their efforts towards the accomplishment of quantifiable goals; teachers routinely collaborate in teams to assess students' accomplishments and shortcomings; and, in order to address weaknesses and highlight successes, teachers regularly evaluate their students' development. Teachers in a PLC are eager for proof that their students are picking up the abilities, attitudes, and information that are thought to be most critical to their success. Through formative evaluations, schools methodically track students' progress and provide prompt assistance to those who need it. When pupils fail to learn, the reaction should be a timely, planned, systematic attack that is

centered on intervention rather than remediation. Shared norms centered on student learning and group accountability for school procedures and enhancements form the foundation of a professional learning community and offer a framework that guides professional conduct (Bryk, Camburn, & Louis, 1999).

Several studies have investigated the effects of PLCs on students' learning outcomes. For instance, Patrick, Arredondo Rucinski, Dagley, Giesen, Tarter, & Watkins, (2013) conducted research on A Meta-Analysis of Dissertation Research on the Relationship between Professional Learning Community Implementation and Student Achievement. The study used a meta-analysis of dissertation research to investigate the relationship between introducing professional learning communities (PLCs) and student success in prekindergarten through grade twelve schools. Relevant unpublished works from 1997 to 2012 were chosen using certain criteria, with an emphasis on Carnegie Doctoral and Research Universities. The studies considered contained student accomplishment data, assessed PLC features, quantified academic data, and allowed for impact size estimates. The hypothesis stated that establishing PLCs would improve students' reading and math proficiency.

It also suggested that collective or teacher effectiveness might buffer the link between PLC and student success. The study included 21 dissertations. The Hord model was used in the study to examine how PLCs were connected to student success in reading and math. Separate analyses looked at the links between specific PLC components and student achievement. Certain PLC features, such as shared and supportive leadership, shared vision, and relational characteristics of supportive

conditions, were found to have a substantial influence on student progress. While the rise in arithmetic performance hypothesis was not substantiated, the increase in reading achievement hypothesis was somewhat validated. The third hypothesis of the study, which used group or teacher efficacy as mediators, was also partially supported. The results of the study extend to educational practice and future research. Specific PLC aspects such as shared leadership, shared vision, and supporting environments were discovered to have a significant impact on student progress. Although the impacts on arithmetic achievement were minimal, PLCs had a minor impact on reading achievement. According to the study, collective or teacher effectiveness may influence the PLC-student achievement link. Finally, the study conducted a meta-analysis on the relationship between PLC adoption and student accomplishment in prekindergarten through grade twelve schools. It identified influential PLC components and supported teacher efficacy as a mediator to a lesser extent. The findings have important implications for educational practice as well as future studies. Based on their study sample, the paper's aims were to address diverse viewpoints on the professional community idea and summarize its influence on student accomplishment in secondary school. To that end, the research sought to clarify the concept's definition and operationalization, taking into account its dynamic character and various usages in the literature. The notion of a professional community lacks a general definition, with a historical progression beginning in 1982 and concluding in a professional learning community around 2000. Despite this progress, the term remains vague, with a need for a more systematic understanding

of its multifaceted character, owing in part to its relevance across many educational contexts.

Catalina, Hofman, and Bosker (2011) the report acknowledged the presence of several metaphors for educational community, which are connected to common activities, norms, values, and relationships that promote student learning. The operationalization of the professional community idea varied between researchers, with some incorporating interrelated factors such as reflective discussion, practice deprivation, cooperative practices, collective accountability, and an emphasis on student learning. Despite differences in operationalization, the fundamental "communitarian character" concept remained intact. The second goal of the study was to investigate the influence of the professional community on student success in secondary schools by analyzing five empirical studies. Based on the presented data, effect sizes were computed, revealing a range of effects ranging from minor to moderate. Despite the small impact size, the overall effect size in a meta-analysis indicated a statistically significant beneficial association between the professional community and student accomplishment. While the effect size may be minor, its significance should not be ignored, especially when considering the influence of one school on many kids. Catalina, Hofman, & Bosker (2011)

Furthermore, numerous teacher and school features, such as leadership, professional growth, and trust, may impact or condition the professional community's effect on student accomplishment. These difficulties, which have been noted in past assessments, imply that external influences play a role in the link

between the professional community and student accomplishment. Finally, the article addressed several facets of the professional community idea, including its growing definition, operationalization, and influence on student accomplishment. It focused on the positive but complicated link between the professional community and student accomplishment, emphasizing the importance of even little benefits and acknowledging the role of external factors in this relationship. Catalina, Hofman, & Bosker (2011).

The studies mentioned by Patrick et al., (2013) and Catalina, Hofman, and Bosker (2011) investigate how professional learning communities (PLCs) affect the learning outcomes of students. Patrick et al., (2013) examined the connection between PLC implementation and student accomplishment using a meta-analysis of dissertation research. The Hord model was utilized in the study, which looked at 21 dissertations, to determine how PLCs relate to students' progress in math and reading. According to Patrick et al., research, key PLC characteristics, including shared and supportive leadership, a common vision, and encouraging environments, had a considerable impact on student growth, particularly in the area of reading success. The effect on math achievement was small, though. Although Patrick's study has limitations, it nonetheless offers insightful information about how PLCs affect student progress. The findings' potential for generalization may be constrained by the emphasis on dissertations from certain universities. Furthermore, the analysis may not accurately reflect more recent trends in PLCs due to its dependence on data from 1997 to 2012.

By examining five empirical studies, Catalina, Hofman, and Bosker's (2011) study sought to determine the impact of professional communities on secondary school students' achievement. They performed a meta-analysis and calculated effect sizes, which varied from small to large. Despite the relatively small impact sizes, the meta-analysis found a statistically significant positive relationship between professional communities and student achievement. The study also made clear that outside variables, such as teacher and school characteristics, may influence how professional communities and student achievement interact. By emphasizing the "communitarian character" idea of professional groups, this study offers a unique viewpoint. The link between PLCs and student accomplishment is complicated, yet relying just on impact sizes may not adequately represent it. The study's emphasis on secondary education may also restrict its application to other educational levels. While Catalina, Hofman, and Bosker (2011) undertake a meta-analysis of empirical research, Patrick (2013) employs a meta-analysis of dissertations to examine the effects of PLCs on student accomplishment. Catalina, Hofman, and Bosker (2011) place more emphasis on the "communitarian character" of professional communities than Patrick (2013) does on particular PLC characteristics like shared leadership and shared vision. Patrick (2013) focuses primarily on the connection between PLCs and reading and math success, whereas Catalina, Hofman, and Bosker (2011) take into account the entire impact on secondary school students' academic achievement.

Although the generalizability of the findings and the scope of the analyses in both studies have limits, they nonetheless offer insightful information about how

PLCs affect student progress. Both studies admit the need for more investigation and a more methodical comprehension of PLCs, showing that the idea of PLCs is still rather nebulous. In conclusion, this research provides complementary viewpoints on how PLCs affect student success. Patrick (2013) concentrates on certain PLC characteristics, whereas Catalina, Hofman, and Bosker (2011) emphasize the general "communitarian character." Both studies emphasize the intricacy of the connection between PLCs and student achievement, but they also contain limitations that should be taken into account when evaluating the results. To offer a more thorough knowledge of PLCs in education, further study is required.

2.3.4 Challenges of PLC Implementation

While PLCs offer numerous potential benefits, their implementation in primary schools is not without challenges. This section provides an overview of the challenges associated with the implementation of PLCs in primary schools. To start with, systemic barriers within educational systems can significantly impact the success and effectiveness of professional learning communities (PLCs). Talbert (2009) emphasizes that bureaucratic structures, rigid policies, and top-down decision-making processes can hinder the collaborative nature of PLCs. These systemic barriers can impede the autonomy and collective decision-making that are vital for meaningful collaboration within PLCs. Additionally, a lack of time, resources, and support from the system can pose challenges to sustaining PLC initiatives (Harris & Jones, 2010). Insufficient time allocated for collaboration and professional learning, limited availability of resources, and inadequate support from

higher levels of the education system can impede the growth and development of PLCs. Effective leadership is crucial for overcoming challenges and promoting the success of PLCs. However, leadership turnover, insufficient training for PLC leaders, and a lack of distributed leadership can impede the development and sustainability of PLCs (Antinluoma et al., 2018). Leadership within PLCs must create a supportive environment, foster collaboration, and provide the necessary resources and guidance to overcome these challenges. Building the capacity of PLC leaders through comprehensive training programs and establishing a culture of distributed leadership can enhance the effectiveness of PLCs in driving professional growth and improving student outcomes.

One of the primary purposes of PLCs is to combat professional isolation among teachers. However, establishing a culture of trust, open communication, and collaboration can be challenging, particularly in schools where teachers typically work in isolation (Morrissey, 2000). Overcoming professional isolation within PLCs requires dedicated effort and time. Building relationships, fostering a sense of belonging, and addressing resistance to collaboration are crucial steps in creating a collaborative culture within PLCs. By providing opportunities for regular communication, encouraging peer support, and promoting a sense of collective responsibility, PLCs can break down barriers and alleviate professional isolation among teachers.

Time constraints are consistently cited as a major challenge for PLCs. Teachers have numerous responsibilities and limited time for collaboration,

reflection, and professional learning (Fulton & Britton, 2011). To address this challenge, schools need to prioritize and allocate dedicated time for PLC meetings and activities. By integrating collaborative time into teachers' schedules and establishing a clear expectation for PLC participation, schools can ensure that collaboration becomes an integral part of teachers' professional routines. Effective time management strategies, such as setting goals and agendas for meetings, utilizing technology for virtual collaboration, and streamlining non-instructional tasks, can also maximize the efficiency and effectiveness of PLC time. Establishing and sustaining a cohesive professional learning community (PLC) necessitates a shared vision and a collective commitment to a common purpose. However, challenges such as differing perspectives, conflicting agendas, and varying levels of commitment among educators can impede the development and continuity of a unified PLC (Pirtle & Tobia, 2014).

To establish a strong PLC, it is essential for all members to align their perspectives and develop a shared vision. This involves engaging in open and honest discussions to understand each other's viewpoints, values, and goals. By actively listening and respecting diverse perspectives, educators can find common ground and work towards a shared purpose that encompasses the best interests of students and professional growth. Conflicting agendas can arise within a PLC when individual educators prioritize personal goals or advocate for their own interests over the collective objectives of the community. Overcoming this challenge requires fostering a culture of collaboration, where educators recognize the value of collective

decision-making and the positive impact it can have on student learning outcomes. By emphasizing the benefits of collaboration and shared responsibility, PLC members can transcend individual agendas and focus on the greater good of the community.

Another obstacle to a cohesive PLC is varying levels of commitment among educators. Some educators may be highly dedicated and actively contribute to the community, while others may exhibit lower levels of engagement and commitment. To address this issue, PLC leaders and members should promote a culture of inclusivity and actively involve all participants. Providing support, encouragement, and recognition for individual contributions can help cultivate a sense of ownership and commitment among all educators involved in the PLC. Furthermore, establishing clear goals, expectations, and norms within the PLC can contribute to its cohesiveness. By collectively defining and agreeing upon the purpose, values, and standards of the community, educators can work towards a shared vision with a unified focus. Regular communication and reflection on progress towards goals can help maintain alignment and sustain the commitment of all PLC members.

It is important to acknowledge that building and maintaining a cohesive PLC is an ongoing process that requires continuous effort and collaboration. Periodic reassessment and adjustment of strategies and practices may be necessary to address any emerging conflicts or challenges. By fostering a culture of mutual respect, collaboration, and shared commitment, educators can overcome differing perspectives, conflicting agendas, and varying levels of commitment, ultimately

establishing a cohesive and effective PLC that benefits both educators and students. Access to high-quality professional development opportunities is vital for the growth and effectiveness of PLCs. Schools need to provide relevant and ongoing professional learning experiences that align with the needs and goals of the PLCs (Harris & Jones, 2010). Limited resources, inadequate funding, and a lack of knowledge about effective professional development strategies can hinder the capacity of PLCs to engage in meaningful and impactful professional learning. Schools should invest in comprehensive professional development programs, leverage external expertise, and seek out innovative approaches to support the professional growth of PLC members.

Addressing the various challenges that PLCs face is essential for their success and effectiveness. Overcoming systemic barriers, such as bureaucratic structures and limited resources, requires systemic change and support from educational systems. Effective leadership, the establishment of a collaborative culture, dedicated time for collaboration, a shared vision and commitment, appropriate evaluation and accountability measures, and access to high-quality professional development opportunities are key factors in addressing these challenges. By recognizing and proactively addressing these challenges, PLCs can thrive as transformative spaces for teacher collaboration, professional growth, and improved student outcomes.

The difficulties of establishing and maintaining professional learning communities (PLCs) in elementary schools are highlighted in the material that is given. The influence of systemic impediments inside educational systems on PLCs is

highlighted in Talbert's (2009) work. As barriers to collaboration inside PLCs, it lists bureaucratic structures, strict regulations, and top-down decision-making procedures. The difficulties brought on by a lack of time, finances, and supports from the educational systems are discussed by Harris and Jones. They draw attention to problems like the lack of appropriate time set aside for collaboration and the scarcity of resources. Both pieces of literature acknowledge the impact of systemic elements and resource limitations on PLCs. They both understand that outside influences may make it difficult to adopt PLCs successfully. In contrast, Harris & Jones (2010) emphasize resource shortages and a lack of assistance, whereas Talbert (2009) concentrates on structural constraints inside the system. Although these issues are real obstacles, the work should have gone more in-depth on concrete examples and methods of getting through them.

PLC development and sustainability are hampered, according to Antinluoma et al. (2018), by leadership churn, insufficient training for PLC leaders, and a lack of dispersed leadership. The study of Antinluoma et al., which largely addresses leadership issues and complements the other referenced publications by highlighting the significance of strong leadership in resolving PLC issues, focuses on leadership concerns. This section does not directly contrast anything because the importance of leadership is covered in all the listed books. Leadership is important, but the work might offer more detailed advice on how to support and grow leadership inside PLCs.

The difficulty of eliminating professional isolation among teachers inside PLCs is highlighted by Morrissey (2000). It emphasizes the value of cooperation, open communication, and trust. In contrast to the structural and leadership issues covered in other publications, Morrissey's work is focused on the problem of overcoming professional isolation. In contrast to the structural and leadership issues covered in previous sections, the focus here is on professional isolation. Morrissey's study may offer more specific recommendations for fostering open communication and trust inside PLCs. Time restrictions are cited by Fulton & Britton (2011) as a significant obstacle for PLCs, as instructors have little free time for collaboration and professional development. By stressing the time restrictions instructors encounter, this paper adds to Harris & Jones' (2010) examination of time-related difficulties. This section does not directly contrast anything because all of the works listed recognize the difficulty of meeting deadlines. The work could provide more detailed advice on PLC time management tactics. Pirtle and Tobia (2014) discuss the difficulty of coordinating divergent viewpoints, competing goals, and various degrees of commitment inside PLCs. The topic of the difficulties in creating a shared vision and commitment inside PLCs is enhanced by this study. This section does not directly contrast anything because all of the sources are in agreement about the significance of common objectives. Although the value of a common vision is acknowledged, the work may offer more detailed advice on how to resolve disagreements and cope with divergent viewpoints.

High-quality professional development options that support PLC requirements and objectives are required, according to Harris & Jones (2010). By emphasizing the value of professional growth, this work enhances Harris & Jones' (2010) consideration of resource limitations. This section doesn't directly contradict anything because all of the books included here emphasize the importance of professional growth. While acknowledging professional development, the work might provide more specific advice on how to create effective professional development for PLC members. In conclusion, the mentioned publications collectively offer a thorough picture of the difficulties PLCs in elementary schools encounter. They speak to issues with systems, leadership, cultures, timing, alignment, and professional growth. To help the effective adoption of PLCs, they might, however, provide more detailed approaches and solutions to address these issues.

2.4 Conceptual Framework

The deployment of PLCs is a crucial component of educational reform in the Karaga District. Exploring the influence of these independent variables which include teachers' attitudes, leadership support, and implementation challenges, will help us gain a better understanding of how PLCs can be used to enhance teaching methods and student learning outcomes in primary schools. The implementation of Professional Learning Communities (PLCs) in educational settings is now significant due to their strategic nature, which fosters collaborative learning and improves instructional practices among teachers. Nonetheless, the success of PLCs is highly

dependent on their adaptation to the unique contexts in which they are implemented (Owen, 2014; Brody & Hadar, 2015; Ismail, Ishak, & Kamaruddin, 2020). The diagram below presents a conceptual framework for PLC implementation which provides a structured approach to understanding the essential components and processes involved in establishing effective PLCs. This framework emphasizes the need to consider various factors such as teachers' attitudes, leadership support, and implementation challenges when putting Professional Learning Communities into practices.

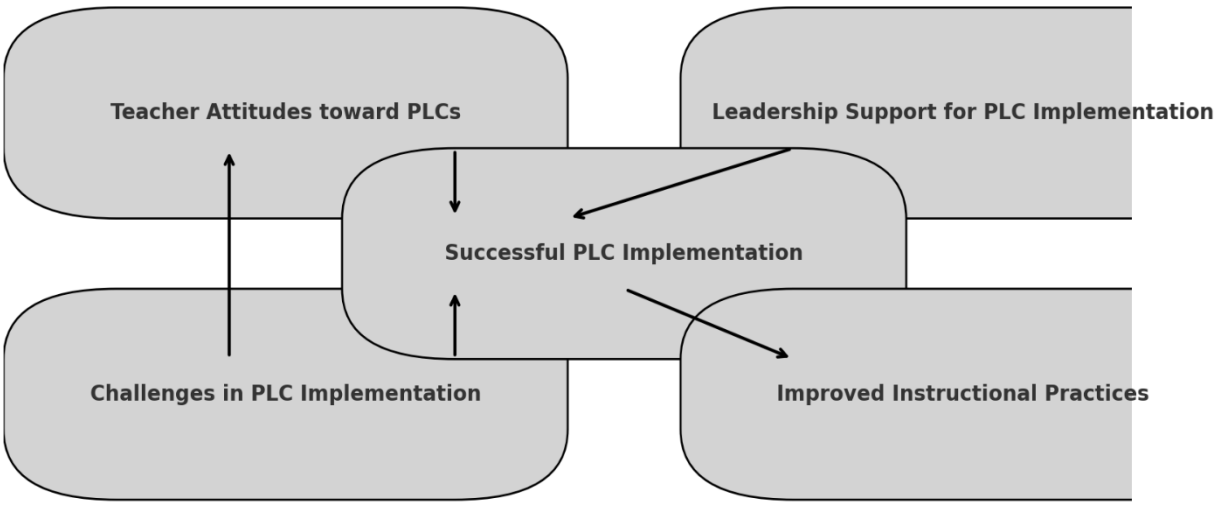

Figure 1: Conceptual Framework for PLC Implementation: Source researcher's own construction.

Despite teachers' positive attitudes and leadership support, teachers face challenges in PLC implementation that can impede their efforts (Harris & Jones, 2010). These challenges often include time constraints, limited resources, and

potential resistance to change, which can reduce the efficacy of PLCs. For instance, when teachers are burdened with heavy workloads or lack adequate time to engage in PLC activities, maintaining consistent participation can be difficult. Similarly, a shortage of instructional resources may limit the scope and effectiveness of collaborative learning efforts. These challenges can lower morale, reduce participation, and ultimately diminish the impact of PLCs. Consequently, identifying and addressing these challenges is essential for sustaining the development of PLCs and ensuring they achieve their intended objectives.

At the core of this framework is successful PLC implementation, where teacher attitudes, leadership support, and challenges converge. When teachers are motivated, leadership support is strong, and challenges are minimized, PLCs are more likely to be implemented successfully. Effective implementation provides teachers with opportunities for continuous professional development, enabling them to collaborate, share best practices, and refine their instructional methods. Successful PLC implementation thus bridges the gap between theoretical benefits and tangible outcomes within the school, fostering an environment that supports teacher growth and development.

The ultimate goal of PLCs is to improve instructional practices. A well-implemented PLC allows teachers to enhance their teaching methods, embrace innovative approaches, and develop strategies for student-centered learning (Lumpe 2007). Through effective collaboration, teachers become better equipped to meet diverse student needs, adapt to evolving curriculum requirements, and create more

engaging learning environments. Improved instructional practices directly benefit students, as teachers are able to implement more effective teaching strategies that contribute to improved student performance and growth.

2.5 Summary of Chapter Two

This chapter has undertaken a comprehensive exploration of the literature relating to theoretical frameworks, review of concepts and key issues, empirical reviews and conceptual frameworks in the context of our research topic. The main objective has been to offer a profound understanding of these critical components that underpin scholarly analysis. This chapter has delved into the significance of theoretical frameworks in guiding research, emphasizing the Instructional Improvement Theory (IIT) as chosen theoretical lens for investigating the implementation of Professional Learning Communities (PLCs). In addition, explorations of theoretical and empirical reviews have revealed the depth and breadth of existing research in this field. Insights have been drawn from seminal works like DuFour's framework and examined empirical studies that assess the effects of PLCs on instructional practices and student learning outcomes. The chapter has also underscored the vital role played by conceptual frameworks in structuring our understanding of PLCs, especially in primary schools, by highlighting factors like teachers' attitudes, leadership support, and their impact on instructional practices and student outcomes. The knowledge gained from this chapter will serve as a solid foundation upon which we can build on. It provides us with a clear roadmap for our investigation into the challenges and opportunities

associated with the implementation of PLCs in primary schools. By integrating theoretical and empirical perspectives, we aim to contribute to the growing body of knowledge in this area and ultimately inform policy and practice.

The review indicated that PLCs play a crucial role in enhancing teacher collaboration, improving instructional practices, and positively impacting student learning outcomes. However, effective implementation of PLCs is linked to strong leadership, teacher engagement, and a culture of collaboration. Also, teachers' perceptions and attitudes towards PLCs significantly influence their effectiveness. The review again found out that while some studies highlight the benefits of PLCs, others indicate gaps in methodology, sample sizes, and long-term impact analysis. Strong leadership fosters a culture of trust, open communication, and professional growth. School principals and administrators play a key role in providing time, resources, and structural support for PLCs. A collaborative leadership style enhances teacher participation and collective problem-solving. Various studies demonstrate that PLCs contribute to increased teacher knowledge, improved teaching strategies, and better student outcomes (Atta, 2015; Lumpe, 2007; Vescio et al., 2008). Research also highlights that collaborative activities, shared vision, and reflective discourse are key success factors (Moulakdi & Bouchamma, 2020; Song & Choi, 2017). In addition, systemic barriers, including bureaucratic structures, rigid policies, and top-down decision-making, hinder effective PLC implementation (Talbert, 2009). Time constraints, resource limitations, and inconsistent leadership support negatively affect the sustainability of PLCs (Harris & Jones, 2010; Fulton & Britton,

2011). Teacher isolation and conflicting agendas within schools can impede collaboration and shared goals (Morrissey, 2000; Pirtle & Tobia, 2014). It is also revealed that more longitudinal studies are needed to assess the long-term effects of PLCs on teacher attitudes, professional development, and student outcomes. Research should address gaps in study methodologies, sample sizes, and implementation strategies to enhance transparency and replicability. In Conclusion, the review underscores that PLCs are valuable for teacher development and student achievement, but their success depends on leadership, collaboration, and overcoming systemic barriers. Future research should focus on sustainable implementation strategies and long-term impact assessments to strengthen the role of PLCs in primary education.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter focused on the methodology of the study. A mixed-methods study approach was used to investigate how teachers from Karaga District in the Northern Region implement PLC to bring about student literacy achievement in educational practice and how PLCs are used to address educational problems, especially in the district. The research paradigm and approach, the research design, population, sample and sampling techniques, instrumentation, data collection procedures, data analysis, data quality, and ethical issues are outlined in the following paragraphs.

3.2 Research paradigm

The study of PLCs implementation in primary schools within the Karaga District uses a pragmatic perspective. Pragmatism, as a research paradigm, recognizes that there are diverse ways to interpret the world and conduct research, acknowledging that no single viewpoint can provide a comprehensive understanding and that multiple realities may coexist (Saunders et al., 2009). Embracing pragmatism as a research paradigm for PLC implementation in primary schools in the Karaga District aligns with the core principles of problem-solving and action-oriented research. It emphasizes the importance of acknowledging multiple perspectives and realities while striving for practical and collaborative solutions.

The first phase of this study employed a quantitative approach to investigate the implementation of Professional Learning Communities (PLCs) among teachers in the Karaga District, Northern Region. This phase aims to gather numerical data on teachers' attitudes, the level of support provided by school leaders, the effects of PLC on teachers' instructions and the challenges of PLC implementation. This will be analyzed to identify patterns and correlations related to PLCs. A questionnaire was designed to collect quantitative data from a representative sample of teachers in the district. The survey includes questions related to PLC participation, attitudes, intentions, and perceived behavioral control. The population for this phase comprises teachers in the Karaga district. A purposive sampling technique was employed to select a representative sample of teachers actively participating in PLCs. The survey instrument is carefully crafted to gather data on specific variables, including teachers' attitudes toward PLCs, their intentions to engage in PLC activities, and perceived barriers. The survey is administered to the selected teachers and SISOs, and responses are systematically collected. Quantitative data collected from the survey is analyzed using statistical techniques such as analysis of variance (ANOVA), regression analysis, correlations, and descriptive statistics to identify relationships and patterns among variables. This analysis provides a quantitative understanding of the factors influencing PLC implementation and its impact on teacher instructions.

Building upon the outcomes obtained during the quantitative stage, the second phase of the study employs a qualitative approach. During the qualitative phase, attention is given to ensuring data quality and credibility. Data collection and interpretation procedures adhere to established qualitative research standards.

Qualitative data are gathered through interviews, focus group discussions, and document analysis. Focus group discussions explore how teachers actively acquire knowledge through interactions with colleagues and how cultural contexts impact their perceptions and practices related to PLCs. Thematic analysis, is applied to the qualitative data. This analysis identifies codes and themes that emerge from participants' narratives, beliefs, and practices. The qualitative analysis explores how teachers' collaborative learning experiences within PLCs. It examines how teachers communicate, share experiences, and work together to construct knowledge collectively. It investigates how the practical application of PLCs aligns with the idea that meaningful learning occurs in authentic, real-world settings. The qualitative findings obtained in the second phase, are integrated with the quantitative results from the first phase. This integration allows for a comprehensive and explanatory understanding of how teachers in the Karaga District implement PLCs, their perceptions of PLC effectiveness.

In summary, this research adopts an explanatory sequential design, beginning with quantitative data collection and analysis, followed by qualitative data collection and analysis. This methodological approach enables a holistic exploration of the research questions, offering both statistical validation and in-depth insights into PLC implementation among teachers in the Karaga District.

3.3 Research Design

The researcher selected a research design that allows for both quantitative and qualitative data collection and analysis. The explanatory sequential design within

mixed-method approach was adopted in this study. Both quantitative and qualitative components were included in the research design, and the quantitative data was employed in an explanatory sequential way to improve the comprehension of the qualitative findings. This structure highlights how the qualitative element provides an explanatory framework for the quantitative component. The quantitative component involved the collection of numerical data related to various aspects of PLC implementation, teacher practices, and student learning outcomes.

The selection process for these schools considered several factors, including the diversity of the teachers' body at each school, the extent to which PLCs had been implemented, and the willingness of the schools to participate in the study. In selecting multiple schools, the research aimed to provide a comprehensive examination of the PLC implementation process, considering variations across different school settings. By examining PLC implementation across multiple schools within the Karaga District, the researchers can identify common trends, differences, and patterns that contribute to a more comprehensive understanding of the subject.

3.4 Population of the Study

The population of the study comprises primary school teachers and teaching staff in the district education directorate in the Karaga District. According to the statistical unit in the Education Directorate, the teaching staff in the ninety (90) public primary schools is five hundred and thirty-eight (538). Out of this figure, four hundred and thirteen (413) are males, and one hundred and twenty-five (125) are females. Additionally, there is thirty-two (32) teaching staff from the Education

Directorate. Out of the thirty-two (32) teaching staff from the office, twenty-eight (28) of them are males and four (4) are females. In all, the total population for the study consists of five hundred and seventy (570) participants, with four hundred and forty-one (441) males and one hundred and twenty-nine (129) females. This represents a clear overview of the population in the study.

3.4.1 Target Population

The target population for this study consisted of individuals holding various roles within the educational system, specifically in the Karaga District. These roles included those of headteachers, who serve as the leaders responsible for overseeing the administration and management of public primary schools in the district. Curriculum leads, on the other hand, are key figures in schools, actively involved in organizing refresher trainings, program development and instructional planning. Additionally, classroom teachers are the teachers responsible for directly teaching and interacting with students in public primary schools. Furthermore, School Improvement Support Officers (SISOs) were also part of the target population. SISOs are professionals who offer support and guidance to schools, aiming to enhance educational outcomes. These individuals were selected from a total of twenty-two (22) public primary schools and the District Education Offices (DEO). The significance of this target population lies in the fact that they represent specific groups whose experiences, perspectives, and practices are accurately examined as part of the research. In total, the study included one hundred and seventy-nine (179) participants from these various roles within twenty-two (22) primary schools and District Education Office in the Karaga District. Among these participants, there

were nineteen (19) females and one hundred and sixty (160) males. To break down the participants by role, classroom teachers constituted one hundred and twenty-eight (128) participants, curriculum leaders were twenty-two (22), headteachers to comprise twenty (22) participants. Furthermore, School Improvement Support Officers (SISOs) accounted for seven (7) participants. Therefore, the target population for this study is one hundred and seventy-nine (179). This comprehensive approach enabled an in-depth exploration of Professional Learning Community (PLC) implementation across different roles and perspectives within the educational system in the Karaga District.

3.5 Sample and Sampling Techniques.

Selecting a representative sample from the primary schools is important as a means to ensure the validity and applicability of research findings to the entire population. The total number of primary schools in the district is ninety (90) across urban, peri-urban, and rural. The number of primary schools in each category according to the 2022 Statistics Unit of the Karaga District Education Office (DEO) report is eleven (11) urban, thirty-one (31) peri-urban, and forty-eight (48) rural schools. For the purpose of this study, twenty-two (22) primary schools and the District Education Office were chosen for data collection using purposive sampling. The primary schools used in the study were purposively selected because of their participation in professional learning communities as well as their willingness to participate in the research. Another reason for using purposive sampling was that some schools, especially those in more interior locations, have just one teacher overseeing the entire school. Situations like this illustrated that peer support and

collaborative efforts which are essential to PLCs are few or nonexistent. It is therefore clear that choosing participants from these schools post challenges to learning how PLCs can be implemented successfully in such remote situations. Because of this, it's essential to carefully choose schools who can offer relevant information regarding the implementation of Professional Learning Communities (PLCs). To guarantee representation in urban, peri-urban, and rural areas, schools were selected based on their natural environments, hence five (5) schools from urban, seven (7) schools from per urban and ten (10) schools from rural areas were selected. One hundred and seventy-two (172) teachers from the schools and seven (7) School Improvement Support Officers (SISOs) from the District Education Office were chosen as participants for the study, making a total number of one hundred and seventy-nine (179) participants. However, a sample size was determined using Krejcie and Morgan's table (1970). This method ensures a representative sample of the population, allowing for generalizable findings. Given a total population of one hundred and seventy-nine (179) participants, comprised of one hundred and seventy-two (172) teachers and seven (7) SISOs. Using the table a sample of 109 was determined representing approximately 61% of the population. This sample size provides a sufficient representation of the population.

Additionally, simple random sampling was used to select the individuals who took part in the study. This technique was employed to select individual teachers from a school through a lottery system in which each teacher in a school was assigned a number written on a card. These cards were placed in a container and one card was drawn at a time to select candidate in that school for the data collection.

This approach was used for each of the 23 schools' teachers. The selected teachers were informed and got their consent. There was a check for a balanced distribution across schools.

3.5.1 Sample Distribution

The table 1 below presents the distribution of the sample across urban, peri-urban and rural areas. The table provides an overview of the demographic characteristics of the sample, indicating the proportion of participants from each area.

Table 1: Sample Distribution

CATEGORY	NUMBER OF SCHOOLS	NUMBER OF PARTICIPANTS	
		Quantitative	Qualitative
Urban	6	25	10
Peri-Urban	7	35	7
Rural	10	49	10
Total	**23**	**109**	**27**

Source: field survey 2024.

3.6 Instrumentation

In this research, a combination of quantitative and qualitative instrumentation was employed to comprehensively investigate the implementation of professional learning communities (PLCs) in primary schools. The instrumentation covered both quantitative and qualitative tools for data collection. For this study, four primary data collection methods were employed: questionnaires, interviews, document analysis,

and focus group discussions. These methods were chosen to gather comprehensive information about the implementation process of Professional Learning Communities (PLCs) in primary schools. By combining quantitative and qualitative instrumentation, the study aimed to obtain rich and comprehensive data regarding PLC implementation in primary schools. This multi-method approach facilitated a holistic understanding of perspectives, formal structures, and actual practices related to PLC implementation within the district.

3.6.1 Questionnaire

A questionnaire was administered to collect structured quantitative data from one hundred and nine (109) participants, including classroom teachers, headteachers, curriculum leads, and SISOs. These surveys included Likert-scale items. The surveys aimed to quantify aspects related to PLC implementation, and teacher practices. Administering questionnaires in research work involves a series of steps to ensure that data collection is systematic, reliable, and valid. The researcher designed the questionnaire by drafting questions that aligned with the research objectives, ensuring that the questions were clear, concise, and free from bias.

The questionnaire has five sections that make up well-structured questions that have been planned to collect structured quantitative data. It is important to emphasize that each section consists of Likert-scale questions, with six questions under each section. Section ‘A’ comprises bio data. The purpose of this section is to collect participant demographic data, including age, gender, educational background, and teaching experience. In order to put the replies in perspective and spot any trends

based on demographic variables, bio data is essential. Section ‘B’ is primary school teachers' attitudes regarding the implementation of PLCs in the Karaga District. The purpose of this part is to assess primary school teachers' opinions about the use of PLCs. It explores their thoughts, opinions, and sentiments about the collaborative learning environment and how it affects their ability to advance professionally. Section ‘C’ deals with school leaders' support level for PLC implementation. The degree of support that school administrators give their teachers in PLC implementation is evaluated in this section.

Section ‘D’ discusses the impact of PLC implementation on teachers' methods of instruction. Understanding the direct effects of PLC implementation on teachers' instructional practices is the main goal here. It seeks to measure how involvement in PLCs affects teaching techniques, approaches, and strategies. Section ‘E’ difficulties associated with PLC implementation for basic school teachers in the Karaga District. The last section discusses the difficulties Karaga district primary school teachers had when putting PLCs into practice. This offers insightful information about possible roadblocks and areas that the PLC implementation process would need to focus on or enhance.

The questions are on a Likert scale. Questions items 1 to 6 are included in this section to gauge teachers' sentiments on the deployment of PLCs. Questions 7 to 12 are on teachers' opinions of the assistance that school administrators give them when implementing PLCs. Items 13 through 18 are used in this part to evaluate how teachers' instructional practices have changed both before and after the introduction

of PLCs. The purpose of question items 19 to 24 are included in the last part to help identify and evaluate the difficulties teachers encountered when implementing PLCs.

In summary, the questionnaire was structured to gathers detailed data on the demographics, attitudes, views, and difficulties associated with PLC implementation among the teachers using a combination of quantitative and qualitative descriptions. The data collection method entailed how to administer the questionnaire. Common methods included paper questionnaires. Ethical approval was obtained, ensuring that the questionnaires respect privacy and informed consent. After pre-testing the questionnaire, it was administered to a small group of individuals (a pilot group) to identify any problems with question wording, format, or the survey's flow, and necessary revisions were made. A final questionnaire was prepared, incorporating any revisions or improvements based on the pretest. The questionnaires were distributed to the selected participants or respondents using the chosen method, which is in-person, to ensure that the process is well-organized and standardized to minimize errors. The researcher kept track of the progress of data collection to ensure that he was reaching his target sample size and demographic representation. As respondents completed the questionnaires, the researcher collected and recorded their responses accurately. Analyze the data and use appropriate statistical or qualitative analysis techniques to make sense of the collected data. The researcher interprets the findings in the context of the research objectives and draws conclusions based on the data.

3.6.2 Interview

The research uses a qualitative methodology that involves interviews. Five sections make up the interview framework, and each segment has five main questions. The interview is meant for respondents, which consist of twenty-two (22) headteachers and five (5) School Improvement Support Officers (SISOs). The purpose of the interview questions that are presented is to elicit detailed responses from a subset of primary school teachers in the Karaga District.

The interview questions are described as follows: Teachers are asked to specify their gender in Section 'A' Bio Data, which is a simple inquiry. Teachers are provided with age ranges to choose from, which gives them insight into the respondents' age distribution. Teachers select their most advanced degree, giving a glimpse into their educational history. In order to differentiate between teachers who have graduated and those who have certificates or degrees, this question divides teachers into many professional groups. Teachers choose a range of years to teach, including details about their experience level. Teachers are encouraged to submit particular instances from their professional learning communities that have shaped their perspective about the benefits of cooperation for both teaching and learning in Section 'B'. Requests instances of how working together in professional learning communities has improved instruction or increased student involvement. Section 'C' asks teachers what they think school administrators should do to better recognize and value their contributions to professional learning communities. Teachers are asked to recall instances in which their participation in Professional Learning Communities activities was impacted by the assistance or lack of it from school administrators.

Section 'D' asks for an explanation of a particular situation in which the establishment of professional learning communities improved cooperative planning among coworkers. Asks about the difficulties and solutions faced while using differentiated instruction methodologies after PLC adoption. In Teachers are encouraged to comment in Section 'E' on challenges faced when implementing PLC. The interview sought to collect qualitative data from twenty-seven (27) participants. These participants are five (5) SISOs and twenty-five (25) headteachers.

3.6.3 Document Analysis

Document analysis involved the examination of relevant documents, reports, and records related to PLCs in primary schools. This method helped in understanding formal structures, policies, and guidelines pertaining to PLCs, adding depth to the qualitative findings. Document analysis was an important way of gathering data for the study. The researcher collected documentation from both the twenty-two (22) Curriculum Leaders (CL) and headteachers. These documentation included PLC meeting minutes, school policies, teacher resource pack, and implementation instructions. These materials were thoroughly reviewed and analyzed in order to obtain insight into the formal structures, practices, and resources associated with the introduction of Professional Learning Communities (PLCs) in primary schools. The researcher will be able to discover trends, rules, and guidelines that influenced the PLC implementation process in these schools through this analysis.

3.6.4 Focus Group Discussions (FGDs)

Focus Group Discussions (FGDs) were organized with groups of teachers participating in PLCs. These discussions allowed for group interactions and collective exploration of their experiences, challenges, and perceptions regarding PLCs. Focus Group Discussions (FGDs) technique used to elicit thoughts and ideas from a small group of participants on the topic. Typically, 4 to 7 volunteers were used in each sitting. The researcher used a semi-structured approach that incorporates both pre-planned questions and spontaneous discussion of pertinent topics. The primary goal is to investigate participants' attitudes, beliefs, perceptions, and experiences about the study issue. Through group interaction, the researcher allowed the exchange of varied ideas and gave a deeper understanding of participants' thoughts and feelings. Every stratum urban, peri-urban, and rural hosted two (2) focus group discussions. The researcher was able to meet thirteen (13) participants for the urban, nine (9) participants for the peri urban and eight (8) participants for the rural. It guarantees that the various experiences and backgrounds of the participants serve as a foundation for the insights gained.

Section ‘A’ Primary school teachers' attitudes regarding the implementation of PLCs in the Karaga District. The FGD explores participants' perspectives about the implementation of PLC. The purpose of probing questions is to start a conversation in groups on the attitudes of primary school teachers towards PLC in the Karaga. Section ‘B’ School leaders' support level for PLC implementation the purpose of this section is to discuss how school administrators may help with PLC implementation. This section admonishes participants to discuss how supportive

school administrators are in PLC implementation. Section 'C' the impact of PLC implementation on teachers' methods of instruction the influence of PLC implementation on teachers' instructional practices is investigated in the FGD. Through group conversations, participants exchange experiences and insights about how their involvement in Professional Learning Communities (PLCs) has changed their teaching tactics, approaches, and methodologies. Section 'D' difficulties associated with PLC Implementation for basic school teachers in the Karaga District. The last section of the FGD is devoted to investigating the difficulties encountered by Karaga district primary school teachers when implementing PLCs. Participants participate in a group discussion to pinpoint shared difficulties they face when implementing PLC.

The recorded audio from each FGD was played back for participants to verify if the data has been appropriately collected in order to assure accuracy and participant validation. By enabling participants to confirm that their opinions and experiences are accurately reflected in the study findings, this feedback circle improves the validity of the qualitative data gathered through the focus group discussions (FGDs). A wide range of viewpoints are ensured by including two groups each from the urban, peri-urban, and rural strata, offering a deep and thorough knowledge of the dynamics of PLC implementation across various settings within the Karaga area.

The FGDs approach has enabled the researcher to elicit in-depth perspectives and insights on a specific topic by encouraging group interaction and debate among

participants who have related experiences or interests. The combination of these qualitative instruments facilitated a comprehensive exploration of the qualitative aspects of PLC implementation, capturing diverse perspectives, practices, and formal structures within the district.

3.7 Data Collection Procedures

Combination of quantitative and qualitative data collection methods was employed to comprehensively investigate the implementation of Professional Learning Communities (PLCs) in primary schools. The data collection procedures incorporated both quantitative and qualitative approaches, allowing for a more holistic understanding of the research questions. Questionnaires, interviews, document analysis, and focus group discussions were used to obtain data for the study. The researcher obtained permission from the District Director of Education to conduct the interview and the activities related to the study. The headteachers of the schools involved were also officially notified, and their permission was sought to conduct the research. After permission, the researcher contacted teachers from various backgrounds who were part of the desired group for the exercise. Under the observation of the researcher, the selected participants were given enough time to complete the questionnaires. Document analysis and concentrated group discussions were employed to collect the data. Ethical standards and procedural rules were adhered to.

A pilot study was undertaken at surrounding schools prior to the main data collection to identify possible concerns and prepare contingency strategies. This

methodical procedure guaranteed that data was acquired and reviewed while adhering to ethical norms. Questionnaires were administered to collect structured quantitative data from participants, including classroom teachers, headteachers, curriculum leads, and SISOs. The surveys included Likert-scale. Document analysis, the researcher reviewed policies, guidelines, and documents related to PLCs to gain insights into formal structures and procedures. Focus Group Discussions (FGD) were organized with groups of teachers participating in PLCs.

3.8 Data Analysis

The table presents the research questions alongside the instruments used. It also give details presentation on the types of data collected and the analysis tools employed.

Table 2: Data analysis

S/N	RESEARCH QUESTION	INSTRUMENTS	DATA TYPE	ANALYSIS TOOL
1.	What are the attitudes of primary school teachers towards the implementation of Professional Learning Communities (PLCs) in the Karaga District?	Questionnaires, Interviews, Focus Group Discussions (FGDs)	Quantitative & Qualitative	Analysis of variance (ANOVA) Thematic analysis
2.	What is the level of support provided by school leaders in effective implementation of Professional Learning Communities (PLCs) in the Karaga District?	Questionnaires, Interviews, Document Analysis, Focus Group Discussions (FGDs)	Quantitative & Qualitative	Descriptive statistics Thematic analysis
3.	What is the effect of Professional Learning Communities (PLCs) implementation on the instructional practices of primary school teachers in the Karaga District?	Questionnaires, Interviews, Document Analysis, Focus Group Discussions (FGDs)	Quantitative & Qualitative	Paired sample t-test Thematic analysis
4.	What are the challenges teachers in the Karaga District face when implementing PLCs?	Questionnaires, Interviews, Document Analysis, Focus Group Discussions (FGD)	Quantitative & Qualitative	Descriptive statistics Thematic analysis

Quantitative and qualitative data collected through questionnaires, interviews, document analysis, and focused group discussions would undergo statistical analysis. To start with, the researcher applies analysis of variance (ANOVA) to investigate primary school teachers' perspectives about the Karaga District's Professional Learning Communities (PLCs) implementation. Determine whether views among various teacher groups differ significantly from one another. In addition, to ascertain the degree of assistance given by school administrators to the successful establishment of Professional Learning Communities (PLCs) in the Karaga District, he employed descriptive statistics. To sum up the support levels, he uses metrics like mean, median, and standard deviation. Furthermore, he used paired sample t-tests to look at how the Karaga District's primary school teachers' instructional practices have changed as a result of the establishment of Professional Learning Communities (PLCs). Examine if the teaching strategies used before and after the PLC adoption change significantly. In conclusion, he summarized the difficulties teachers in the Karaga District encountered while putting Professional Learning Communities (PLCs) into practice using descriptive statistics. Use statistics like percentages and frequency to highlight the salient characteristics of the difficulties.

3.9 Data Quality and Ethical Considerations:

Ensuring data quality and addressing ethical concerns are paramount in research. This section outlines the strategies employed to maintain data quality and uphold ethical standards in both the qualitative and quantitative aspects of the study. Quantitative data were subjected to statistical validation techniques to identify and address data quality issues. Participants were provided with clear and comprehensive

information about the research's purpose, potential risks and benefits, and their right to participate or withdraw. Informed consent was obtained from all participants involved in both qualitative and quantitative data collection. To protect the privacy of participants in both data collections, strict procedures were followed. Data were securely stored, and efforts were made to anonymize or de-identify data when necessary. Access to data was limited to authorized personnel to ensure confidentiality. When working with sensitive or vulnerable populations in both qualitative and quantitative data collection, the researchers were attentive to the potential social influence of the study. Steps were taken to anticipate and mitigate any adverse consequences of disseminating or utilizing the study findings.

Thorough data collection approaches were employed to minimize measurement errors and biases in both the qualitative and quantitative data. Standardized tools and procedures were used to ensure consistency. Data cleaning and cross-validation procedures were implemented to detect and rectify errors or inconsistencies in both qualitative and quantitative data, enhancing the overall accuracy and reliability of the findings. The researchers adhered to these ethical standards throughout the study. By safeguarding ethical integrity, maintaining data quality, and addressing ethical considerations in both qualitative and quantitative research components, the study upheld the highest standards of research ethics and data reliability.

3.10. Chapter summary

Finally, the study used a mixed method to evaluate how teachers in the Karaga District, Northern Region, implemented Professional Learning Communities (PLCs). The major goals were to investigate how PLCs affect teacher satisfaction and student reading success. The following sections give an overview of essential methodological considerations. The study used the pragmatism research paradigm to explore and analyze the experiences, attitudes, and practices of Karaga District teachers. The study's population of interest was teachers and SISOs in the Karaga District in the Northern Region. The study included picking a subset of teachers from a wider population, and the sample strategy used was purposive sampling.

Questionnaires, interviews, document analysis, and focus group discussions were also employed as data gathering equipment. The method of analyzing acquired data using SPSS statistical software, which includes thematic analysis ANOVA, descriptive statistics, paired sample t-test and regression analysis. Strategies such as personal verification and peer debriefing were used to assure data quality and validity. To show adherence to ethical research standards, ethical factors such as informed permission from participants, confidentiality, and any ethical approvals acquired from appropriate agencies or institutions were mentioned. In conclusion, this chapter gives a thorough review of the research technique used in the study. The study paradigm, design, population, sample strategies, data collection instruments, analytic methodologies, data quality metrics, and ethical issues are all covered.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter delves into the findings and discussions regarding teachers' attitudes towards Professional Learning Communities (PLCs) implementation within the Karaga District. The data of the study was taken from one hundred and nine (109) respondents, comprises of SISOs, headteachers, curriculum leaders and classroom teachers. The analyses were done along the research questions.

- *What are the attitudes of primary school teachers in Professional Learning Communities (PLCs) implementation in the Karaga District?*
- *What is the level of support provided by school leaders in effective implementation of Professional Learning Communities (PLCs) in the Karaga District?*
- *What is the effect of Professional Learning Communities (PLCs) implementation on the instructional practices of primary school teachers in the Karaga District?*
- *What are the challenges teachers in the Karaga District face when implementing Professional Learning Communities (PLCs)?*

4.2 Demographic Characteristics of Respondents

There were one hundred and nine (109) numbers of respondents and their bio data is presented below. Tables 2, to table 5 present respondents' gender, age, their highest educational attainment and number of years in the service. Table 2 provides a

breakdown of the gender distribution among the respondents. This table sorts the participants by gender. This offers insight into the demographic composition of the respondent. By investigating the gender distribution, we can assess the variety of the sample in terms of gender. This information is crucial for understanding any gender-related tendencies or patterns in the responses, ensuring a comprehensive analysis of the data.

Table 3: Gender of Respondents

Gender	Frequency of respondents	Percentages of respondents (%)
Male	76	69.7
Female	33	30.3
Total	**109**	**100.0**

Source: field survey 2024.

From table 3, the gender distribution of respondents reveals a notable gender disparity within the surveyed population. Among the respondents, males represent the majority, constituting 69.7% of the total respondents. In contrast, females comprise a smaller proportion, accounting for 30.3% of the surveyed population.

Table 4 is a breakdown of the respondents' ages. The respondents are grouped into different age brackets; to provide information about the demographic makeup of the respondents. The age is divided to highlight the choice and frequency of the respondents. This will bring about better understanding of the age-related trends and patterns within the respondent. It will also aid to analyze how age could affect replies to make sure the sample is representative of the larger population.

Table 4: Ages Distribution of the Respondents

Age of groups of respondents	Frequency of respondents	Percentages of respondents (%)
25-30	33	30.3
31-36	43	39.4
37-42	17	15.6
43-48	6	5.5
49-54	10	9.2
Above 55	0	0.0
Total	**109**	**100.0**

Source: field survey 2024.

The age distribution of respondents in table 4 reveals interesting insights into the demographics of the surveyed population. Among the age groups, individuals aged 31-36 years represent the largest cohort, constituting 39.4% of the total respondents. Following closely behind are individuals aged 25-30 years, comprising 30.3% of the respondents. This indicates a significant proportion of the surveyed population falls within the bracket of early to mid-30s. Furthermore, individuals aged 37-42 years and those with 43-48 years represent relatively smaller percentages of the total respondents, accounting for 15.6% and 9.2%, respectively. The age group of 49-54 years comprises the smallest proportion, with only 5.5% of the respondents falling within this category. Above 55 years of age was 0% meaning no respondent was recorded for this age category.

Table 5, this table provides the distribution of respondents based on their highest level of educational attainment. The table categorizes the participants according to their highest completed educational qualifications, ranging from SSSCE/ WASSCE to Second degree. The data is essential for understanding the

educational background of the survey sample, providing insights into the correlation between education levels and various response patterns. This information helps to assess the diversity of the sample in terms of educational achievement.

Table 5: Highest Education attained by Respondents

Certificate or degree obtained	Number of respondents	Percentage of respondents
Certificate/Diploma/Higher National Diploma	58	53.2
First degree (BA, BSc, BEd, etc.)	50	45.8
Second degree (MA, MSc, M.Phil, MEd, MBA, etc.)	1	0.91
Total	**109**	**100.0**

Source: field survey 2024.

From the table 5, the most prominent category within the dataset, comprising 53.2% of the respondents, is individuals who have obtained certificates, diplomas, or higher national diplomas. This suggests a significant proportion of the sample have pursued vocational or specialized training beyond secondary education but may not have proceeded to attain a traditional university degree. Following closely behind, 45.8% of the respondents hold a first-degree qualification, such as a Bachelor of Arts, Bachelor of Science, or Bachelor of Education. This represents a considerable portion of the sample population and indicates a strong emphasis on higher education attainment among the respondents. A smaller yet notable segment, comprising 0.91% of the respondents, have pursued advanced degrees beyond the undergraduate level. These include Master of Arts, and other postgraduate qualifications. This suggests a subset of the sample has furthered their education to specialize in specific fields or

enhance their professional credentials. The data indicated that the respondents consist of individuals holding certification or diplomas as professional teachers.

Table 6 presents an overview of the respondents' teaching experience, categorized by the number of years they have spent in teaching. This table subdivided the participants into different experience ranges. Examining the respondents by their years of experience, we can gain valuable insights into how teaching experience might influence responses.

Table 6: Respondents' Years of teaching Experience

Years as a teacher	Frequency of respondent	Percentages (%) of respondents
1 – 5 years	10	9.2
6 – 10 years	23	21.1
11 – 15 years	21	19.3
16 – 20 years	48	44.0
Above 20 years	7	6.4
Total	**109**	**100.0**

Source: field survey 2024.

The table 6 provides a detailed breakdown of teaching experience within a specific demographic or sample group, providing insights into the distribution of individuals across various ranges of teaching experience. Through an analysis of frequencies and percentages, it illuminates significant trends regarding the tenure and experience levels of teachers within the surveyed population. A modest yet noteworthy portion, comprising 9.2% of the respondents, consists of individuals who have been teaching for a duration ranging from 1 to 5 years. This group likely represents early-career educators who are in the initial stages of their teaching careers, navigating the challenges and opportunities associated with the profession. A substantial increase in

the proportion of respondents, accounting for 21.1% of the total, is observed within the 6 to 10 years teaching experience range. This category includes educators who have gained considerable experience and expertise over the years, transitioning from novice to seasoned professionals within the field of education. Continuing the trend of increasing tenure, 19.3% of the respondents fall within the 11 to 15 years teaching experience range. This segment likely comprises educators who have surpassed the initial learning curve and have established themselves as experienced practitioners within their respective teaching domains.

The largest segment within the dataset, comprising 44.0% of the respondents, encompasses individuals with more than 16 but less than 20 years of teaching experience. This category represents veteran teachers who have dedicated substantial portions of their careers to the teaching profession, accumulating extensive knowledge, skills, and insights throughout their tenure. A smaller fraction, representing 6.4% of the respondents, consists of individuals who have been teaching for a duration spanning from 20 years and above. This category includes teachers who have accrued significant experience and have likely witnessed notable changes and developments within the educational landscape over the years.

4.3 Research Questions and Analysis

4.3.1 Research Question 1: *What are the attitudes of primary school teachers towards Professional Learning Communities (PLCs) implementation in the Karaga District?*

Table 7 presents the results of an Analysis of Variance (ANOVA) examining the attitudes of primary school teachers between and within groups towards the implementation of PLCs in the Karaga District. This table includes key statistical factors such as sum of square, degree of freedom, F-statistic and significant.

Table 7: Analysis of Variance on the Attitudes of Primary School Teachers in Professional Learning community implementation in Karaga district.

Statement	Groups	Sum of Squares	Df	Mean Square	F	Sig.
There is value in sharing knowledge and experiences with other teachers within the Professional Learning Community.	Between groups	11.616	1	11.616	4.176	.043
	Within groups	297.632	107			
	Total	**309.248**	**108**			
I am willing to actively participate and collaborate with my colleagues in the implementation of Professional Learning Communities.	Between groups	6.050	1	6.050	2.467	.119
	Within groups	262.391	107	2.452		
	Total	**268.440**	**108**			
I am confident in my ability to contribute meaningfully to Professional Learning Communities discussions.	Between groups	8.754	1	8.754	2.705	.103
	Within groups	346.291	107	3.236		
	Total	**355.046**	**108**			
I view Professional Learning Communities as a supportive platform for sharing innovative strategies among teachers.	Between groups	15.811	1	15.811	5.444	.022
	Within groups	310.776	107	2.904		
	Total	**326.587**	**108**			
Professional Learning Communities foster a sense of community among teachers.	Between groups	2.300	1	2.300	.765	.384
	Within groups	321.957	107	3.009		
	Total	**324.257**	**108**			
There is satisfaction in collaborating with colleagues through Professional Learning Communities.	Between groups	3.578	1	3.578	1.372	.244
	Within groups	279.009	107	2.608		
	Total	**282.587**	**108**			

Source: field survey 2024.

Table 7 above presents the results of the ANOVA test, which offers insights into the significance of differences among groups. These groups comprise urban, peri-urban, and rural in terms of attitudes and perceptions towards Professional Learning Communities (PLCs). The results indicate a statistically significant difference in the perceptions of the value of sharing knowledge and experiences among teachers within PLCs ($F(1,107) = 4.176$, $p = .043$). This suggests that there are meaningful variations in attitudes towards this aspect of PLCs between the different groups. For example, teachers in urban areas believe that PLCs are useful but they are other areas for knowledge exchange. They indicated that they had access to equally different possibilities for idea-sharing in professional growth. Once more, they believe that living in an urban area gives them access to resources and information that can aid in their learning. Teachers in peri-urban and rural areas view PLCs as having greater value for knowledge exchange because of possible restrictions on resources and professional development opportunities in their environments.

For the willingness to actively participate and collaborate within PLCs, the ANOVA results show no statistically significant difference between groups ($F(1,107) = 2.467$, $p = .119$). This implies that the level of willingness to engage in collaborative activities within PLCs is relatively consistent across different groups. Similarly, there is no statistically significant difference in the confidence levels regarding the ability to contribute meaningfully to PLC discussions among different groups ($F(1,107) = 2.705$, $p = .103$). However, there is a significant difference in the perception of PLCs as supportive platforms for sharing innovative strategies among teachers ($F(1,107) = 5.444$, $p = .022$). This suggests that certain groups hold

differing views regarding the supportive nature of PLCs. Because rural are more isolated in their careers and require collaborative support networks, rural teachers view PLCs as a more helpful platform than their urban and peri-urban counterparts. Urban teachers have access to alternative professional support sources. They view PLCs as less helpful than peri-urban and rural teachers do. PLCs foster a sense of community among teachers, the ANOVA results indicate no statistically significant difference between groups ($F(1,107) = 0.765$, $p = .384$). This implies that the perception of community-building within PLCs is consistent across various groups. Lastly, there is no statistically significant difference in satisfaction levels regarding collaboration within PLCs among different groups ($F(1,107) = 1.372$, $p = .244$).

However, the study also, conducted interviews with School Improvement Support Officers (SISOs) and headteachers to gather insights into the attitudes of teachers towards the implementation of Professional Learning Communities (PLCs) in the Karaga District. While the majority expressed positive views about teachers' attitudes towards PLC implementation, a significant number of respondents highlighted both positive and negative observations. Among the positive remarks by twenty-seven (27) respondents included factors such as consistent attendance, active participation, the willingness to engage in discussions and collaborative activities during PLC meetings. Headteacher 1 *I personally see PLC as a collaborative platform where we all discuss to get clear ideas to help us teach (*Headteacher 1, interview, 2024). Headteacher 2 participating in PLC activities I believe fosters a sense of community among school staff (Headteacher 2, interview February 2024). SISO1 indicated that he ones in a while visit PLC sessions which he observed that

some teachers contribute meaningful ideas during PLC meetings (SISO 1, interview February 2024). SISO 2 attributes full attendance as a sign of commitment and belief in the significance of PLC meetings. He mentioned that *there is respectful exchange of views, active participation, and the creation of a common platform for sharing ideas and strategies*. (SISO 4, interview February 2024). SISOs and headteachers emphasize the importance of Professional Learning Communities (PLCs) in fostering collaboration and unity in classrooms. Headteacher 1 believes PLCs improve teaching methods and instructional clarity, while Headteacher 2 emphasizes community development. Teachers' contributions and full attendance are crucial for fostering a climate of cooperation and improvement.

According to the questionnaire responses, there is a statistically significant difference regarding PLCs value sharing experiences and information (F (1,107) = 4.176, p =.043). Urban teachers see PLCs as helpful, but they also see other avenues for professional development, noting resources that improve their students' education. Teachers in peri-urban and rural areas, on the other hand, place a higher value on PLCs as a means of exchanging knowledge. This is probably because they have less access to resources and chances for professional development. This supports Headteacher 1's claim that PLCs offer a cooperative forum for discussion concepts to enhance instruction.

It's interesting to note that the questionnaire does not disclose any statistically significant differences in confidence levels regarding contributions to discussions (F (1,107) = 2.705, p =.103) or willingness to participate in PLCs (F

(1,107) = 2.467, p =.119). This implies that teachers in all groups have a common commitment to working together. This conclusion is supported by the interviews, where SISOs reported that regular attendance and engaged involvement were beneficial elements of PLC proceedings. Headteacher 2 highlights that staff members who participate in PLCs develop a feeling of community that is shared by all the groups.

PLCs are perceived as supportive venues for exchanging creative solutions, as indicated by a significant difference in the questionnaire answers (F (1,107) = 5.444, p =.022). Compared to their urban counterparts, who have access to other professional support sources, rural teachers view PLCs as essential support networks since they feel more alone in their work. SISO 2 observed that full attendance at PLC meetings signifies a commitment to the relevance of these meetings, where a polite exchange of opinions happens, advances credence to this understanding.

There are no statistically significant differences between the groups in the impression of PLCs as a tool of community-building (F (1,107) = 0.765, p =.384). The data, both quantitative and qualitative, indicates that teachers place equal weight on the community component of PLCs. This notion is emphasized in the interviews, as SISOs and headteachers emphasize how PLC meetings foster a collaborative climate that provides a shared forum for idea sharing.

Lastly, the study shows that there are no appreciable variations in PLCs' satisfaction levels with collaboration (F (1,107) = 1.372, p =.244). This consistency stands in contrast to the deeper observations made during the interviews, which

emphasized the importance of regular attendance and active involvement. The interviews show a range of experiences, indicating that while teachers value the chance to work together, the success of those exchanges may have an impact on how satisfied they are.

In conclusion, the interviews offer a deeper understanding of the contextual details and lived experiences of teachers, while the questionnaire data offer insightful statistical patterns of instructors' perceptions of PLCs. Taken as a whole, these results demonstrate the vital role professional learning communities (PLCs) play in promoting teacher cooperation and a sense of community, while also highlighting the varying perspectives influenced by resource and location related issues. The correlation between quantitative and qualitative data highlights the need of cultivating accessible and encouraging professional learning communities (PLCs) to improve teacher professional development and community building.

However there is also negative attitude by some teachers for instance, headteacher 6, raised concerns about negative attitudes towards PLCs among certain teachers. The respondent pointed out *instances of lateness to meetings*, which he interpreted as signs of disinterest or lack of commitment (Headteacher 6, interview February 2024). Headteacher 8 highlighted the reluctance of some teachers to participate, citing reasons such as perceived irrelevance or personal disinterest. Headteacher 8 echoed these concerns, noting a lack of active engagement and initiative from some teachers, even when physically present at meetings (Headteacher 8, interview February 2024). Nevertheless, the interviewees

highlighted several key points of concern. Some of the assertions include unwillingness to attend meetings by some teachers display a reluctance to participate in PLC meetings, indicating a deficiency in enthusiasm or dedication. This reluctance may stem from various factors such as a perceived lack of relevance or value in the meetings, or personal disinterest in collaborative professional development. Another attitude is lateness there is observed lateness among certain teachers, which not only demonstrates a lack of punctuality but also suggests a potential disregard for the significance of timely engagement in PLC activities. (Headteacher 4, 6, interview, February 2024). Another assertion indicated even though there is value in sharing knowledge in PLC as well as viewing PLC as a supportive platform, still no active participation by some teachers even when physically present, some teachers fail to actively engage in PLC discussions and activities. This passive participation underscores a lack of initiative or interest in contributing to collective learning and growth (Headteacher 8, interview, February 2024).

Punctuality is fundamental to fostering a culture of respect and commitment within the professional community, active involvement is vital for harnessing the full potential of PLCs in fostering collaboration and improving instructional practices. These observations highlight the importance of addressing potential barriers to effective PLC implementation, such as addressing perceived irrelevance, fostering a culture of punctuality and active participation, and providing support and encouragement for teachers to fully engage in collaborative professional development efforts. By acknowledging and addressing both positive and negative

attitudes towards PLCs, stakeholders can work towards creating a more inclusive and supportive environment that maximizes the potential of PLCs in enhancing teaching and learning outcomes. These attitudes and behaviors among teachers pose significant challenges to the effectiveness of PLC implementation, hindering the collaborative efforts aimed at enhancing teaching practices and student outcomes. Addressing these issues requires proactive measures to cultivate a culture of active participation, punctuality, and shared responsibility within the professional learning community.

The results of the questionnaire show that there is a statistically significant variation in how teachers within PLCs view the importance of exchanging information and experiences ($F(1,107) = 4.176$, $p = .043$). Teachers in peri-urban and rural areas see PLCs as essential for knowledge exchange because of limited resources, while teachers in urban areas consider them to be valuable. This shows that a large number of educators are aware of how PLCs can support their professional development. On the other hand, Headteacher 8's interview insights show that some teachers express a reluctance to participate because they believe PLC meetings are unnecessary or unimportant. The unfavorable sentiments voiced by certain teachers in the interviews contrast with the largely positive opinions documented in the quantitative data, as this perspective illustrates. The divergent opinions imply that although the majority may see the benefits of PLCs, a sizeable minority may not, which could compromise these programs' overall efficacy.

The quantitative results show that there are no group-to-group statistically significant variations in the readiness to collaborate and engage in PLCs (F (1,107) = 2.467, p =.119). This implies that teachers have a baseline degree of engagement readiness. The interviews do, however, reveal a serious problem in this area, with Headteacher 6 mentioning things like lateness and a lack of dedication from some teachers. The idea of a group that is consistently willing is at odds with these undesirable habits, which include being late for meetings and not participating fully.

Additionally, Headteacher 8 notes that some teachers might physically attend meetings but not participate in them. These observations are consistent with previous statistical results that showed no significant differences in confidence levels regarding meaningful contributions to discussions (F (1,107) = 2.705, p =.103). This disparity highlights the disconnect that exists between active participation and attendance, suggesting that even when teachers are willing to go, this does not always equate to meaningful engagement.

According to the statistical findings, there is a noteworthy distinction in how PLCs are perceived as helpful venues for exchanging creative approaches (F (1,107) = 5.444, p =.022). This conclusion suggests that even when teachers realize the promise of PLCs, their engagement may be weak, which contradicts with Headteacher 8's views of some teachers participating passively. The collaborative objectives of PLCs may be compromised by this passive participation, underscoring the significance of encouraging an active participation culture.

The quantitative results indicate that there are no significant differences in how PLCs' community building is perceived (F (1,107) = 0.765, p =.384), indicating that different groups have a common understanding of these elements of PLCs. The qualitative statistics, however, show that unfavorable habits like lateness and lack of excitement overshadow the presence of certain teachers. This makes it difficult to establish a strong professional community where participation and respect for one another are fundamental. In conclusion, the qualitative insights highlight important obstacles to successful implementation, while the quantitative data primarily presents a good picture of PLCs, highlighting their usefulness for knowledge sharing and collaborative engagement. Targeted interventions are necessary to address the negative attitudes that have been noticed, such as unwillingness to contribute, tardiness, and passive engagement. Stakeholders may maximize the potential of Professional Learning Communities (PLCs) to improve teaching practices and student results by identifying and addressing the factors that contribute to these negative attitudes. This will help to establish a more inclusive and supportive atmosphere. The complexity of teachers' attitudes regarding PLCs is shown by this dual analysis, which calls for a comprehensive strategy to increase their efficacy and adoption.

The focus group discussion also share both positive and negative attitudes, respondents shared their perspectives on the effectiveness of Professional Learning Communities (PLCs) within their school. Group 3 highlighted a mixture of behaviors observed in PLC meetings, noting that while some teachers are punctual and actively participate, others consistently arrive late and contribute minimally to discussions

(Group 3 focus group discussion, February 2024). This observation suggests that there may be challenges in maintaining consistent engagement and participation among all members of the PLC. Group 4 echoed some of group 3's observations but focused on the positive aspects, noting encouraging levels of attendance and cooperation among teachers. They emphasized the importance of collaboration and suggested recognizing and celebrating teachers who actively contribute to PLCs as a way to further enhance participation. Group 5 reinforced the positive aspects mentioned by group 4, highlighting consistently high attendance and attributing it to teachers' belief in the value of PLCs for improving teaching and learning outcomes. They proposed leveraging this belief by sharing success stories and examples of how PLCs have positively impacted the school community to reinforce teachers' commitment to collaboration. The facilitator acknowledged the positive aspects of the discussion, such as high attendance and active participation, while also recognizing the need to address challenges such as lateness and lack of contribution. They endorsed group 4's suggestion of recognizing and celebrating teachers' efforts and supported group 5's idea of showcasing the benefits of PLCs to reinforce teachers' belief in their value.

In conclusion, a complex landscape of teacher views regarding PLCs is revealed by comparing focus group insights with questionnaire results. The qualitative replies point up major obstacles to actual engagement, such as teachers' modest efforts and tardiness, even though the quantitative data shows overall positive perceptions and a general willingness to interact. This disparity highlights the need for focused approaches to improve participation, like sharing success stories

and implementing recognition programs to bolster the idea that PLCs are valuable. In order to improve teaching and learning results, stakeholders can endeavor to create a more inclusive and productive atmosphere for professional collaboration by addressing both the good and negative views stated in these discussions.

4.3.2 Research Question 2 *What is the level of support provided by school leaders in effective implementation of Professional Learning Communities (PLCs) in the Karaga District?*

Table 8 presents the levels of support provided by school leaders in the implementation of Professional Learning Communities (PLCs) within the Karaga District. The data is based on responses collected from various participants, with a focus on the extent and nature of support rendered by the school leadership. The key factors taken into accounts are valid, missing and mean, the number of valid responses received for each aspect of support, indicating the sample size used to calculate the statistical measures. The number of responses that were not provided or were invalid for each aspect of support is highlighting the extent of missing data. The average level of support provided, calculated from the valid responses. This gives an indication of the overall perception of the support level provided by school leaders in the implementation of PLCs. The table provides insights into the effectiveness and adequacy of the support mechanisms in place, helping to identify areas of strength and potential improvement in the leadership's role in facilitating PLCs.

Table 8: Level of Support School Leaders Provide in the Implementation of PLCs in the Karaga District

S/N	STATEMENT	N VALID	MISSING	MEAN
1	School leaders effectively communicate the goals and expectations of Professional Learning Communities (PLCs) implementation in our school	109	0	3.58
2	School leaders are always available when seeking guidance or clarification on Professional Learning Communities (PLCs) activities.	109	0	3.79
3	There is a strong commitment from school leaders towards fostering a collaborative environment for Professional Learning Communities (PLCs)	109	0	3.67
4	School leaders allocate sufficient financial resources to support the implementation of Professional Learning Communities (PLCs) in our school.	109	0	3.57
5	School leaders allocate sufficient material resources (e.g. TLRs) to facilitate the effective functioning of Professional Learning Communities (PLCs) in our school.	109	0	3.69
6	School leaders actively participate in and contribute to Professional Learning Communities (PLCs) to demonstrate their commitment to the collaborative learning culture.	109	0	3.59

Source: field survey 2024.

From table 8 it is indicated that the survey collected responses from 109 participants regarding the level of support provided by school leaders in the context of PLC implementation. The six dimensions evaluated include, effective communication of goals and expectations, availability for guidance, commitment to fostering collaboration, allocation of financial resources, allocation of human/material resources, and active participation in PLC activities. For effective communication of goals, the mean score for this dimension was 3.58, indicating a generally positive perception among respondents. School leaders appear to effectively communicate the goals and expectations of PLC implementation, although there might be room for improvement to ensure clarity and alignment. With a mean score of 3.79, respondents generally perceive school leaders as consistently available for guidance or clarification on PLC activities. This suggests a high level of accessibility and support from school leaders, which is essential for the smooth functioning of PLCs. School leaders, received a mean score of 3.67 on fostering a collaborative environment for PLCs. This indicates a strong commitment to promoting collaboration among teachers, which is fundamental for the success of PLC initiatives.

The mean score of 3.57 suggests that school leaders allocate sufficient financial resources to support PLC implementation. However, it's crucial to ensure that these resources are effectively utilized to meet the diverse needs of PLCs and maximize their impact on student learning. Respondents reported a mean score of 3.69, indicating that school leaders allocate sufficient material resources to facilitate

the effective functioning of PLCs. Adequate staffing is essential for providing the necessary support and expertise to sustain PLC activities.

With a mean score of 3.59, respondents perceive school leaders as actively participating in and contributing to PLCs to demonstrate their commitment to collaborative learning. Active involvement from school leaders can inspire and motivate educators to fully engage in PLC activities. The survey results reflect a positive perception of school leaders' support for PLCs across various dimensions. While there are areas for improvement, such as enhancing communication effectiveness and ensuring optimal resource allocation, the findings underscore the importance of strong leadership in fostering a culture of collaboration and continuous improvement within educational institutions. Moving forward, it is essential for school leaders to continue prioritizing and enhancing their support for PLCs to maximize their potential for improving teaching practices and student outcomes.

The interviews conducted with twenty-seven (27) respondents (headteachers and SISOs) in the Karaga District shed light on the level of support provided by school leaders in the effective implementation of Professional Learning Communities (PLCs). Through their responses, several key themes emerged, highlighting the crucial role of school leaders in facilitating and nurturing PLCs within educational institutions.

A recurrent theme among the respondents is the significance of providing Teaching and Learning Materials (TLMs) to facilitate effective discussions and activities during PLC meetings. Headteacher 11 emphasises the importance of

TLMs, stating that "*they are crucial for ensuring that teachers have the necessary resources"* (Headteacher 11 interview February 2024). This sentiment underscores the role of school leaders in supporting teachers with the tools required to engage meaningfully in PLC activities. Another prominent theme is the importance of leadership involvement, particularly that of headteachers, in providing direction and guidance. Respondents SISO 5 emphasize the essential role of headteachers in *refreshing participants'* understanding of the purpose and objectives *of PLC* (SISO 5, interview, February 2024). Headteacher 3, *their presence at meetings ensures that teachers have access to support and guidance whenever needed* (Headteacher 3 interview February 2024).. Effective communication and reminders from school leaders regarding PLC meetings emerged as crucial factors in ensuring regular attendance and participation. Respondents stress the importance of consistent reminders from Curriculum Leaders (CL). *"and the attendance of school leaders at meetings as indicators of their commitment to the process "*(Headteacher 1, Headteacher 2, Headteacher 4 interview February 2024). The role of school leaders in encouraging and recognizing the efforts of teachers in participating in PLCs is highlighted across multiple responses. Encouragement from school leaders is seen as a demonstration of support for the process and its importance in professional development. Respondent 5 additionally, recognizing the efforts of headteachers in supporting PLCs acknowledges their dedication and encourages continued involvement. Headteacher 3 *"The active participation of school leaders in PLC meetings is perceived as crucial for fostering a sense of collaboration and shared responsibility for improving teaching and learning outcomes*"(Headteacher 3

interview February 2024). Respondent 5, Respondent 6 indicated that their presence not only demonstrates commitment but also provides a model for teachers to follow, encouraging active engagement and participation. Across all respondents, there is a common theme of school leaders actively encouraging and participating in PLC activities. This includes attending meetings, providing support, and actively engaging in discussions. This consistent involvement demonstrates the commitment of school leaders to the PLC process and reinforces its importance to teachers.

Respondents unanimously mentioned the role of school leaders in providing information and updates relevant to PLCs. This includes reminders about meeting schedules, sharing curriculum-related information, and creating awareness about the benefits of PLCs. Information sharing ensures that teachers are well-informed and prepared for PLC activities, contributing to their effectiveness. Respondents highlighted the provision of resources by school leaders, such as Teaching and Learning Materials (TLMs) and Teacher Learning Resources (TLRs). These resources support teachers in their professional development and enhance the quality of discussions and activities during PLC meetings. (Respondents, interview, February 2024)

While some emphasized the active involvement of school leaders in PLC activities, there were variations in the extent of their participation. For example, some respondents mentioned school leaders actively participating in discussions and providing constant reminders, while others focused more on the provision of resources and information. Respondents provided diverse examples of the support

provided by school leaders, while some mentioned tangible actions such as providing water during meetings and creating awareness about PLC benefits, others emphasized intangible forms of support such as encouragement and acknowledgment of teachers' efforts. These differences highlight the multifaceted nature of support provided by school leaders.

There were differences in the perceived effectiveness of the support provided by school leaders. While some respondents expressed appreciation for the support received and acknowledged its positive impact on PLCs, others identified areas for improvement or expressed concerns about certain aspects of support, such as lateness and lack of contribution. The interviews with headteachers and SISOs underline the crucial role of school leaders in supporting the effective implementation of PLCs. From providing necessary resources to modeling collaborative behavior and fostering a positive environment, their involvement is instrumental in cultivating a culture of professional learning and development within educational institutions. Moving forward, recognizing the importance of leadership support and actively engaging school leaders in the PLC process will be essential for realizing the full potential of collaborative learning communities in enhancing teaching and learning outcomes.

The responses highlighted in the discussions indicated the various ways in which school leaders support the implementation of Professional Learning Communities (PLCs) in their schools. These supports range from providing resources and information to actively participating in meetings and encouraging

teachers' involvement. The involvement of school leaders is crucial as it demonstrates their commitment to collaborative learning and fosters a positive and supportive environment for professional development. Additionally, their involvement helps to reinforce the importance of PLCs and encourages active participation among teachers, ultimately contributing to improved teaching and learning outcomes within the school community.

Nevertheless, supplementary data was gathered from a variety of documents pertaining to the support of Professional Learning Communities (PLCs) by school leaders. Among these documents, minutes from PLC meetings emerged as particularly significant, providing valuable insights into the dynamics and encounters faced within the collaborative framework. These minutes underwent thorough examination to extract pertinent information regarding the extent of support and responsiveness of school leaders to the needs of PLCs.

A close analysis of the minutes revealed a range of concerns and feedback voiced by teachers, highlighting areas where additional support and intervention from school leaders were deemed necessary. Prominent among these concerns were the inadequacy of Teaching and Learning Materials (TLMs), issues related to refreshments during meetings, and the perceived need for greater encouragement and emphasis on the importance of active participation in PLC activities. Teachers' expressions of frustration regarding the lack of adequate TLMs underscored a tangible obstacle hindering the effectiveness of PLC sessions. Insufficient resources can impede the collaborative process, limiting opportunities for meaningful

engagement and professional growth among teachers. The recognition of this issue in the minutes signals a call to action for school leaders to address resource allocation and ensure that PLCs have the necessary tools and materials to thrive.

Moreover, the mention of refreshment issues in the minutes suggests that logistical considerations can impact the overall experience and morale of participants during PLC meetings. While seemingly minor, such concerns can affect attendance rates and the overall perception of the value placed on collaborative efforts. Addressing logistical challenges demonstrates leadership's attentiveness to the holistic needs of PLC members and their commitment to fostering a conducive environment for collaborative learning. Furthermore, the minutes reflected a desire among teachers for greater encouragement and support from school leaders to actively engage with PLCs and take their participation seriously. This underscores the importance of leadership's role in promoting a culture of collaboration and continuous improvement within the school community. School leaders have a pivotal responsibility to champion PLC initiatives, articulate their value, and provide the necessary support and encouragement to ensure their success. The examination of PLC meeting minutes provided valuable insights into the challenges faced by teachers within the collaborative framework and highlighted opportunities for school leaders to enhance their support and responsiveness. By addressing concerns related to resource allocation, logistical issues, and fostering a culture of participation, school leaders can further empower PLCs to fulfill their potential as catalysts for professional growth and educational excellence within the school community.

Again data in the focus group discussion, among respondents shared their perspectives on the level of support by school leaders in PLCs implementation. Group 1, 3, 4 & 5 confirm to the fact that effective communication of goals of PLC, availability of leaders for guidance, fostering of collaboration, allocation of financial resources, allocation of human resources, and active participation are levels of support by school leaders in PLC implementation, however, group 6 has different views regarding whether what they are doing is enough in this regard. Therefore group 6 argues that more needs to be done to improve PLC implementation and express worries that the assistance offered by school administrators falls short of expectations. The success of PLCs may be hampered by these teacher perceptions of communication gaps, a lack of resources, a lack of availability for support, or inconsistent leadership engagement. To maximise the influence of PLCs on teaching and learning results, they push for increased funding for support systems, improved resource allocation, more transparent communication channels, and a stronger commitment from the leadership.

They sum up by indicating that school leaders are essential to the success of PLC implementation. However, various opinions exist on the adequacy of the assistance offered by leaders, despite the fact that many teachers recognize it. It takes constant communication, teamwork to solve problems, and a mutual commitment to continual development to address these different points of view. They suggested schools may create vibrant professional learning communities that empower teachers and improve student achievement by matching leadership strategies to the changing demand of PLCs.

The average score of 3.58 indicates that school leaders normally believe to be capable of effectively communicating objectives and goals. While this is positive, it also suggests possible areas for development in order to improve alignment and clarity. The significance of clear communication and prompt reminders from school leaders about PLC sessions was underscored by the respondents. In line with the survey results that point out areas for development, they observed that frequent attendance and involvement depend on consistent communication. The importance of clear communication from school leaders in fostering comprehension and participation in PLC activities was emphasized by the participants.

A strong impression of school leaders' availability for guidance is indicated by a mean score of 3.79. It is believed that this accessibility is necessary for PLCs to operate as intended. In support of the survey's conclusions, respondents emphasized the vital role that head teachers play in offering leadership and direction. It was mentioned that headteachers' attendance at meetings was essential for assisting teachers. The good survey results were further supported by the focused group discussions demonstrating general agreement on the significance of school leaders being reachable to offer the required assistance and direction.

Respondents felt that school leaders were very committed to encouraging teacher collaboration, which is essential for PLC success, with a mean score of 3.67. A number of participants indicated that they believed active involvement from school leaders at PLC meetings was crucial to promoting teamwork. This highlights the leaders' responsibility to set an example of collaborative behavior and is

consistent with the survey's good result. The results of the survey were supported by discussions that emphasized how school leaders' active participation in PLC events fosters a collaborative atmosphere.

A mean score of 3.57 indicates that school leaders provide enough funding to support PLC implementation, but effective use of those funds is still required. Resources were mentioned as being necessary to support discussions and activities during PLC meetings, but the emphasis on financial resources was less prominent. Although the importance of resources in general was acknowledged, it was not clear that discussions would benefit from a more thorough examination of financial issues.

The average score recorded by respondents was 3.69, suggesting that school administrators provide sufficient material resources to support PLCs. The interviews focused on how school administrators provide Teaching and Learning Materials (TLMs), emphasizing their role in preparing teachers to participate in PLCs with effectiveness. Similar to the survey results, there was an acknowledgment of the necessity of having enough resources, particularly TLMs, to assist teachers' professional growth.

Respondents believe school leaders actively participate in PLC activities, which is important for creating a collaborative climate, as shown by a mean score of 3.59. Numerous participants pointed out that in order to inspire teachers and promote involvement, headteachers' presence in PLC sessions is essential. This is consistent with the survey results, which highlight the significance of leadership involvement.

The positive view found in the study was reinforced by the emphasis placed on the importance of school leaders' active participation in highlighting the value of PLCs.

A recurring element across all aspects highlights the favorable opinion of school leaders' support for PLCs. The quantitative perspective offered by the survey data highlights opportunities for improvement while also suggesting generally positive opinions. These findings are deepened by interviews and focused group discussions, which highlight issues of resource availability, leadership participation, and successful communication. The qualitative evidence from interviews and discussions emphasizes the complex nature of leadership support, encompassing both tangible and intangible types of aid, even if the survey shows a strong base of support for PLCs. Variations in respondents' opinions also imply that, although many have a positive opinion of leadership, others pointed out areas that needed improvement, most notably in the efficiency of resource allocation and communication consistency.

In all, the results highlight how important school leaders are to the development of effective PLCs. School leaders must continue to place a high priority on good communication, actively participate in PLC activities, and make sure that resources are allocated as efficiently as possible in order to fully realize the potential of these collaborative communities. Furthermore, recognizing the little differences in teachers' viewpoints can direct focused enhancements in assistance techniques.

4.3.3 Research Question 3 *What is the effect of Professional Learning Communities (PLCs) implementation on the instructional practices of primary school teachers in the Karaga District?*

The findings of a matched samples test examining how the establishment of Professional Learning Communities (PLCs) affects teachers' instructional methods are shown in Table 9. This table compares teachers' instructional methods before and after the introduction of PLCs, highlighting any significant changes or improvements. The statistical measures included provide insight into how PLCs influence teaching techniques, thereby informing the effectiveness of these communities in enhancing instructional quality.

Table 9: Analysis of Paired Samples Test on the Effects of PLC Implementation on Teachers' Instructional Practices

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Through PLC teachers in the school do engage in collaborative planning with colleagues to design instructional activities - PLC has enhanced my knowledge in using student data to inform my instructional practices.	-.339	1.148	.110	-.557	-.121	-3.086	108	.003
Pair 2	PLC provides a platform to incorporating differentiated instructional strategies to meet the diverse needs of students within the school. - Participating in Professional Learning Communities enhances my professional growth and development as a teacher.	.009	1.143	.109	-.208	.226	.084	108	.933
Pair 3	Participating in Professional Learning Communities enhances my professional growth and development as a teacher. - Professional Learning Communities are effective in addressing educational challenges and improving teaching practices.	-.018	.991	.095	-.206	.170	-.193	108	.847

Source: field survey 2024.

The first pair of statements in table 9 above explores the relationship between engaging in collaborative planning through PLCs and the enhancement of teachers' knowledge in using student data to inform instructional practices. The mean difference of -.339 indicates a statistically significant decrease in the agreement level between the two statements. This suggests that while teachers may engage in collaborative planning, they may not perceive a direct enhancement in their ability to use student data for instructional purposes. The negative mean difference implies a shift towards disagreement with the second statement.

In the second pair, the focus shifts to the relationship between incorporating differentiated instructional strategies through PLCs and the impact on teachers' professional growth. The mean difference of .009 suggests no significant change in agreement level between the two statements. This indicates that teachers perceive participating in PLCs as beneficial for their professional growth, irrespective of whether they specifically focus on differentiated instruction. The non-significant p-value supports this interpretation.

The third pair assesses the association between PLC participation and both professional growth and the effectiveness of PLCs in addressing educational challenges. The mean difference of -.018 suggests a minor decrease in agreement level between the two statements, indicating that while teachers perceive professional growth through PLCs, they may not necessarily perceive them as highly effective in addressing educational challenges. However, the non-significant p-value implies that this difference is not statistically significant. However, the qualitative

data provided valuable insights into the perceived impact of Professional Learning Communities (PLCs) implementation on the instructional practices of primary school teachers in the Karaga District. Key themes emerging from the responses include collaborative learning, skill development, targeted feedback, and practical application. However, challenges need to be addressed to ensure equitable participation and maximise the effectiveness of PLCs. Moving forward; continued support and investment in PLC initiatives can further enhance teacher professional development and ultimately contribute to improved student outcomes in the district. Headteacher 1, 3, & 5 all highlight the role of PLCs in providing learning opportunities and skill development for teachers. Headteacher 1 specifically mentions learning how to handle bright students, while headteacher 3 emphasizes learning how to prepare, evaluate, and reflect on lessons. Headteacher 5 focuses on practical knowledge gained, such as marking and closing registers. These responses suggest that PLCs offer valuable professional development experiences that enhance teachers' instructional practices (Interview, February 2024)

Headteacher 2 and 4 emphasize the collaborative aspect of PLCs in facilitating broader consultations and feedback exchange among teachers. Headteacher 2 mentioned consultation on challenging topics (Headteacher 2, interview, February 2024), while headteacher 4 highlights *"the assignment of teaching topics for feedback*" (Headteacher 4, interview, February 2024). These responses indicate that PLCs serve as platforms for teachers to share knowledge, exchange ideas, and receive constructive feedback, ultimately enriching instructional practices through collective expertise. Headteacher 1, 2, 3, and 5 express positive

perceptions of PLCs, describing them as beneficial strategies for professional development and instructional improvement. Headteacher 3 specifically refers to PLCs as a very good strategy, highlighting overall satisfaction with the collaborative learning approach. These responses collectively suggest that PLCs are viewed favorably by teachers and are perceived to have a positive impact on their instructional practices.

While there are some differences in emphasis and perspective among the respondents, the overall consensus is that PLCs play a significant role in enhancing teachers' instructional practices through professional development, collaboration, and knowledge sharing. Addressing challenges are essential to ensure the inclusivity and effectiveness of PLC initiatives. Moving forward continued support and investment in PLCs can further leverage their potential to improve teaching and learning outcomes in the Karaga District.

Also responses from the focus group discussions indicated PLCs is major professional development platform for enhancing teachers' instructional strategies. Some of the responses were that PLCs are dynamic, interactive tools that help improve the ways in which teachers teach. PLCs enable teachers to constantly improve their methods and, in turn, produce good learning experiences for their students by encouraging cooperation, reflective practice, professional development, and access to resources and support.

Collaborative planning and using student data are two of the main conclusions drawn from the quantitative data from the paired samples test. Using

student data to guide instruction and collaborative planning by teachers through PLCs differ significantly from one another. The mean difference is negative (-0.339, p = 0.003), indicating that even when teachers work together, they might not think that PLCs have a direct impact on their data-driven teaching methods. This shows disconnect between group efforts and the real-world use of student data.

There was no apparent change in agreement between the two components of differentiated instruction and professional growth (mean difference = 0.009, p = 0.933). Although there is little direct connection between differentiated techniques and overall professional development through PLCs, teachers nevertheless view both as valuable. Professional growth and handling educational challenges: While PLCs foster growth, it's possible that they aren't thought to be very successful in addressing particular teaching challenges, as indicated by the slight decline in agreement (mean difference = -0.018, p = 0.847) between professional growth and effectiveness in handling challenges. These results indicate that while PLCs are generally seen as helpful for professional development, there may be some discrepancies in how they are perceived in respect to practical outcomes like data usage or overcoming obstacles.

A more comprehensive and personal view is provided by the qualitative insights gathered from interviews. Respondents such as (headteacher 1, 3, and 5) highlight the importance of PLCs in helping students acquire practical skills including lesson planning, registration marking, and working with a diverse student body. This individual focus is in contrast to the questionnaires' emphasis. Through

PLCs, head teachers emphasize the value of feedback and consultation, for example, Headteacher 4 stated topic assignments for feedback, and Headteacher 2 mentioned consultations on difficult themes. The quantitative outcomes of the paired samples test do not as strongly reflect these useful advantages. Headteachers are generally satisfied with PLCs as a professional development technique, highlighting the beneficial collaborative element, which is consistent with the quantitative data supporting PLCs' ability to foster professional development.

A more comprehensive insight of PLCs' daily functioning can be gained from the interview replies, which emphasize practical knowledge application and collaborative skills. In contrast, the questionnaire results present a broader picture of PLCs' effects. Teachers in the focus groups see PLCs as dynamic tools for professional development, developing instructional practices through reflective practice and cooperation. The focus group discussions support and elaborate on the qualitative data from the interviews. This is consistent with the questionnaire data's overall good assessment of PLCs. Teachers emphasize how PLCs may enhance instruction and provide students with positive learning experiences. While the data from the questionnaire indicates some discrepancy between collaborative practices and certain instructional aims, such as the use of student data, this practical focus aligns with the interview responses. The collective and dynamic viewpoint offered by focus group replies demonstrates that PLCs are viewed as continual instruments for instructional improvement and professional growth, with a focus on collaboration and reflective practice.

Table 10 examines the connection between the establishment of Professional Learning Communities (PLCs) and the professional experience of teachers. This table offers a thorough examination of the interactions and influences between these factors, providing insightful information on the efficacy of professional learning communities (PLCs) and the significance of teacher experience. By analyzing these relationships, the table seeks to illustrate important elements that support better educational achievements.

Table 10: The relationship Between PLCs implementation, the Teachers' experience in their profession.

STATEMENT	MEAN	STD. DEVIATION	N
How long have you been teaching?	3.55	1.456	109
The implementation of Professional Learning Communities (PLCs) in the school has led to the adoption of differentiated instructional strategies to meet the diverse needs of students.	3.34	1.241	109
The implementation of Professional Learning Communities (PLCs) positively influenced student engagement and participation in classroom activities.	3.54	1.127	109
Professional Learning Communities (PLCs) create more supportive learning environment for students.	3.44	1.182	109
The implementation of Professional Learning Communities (PLCs) has resulted in a more cohesive curriculum which improves the overall educational experience for students.	3.32	1.239	109
Professional Learning Communities (PLCs) have played a significant role in promoting a growth mindset among students.	3.46	1.159	109
The implementation of Professional Learning Communities (PLCs) has led to increased student motivation and a greater sense of ownership in their own learning.	3.63	1.160	109

Source: field survey 2024.

From table 10 the mean duration of teaching experience among the sample is 3.55 years, with a standard deviation of 1.456, indicating a moderate level of variability in teaching experience. Regarding the implementation of PLCs, the mean ratings vary slightly across different aspects, ranging from 3.32 to 3.63, with corresponding standard deviations suggesting varying degrees of dispersion around the means. Moving on to the regression analysis, the ANOVA table provides crucial insights into the overall significance of the model and the individual predictors. The regression model is highly significant ($F = 7.455$, $p < .001$), indicating that the implementation of PLCs collectively predicts variations in teachers' experience duration.

Individually, the predictors related to PLCs exhibit varying degrees of influence on teachers' experience duration. Notably, the adoption of differentiated instructional strategies (Mean = 3.34) and the promotion of a growth mindset (Mean = 3.46) seem to have a slightly lower average rating compared to other aspects. Conversely, the perception that PLCs enhance student motivation and ownership in learning (Mean = 3.63) appears to have the highest average rating among the predictors. These results suggest that while the implementation of PLCs collectively impacts teachers' experience duration, certain aspects may play a more significant role than others. Specifically, PLCs seem to have a particularly strong association with increased student motivation and ownership in learning, potentially indicating a profound impact on teaching practices and professional development. Furthermore, the variability in ratings across different aspects of PLC implementation underscores the nuanced nature of teachers' perceptions.

While PLCs may contribute positively to various facets of teaching and learning, their effectiveness could vary based on specific contexts and practices within educational institutions. The findings highlight the importance of PLCs in shaping teachers' experiences and fostering positive outcomes in education. Future research could delve deeper into the mechanisms through which PLCs influence teaching practices and explore strategies for optimizing their implementation to maximise their benefits for teachers and students comparable. Table 9 from the questionnaire data provides additional context for the analysis. It indicates that although the implementation of PLCs has a positive impact on areas like classroom engagement and student motivation which are the highest-rated in the data, teachers' perceptions of PLCs' effects on differentiated instruction and developing coherent curricula vary. Although PLCs are thought to encourage student ownership and a growth mentality, the variation in evaluations reveals that teachers' perspectives vary, especially when it comes to differentiated instruction.

All data sources focus groups, interviews, and questionnaires indicate that teachers see PLCs as helpful for their professional development. Yet, focus groups and interviews offer more detailed, real-world examples of how PLCs help teachers, whereas surveys highlight the gaps between group projects and the implementation of instruction. The value of cooperation, consultation, and feedback is emphasized in both the focus groups and the interviews; however, the questionnaire results, which place greater emphasis on the quantitative components of instructional techniques, slightly minimize its importance. Teachers' perceptions of Professional Learning Communities (PLCs) as very helpful in tackling educational issues appear to be at

odds with the questionnaires, whereas interviews and focus group discussions emphasize the importance of continuous learning, cooperation, and reflection as PLC advantages.

Focus groups and interviews provide a more realistic, skill-based perspective on PLCs with an emphasis on real-world classroom applications. On the other hand, differences are highlighted in the questionnaire results, which concentrate more on theoretical elements like data-driven instruction or tackling educational obstacles. Focus groups and interviews provide more detail about particular teacher experiences (like lesson planning and feedback), whereas questionnaire data stays at a higher level and identifies broad patterns as opposed to specific case studies.

In conclusion, while PLCs are helpful for teacher development, according to all data sources, the questionnaire identifies some gaps in particular educational outcomes, such as using data and overcoming obstacles. A more realistic picture of PLCs in action is given by the focus groups and interviews, which offer deeper, more useful insights into how teachers actually use PLCs to improve their everyday instructional practices and professional development. PLC efficacy could be increased by addressing the issues raised in the questionnaire.

4.3.4 Research Question 4 *What are the Challenges Primary School Teachers in the Karaga District face when Implementing PLCs.*

Table 11 lists and examines the several obstacles that Karaga district primary school teachers face while putting Professional Learning Communities (PLCs) into practice.

This chart offers a thorough summary of the challenges faced by teachers, including a lack of administrative support, insufficient resources, time restraints, and inadequate training. By drawing attention to these issues, the table hopes to raise awareness of the areas that require attention in order to successfully adopt PLCs and increase teachers' collaborative professional development.

Table 11: Challenges Primary School Teachers in the Karaga District face when Implementing PLCs.

S/N	STATEMENT	VALID	MISSING	MEAN
1	Time constraints is a challenge when participating in Professional Learning Communities (PLCs)	109	0	3.33
2	lack of clear communication within Professional Learning Communities (PLCs) is a problem	109	0	3.61
3	Limited resources (e.g., materials, technology) hinder the effective implementation of Professional Learning Communities (PLCs)	109	0	3.15
4	Resistance to change exists among teachers when it comes to adopting practices suggested within Professional Learning Communities (PLCs)	109	0	3.29
5	There was insufficient training and support provided for teachers prior to the implementation of Professional Learning Communities (PLCs).	109	0	3.18
6	Poor participation levels among teachers in Professional Learning Communities (PLCs) are affecting the overall effectiveness of collaborative efforts.	109	0	3.15

Source: field survey 2024

The table 11 above presents results of the challenges that primary school teachers in the Karaga District encounter when implementing Professional Learning Communities (PLCs). Each challenge is rated on a scale from "Strongly Disagree" to "Strongly Agree," with the mean score indicating the level of disagreement or agreement among respondents. The mean score of 3.33 suggests that, on average, respondents lean towards agreement with the statement that time constraints are a challenge when participating in PLCs. This indicates that teachers perceive time limitations as somewhat of an obstacle, although not overwhelmingly so. With a mean score of 3.61, the challenge of lack of clear communication within PLCs is notably significant. Teachers tend to strongly agree that communication barriers hinder effective collaboration and knowledge sharing within PLCs. This suggests that improving communication channels within PLCs is crucial for enhancing their effectiveness. The mean score of 3.15 indicates that respondents generally agree that limited resources, such as materials and technology, hinder the effective implementation of PLCs. Not pronounced like lack of clear communication, however, this challenge is still perceived as a significant barrier to successful PLC implementation. Teachers tend to agree, with a mean score of 3.29, that resistance to change exists among teachers when it comes to adopting practices suggested within PLCs. This suggests that overcoming resistance to change is a key factor in ensuring the successful adoption and implementation of new practices and strategies within PLCs. The mean score of 3.18 indicates that respondents agree that there was insufficient training and support provided for teachers prior to the implementation of PLCs. This highlights the importance of comprehensive professional development

opportunities tailored to teachers' needs to ensure the successful implementation of PLC initiatives.

With a mean score of 3.15, poor participation levels among teachers in PLCs are perceived as a significant challenge affecting the overall effectiveness of collaborative efforts. This underscores the importance of fostering a culture of active engagement and participation within PLCs to maximize their impact on teacher growth and student learning outcomes. The findings from this table suggest that primary school teachers in the Karaga District face several challenges when implementing PLCs, including time constraints, lack of clear communication, limited resources, resistance to change, insufficient training and support, and poor participation levels. Addressing these challenges requires concerted efforts to improve communication, provide adequate resources and support, overcome resistance to change, and foster a culture of active participation within PLCs. By addressing these challenges, stakeholders can enhance the effectiveness of PLCs in promoting teacher growth and improving student learning outcomes in the Karaga District.

The responses provided through the qualitative data, offer a diverse array of perspectives on the challenges encountered when implementing Professional Learning Communities (PLCs) within educational settings. headteacher 1: This respondent highlights two significant challenges: *lack of participation and lateness to meetings"* (headteacher 1, interview, February, 2024). These challenges directly affect the collaborative nature of PLCs. Lack of participation can hinder the

exchange of ideas, collaboration, and collective problem-solving essential for PLC effectiveness. Similarly, lateness to meetings disrupts schedules and can impede the flow of discussions; potentially diminishing the overall productivity and effectiveness of PLCs. Addressing these challenges may require fostering a culture of accountability, emphasizing the importance of active participation and punctuality within the PLC framework.

Respondent 2: Interestingly, this respondent reports no challenges encountered during PLC implementation. While this response may indicate a positive experience, it could also suggest a potential lack of awareness or acknowledgment of existing challenges. Further exploration may be warranted to understand the factors contributing to this perception and whether there are hidden obstacles that need to be addressed. Headteacher 3: Similar to headteacher 2, headteacher 3 also reports no challenges and views PLC implementation as an integral part of their work as teachers. This perspective underscores the value and seamless integration of PLCs into the professional responsibilities of teachers. However, it's essential to ensure that this perception is reflective of a genuine absence of challenges rather than a reluctance to acknowledge existing issues. Respondent 4 identified two key challenges: *"lack of instructional materials and limited availability of teachers in schools"* (headteacher 4 interview, 2024). The absence of adequate instructional materials can hinder lesson planning, curriculum development, and the implementation of effective teaching strategies within PLCs. Additionally, the shortage of teachers may limit the diversity of perspectives and expertise available for collaboration, potentially impacting the quality and depth of

discussions within PLC meetings. Addressing these challenges may necessitate resource allocation, strategic planning, and collaboration with educational stakeholders to enhance access to materials and support teacher recruitment efforts.

SISO 5 outlines several challenges, including *"time constraints, workload un timely release of TLRs to organize PLCs, and a dominance of theoretical discussions over practical applications in PLC meetings"* (SISO 5, interview, February 2024). Time constraints and inadequate TLRs can restrict the frequency and duration of PLC meetings, limiting opportunities for collaboration and professional development. Moreover, a discrepancy between theoretical discussions and practical applications may hinder the translation of insights gained within PLCs into actionable strategies for classroom practice. Addressing these challenges may require revisiting scheduling policies, providing sufficient resources and support for PLC facilitators, and promoting a balance between theoretical and practical discussions within PLCs.

The challenges highlighted by respondents underscore the complex nature of PLC implementation and the diverse obstacles that teachers may encounter in collaborative professional development efforts. Addressing these challenges requires a holistic approach, encompassing organizational support, resource allocation, and a commitment to fostering a culture of collaboration and continuous improvement within educational institutions. By recognizing and addressing these challenges, teachers can enhance the effectiveness and impact of PLCs in promoting teacher growth and student learning outcomes. Both focus group discussions and individual

responses highlighted issues related to teacher motivation and participation. Teachers expressed concerns about colleagues lacking motivation and willingness to participate in professional development activities such as PLCs. Headteacher 1 "*Well, speaking from my own experience, I've noticed that some teachers seem to lack motivation in our district. It's disheartening because motivated teachers are crucial for creating a positive learning environment for our students"* (Headteacher 1 interview, February 2024). *Headteacher 2 added: "I agree. I've seen instances where some teachers just go through the motions without putting in the effort to engage with their students* (Headteacher 2 interview, February 2024).

Time constraints emerged as a significant challenge in both sets of findings. Teachers noted the time-consuming nature of PLCs and the inadequacy of time, task, and workload un timely release of TLRs to organize and participate in these activities effectively. SISO 4, *"It's frustrating when we don't have enough time or resources to fully commit to PLCs. We end up rushing through discussions and don't have the opportunity to delve deep into important topics"* (SISO 4 interview, February 2024). Headteacher 8 "*And without adequate TLRs, it's hard to justify spending extra time outside of our regular duties to participate in PLCs. ''It puts a strain on our already busy schedules"* (headteacher 8, interview, February 2024). *Headteacher 9, "Funding challenges and materials shortages make it difficult to provide quality education for our students. We often have to make do with limited resources, which can hinder student engagement and achievement"*(headteacher 9 interview, February 2024). *Headteacher 10 and when we don't have the necessary teaching and learning materials, it affects the effectiveness of PLC sessions. We can't*

fully implement the strategies we discuss if we don't have the right resources (Headteacher 10 interview, February 2024). *Headteacher 11, when we don't have the necessary materials during PLC sessions, it's hard to stay focused and engaged. We end up getting distracted and wasting valuable time* (Headteacher 11, interview, February 2024).

The focus group discussions and individual responses highlighted issues related to teacher motivation and participation. Teachers expressed concerns about colleagues lacking motivation and willingness to participate in professional development activities such as PLCs. Time constraints emerged as a significant challenge in both sets of findings. Teachers noted the time-consuming nature of PLCs and the inadequacy of time, task, and workload release (TLRs) to organize and participate in these activities effectively. Funding challenges, materials shortages, and lack of teaching and learning materials were common themes in both discussions. Teachers expressed frustrations about the impact of these resource constraints on their ability to deliver quality education and engage in meaningful PLC sessions. While some challenges were consistent across both sets of findings, there were differences in the specific challenges mentioned. For example, individual respondents highlighted issues such as lateness to meetings and instructional materials shortages, whereas the focus group discussion emphasized challenges related to children roaming about during PLC sessions and the dominance of theoretical discussions over practical applications.

The focus group discussion allowed for a deeper exploration and elaboration of the challenges faced by teachers in the Karaga District. Participants had the opportunity to share their perspectives, engage in dialogue, and provide context to their responses, leading to a richer understanding of the issues at hand. The discussion captured a broader range of perspectives compared to individual responses. Participants shared insights from their own experiences and engaged in collaborative sense-making, leading to a more comprehensive examination of the challenges facing teachers in the district.

Additional evidence was taken from the minutes on PLCs meetings the minutes of the meeting shed light on the challenges encountered by teachers in the Karaga District. Among the primary challenges discussed were funding constraints and a shortage of teaching and learning materials (TLM). The document highlights funding as a significant obstacle faced by teachers in the Karaga District. Lack of adequate financial resources hinders the smooth functioning of educational activities (PLC meeting book August 2023) Insufficient funding impacts various aspects of education, including infrastructure development, teacher training programs, and extracurricular activities. The minutes suggest a need for increased financial support from relevant authorities or stakeholders to address the funding gap effectively.

Another notable challenge outlined in the document pertains to the scarcity of teaching and learning materials (TLM). Teachers in the Karaga District are confronted with a dearth of essential instructional resources necessary for delivering quality education. The absence of TLM impedes the effectiveness of teaching

methods and limits students' access to diverse learning experiences. The minutes underscore the critical need to address the materials challenge by procuring adequate resources to support teaching and learning activities in schools.

The information from document 6 emphasizes the issue of insufficient teaching and learning materials (TLM) which can also be seen in the Karaga District. Key points from Document 6 include: *Instructional Materials are lacking;* teachers face significant obstacles due to the absence of essential instructional materials required for effective teaching (PLC meeting book 2023). The lack of TLM undermines the quality of education delivery and limits teachers' ability to engage students in meaningful learning experiences. The documents stated urgent need to address the shortage of teaching and learning materials to enhance the overall educational outcomes in the Karaga District. However the leadership in the schools within the district are guided by the PLC meeting book and the resource pack for conducting the activities of the professional learning communities.

Regarding the difficulties primary school teachers encounter in implementing Professional Learning Communities (PLCs) in the Karaga District, a number of similarities and differences can be seen when contrasting the results from the quantitative data in Table 10 with the qualitative responses from focus groups and interviews. The average response to the question "Time constraints is a challenge when participating in PLCs" was 3.33, suggesting that people view time as a modest barrier to PLC involvement. In interviews, respondents frequently cited time restrictions as a barrier. For example, SISO 5 stated that their workload and "time

constraints" hindered their capacity to fully engage in PLCs. Teachers confirmed the quantitative findings by expressing frustration at not having enough time to devote to detailed conversations.

The average score of 3.15 for the statement "Limited resources hinder the effective implementation of PLCs" indicates that teachers' main worries were related to technology and limited materials. Participants in focus groups and individual interviews both underlined the lack of teaching and learning materials (TLM). In line with the quantitative results, Headteacher 4 reported a "lack of instructional materials," and the PLC meeting minutes similarly emphasized the scarcity of resources as a major obstacle.

"Poor participation levels among teachers" had a mean score of 3.15, indicating recognition of the issue, albeit not the top rating. Issues with motivation and involvement came up in both focus groups and interviews. Headteacher 1 observed that certain teachers lacked enthusiasm, and SISO 5 confirmed the quantitative results by pointing out that low participation was a factor limiting PLC effectiveness.

The category "Lack of clear communication" had a mean score of 3.61, indicating a high degree of agreement that obstacles to communication are a serious problem. This opinion was reinforced by a number of interviewers, who frequently mentioned that arranging and leading PLC sessions was difficult due to inadequate communication. For instance, Headteacher 1 brought up the possibility that poor communication was the cause of tardiness to meetings.

With a mean score of 3.29, teachers' agreement that resistance to change is a problem is moderate. Interviews and focus groups placed less emphasis on this particular difficulty. Rather than cultural resistance to new methods, participants instead concentrated more on the logistical challenges, like a shortage of supplies and time restraints.

Teachers found the lack of training and assistance prior to PLC implementation to be challenging, as indicated by the mean score of 3.18, which indicates a moderate agreement.
The qualitative data did not reveal a clear pattern of inadequate training. There were few direct allusions to inadequate initial training, despite the fact that some respondents mentioned difficulties such as the requirement for practical application in PLC discussions. This raises the possibility that the two data sets' perceptions differ from one another.

The disparity between theoretical talks and real-world applications in PLC sessions emerged as a major subject in the qualitative replies, especially in the interviews with SISO 5 and other participants. PLC sessions frequently tended to concentrate more on theory than on workable solutions, according to SISO 5. There was a discrepancy between the structured survey results and the nuanced insights from interviews and discussions since this issue was not specifically measured in the quantitative data.

While participation levels were generally covered by the quantitative data, certain issues were brought up in the interviews, such as meeting tardiness and how

it affects teamwork. Headteacher 1 and others brought out the impact this had on the general productivity and flow of the conversations. According to the qualitative comments, one important element affecting PLC performance is teacher motivation. Headteacher 1 underlined this point in particular, pointing out that low motivation among certain teachers has a detrimental effect on PLC effectiveness. Since this problem was not quantified in the quantitative survey, it's possible that fewer people reported it when structured data was being gathered.

The quantitative and qualitative data highlight the importance of time restrictions, resource scarcity, and communication hurdles as major obstacles to PLC implementation. Qualitative insights, on the other hand, offer a more complex picture by emphasizing real-world challenges including teacher tardiness, the necessity of striking a balance between theory and practice, and motivational concerns. These qualitative results provide a richer context and highlight concerns that organized surveys could miss, which enhances the quantitative data. Improving the efficacy of PLCs in the Karaga District will require addressing the more general as well as the more focused issues noted in both data sets.

4.4 Discussions

4.4.1 Research Question 1: *What are the attitudes of primary school teachers towards Professional Learning Communities (PLCs) implementation in the Karaga District?*

The attitudes of teachers toward the implementation of professional learning communities (PLCs) are crucial determinants of the success or failure of such

initiatives. These attitudes can significantly influence the level of collaboration, engagement, and effectiveness within PLCs. First of all, the results in this study align with the literature indicating that positive attitudes are essential for effective PLC implementation (Vescio, Ross, & Adams, 2008). Both male and female respondents demonstrate generally favorable attitudes towards collaborative learning platforms, indicating a willingness to engage and participate in PLC activities. The literature suggests that good attitudes towards PLCs can lead to improved teaching practices and greater professional growth (Vescio, Ross, & Adams, 2008). The positive attitudes observed among respondents indicate a potential for beneficial effects on educational outcomes through collaborative learning and knowledge exchange within PLCs. The results in this study validate the literature's findings that participation in PLCs positively impacts teachers' thinking and attitudes (Padwad, 2008).

In addition, the study is consistent with existing studies (Akhir, 2020; Padwad, 2008), the majority of respondents in the study exhibited positive attitudes towards PLCs. Factors such as consistent attendance, active participation, and willingness to engage in discussions align with literature indicating that positive attitudes are crucial for successful PLC implementation. While the literature emphasizes the importance of positive attitudes, the study also reveals instances of negative attitudes among teachers. Concerns such as unwillingness to attend meetings, lateness, and lack of active participation indicate challenges in fostering a culture of commitment and engagement within PLCs. The study confirms the importance of positive attitudes in PLC implementation it also identifies challenges

that need to be addressed to maximize the potential of PLCs. By acknowledging both positive and negative attitudes and implementing proactive measures to address challenges, stakeholders can create a more inclusive and supportive environment that fosters collaboration and improves teaching practices and student outcomes within PLCs.

4.4.2 Research question 2: *What is the level of support school leaders provide in the implementation of Professional Learning Communities (PLCs) in the Karaga District?*

The level of support provided by school leaders in the implementation of professional learning communities (PLCs) is instrumental in determining the success and effectiveness of these PLC implementation. Both the literature review and the results in this study emphasize the crucial role of school leaders, particularly principals, in facilitating effective Professional Learning Communities (PLCs). The literature highlights the importance of leadership in fostering a collaborative environment, establishing a shared vision, and promoting continuous improvement (Harris & Jones, 2010; Buttram & Farley-Ripple, 2016). The results confirm this by showcasing the active involvement of school leaders in providing direction, support, and resources for PLCs.

The literature highlights the role of leaders in promoting collaboration among teachers within PLCs (Buttram & Farley-Ripple, 2016). Similarly, the results demonstrate how school leaders actively encourage and participate in PLC activities, creating a supportive environment conducive to collaboration and professional growth.

4.4.3 Research Question 3 *What is the effect of Professional Learning Communities (PLCs) implementation on the instructional practices of primary school teachers in the Karaga District?*

The findings from this study and the literature confirm that Professional Learning Communities (PLCs) have a positive impact on teachers' instructional practices. Researchers like Atta (2015), Lumpe (2007), and Barton and Stepanek (2012) highlight how PLCs enhance teaching strategies, promote collaboration, and lead to improved student outcomes. The literature and the survey results both emphasize the importance of collaboration within PLCs. Studies by Lumpe (2007), Barton and Stepanek (2012), and Vescio, Ross, and Adams (2008) underscore how collaborative discussions and shared experiences among teachers within PLCs contribute to professional growth and improved instructional practices. The findings from the study contradict the existing literature, which predominantly suggests a positive impact of PLCs on teachers' ability to use student data for instructional purposes. Previous research has emphasized the role of reflective dialogue and virtual PLCs in facilitating this enhancement (Penner-Williams, 2017; McConnell, 2013). However, the discrepancy between the study results and the literature suggests potential challenges or limitations in the implementation of PLCs that hinder their effectiveness in this regard.

The study's findings align with the literature regarding the positive impact of PLC participation on teachers' professional growth. Existing research emphasizes the role of PLCs in promoting collaboration, sharing best practices, and engaging in

continuous learning (Ratts, 2016; Vescio, 2008). Despite the lack of specificity in focusing on differentiated instruction, teachers still perceive PLC participation as beneficial for their overall professional development. The agreement regarding the effectiveness of PLCs in addressing educational challenges echoes some concerns raised in the literature. While PLCs are often lauded for their potential to address various educational issues, including improving student achievement and fostering a positive school culture (Doğan, 2018; Marsh, 2015), the findings suggest that teachers may not fully perceive PLCs as highly effective in overcoming broader educational challenges.

The comparative analysis between the study results and existing literature sheds light on the nature of PLCs' impact on teachers' instructional practices and professional growth. While some findings confirm the positive outcomes associated with PLC participation, particularly in terms of professional growth, others highlight potential discrepancies or challenges that warrant further investigation. Addressing these discrepancies and refining PLC structures and practices could enhance their effectiveness in supporting teacher development and improving educational outcomes.

4.4.4 Research Question 4 *What are the Challenges Primary School Teachers in the Karaga District face when Implementing PLCs.*

The results from the survey conducted in the Karaga District further support the challenges identified in the literature (Talbert, 2009; Harris & Jones, 2010; Antinluoma et al., 2018; Morrissey, 2000; Fulton & Britton, 2011; Pirtle & Tobia,

2014). Primary school teachers in the district perceive time constraints, lack of clear communication, limited resources, resistance to change, insufficient training and support, and poor participation levels as significant obstacles to effective PLC implementation. These findings align with the literature, indicating a consensus among teachers regarding the prevalent challenges faced by PLCs (Talbert, 2009; Harris & Jones, 2010; Antinluoma et al., 2018; Morrissey, 2000; Fulton & Britton, 2011; Pirtle & Tobia, 2014). Addressing these challenges requires a comprehensive approach involving systemic change, effective leadership, collaborative culture, resource allocation, professional development, and active participation (Talbert, 2009; Harris & Jones, 2010; Antinluoma et al., 2018; Morrissey, 2000; Fulton & Britton, 2011; Pirtle & Tobia, 2014). By proactively addressing these challenges, stakeholders can enhance the effectiveness of PLCs as transformative spaces for teacher collaboration, professional growth, and improved student outcomes (Talbert, 2009; Harris & Jones, 2010; Antinluoma et al., 2018; Morrissey, 2000; Fulton & Britton, 2011; Pirtle & Tobia, 2014).

Last but not the least, the study looks into the attitudes of primary school teachers, the extent of support from school leaders, the influence on teaching methodologies, the academic achievements of children, and the obstacles encountered during the establishment of Professional Learning Communities (PLCs) in the Karaga District. The study reveals that teachers have, on the whole, favourable opinions about PLCs. This is consistent with literature that suggests positive attitudes are essential for the successful implementation of PLCs. In addition, according to the research and study findings, school leaders, principals in particular play a critical

role in enabling successful PLCs by offering guidance, resources, and support. Furthermore, on instructional practices, although there are contradictions in the research on the use of student data for instructional purposes, as well as suggesting possible implementation difficulties, PLCs have a favourable effect on teacher instructional practices. Moreso, on the learning outcomes for Students, the study demonstrates that the deployment of PLCs has a favourable effect on students' learning outcomes, highlighting processes including teacher cooperation, individualized teaching, and professional development. Also, on challenges faced in PLC implementation, the research finding is consistent with the previous research; difficulties with time management, communication, and resource scarcity, reluctance to change, inadequate training, and low participation rates are among the difficulties noted.

CHAPTER FIVE

Summary, Conclusion, and Recommendations

5.1 Introduction

This chapter presents summary of the findings, conclusions, and recommendations derived from the study conducted on the attitudes of primary school teachers towards Professional Learning Communities (PLCs) implementation in the Karaga District.

5.2 Summary of Findings

The study on the attitudes of primary school teachers towards Professional Learning Communities (PLCs) implementation in the Karaga District revealed both positive and negative sentiments among respondents. While the majority expressed positive views toward PLC implementation, some highlighted concerns about negative attitudes among certain teachers. The study unearthed several positive observations regarding teachers' attitudes towards PLCs. The majority of teachers demonstrated a commendable level of commitment, as evidenced by consistent attendance, active participation, and a genuine willingness to engage in discussions. Emphasis was placed on the respectful exchange of views, underscoring the creation of a conducive environment for sharing ideas and strategies for professional growth and development.

However, amidst the positivity, the study also shed light on concerns regarding negative attitudes among certain teachers. Instances of reluctance to attend meetings and habitual lateness were identified as indicators of disinterest or lack of commitment toward PLC activities. Furthermore, some teachers were noted for their

passive engagement, failing to exhibit initiative or enthusiasm even when physically present at meetings, thereby hindering the collaborative efforts essential for effective PLC implementation. Delving into the examination of attitudes among male and female teachers, interesting patterns emerged. Both genders expressed a generally favorable attitude towards the essence of sharing knowledge and experiences within PLCs, although females exhibited a slightly higher level of enthusiasm in this regard. Notably, male teachers showcased a greater readiness to actively participate and collaborate within PLCs compared to their female counterparts, reflecting a disparity in engagement levels.

Moreover, male respondents displayed higher confidence in their ability to contribute meaningfully to PLC discussions, suggesting a heightened sense of self-assurance and perceived efficacy in their professional capacities. Interestingly, while both genders acknowledged PLCs as fostering a sense of community among teachers, females showcased a more favorable perception of PLCs as supportive platforms for sharing innovative strategies. However, gender-based differences surfaced when it came to satisfaction levels derived from collaborating within PLCs. Male teachers expressed slightly lower satisfaction compared to females, hinting at varying experiences and perceptions of collaborative endeavors within the professional learning community.

The research also investigates the level of support provided by school leaders in the effective implementation of Professional Learning Communities (PLCs) in the Karaga District. A survey of 109 participants confirmed positive perceptions of

school leaders' support for PLCs across various dimensions, including effective communication, availability for guidance, commitment to fostering collaboration, allocation of financial and human resources, and active participation in PLC activities.

In addition, interviews, focus group discussions, and document analysis further confirmed that several key findings emerged. The findings revealed that school leaders play a crucial role in providing Teaching and Learning Materials (TLMs) to facilitate meaningful discussions and activities during PLC meetings. This support ensures that teachers have the necessary resources for engaging in PLC activities effectively. Again, headteachers' involvement is vital in providing direction and guidance, refreshing participants' understanding of PLC objectives, and ensuring teachers have access to support during meetings. The results indicated that school leaders' consistent communication and reminders about PLC meetings are essential for ensuring regular attendance and participation. Their attendance at meetings demonstrated commitment to the process and encouraged teacher involvement. Furthermore, school leaders' encouragement and recognition of teachers' efforts in participating in PLCs are seen as demonstrations of support and importance for professional development. Across all respondents, there is a consistent theme of school leaders actively encouraging and participating in PLC activities, demonstrating their commitment to the process and reinforcing its importance to teachers.

The research examined the impact of Professional Learning Communities (PLCs) implementation on the instructional practices of primary school teachers in the Karaga District. Both quantitative and qualitative data highlights several key themes. Respondents acknowledge that PLCs provide learning opportunities and skill development for teachers. These include handling bright students, lesson preparation and evaluation, and practical skills such as marking and register management. PLCs facilitate broader consultations and feedback exchange among teachers, allowing for the sharing of knowledge, ideas, and constructive feedback. Respondents express positive perceptions of PLCs, viewing them as beneficial strategies for professional development and instructional improvement. The results also, indicated that PLCs promote professional growth among teachers, accountability, and a deeper understanding of students' needs. Respondents emphasized the role of PLCs in creating a supportive learning environment, increasing student engagement and motivation, and promoting a growth mindset among students. Regression analysis revealed a significant relationship between PLC implementation and teachers' experience duration. The adoption of differentiated instructional strategies and the promotion of a growth mindset were identified as key factors associated with PLCs, indicating their potential to impact teaching practices and professional development positively. The respondents also provided varied perspectives on the effects of PLCs, with some offering specific examples while others gave more general affirmations. Specifically, respondents 1 and 3 highlighted how PLCs improve teaching strategies, address student challenges effectively, and enhance student learning outcomes through alternative teaching methods and

improved question skills. In contrast, respondents 2, 4, and 5 provided more generalized statements without specific examples. The study found that PLC implementation positively influences various aspects of teaching and learning. It fosters collaboration among educators, leading to improved lesson planning and tailored instruction to meet students' needs.

Finally, the study examined the challenges faced by teachers in the Karaga District when implementing Professional Learning Communities (PLCs). Respondents highlighted various obstacles, including lack of participation, lateness to meetings, lack of instructional materials, limited availability of teachers, time constraints, inadequate task and workload release, the dominance of theoretical discussions over practical applications, resistance to change, and insufficient training and support. Some respondents identified lack of participation and lateness to meetings as significant challenges, hindering collaboration and collective problem-solving essential for PLC effectiveness. Others reported no challenges, suggesting a potential lack of awareness or acknowledgment of existing obstacles. However, challenges such as lack of instructional materials, limited availability of teachers, time constraints, and inadequate TLRs were noted, impacting the frequency and duration of PLC meetings and hindering collaboration and professional development. Funding constraints and material shortages were common themes, affecting lesson planning, curriculum development, and the implementation of effective teaching strategies. Additionally, resistance to change and insufficient training and support were highlighted, suggesting the need for comprehensive professional development opportunities tailored to teachers' needs.

In summary the findings showed that the Karaga District's primary school teachers' opinions on PLCs were not entirely uniform. Some displayed negative attitudes, such as a reluctance to attend meetings, tardiness, and passive engagement, while the majority expressed commitment through frequent attendance and active participation. The efficiency of PLCs was hampered by these unfavorable views, which are consistent with the Instructional Improvement Theory's assertion that teachers' active engagement and dedication are essential for long-term professional development. Teachers who were less engaged may have found it challenging to benefit from the collaborative environment, which is essential for implementing instructional improvements. The conceptual framework highlights that teacher attitudes directly influence the success of PLCs, as they are the primary participants in the process of professional development and knowledge sharing.

The beneficial contribution of school leaders to PLC assistance was one of the main conclusions. To promote teacher participation, school administrators attended sessions, shared information about PLC meetings on a regular basis, and supplied necessary materials such as Teaching and Learning Materials (TLMs). This is in line with the Instructional Improvement Theory, which highlights the necessity of capable leadership in directing and assisting teachers in their professional growth. School leadership has a crucial role in fostering an atmosphere that supports PLC success, as the conceptual framework emphasizes (Harris and Jones 2010). Allocating resources, establishing the vision for professional development, and encouraging collaboration are all crucial tasks for principals and other school administrators (Buttram and Farley-Ripple 2016). Effective leadership is essential to

overcoming obstacles and guaranteeing PLC success, as demonstrated by the study's findings.

According to the study, PLCs had a good effect on teaching methods by improving teachers' ability to plan lessons, attend to students' needs, and provide a cooperative setting for exchanging feedback. This has a direct bearing on the instructional improvement theory, which contends that reflective practice, feedback, and teamwork are the keys to ongoing teaching improvement. As a forum for group knowledge, PLCs enabled teachers to have fruitful discussions that enhanced their methods, which in turn benefited students. This is in line with the conceptual framework's emphasis on the value of PLCs in enhancing teaching methods and student results.

The study also found a number of obstacles to PLC implementation, such as low participation, a lack of teaching resources, time restraints, and change aversion. Some of the systemic obstacles mentioned in the theoretical and conceptual frameworks are reflected in these difficulties. According to the literature, PLC efficacy can be severely hindered by bureaucratic regulations, time constraints, and resource shortages (Talbert, 2009; Harris & Jones, 2010). These obstacles fit well with the conceptual framework's emphasis on the difficulties teachers encounter when implementing PLCs. In order to create an atmosphere where PLCs may thrive and accomplish their intended aims, it is imperative that these obstacles be overcome.

In conclusion a thorough grasp of the dynamics of PLC implementation is provided by the integration of the study findings with the theoretical framework (Instructional Improvement Theory) and conceptual framework (teacher attitudes, leadership support, instructional practices, and difficulties). PLCs have the potential to be a technique for ongoing professional development, as evidenced by their favorable effects on teachers' instructional practices and student outcomes. Nonetheless, the difficulties noted such as low participation, time restraints, and resource shortages point out areas in need of development. These observations add to the expanding body of research on PLCs and have beneficial effects for policymakers and school administrators who want to improve PLC efficacy in basic schools. PLCs can better assist teachers in their professional development and enhance student learning outcomes by tackling the issues and expanding leadership support, as both the conceptual framework and the Instructional Improvement Theory suggest. So therefore, PLCs have a lot to offer in terms of teacher working together, professional development, and student results, overcoming obstacles like those that the study pointed out is crucial for maximizing their effectiveness. Stakeholders may increase the transformational potential of PLCs in the Karaga District by proactively addressing these issues via systemic change, strong leadership, and cooperative efforts.

5.3 Conclusion

The study on primary school teachers' attitudes towards Professional Learning Communities (PLCs) in the Karaga District revealed positive views towards PLC implementation; concerns about negative attitudes among certain

teachers were also highlighted. On one hand, the majority of teachers showed commendable commitment through consistent attendance, active participation, and willingness to engage in discussions within PLCs. This emphasized the creation of a conducive environment for sharing ideas and strategies aimed at professional growth. However, challenges such as reluctance to attend meetings, habitual lateness, and passive engagement were noted among some teachers, hindering collaborative efforts essential for effective PLC implementation. Gender-based differences in attitudes towards PLCs were observed, with both male and female teachers expressing generally favorable views. While females showed slightly higher enthusiasm for sharing knowledge, males exhibited greater readiness to participate actively and contribute meaningfully to discussions. School leaders played a crucial role in supporting PLCs by providing resources, guidance, communication, and encouragement for teachers' participation. Their involvement demonstrated commitment to the process and reinforced the importance of PLCs for professional development.

The impact of PLC implementation on instructional practices was also positive, with respondents acknowledging opportunities for skill development, broader consultations, knowledge sharing, and instructional improvement facilitated by PLCs. Despite the positive aspects, challenges such as lack of participation, lateness, inadequate resources and time constraints, resistance to change, and insufficient training and support were identified. Addressing these challenges requires concerted efforts from stakeholders to improve communication, provide resources, overcome resistance, and foster a culture of active participation within

PLCs. Overall, while PLCs offer valuable opportunities for professional growth and instructional improvement, addressing challenges effectively is essential to maximizing their impact on teacher development and student learning outcomes in the Karaga District.

5.4 Recommendations

Based on the findings of the study on primary school teachers' attitudes towards Professional Learning Communities (PLCs) in the Karaga District, several recommendations can be made to address the identified challenges and enhance the effectiveness of PLC implementation. To start with, headteachers need to develop strategies to address negative attitudes, such as reluctance to attend meetings or passive engagement, through targeted interventions and professional development programs. Provide incentives or recognition for active participation and contributions within PLCs to motivate teachers and foster a culture of engagement. In addition, implement initiatives to promote gender equity in PLC participation, ensuring that both male and female teachers have equal opportunities for involvement and leadership roles. Provide targeted support and encouragement for female teachers to enhance their confidence and active participation within PLCs.

Furthermore, School Improvement Support Officers (SISOs) should provide training for school leaders on effective facilitation and support for PLCs, emphasizing the importance of communication, resource allocation, and active participation. Encourage school leaders to consistently communicate the importance of PLCs, provide necessary resources, and recognize teachers' efforts to participate in

PLC activities. More so, headteachers allocate sufficient resources, including instructional materials, time, and support staff, to facilitate meaningful discussions and activities during PLC meetings. Headteachers should collaborate with educational stakeholders and authorities to address funding constraints and ensure adequate provision of teaching and learning materials. Again, the district training officer need to offer comprehensive training and professional development opportunities for teachers prior to PLC implementation, focusing on building capacity in collaborative practices, instructional strategies, and effective communication. Provide ongoing support and mentorship for teachers participating in PLCs, addressing specific needs and challenges encountered during implementation.

Last but not least, Curriculum Leads need to facilitate discussions within PLCs that emphasize practical applications of learning and problem-solving strategies, encouraging teachers to translate insights gained into actionable practices in the classroom. Foster a culture of innovation and creativity within PLCs, encouraging teachers to share and implement innovative teaching strategies to address student challenges effectively. In conclusion, SISOs should establish regular evaluation processes to assess the effectiveness of PLCs, gathering feedback from teachers, school leaders, and other stakeholders to identify areas for improvement. Use feedback to adapt and refine PLC structures, practices, and support mechanisms to better meet the needs of teachers and promote continuous improvement.

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UNIVERSITY FOR DEVELOPMENT STUDIES
FACULTY OF EDUCATION
QUESTIONNAIRES AND INTERVIEW QUESTIONS FOR SELECTED KARAGA DISTRICT PUBLIC PRIMARY SCHOOLS TEACHERS
RESEARCH INVITATION LETTER

Dear Sir/Madam,

I am a student of the University for Development Studies, where I am pursuing a Master of Philosophy (Training and Development) degree. In partial fulfillment of the degree requirements, I am undertaking a study on "Assessing the Implementation Process of Professional Learning Community (PLC) among Primary School Teachers in Northern Ghana" as part of my study course.

I would be happy if you could help me out by answering these interview questions and questionnaires for me. Please be assured that your names and confidentiality are protected during this process. Thank you very much.

Yours sincerely,

udent)

RSITY FOR DEVELOPMENT STUDIES
FACULTY OF EDUCATION
R SELECTED PRIMARY SCHOOLS TEACHERS IN THE KARAGA DISTRICT.

SECTION A: BIO DATA

1. Gender:

a) Male [ ] (2) Female [ ]

2. Age:
   a) 25–30 years [ ]
   b) 31–36 years [ ]
   c) 37–42 years [ ]
   d) 43–48 years [ ]
   e) 49-54 years [ ]
   f) Above 55 years [ ]

3. Highest Education attained:
   a) SSSCE/WASSCE [ ]
   b) Certificate/Diploma/HND [ ]
   c) First Degree (BA, BSc, B.Ed, etc) [ ]
   d) Second Degree (M.A., M.Sc, M.Phil, M.Ed, MBA, etc) [ ]
   e) Other [ ]

4. Professional status:
   a) Certificate/Diploma Professional teacher [ ]
   b) Certificate/Diploma non-professional teacher [ ]
   c) Graduate professional teacher [ ]
   d) Graduate non-professional teacher [ ]

5. How long have you been teaching?
   a) 1 – 5 years [ ]
   b) 6 – 10 years [ ]
   c) 11 – 15 years [ ]
   d) 16 – 20 years [ ]
   e) Above 20 years [ ]

Note: please rate yourself in Professional Learning Communities (PLCs) on a scale of being strongly negative and being strongly positive. Where SD stand for Strongly Disagree, D is Disagree, N is Neutral, A is Agree and SA is Strongly Agree.

S/N	STATEMENT	SCALE				
	SECTION B: ATTITUDES OF PRIMARY SCHOOL TEACHERS IN PROFESSIONAL LEARNING COMMUNITIES (PLCS) IMPLEMENTATION IN KARAGA DISTRICT.	SD	D	N	A	SA
1.	There is value in sharing knowledge and experiences with other teachers within the Professional Learning Community.	☐	☐	☐	☐	☐
2.	I am willing to actively participate and collaborate with my colleagues in the implementation of Professional Learning Communities.	☐	☐	☐	☐	☐
3.	I am confident in my ability to contribute meaningfully to Professional Learning Communities discussions.	☐	☐	☐	☐	☐
4.	I view Professional Learning Communities as a supportive platform for sharing innovative strategies among teachers.	☐	☐	☐	☐	☐
5.	Professional Learning Communities foster a sense of community among teachers.	☐	☐	☐	☐	☐
6.	There is satisfaction in collaborating with colleagues through Professional Learning Communities.	☐	☐	☐	☐	☐
	SECTION C: LEVEL OF SUPPORT SCHOOL LEADERS PROVIDE IN THE IMPLEMENTATION OF PLCS IN THE KARAGA DISTRICT.					
7.	School leaders effectively communicate the goals and expectations of Professional Learning Communities (PLCs) implementation in our school	☐	☐	☐	☐	☐
8.	School leaders are always available when seeking guidance or clarification on Professional Learning Communities (PLCs) activities.	☐	☐	☐	☐	☐
9.	There is a strong commitment from school leaders towards fostering a collaborative environment for Professional Learning Communities (PLCs)	☐	☐	☐	☐	☐
10.	School leaders allocate sufficient financial resources to support the implementation of Professional Learning Communities (PLCs) in our school.	☐	☐	☐	☐	☐
11.	School leaders allocate sufficient human resources (e.g. personnel) to facilitate the effective functioning of Professional Learning Communities (PLCs) in our school.	☐	☐	☐	☐	☐
12.	School leaders actively participate in and contribute to Professional Learning Communities (PLCs) to demonstrate their commitment to the collaborative learning culture.	☐	☐	☐	☐	☐

	SECTION D: HOW PLC IMPLEMENTATION AFFECTS TEACHERS' INSTRUCTIONAL PRACTICES.					
13.	Through PLC teachers in the school do engage in collaborative planning with colleagues to design instructional activities	☐	☐	☐	☐	☐
14.	PLC has enhanced my knowledge in using student data to inform my instructional practices.	☐	☐	☐	☐	☐
15.	PLC provides a platform to incorporating differentiated instructional strategies to meet the diverse needs of students within the school.	☐	☐	☐	☐	☐
16.	School staffs continuously engage in reflection on their instructional practices.	☐	☐	☐	☐	☐
17.	Participating in Professional Learning Communities enhances my professional growth and development as a teacher.	☐	☐	☐	☐	☐
18.	Professional Learning Communities are effective in addressing educational challenges and improving teaching practices.	☐	☐	☐	☐	☐
	SECTION E: CHALLENGES PRIMARY SCHOOL TEACHERS IN THE KARAGA DISTRICT FACE WHEN IMPLEMENTING PLCS.					
19.	Time constraints is a challenge when participating in Professional Learning Communities (PLCs)	☐	☐	☐	☐	☐
20.	lack of clear communication within Professional Learning Communities (PLCs) is a problem	☐	☐	☐	☐	☐
21.	Limited resources (e.g., materials, technology) hinder the effective implementation of Professional Learning Communities (PLCs)	☐	☐	☐	☐	☐
22.	Resistance to change exists among teachers when it comes to adopting practices suggested within Professional Learning Communities (PLCs)	☐	☐	☐	☐	☐
23.	There was insufficient training and support provided for teachers prior to the implementation of Professional Learning Communities (PLCs).	☐	☐	☐	☐	☐
24.	Poor participation levels among teachers in Professional Learning Communities (PLCs) are affecting the overall effectiveness of collaborative efforts.	☐	☐	☐	☐	☐

UNIVERSITY FOR DEVELOPMENT STUDIES
FACULTY OF EDUCATION
INTERVIEW QUESTIONS FOR SELECTED PRIMARY SCHOOLS TEACHERS IN THE KARAGA DISTRICT.

SECTION A: BIO DATA

1. Gender:
   a) Male [ ] (2) Female [ ]
2. Age:
   g) 25–30 years [ ]
   h) 31–36 years [ ]
   i) 37–42 years [ ]
   j) 43–48 years [ ]
   k) 49-54 years [ ]
   l) Above 55 years [ ]
3. Highest Education attained:
   f) SSSCE/WASSCE [ ]
   g) Certificate/Diploma/HND [ ]
   h) First Degree (BA, BSc, B.Ed, etc) [ ]
   i) Second Degree (M.A., M.Sc, M.Phil, M.Ed, MBA, etc) [ ]
   j) Other [ ]
4. Professional status:
   e) Certificate/Diploma Professional teacher [ ]
   f) Certificate/Diploma non-professional teacher [ ]
   g) Graduate professional teacher [ ]
   h) Graduate non-professional teacher [ ]
5. How long have you been teaching?
   f) 1 – 5 years [ ]
   g) 6 – 10 years [ ]
   h) 11 – 15 years [ ]
   i) 16 – 20 years [ ]
   j) Above 20 years [ ]

SECTION B: ATTITUDES OF PRIMARY SCHOOL TEACHERS IN PROFESSIONAL LEARNING COMMUNITIES (PLCS) IMPLEMENTATION IN KARAGA DISTRICT.

What are some of the attitudes of teachers towards Professional Learning Community (PLC) implementation in your school?

I need your views on the following statements

1. There is value in sharing knowledge and experiences with other teachers within the Professional Learning Community.
2. I am willing to actively participate and collaborate with my colleagues in the implementation of Professional Learning Communities.
3. I am confident in my ability to contribute meaningfully to Professional Learning Communities discussions.
4. I view Professional Learning Communities as a supportive platform for sharing innovative strategies among teachers.

5. Professional Learning Communities foster a sense of community among teachers.
6. There is satisfaction in collaborating with colleagues through Professional Learning Communities.

SECTION C: LEVEL OF SUPPORT SCHOOL LEADERS PROVIDE IN THE IMPLEMENTATION OF PLCS IN THE KARAGA DISTRICT.

Could you please mention some of the support school leaders provide in the implementation of PLC in your school.

SECTION D: HOW PLC IMPLEMENTATION AFFECTS TEACHERS' INSTRUCTIONAL PRACTICES.

Do you feel the impact of PLC on teachers' instructional strategies? **If yes**, Example.

SECTION E: CHALLENGES PRIMARY SCHOOL TEACHERS IN THE KARAGA DISTRICT FACE WHEN IMPLEMENTING PLCS.

What are some of the challenges you face in the school when implementing PLC.