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INFLUENCE OF SENIOR HIGH SCHOOL TEACHERS' MOTIVATION ON PARTICIPATION IN PROFESSIONAL DEVELOPMENT ACTIVITIES IN SAGNARIGU MUNICIPAL ASSEMBLY

ADAM ALHASSAN

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BY

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DECLARATION

Candidate's Declaration:

I hereby declare that this thesis is my original research whose findings have not been presented for another degree in this university or elsewhere and that all citations in the work have been duly acknowledged.

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ABSTRACT

This study investigated the influence of senior high school teachers' motivation on their participation in Professional Development (PD) activities within the Sagnarigu Municipality. Using a quantitative approach and cross-sectional descriptive survey design, the study randomly selected 405 teachers from four government-assisted senior high schools to participate in the study. A pre-tested questionnaire was used. Descriptive statistics and chi-square tests were utilized to analyzed the study, with logistic regression identifying significant predictors of PD attendance. The findings revealed that motivation has strong influence on high PD participation. Multivariate analysis confirms that teachers with high intrinsic and extrinsic motivation, as well as those engaged in additional business activities are more likely to attend PD sessions. The findings also indicate that age, gender and marital status significantly affect PD attendance, while ethnicity, education level, and teaching experience do not. In view of this, the study recommended that the GES should motivate teachers by instituting motivation packages for them as this would increase teachers' engagement and also foster a sustained participation in professional development activities.

Keywords: Professional Development Participation, Professional Learning Communities, Sagnarigu Municipal Assembly, Senior High School.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Teacher professional development (PD) is a critical element in advancing educational quality and enhancing teacher effectiveness. It includes a broad spectrum of activities aimed at deepening teachers' knowledge, refining their skills, and improving their practices, thereby positively impacting student learning outcomes (Cham et al., 2014; Tam et al., 2020). Professional development provides structured learning experiences designed to elevate instructional practices, boost teacher effectiveness, and ultimately improve student achievement. As noted by Aparna et al. (2020), PD activities include workshops, tutorials, seminars, cooperative learning groups, training, mentoring, and advanced degree programs. These activities are primarily intended to keep teachers abreast of the latest research, teaching methodologies, educational technologies, and curriculum updates. Despite its importance, participation in PD activities varies significantly among teachers, influenced by numerous factors including personal, institutional, and contextual (Bornaa *et al*., 2022). A few of the serious individual issues that possibly influence teachers' participation in PD is their level of motivation (Roberts *et al*., 2012; Tu, 2021).

Motivation is a complex and multidimensional construct that drive individuals to pursue specific goals. In the realm of education, teacher motivation pertains to the internal drive that encourages educators to engage in activities aimed at enhancing their professional competencies (Roberts *et al*., 2012) Recognizing the factors that inspire tutors to take part in professional growth (PD) activities is crucial, as motivated teachers are more inclined to pursue continuous learning and effectively apply new experiences and proficiencies in their classrooms

(Tam et al., 2020). Teacher professional development is a vital element of the educational system, playing a key role in promoting ongoing growth and improvement among educators. It involves a wide set of activities designed to expand teachers' knowledge, refine their skills, and improve their practices, thereby enhancing learner's learning outcomes and allowing educators to meet the evolving demands of the educational environment (Descals-Tomás et al., 2021).

Teacher motivation is a critical element in the educational landscape, significantly impacting the worth of teaching and learning. Highly inspired teachers have a high probability to participate in continuous professional development (Mahler *et al*., 2018), adopt innovative teaching practices, and create positive learning environments (Turkpenova, 2023). Understanding and fostering teacher motivation is crucial for achieving educational excellence and ensuring that students receive the best possible education. Motivated teachers exhibit higher levels of enthusiasm and commitment to their profession (Fasce H et al., 2016; Layek & Koodamara, 2024). This enthusiasm translates into more dynamic and engaging lessons, which can enhance students' interest and participation in class (Cham *et al*., 2014). When teachers are inspired, they have high chance to employ diverse instructional strategies, adapt to the varying needs of their students, and create an inclusive classroom environment that supports all learners (Layek & Koodamara, 2024).

Several analysts have provided insights into the dynamics of teacher motivation. For instance, Zhang and Qian (2022) posit that motivation is gingered by the degree to which individuals experience independence, competence, and relatedness in their activities. Accordingly , teachers who perceive PD activities as autonomous, competence-enhancing, and socially supportive are more likely to be intrinsically motivated and, consequently, more engaged in these activities (Zhang & Qian, 2022). Additionally, Roberts *et al*., (2012 distinguish between factors that affect

job fulfillment (motivators) and those that trigger job dissatisfaction (hygiene factors). In the environment of PD, motivators might include opportunities for professional growth, recognition, and meaningful learning experiences, whereas hygiene factors might encompass adequate resources, supportive administration, and manageable workloads (Verhees *et al*., 2021).

In spite of the theoretical understanding of motivation, empirical studies exploring association between teacher motivation and involvement in PD activities is limited (Ahmad Zaky El Islami et al., 2022; Baluchzada, 2023). Existing studies often highlight the general benefits of PD and the challenges teachers face but do not delve deeply into how diverse kinds of motivation (intrinsic and extrinsic) correlate with PD participation levels (Marchand *et al*., 1995; X. Sun *et al*., 2022; Waters & Wall, 2008). This gap in the studies highlights the need for a focused investigation into how motivation influences teachers' engagement in PD. Understanding this relationship is vital for educational stakeholders, including policymakers, school administrators, and PD providers. By identifying the motivational factors that drive teachers to participate in PD, educational leaders can design and implement more effective PD programs that align with teachers' needs and preferences. This alignment can enhance the overall effectiveness of PD initiatives, directing to enhance teaching practices and learners' outcomes.

Moreover, the changing educational landscape marked by technological advancements and evolving pedagogical approaches, makes it necessary for teachers to continually update their skills and knowledge. As such, fostering a culture of continuous professional growth through well-motivated and engaged teachers is essential for educational success. Therefore, this research investigates the link between teachers' motivation and their participation levels in PD activities.

1.2 Problem Statement

In the contemporary educational arena, the significance of teacher professional development (PD) cannot be estimated. It is widely recognized as a dire component in improving instructional quality, promoting teacher effectiveness, and enhancing student learning outcomes (XiangQing, 2023). Despite the acknowledged benefits of professional development, a significant challenge persists in the form of varying levels of teacher engagement in these activities. Research indicates that teacher motivation plays a vital part in influencing the degree to which teachers participate in PD programs (Cheung *et al*., 2023). However, the specific dynamics and underlying factors that influence this association remain underexplored.

Teacher motivation is a multifaceted construct that encompasses intrinsic factors such as personal growth, professional identity, and passion for teaching, as well as extrinsic factors including recognition, career advancement, and financial incentives (Strömmer *et al*., 2020). The motivation of teachers to engage in PD activities is critical because it directly impacts their willingness to adopt new teaching strategies, integrate innovative practices (Waters & Wall, 2008), and commit to continuous improvement. Yet, despite its importance, there is a noted dearth of empirical studies that thoroughly examines how different motivational factors influence teacher engagement in PD.

One major issue is the variability in participation rates in professional development programs. While some teachers actively seek out and participate in PD opportunities, others remain disengaged or participate only when mandated (Marchand *et al*., 1995). This inconsistency suggests that there are underlying motivational barriers that prevent some teachers from fully engaging in PD activities. Understanding these barriers and the role of motivation is essential for designing effective professional development platforms that provide to the diverse needs

and motivations of teachers. Moreover, the quality and impact of PD are often compromised when educators participate out of obligation rather than genuine interest (Lonsdale *et al*., 2016). Professional development that is perceived as irrelevant or unaligned with teachers' needs can lead to superficial compliance rather than meaningful engagement. This highlights the need for PD programs that are not only well-designed and relevant but also motivating for teachers.

Additionally, the current literature on teacher motivation and PD tends to focus on either motivation or professional development in isolation, without adequately addressing the intersection of these two critical areas (Moon & Park, 2022). There is a pressing need for research that integrates these domains to offer a-far-reaching understanding of how motivation influences teachers' PD participation and how this, in turn, affects their teaching practices and student outcomes. The lack of comprehensive studies on this area also has practical implications for educational policy and school leadership. Without a clear understanding of the motivational factors that drive teacher engagement in PD, it is challenging to design and implement policies that effectively support teacher development and retention. As schools and educational institutions strive to advance teacher quality and learner achievement, addressing the motivational aspects of PD participation becomes increasingly important.

The relationship between teacher motivation and participation in professional development activities represents a critical yet underexplored area of educational research. Addressing this gap is essential for developing PD programs that do not only attract teachers but also foster sustained and meaningful participation. By examining the motivational factors that influence teacher engagement in PD activities, educational leaders and policymakers can enhance support for teachers in their career development, eventually leading to superior instructiona ` l practices and enhanced student learning outcomes. Academic performance in the northern

region has been low as compared to students from the southern part

1.3 Research Objectives

The study is composed of a main objective and specific objectives.

1.3.1 General Objective

The principal purpose of this research is to investigate the influence of SHS teachers' motivation on participation in professional development activities.

1.3.2 Specific Objective

Specifically, the study sought to;

1. Explore the levels of motivation among teachers to participate in PD in Sagnarigu Municipality
2. Examine factors that influence teachers' participation in professional development activities
3. Investigate the relationship between teacher motivation and their participation in professional development
4. Assess how demographic characteristics influence teachers' participation in PD

1.4 Research Questions

The study is made up of a main question and specific questions.

1.4.1 General Research Question

How does SHS teachers' motivation influence their participation in professional development activities in the Sagnarigu Municipality?

1.4.2 Specific Research Questions

Specifically, the research addresses the following questions:

1. What are the levels of motivation among teachers to participate in PD in Sagnarigu Municipality?

2. What factors influence teachers' participation in professional development activities?

3. What is the relationship between teacher motivation and their participation in professional development activities?

4. How do demographic characteristics influence teachers' participation in PD activities?

1.5 Study Hypothesis

Null Hypothesis (H_0) 1: There is no association between intrinsic motivation and participation in PD activities

Alternate hypothesis (H_1) 1: Higher levels of intrinsic motivation are positively associated with greater participation in PD activities.

Null Hypothesis (H_0) 1: There is no association between extrinsic motivation and participation in PD activities

Alternate hypothesis (H_1) 2: Higher levels of extrinsic motivation are positively associated with greater participation in PD activities.

Hypothesis 3: The link between intrinsic motivation and participation in PD activities is mediated by the personal factors.

Null Hypothesis (H0) 3**:** Personal factors do not mediate the link between intrinsic motivation and participation in PD activities

1.6 Significance of the study

This study will contribute to the understanding of how intrinsic and extrinsic motivation

influence teachers' engagement in professional development (PD) activities. It will provide empirical evidence to support or expand existing theories of motivation, such as Self-Determination Theory (SDT), which differentiates between intrinsic and extrinsic motivation. By exploring the role of personal factors (e.g., age, gender, experience, or attitudes) as mediators in the relationship between motivation and PD participation, this study will add depth to the theoretical framework of how motivation translates into action in educational settings. The study will also provide context-specific insights into teacher motivation and PD participation in the Sagnarigu Municipal Assembly, which may differ from findings in other regions or countries. This contributes to the global discourse on teacher motivation and professional development. The findings of this study can help educational administrators and school leaders in the Sagnarigu Municipal Assembly design more effective PD programs that align with teachers' motivational drivers. This can lead to higher participation rates and better outcomes for both teachers and students.

By identifying whether intrinsic or extrinsic motivation plays a stronger role in PD participation, the study can guide the development of tailored PD initiatives. For example, if intrinsic motivation is more influential, PD programs could focus on fostering teachers' passion for teaching and personal growth. Professional development is critical for improving teaching practices and student outcomes. By understanding the motivational factors that influence PD participation, your study can indirectly contribute to enhancing teacher performance and, ultimately, student achievement. The findings of your study can inform policymakers at the municipal and national levels about the importance of addressing teacher motivation when designing PD policies. This can lead to more effective and sustainable educational reforms.

1.7 Scope of the study

The scope of the study defines the boundaries, focus, and extent of the research. It clarifies what the study will cover, the specific population or area it will examine, and the limitations it will operate within. The study was conducted within the Sagnarigu Municipal Assembly in Ghana. This specific geographical focus ensures that the findings are contextually relevant to the educational environment and policies of this region. The research targeted senior high schools (SHS) within the municipality. The study examined both intrinsic motivation and extrinsic as key variables influencing teachers' participation in professional development activities. The study will focus on formal and informal PD activities, such as workshops, seminars, training programs, online courses, and peer collaboration, that are available to teachers in the Sagnarigu Municipal Assembly.

The study adopted a quantitative research design, possibly supplemented by qualitative insights, to examine the relationships between motivation, personal factors, and PD participation. Data will be collected through surveys or questionnaires administered to senior high school teachers. Interviews or focus group discussions conducted to gather deeper insights into teachers' motivations and experiences with PD. Statistical tools such as correlation analysis, regression analysis, and mediation analysis will be used to analyze the data.

1.8 Limitations of the study

The findings of the study wase specific to the Sagnarigu Municipal Assembly and may not be generalizable to other regions or countries without further research. The study did not include teachers from junior high schools, primary schools, or tertiary institutions, as the focus is solely on senior high school teachers. While the study will examine intrinsic and extrinsic motivation, as well as personal factors, it will not explore other potential variables (e.g., school leadership,

resource availability, or policy frameworks) that may also influence PD participation. The study will rely on self-reported data from teachers, which may be subject to biases such as social desirability bias or recall bias.

1.9 Organization of the Study

The study is organized into five chapters. Chapter one presents the introduction, which covers the background of the study, the problem statement, research questions, objectives of the study, and the significance of the study. Chapter two is dedicated to the literature review, including the conceptual framework, theoretical review, and empirical review. Chapter three outlines the research methodology, detailing the research design, population and sampling techniques, data collection instruments, data analysis, as well as the validity and reliability of the data collection instruments. Chapter four presents and discusses the results, while the final chapter offers a summary, conclusion and recommendation of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter examines the relevant literature germane to this study. The chapter is discussed in three parts. The opening section reviews the theories used as the framework for the study and discusses their applicability to it. The second part reviews literature on the concepts that were used in the study, and the final part takes into account empirical studies done by other researchers on association between teachers' motivation and involvement levels in professional development activities.

2.1 Theoretical Framework

The study of the association between teachers' motivation and their participation levels in professional development activities can be framed within several established theoretical perspectives in education and organizational behavior. These theories help elucidate the underlying mechanisms and factors that influence teachers' engagement in professional development (PD). The key theoretical frameworks relevant to this study include Self-Determination Theory (SDT), Expectancy Theory, and Social Cognitive Theory.

2.1.1 Self-Determination Theory (SDT)

Self-Determination Theory (SDT), developed by Ryan and Deci, (2000), is a prominent framework for understanding human motivation. SDT asserts that individuals are driven by intrinsic and extrinsic motivations which influence their behavior and engagement in activities (Sachidanandan et al., 2022).

Intrinsic motivation talks to involvement in an activity for its integral satisfaction and relevance.

For teachers, intrinsic motivation might include a passion for teaching, a desire to improve student outcomes, or a commitment to personal growth. When teachers are intrinsically motivated, they are more likely to participate actively in PD activities because they find these activities inherently rewarding and aligned with their professional values and interests (Ryan & Deci, 2000). Extrinsic motivation comprises engaging in an activity due to external rewards or pressures. For teachers, extrinsic motivators might include professional development credits, financial incentives, career advancement opportunities, or compliance with institutional policies. While extrinsic motivation can drive participation in PD activities, its effectiveness depends on the perceived relevance and value of the rewards (Ryan & Deci, 2000).

SDT highlights the prominence of fulfilling three (3) basic psychological desires: autonomy, competence, and relatedness. When PD activities satisfy these needs, teachers are more likely to be motivated and engaged. The scale to which teachers sense they ought to control over their learning and professional growth. The extent to which PD activities help teachers feel effective and capable in their teaching roles. The sense of association and collaboration with coworkers during PD activities (Ryan & Deci, 2000).

2.1.2 Expectancy Value Theory

Expectancy of success represents an individual's belief about their capacity to achieve or gain something after they accomplish a given task. In the context of PD activities, this means a teacher's confidence in their ability to benefit from and complete the PD activities. Factors influencing expectancy of success include past experiences, perceived task difficulty, and self-efficacy (Bandura, 1977). In the context of PD, these components reflect how teachers perceive the PD activities in terms of interest, importance, relevance to their teaching goals, and the costs associated with participation.

EVT can be used to explain why teachers choose to participate (or not) in PD activities. Understanding this relationship requires examining how teachers' expectancy beliefs and task values influence their motivation to engage in PD. Teachers who believe they can successfully complete PD activities and derive benefits from them are more likely to participate. High self-efficacy, positive past experiences with PD, and support from peers and administrators can enhance teachers' expectancy of success. Conversely, teachers who doubt their ability to succeed or who have had negative past experiences may be less motivated to participate (Njenga, 2023). Teachers who find PD activities inherently enjoyable and interesting are more likely to participate. PD that aligns with teachers' interests, provides engaging content, and uses interactive methods can enhance intrinsic value. For example, workshops that allow for hands-on practice, collaborative learning, and real-world applications can increase teachers' intrinsic motivation (Desimone and Garet, 2015).

When teachers perceive PD as personally important for their professional growth and teaching effectiveness, they are more likely to engage in it. Attainment value is high when PD activities are aligned with teachers' professional goals and aspirations, such as improving student outcomes, gaining new teaching strategies, or achieving career advancement (Eccles & Wigfield, 2002). The perceived relevance and usefulness of PD activities in helping teachers achieve their long-term goals, such as improved student performance, enhanced instructional practices, or preparation for leadership roles, can significantly motivate participation. PD that is directly applicable to classroom practice and aligns with curriculum standards is likely to be perceived as having high utility value (Kennedy, 2016).

The perceived costs associated with PD, including time, effort, and potential stress, can deter participation. Teachers may weigh these costs against the perceived benefits. To mitigate these

costs, schools can provide incentives, such as professional development credits, stipends, or time off from regular duties, and ensure that PD activities are scheduled conveniently and are accessible (Bourne et al., 2021). Expectancy-Value Theory offers a valuable framework for grasping and boosting teacher motivation to participate in professional development activities. By addressing both expectancy beliefs and task values, educational leaders and policymakers can design PD programs that effectively motivate teachers, leading to improved teaching practices and better educational outcomes (Eccles and Wigfield, 2002).

Expectancy-Value Theory (EVT) provides a comprehensive framework for understanding the motivations behind individual behavior, particularly in educational settings. Developed by Pintrich (2003) EVT suggests that an individual's motivation to participate in a task is induced by their hopes of success and the importance they put on the task. This theory is highly relevant when exploring teachers' participation in professional development (PD) activities, as it helps elucidate the elements that motivate tutors to involve in continuous learning and professional growth. Instrumentality is the belief that successful performance will lead to desired outcomes.

If teachers perceive that participating in PD activities will result in tangible benefits, such as enhanced student learning, recognition, or career advancement, they are more likely to be motivated to involve in these activities (Fishman et al., 2013). Valence refers to the value individuals place on the expected outcomes. Teachers was motivated to participate in PD activities if they highly value the benefits associated with those activities. The more aligned the PD outcomes are with teachers' personal and professional goals, the higher the motivation to participate(Tilga et al., 2019).

2.1.3 Social Cognitive Theory

Social Cognitive Theory (SCT), developed by Bandura, (1986), offers a robust framework for appreciating human behavior across the lens of dynamic interplay between personal, behavioral, and environmental influences. This theory underlines the position of observational learning, self-efficacy, and shared determinism in influencing individual actions and decisions (Bandura, 1977). When applied to the context of teacher involvement in professional growth (PD) activities, SCT helps to elucidate the elements that motivate teachers to involve in continuous professional learning and development. Observational learning, or modeling, is a core component of SCT. It posits that individuals can obtain new behaviors by studying others.

In the context of PD, teachers can learn effective teaching strategies, classroom management techniques, and innovative pedagogical approaches by observing their peers and mentors during PD sessions or collaborative activities within their schools (Bandura, 1977). Self-efficacy relates to an individual's confidence in their ability to execute a definite mission or achieve a specific goal. In the jurisdiction of PD, self-efficacy influences a teacher's belief in their capacity to learn new skills and apply them effectively in the classroom. Teachers with high self-efficacy are more likely to engage in PD activities, as they believe in their potential to benefit from these opportunities and improve their teaching practices (Bandura, 1997). Reciprocal determinism describes the bidirectional influence between personal factors (e.g., beliefs, attitudes), behavioral factors (e.g., actions, practices), and environmental factors (e.g., social norms, support systems). In the context of PD, this concept highlights how a supportive school environment, collaborative culture, and positive feedback can reinforce teachers' motivation to participate in PD activities (Bandura, 1986).

PD activities that incorporate observational learning opportunities, such as peer observations, mentorship programs, and demonstration lessons, can significantly enhance teacher participation.

Teachers are more likely to engage in PD when they see successful models demonstrating effective practices. For example, a novice teacher might be inspired to attend PD workshops after observing a seasoned teacher's successful implementation of new instructional strategies. Providing teachers with opportunities to successfully apply new skills in a supportive environment can enhance their confidence and willingness to participate in future PD. Observing peers who successfully implement PD learnings can boost a teacher's belief in their own ability to do the same. Positive feedback and encouragement from colleagues, mentors, and administrators can strengthen teachers' self-efficacy. Managing stress and creating a positive, encouraging atmosphere during PD activities can help teachers feel more capable and motivated to engage.

The concept of reciprocal determinism underscores the significance of building a helpful and collaborative school culture to foster teacher participation in PD. School leaders who prioritize PD, provide necessary resources, and actively participate in PD themselves can create a culture that values continuous learning (Waters & Wall, 2008). Encouraging collaboration among teachers through Professional learning community, team teaching, and peer support groups can create a sense of community and shared purpose. Providing regular, constructive feedback and opportunities for reflection can help teachers see the impact of PD on their practice, reinforcing their motivation to continue participating. Understanding the relationship between SCT and teacher participation in PD activities can guide the design of effective PD programs. Incorporating demonstration lessons, peer observations, and mentorship programs in PD can leverage observational learning. Designing PD activities that include mastery experiences, remote experiences, verbal inducement, and managing emotional stimulation can enhance teachers' confidence and engagement. Cultivating a school culture that values PD, encourages collaboration, and provides consistent feedback can reinforce teachers' motivation to participate in PD (Bandura,

1977).

Social Cognitive Theory provides important insights into the factors that drive teacher participation in professional development activities. By focusing on the elements of observational learning, self-efficacy, and mutual determinism, educational leaders can create and implement PD programs that effectively inspire teachers to pursue ongoing professional growth. This approach ultimately enhances teaching practices and leads to better educational outcomes (Bandura, 1977).

2.2 Integrating the Theories

Integrating these theoretical perspectives provides a comprehensive framework for understanding the association between teachers' motivation and their participation in PD activities. Teachers' engagement in PD is influenced by both intrinsic satisfaction and external rewards. Teachers' motivation to participate in PD depends on their potentials of success and the apparent worth of the outcomes. Teachers' views in their abilities and the influence of their social environment play critical roles in their engagement in PD activities. Understanding the association between teachers' motivation and participation in PD activities requires a multifaceted approach. By applying Self-Determination Theory, Expectancy Theory, and Social Cognitive Theory, this theoretical framework offers a robust explanation of the factors that drive teachers' engagement in professional development. These insights can enlighten the purpose and application of PD programs that effectively motivate teachers, enhance their professional growth, and ultimately improve educational outcomes. For investigating the influence of teacher motivation and partaking in professional development (PD) activities, the framework can integrate motivational theories and factors influencing PD engagement. This framework provides a designed approach to appreciate how different aspects of teacher motivation affect their involvement in PD.

2.11 Conceptual framework for the study

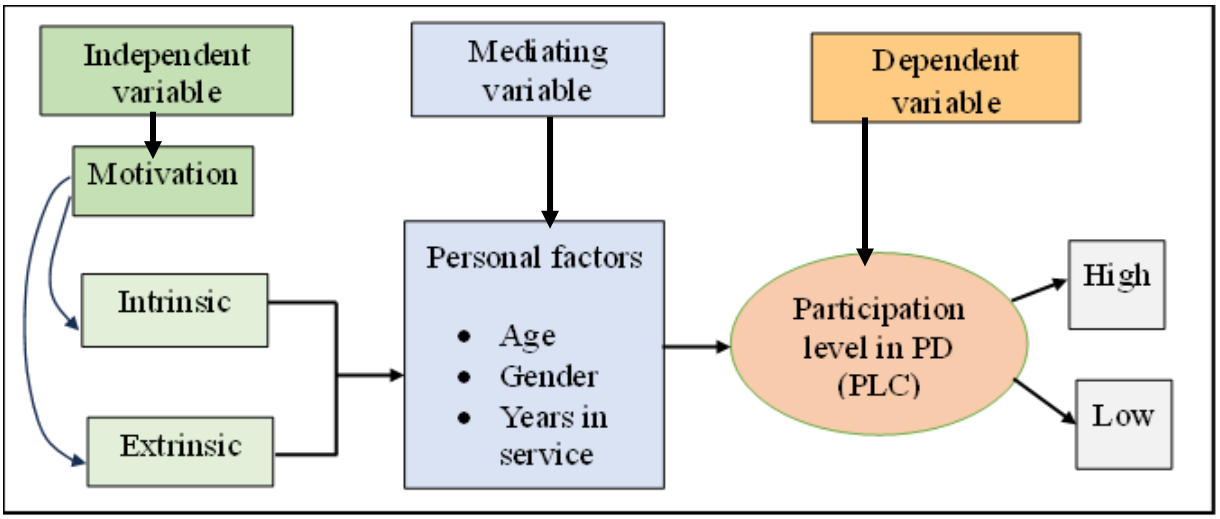

Figure 1: Conceptual Framework on Teacher motivation and Participation in PD

2.12 Review of Concepts and Key Issues

The conceptual framework on Teacher Motivation and Participation in Professional Development (PD) illustrates the dynamic relationship between key variables that influence teachers' engagement in PD activities and the subsequent outcomes. The framework can be broken down into the following interconnected components:

2.12.1 Teacher Motivation

Teacher motivation is a central variable in the framework, acting as both an input and a driving force for participation in PD. Motivation can be intrinsic or extrinsic. Factors influencing teacher motivation may include job satisfaction, school culture, leadership support, and perceived value

of PD. When teachers are motivated, they are more likely to seek out and engage in PD opportunities.

2.12.2 Participation in Professional Development (PD)

Participation in PD is the direct outcome of teacher motivation. Motivated teachers are more likely to actively participate in PD programs, workshops, and training sessions. The framework may also highlight barriers to participation, such as time constraints, lack of resources, or irrelevant PD content, which can negatively impact participation rates even when motivation is high.

2.12.3 Outcomes of PD Participation

The framework likely emphasizes the positive outcomes of PD participation, such as improved teaching practices, enhanced student learning outcomes, and increased teacher self-efficacy. These outcomes can, in turn, reinforce teacher motivation, creating a positive feedback loop. For example, when teachers see the benefits of PD in their classrooms, they may become more motivated to engage in future PD activities.

2.12.4 External Influencing Factors

The framework may also include external factors that influence both teacher motivation and PD participation. These could include school policies, availability of PD opportunities, financial incentives, and peer influence. For instance, a supportive school environment that encourages and funds PD can boost both motivation and participation rates. The framework likely incorporates a feedback loop where the outcomes of PD (e.g., improved teaching skills, better student performance) further enhance teacher motivation. This creates a cyclical relationship where motivation and PD participation continuously reinforce each other.

The conceptual framework demonstrates that teacher motivation is a critical driver of participation in PD, and that participation in PD leads to positive outcomes for both teachers and students. These outcomes, in turn, reinforce motivation, creating a sustainable cycle of professional growth and development. External factors, such as school culture and available resources, play a significant role in shaping this relationship. By addressing barriers and fostering a supportive environment, schools can enhance teacher motivation and maximize the benefits of PD participation.

2.11.1 Intrinsic Motivation and PD Participation

Intrinsic Motivation is determined by internal incentives such as personal satisfaction and professional growth. Teachers who feel autonomous in their professional roles are more likely to engage in PD activities that align with their personal interests and career goals. Autonomy supports intrinsic motivation leading to higher engagement in both formal and informal PD activities (Ryan & Deci, 2000). Teachers who perceive themselves as competent and capable are more likely to participate in PD activities to further enhance their skills and knowledge. Competence enhances intrinsic motivation, encouraging ongoing professional development (Deci & Ryan, 1985). Intrinsic motivation is a vital concept in psychology that relates to the drive to involve in an activity for the desire and fulfillment it provides, rather than for external rewards or pressures (Deci & Ryan, 2000). In the context of professional development, intrinsic motivation is critical for teachers to participate in continuous learning and improvement. Research has consistently shown that intrinsic motivation is a strong predictor of teachers' engagement in professional development activities (Wright, 2015). A study by Kunter et al. (2015) found that teachers' intrinsic motivation was positively correlated with their participation in PD activities, suggesting that teachers who are more motivated to learn and grow are more

likely to be involved in PD.

Several studies have identified factors that influence intrinsic motivation in professional development. For example, autonomy support (Deci & Ryan, 2000) and social support (Guskey, 2015) have been shown to enhance intrinsic motivation. In contrast, extrinsic pressures and rewards (Bhatia and Makkar, 2020) can undermine intrinsic motivation. Professional development participation is a critical aspect of teacher engagement and retention. Research has shown that teachers who participate in PD activities are more likely to be satisfied with their job, feel more confident in their teaching abilities, and experience increased job satisfaction (Guskey, 2015).

Recent research underscores the significance of intrinsic motivation in influencing professional development (PD) participation. For instance, Lee et al. (2015) discovered that intrinsic motivation acted as a moderator between PD participation and teacher engagement. This finding indicates that teachers with higher intrinsic motivation are more apt to benefit from PD activities. Intrinsic motivation is crucial for professional development and teacher engagement, as it drives teachers to actively participate in PD activities, leading to greater job satisfaction, confidence, and retention. Factors such as autonomy support, social support, and external pressures can affect intrinsic motivation, emphasizing the need to cultivate supportive environments that nurture this internal drive.

2.11.2 Extrinsic Motivation and PD Participation

The relationship between extrinsic motivation and partaking in professional development (PD) has garnered considerable attention in recent literature, particularly in the context of education and corporate settings. Extrinsic motivation, which refers to behavior driven by external

rewards such as money, praise, or avoidance of negative consequences, plays a significant role in influencing individuals' engagement in PD activities. Since 2015, research has explored various dimensions of this relationship, revealing how extrinsic incentives can both positively and negatively impact PD participation. Extrinsic motivation is often cited as a key factor driving participation in PD activities. In educational settings, for example, teachers may be motivated to engage in PD to gain professional certifications, salary increments, or to fulfill mandatory requirements set by educational authorities. Similarly, in corporate environments, employees might participate in PD to earn promotions, bonuses, or to avoid job-related sanctions.

A study by Deci, Vallerand, Pelletier, and Ryan (2017) highlighted that extrinsic motivation could effectively increase PD participation when individuals perceive the external rewards as valuable. The study found that when PD programs are linked to tangible benefits, such as career advancement or financial incentives, participation rates tend to be higher. This finding aligns with Self-Determination Theory (SDT), which posits that extrinsic motivation can be a powerful driver of behavior, especially when the external rewards align with individuals' personal goals and values. Similarly, Lawless and Pellegrino (2015) examined the influence of extrinsic motivators on teachers' participation in technology-focused PD. The study revealed that teachers were more likely to engage in PD when it was tied to extrinsic rewards such as technology grants or recognition awards. This underscores the importance of designing PD programs that include extrinsic incentives to boost participation.

While extrinsic motivation can effectively increase initial participation in PD, research has also highlighted potential drawbacks, particularly regarding sustained engagement. Extrinsic rewards may lead to short-term compliance rather than long-term commitment to professional

growth. For instance, once the external reward is attained or removed, individuals may lose interest in continuing their engagement in PD. Gagné and Deci (2018) argued that over-reliance on extrinsic motivators could undermine intrinsic motivation, which is the internal desire to engage in activities for personal satisfaction or a sense of accomplishment. Their research suggested that while extrinsic rewards might encourage participation, they might not necessarily foster a deep, ongoing commitment to professional learning. This phenomenon, known as the over-justification effect, occurs when the presence of external rewards diminishes intrinsic interest in the activity itself.

Furthermore, (Obee et al., 2022) conducted a study examining the long-term impact of extrinsic motivation on teachers' engagement in PD. They found that while extrinsic incentives initially boosted participation, teachers were less likely to apply the learned skills in their classrooms if their primary motivation was external. The study concluded that for PD to be effective, it should also foster intrinsic motivation by making the learning process meaningful and relevant to participants' professional lives.

Given the limitations of relying solely on extrinsic motivation, recent literature emphasizes the importance of balancing extrinsic and intrinsic motivators in PD design. Effective PD programs not only offer external rewards but also connect these rewards to participants' intrinsic goals, such as improving their teaching practice or achieving personal growth. (Billett, 2016) proposed a model of PD participation that integrates both extrinsic and intrinsic motivations. According to this model, extrinsic rewards should be designed to complement rather than overshadow intrinsic motivators. For instance, providing recognition and financial incentives can be effective when these rewards are coupled with opportunities for meaningful reflection, peer collaboration, and personal development. Moreover, research by Ryan and Deci (2020) suggests

that extrinsic rewards can be internalized and transformed into intrinsic motivation when individuals perceive the PD activities as aligned with their values and professional identities. This process of internalization can lead to more sustained and impactful engagement in PD. The effectiveness of extrinsic motivation in driving PD participation is also influenced by contextual factors such as organizational culture, the nature of the PD activity, and individual differences among participants. Thoonen, Sleegers, Oort, Peetsma, and Geijsel, (2015) found that supportive organizational cultures that value professional growth and provide ongoing feedback can enhance the positive effects of extrinsic motivation on PD participation.

Additionally, the nature of the PD activity itself can determine how extrinsic motivation influences participation. For example, Desimone and Garet (2015) found that extrinsic incentives were more effective in promoting participation in PD activities that were perceived as immediately relevant and applicable to participants' work contexts. In all, extrinsic motivation plays a significant role in influencing participation in professional development activities. While external rewards such as financial incentives, promotions, and recognition can effectively increase initial participation, they may not always lead to sustained engagement or deep learning. To optimize the effectiveness of PD programs, it is essential to balance extrinsic and intrinsic motivators, ensuring that the learning process is both rewarding and meaningful to participants. Understanding the interplay between extrinsic motivation and PD participation is crucial for designing programs that not only attract participants but also foster long-term professional growth and development.

2.3 Empirical review

2.3.1 Teacher Motivation

Teacher motivation is a crucial element in the educational process as it significantly influences

the effectiveness of teaching and the overall learning environment. Understanding what motivates teachers is essential for developing strategies to enhance their performance, job satisfaction, and professional growth. The concept of teacher motivation can be explored through various psychological and educational theories that highlight intrinsic and extrinsic factors.

2.3.1.1 Types of Motivation

2.3.1.1.1 Intrinsic Motivation

Intrinsic motivation involves participating in activities for their own inherent satisfaction rather than for external rewards. For teachers, this can manifest as a passion for teaching, a sense of vocation, and the joy of supporting student learning and development. Teachers who are intrinsically motivated typically experience higher job satisfaction and demonstrate greater creativity and commitment in their teaching practices (Deci & Ryan, 2000). This concept is closely aligned with self-determination theory, which highlights the roles of autonomy, competence, and relatedness in enhancing motivation (Ryan & Deci, 2000).

2.3.1.1.2 Extrinsic Motivation

Extrinsic motivation involves performing an activity to achieve a specific outcome, such as rewards or recognition. In the context of teaching, extrinsic motivators can include salary, benefits, job security, professional development opportunities, and career advancement. While extrinsic factors can enhance motivation, they are often most effective when they complement intrinsic motivators rather than replace them (Deci *et al*., 1999). For example, professional development programs that offer financial incentives can motivate teachers to improve their skills, but these programs are more successful when they also address teachers' intrinsic desire for professional growth.

Understanding teacher motivation has practical implications for educational policy and school management. Effective strategies to enhance teacher motivation include. Allowing teachers more control over their curriculum and teaching methods. Creating opportunities for continuous learning and skill enhancement. Acknowledging and rewarding teachers' efforts and successes. Building a collaborative and positive school culture. Teacher motivation is a multifaceted concept influenced by intrinsic and extrinsic factors. Theories such as Self-Determination Theory, Expectancy Theory, and Social Cognitive Theory provide valuable insights into the mechanisms driving teacher motivation. By addressing both intrinsic and extrinsic motivators, educational institutions can create supportive environments that enhance teachers' motivation, leading to improved teaching practices and better educational outcomes.

2.3.1.2 Factors Influencing Teacher Motivation

Teacher motivation is a complex and multifaceted construct that is influenced by various factors. Understanding these factors is crucial for developing strategies to enhance teacher engagement, job satisfaction, and overall effectiveness in the classroom. The factors influencing teacher motivation can be broadly categorized into intrinsic factors, extrinsic factors, and contextual factors.

2.3.1.2.1 Personal Factors

Intrinsic factors are internal to the individual and include personal values, beliefs, and internal desires that drive behavior. Many teachers enter the profession due to a strong passion for teaching and a desire to make a difference in the lives of their teachers. This intrinsic passion is a significant motivator that can sustain teachers through challenging times (Deci & Ryan, 2000). A sense of purpose and commitment to the educational mission can significantly enhance teacher motivation. Teachers who believe that their work has meaningful and positive impacts

on student outcomes are more likely to be motivated and engaged (Day & Gu, 2010). The desire for continuous professional growth and self-improvement is a powerful intrinsic motivator. Teachers who are intrinsically motivated to develop their skills and knowledge are more likely to participate in professional development activities and seek out new learning opportunities (Guskey, 2002).

2.3.1.2.2 Contextual Factors

Contextual factors relate to the broader environment and conditions in which teachers work. These factors include school culture, leadership, and work conditions. Effective school leadership is critical for fostering a motivating work environment. Principals and school leaders who provide support, resources, and constructive feedback can significantly enhance teacher motivation (Leithwood, Harris, & Hopkins, 2008). A positive and supportive work environment is essential for teacher motivation. This includes having adequate resources, manageable workloads, and a collaborative culture. A healthy work environment can reduce stress and increase job satisfaction (Johnson, Kraft, & Papay, 2012). The behavior and engagement of teachers can also impact teacher motivation. Teachers who work with engaged and well-behaved teachers are more likely to experience job satisfaction and motivation. Conversely, dealing with disruptive behavior and lack of student engagement can be demotivating (Descals-Tomás *et al*., 2021)

Providing teachers with autonomy and empowerment in their classrooms and professional decisions can enhance motivation. When teachers have control over their teaching methods, curriculum choices, and classroom management, they are more likely to feel motivated and committed to their work (Fasce H *et al*., 2016). Teacher motivation is influenced by a complex interplay of intrinsic, extrinsic, and contextual factors. Understanding these factors is crucial

for developing strategies to enhance teacher motivation and effectiveness. By addressing intrinsic desires for professional growth and purpose, providing adequate extrinsic rewards and recognition, and creating supportive work environments, educational leaders can foster motivated and committed teachers, leading to better educational outcomes for teachers.

2.3.2 Gender and motivation

The influence of gender or sex on motivation is a complex topic that has been explored extensively in psychological and sociological literature. Gender can play a significant role in shaping the motivational patterns of individuals due to societal norms, cultural expectations, and biological differences. While these influences are not universal and can vary widely depending on context, several key findings have emerged from research in this area.

Cultural and societal expectations about gender roles can significantly influence motivation. Traditionally, men and women have been socialized into different roles, with men often being encouraged to pursue goals related to career achievement, independence, and financial success, while women have historically been encouraged to focus on relational and communal goals, such as nurturing and caregiving (Eagly & Wood, 1999). These societal expectations can shape the types of goals that individuals prioritize and the motivations they experience in pursuing them. For instance, women might be more motivated by opportunities to work collaboratively or contribute to the well-being of others, whereas men might be more driven by competitive or individualistic goals (Eccles, 2020).

According to Self-Determination Theory (SDT), motivation is influenced by the extent to which individuals' needs for autonomy, competence, and relatedness are satisfied (Deci & Ryan, 2021). Research has suggested that there might be gender differences in how these needs are prioritized

and met. For example, women may place a higher value on relatedness—feeling connected to others—which can drive motivation in contexts where collaboration and interpersonal relationships are emphasized (Ryan, Huta, & Deci, 2018). Men, on the other hand, may be more motivated by challenges that enhance their sense of competence, leading them to pursue tasks that allow them to demonstrate skill and mastery (Vallerand & Losier, 2019). Achievement motivation, or the drive to meet standards of excellence and accomplish challenging goals, has also been shown to differ between genders. Studies have found that men generally exhibit higher levels of achievement motivation in competitive environments, which may be related to traditional gender norms that emphasize assertiveness and dominance as male characteristics (Meece, Glienke, & Burg, 2006). Conversely, women may demonstrate higher achievement motivation in contexts where cooperation and support are emphasized, reflecting a socialization process that encourages women to value interpersonal relationships and group harmony (Hyde, 2005).

Gender stereotypes can also impact self-efficacy—an individual's belief in their ability to succeed in specific tasks—which in turn influences motivation. For example, in fields traditionally dominated by men, such as STEM (science, technology, engineering, and mathematics), women may experience lower self-efficacy due to pervasive stereotypes that question their competence in these areas (Aroca et al., 2022). This diminished self-efficacy can reduce motivation to pursue careers or challenges in these fields. On the other hand, men may experience reduced motivation in fields traditionally associated with women, such as nursing or early childhood education, due to similar stereotypes questioning their fit in these roles (Lips, 2004).

While social and cultural factors are significant, biological factors can also play a role in

shaping motivational differences between genders. For instance, some research suggests that hormonal differences, such as variations in testosterone levels, may contribute to differences in risk-taking behaviors and competitiveness between men and women (Carver, 2004). These biological differences can influence the types of goals that men and women are motivated to pursue and how they respond to challenges and competition. Overall, the influence of gender on motivation is shaped by a combination of cultural, social, and biological factors. Gender norms and societal expectations can direct men and women toward different types of goals and sources of motivation, while self-efficacy and gender stereotypes can either enhance or diminish individuals' motivation to pursue certain tasks. Understanding these dynamics is crucial for creating environments that support and nurture motivation across genders, allowing both men and women to achieve their full potential.

2.4.1 The Relationship Between Self-Efficacy and Motivation

Self-efficacy and motivation are fundamental concepts in educational psychology, with their interconnection being a focus of extensive research in recent years. Self-efficacy, defined by Bandura (1997), is the belief in one’s capacity to perform the behaviors required to achieve specific outcomes. Motivation refers to the processes that initiate, direct, and sustain goal-oriented behavior. Since 2015, numerous studies have investigated the dynamic relationship between these two constructs, highlighting their significant reciprocal influence across various contexts.

Research consistently demonstrates that self-efficacy is a robust predictor of motivation. When individuals believe in their capabilities, they are more likely to be motivated to engage in tasks, persist in the face of challenges, and achieve higher levels of performance (Schunk & DiBenedetto, 2020). In the educational context, students with high self-efficacy tend to exhibit

stronger intrinsic motivation, which is characterized by engaging in tasks for the inherent satisfaction rather than external rewards (Zimmerman, 2015). This intrinsic motivation is crucial for sustained engagement in learning activities and academic success.

For example, a study by Honicke and Broadbent (2016) found a significant positive correlation between students' self-efficacy and their academic motivation. The study indicated that students with higher self-efficacy beliefs were more likely to set challenging goals, put in greater effort, and demonstrate persistence, all of which are key components of motivated behavior. These findings have been echoed in various educational settings, including higher education and secondary schooling, indicating the broad applicability of the self-efficacy-motivation relationship. Conversely, motivation can also mediate the relationship between self-efficacy and performance outcomes. Motivation serves as the driving force that enables individuals to harness their self-efficacy beliefs into actionable efforts (Pajares & Olaz, 2017). For instance, students with high self-efficacy are more likely to experience high levels of intrinsic motivation, which in turn fuels their academic engagement and performance. This motivational process is essential for translating self-efficacy beliefs into tangible achievements.

A meta-analysis conducted by Richardson, Abraham, and Bond (2015) highlighted that motivational factors, such as goal orientation and self-regulation, mediate the effect of self-efficacy on academic performance. The study concluded that self-efficacy influences motivation, which subsequently impacts academic outcomes, suggesting that interventions aimed at enhancing students' self-efficacy should also focus on fostering motivation to maximize their effectiveness. The relationship between self-efficacy and motivation is not static but is influenced by various contextual factors, including the learning environment, task difficulty, and social support. Research by Usher and Pajares (2019) emphasizes that the social

environment, including feedback from teachers and peers, plays a critical role in shaping self-efficacy beliefs and, consequently, motivation. Positive feedback and encouragement can enhance self-efficacy, leading to greater motivation, while negative feedback can have the opposite effect.

Moreover, task characteristics, such as complexity and perceived relevance, also influence the self-efficacy-motivation dynamic. When tasks are perceived as challenging yet attainable, they can boost self-efficacy and motivate individuals to invest effort. However, overly difficult tasks may lower self-efficacy and reduce motivation, leading to disengagement (Schunk & Mullen, 2016). This highlights the importance of aligning task demands with individuals' self-efficacy levels to maintain motivation.

Given the strong link between self-efficacy and motivation, interventions designed to enhance self-efficacy have been shown to simultaneously boost motivation. For instance, mastery experiences, which involve successfully completing tasks, are one of the most effective ways to build self-efficacy and, in turn, increase motivation (Bandura, 1997). Additionally, teaching strategies that promote self-regulation and goal-setting have been found to enhance both self-efficacy and motivation (Schunk, 2016). In all, the relationship between self-efficacy and motivation is complex and mutually reinforcing. High self-efficacy contributes to increased motivation, which in turn enhances performance outcomes. Conversely, motivation acts as a mediator that translates self-efficacy beliefs into effective action. Understanding this dynamic is crucial for designing educational interventions that foster both self-efficacy and motivation, ultimately leading to improved academic achievement and personal development.

2.3.2 Professional Development in Education

Professional development in education is a critical component in enhancing teacher effectiveness, improving student outcomes, and fostering a culture of continuous improvement within schools. It encompasses a range of activities and programs designed to help teachers refine their skills, update their knowledge, and adopt new pedagogical approaches (Rasheed *et al*., 2020). Effective professional development is characterized by its ability to be ongoing, collaborative, and aligned with teachers' instructional needs and goals.

2.3.4 Importance of Professional Development

Professional development is essential for several reasons. Firstly, it helps teachers keep up with the latest research, educational technologies, and teaching strategies. In an ever-evolving educational landscape, teachers must continually update their skills to meet the diverse needs of their teachers (Desimone, 2009). Secondly, professional development enhances teachers' instructional practices, which can lead to improved student achievement (Yoon *et al*., 2007). By participating in professional development, teachers can learn new techniques to engage teachers, differentiate instruction, and assess student learning effectively.

2.3.5 Characteristics of Effective Professional Development

Research has identified several characteristics that make professional development effective. Professional development that is focused on specific content areas and pedagogical strategies relevant to subjects teachers teach is more effective. Content-specific training helps teachers develop a deeper understanding of the subject matter and how to teach it (Desimone, 2009). Active learning involves teachers engaging in activities that require them to reflect on their teaching practices, collaborate with peers, and apply new knowledge in their classrooms. This

can include peer observations, coaching, and collaborative planning sessions (Darling-Hammond, *et al*., 2017). Professional development should be aligned with school goals, state standards, and other reform initiatives. When professional development activities are coherent and connected to broader educational goals, teachers are more likely to find them relevant and useful (Darling-Hammond, *et al*., 2017).

The duration and intensity of professional development are critical factors in its effectiveness. Professional development programs that are sustained over time and involve multiple sessions are more likely to lead to meaningful changes in teaching practice (Guskey & Yoon, 2009). When teachers from the same school, grade level, or department participate in professional development together, it fosters a sense of community and collaboration. Collective participation can lead to the development of shared practices and a supportive professional learning community (Borko, 2004).

Understanding the link between teacher motivation and engagement in professional development (PD) activities is of critical significance for several reasons. This relationship directly impacts the quality of education, the professional growth of teachers, and the overall effectiveness of educational systems (L. Sun & Pan, 2021). Recognizing and fostering this connection can lead to enhanced teaching practices, improved student outcomes, and a more dynamic and adaptable educational environment (Roberts *et al*., 2012). Teacher motivation is a fundamental driver of participation in professional development activities, which are essential for improving instructional practices and student achievement (Lonsdale *et al*., 2016). Motivated teachers are more likely to engage deeply with PD programs, applying new strategies and insights to their teaching. This engagement not only enhances their instructional skills but also positively influences student learning outcomes. Studies have shown that when teachers

are motivated and committed to their professional growth, they are more effective in the classroom, leading to higher student performance (Burgess *et al*., 2016).

Professional development is a key component of lifelong learning for educators. A motivated teacher is more likely to view PD as a chance for personal and professional development rather than an obligatory task (van Braak *et al*., 2022). This intrinsic motivation fosters a culture of continuous improvement, where teachers actively seek out new knowledge and skills, stay updated with educational trends, and adapt to changes in the curriculum and student needs. This continuous professional growth is crucial for maintaining high standards of teaching and adapting to the evolving educational landscape. Teacher motivation significantly affects job satisfaction and retention rates. Motivated teachers who engage in meaningful PD activities are more likely to experience job satisfaction, reducing burnout and attrition rates (Cham *et al*., 2014). Professional development opportunities that align with teachers' interests and career goals can rejuvenate their passion for teaching, making them feel valued and supported by their institutions. This sense of professional fulfillment is vital for retaining skilled and experienced teachers, which in turn, contributes to the stability and quality of the educational workforce (Tam *et al*., 2020).

Understanding the relationship between teacher motivation and PD engagement can inform educational policy and practice. Policymakers and school leaders can use insights from this relationship to design and implement PD programs that are more appealing and effective for teachers. By considering factors that motivate teachers, such as relevance, autonomy, and professional growth opportunities, educational leaders can create PD initiatives that encourage sustained engagement and meaningful participation (Cham *et al*., 2014; Nadon *et al*., 2023; Sempere-Tortosa *et al*., 2021). This informed approach to PD can lead to more impactful and

cost-effective professional development efforts. The relationship between teacher motivation and engagement in professional development activities is of paramount importance for the success of educational systems. It influences teaching quality, student outcomes, teacher retention, and the overall effectiveness of educational practices (Bouchard, 2009; Dev *et al*., 2020; Elmberger *et al*., 2019). By recognizing and fostering this relationship, educational stakeholders can create a more dynamic, adaptable, and high-performing educational environment that benefits teachers and students alike

2.3.6 Models of Professional Development

There are various models of professional development, each with its own advantages and limitations: Workshops and seminars are traditional forms of professional development that provide teachers with opportunities to learn about new strategies and concepts. However, they are often criticized for being too short and not providing follow-up support (Garden *et al*., 2015). Professional learning communities are groups of educators that meet regularly to collaborate, reflect on practice, and share expertise. Professional learning community promote continuous learning and improvement and are effective in fostering a collaborative culture within schools (Guise *et al*., 2012). Coaching and mentoring involve experienced educators providing individualized support and feedback to less experienced teachers. This model is highly effective in helping teachers implement new practices and develop their skills (Knight, 2009). With advancements in technology, online professional development has become increasingly popular. It offers flexibility and access to a wide range of resources, making it a convenient option for teachers. However, the quality and effectiveness of online professional development can vary (Fishman *et al*., 2013).

2.3.7 Challenges and Considerations

While professional development is crucial, several challenges need to be addressed. Ensuring that professional development activities are relevant to teachers' needs and of high quality is a significant challenge. Professional development should be designed based on the actual instructional needs of teachers and aligned with their goals (Wei *et al*., 2009). Finding the time and resources for professional development can be challenging for schools. Teachers often have limited time outside of their instructional duties, and schools may lack the financial resources to provide high-quality professional development (Darling-Hammond *et al*., 2017).

Sustaining the impact of professional development over time is critical. Teachers need ongoing support to implement new practices effectively and to make lasting changes in their instructional approaches (Desimone & Garet, 2015). Professional development in education is a vital mechanism for improving teacher effectiveness and student learning outcomes. Effective professional development is characterized by its focus on content, active learning, coherence, duration, and collective participation. Despite challenges related to relevance, time, and resources, ongoing efforts to enhance professional development can lead to meaningful improvements in teaching and learning.

2.4.1 Types of Professional Development Activities

Professional development (PD) activities are essential for educators to enhance their teaching skills, stay updated with educational advancements, and improve student outcomes. These activities can take various forms, catering to different learning preferences, schedules, and professional needs. Effective professional development is ongoing, collaborative, and focused on specific content and skills that teachers need to improve their practice. Here are several types of professional development activities commonly used in education

2.4.1.1 Professional Learning Communities (Professional learning community)

Professional Learning Communities (Professional learning community) involve groups of educators who meet regularly to discuss and reflect on their teaching practices, share insights, and collaborate on solving instructional challenges. Professional learning community foster a collaborative culture and continuous learning environment within schools (Blasko *et al*., 2004). The regular interaction and peer support in Professional learning community help teachers implement new strategies and maintain professional growth over time. Coaching and mentoring provide personalized support to teachers, often involving experienced educators working closely with less experienced or struggling teachers. Coaches and mentors offer guidance, feedback, and model effective teaching practices. This form of professional development is highly effective because it addresses individual needs and provides ongoing, job-embedded support (Knight, 2009).

PD activities often encourage collaboration and the development of professional learning communities (Professional learning community). In Professional learning community, teachers work together to share knowledge, solve problems, and support each other's professional growth. This collaborative environment enhances teachers' sense of belonging and professional identity (DuFour, 2004). By working together, teachers can collectively improve their instructional practices and student outcomes.

2.4.1.2 Workshops and Seminars

Workshops and seminars are traditional forms of professional development that provide structured opportunities for teachers to learn new strategies, gain knowledge, and interact with peers. These events are typically short-term, ranging from a few hours to a few days, and focus on specific topics such as classroom management, curriculum development, or the integration

of technology in teaching (Garet *et al*., 2001). While these can be beneficial for introducing new concepts, their impact is often limited if not followed up with sustained support. With advancements in technology, online professional development has become increasingly popular. Online PD includes webinars, online courses, virtual workshops, and professional learning networks. These platforms offer flexibility, allowing teachers to engage in learning at their own pace and from any location (Fishman *et al*., 2013). Online PD can also provide access to a wide range of resources and expert instructors, though the quality and engagement levels can vary.

2.4.1.2 Conferences

Educational conferences provide opportunities for teachers to attend sessions on diverse topics, network with peers, and learn from leading experts in the field. Conferences can be regional, national, or international, offering a broad perspective on educational trends and innovations. While conferences can be inspiring and informative, the challenge lies in translating the acquired knowledge into practice without ongoing support (Darling-Hammond *et al*., 2017). In-service training refers to PD activities conducted during the school year, often during professional development days. These sessions are typically organized by the school or district and may cover various topics relevant to the current educational context, such as new curriculum standards, assessment techniques, or instructional strategies. In-service training ensures that all teachers receive consistent information and updates (Wei *et al*., 2009).

2.4.2 Benefits of Professional Development for Teachers

Professional development (PD) is crucial for teachers' growth and the overall improvement of educational systems. By engaging in PD activities, teachers can enhance their skills, adapt to new teaching methods, and meet the evolving needs of their teachers. The benefits of professional development for teachers are manifold, impacting their instructional practices, job

satisfaction, and student outcomes.

2.4.2.1 Improved Instructional Practices

Professional development helps teachers improve their instructional practices by introducing them to new teaching strategies, tools, and techniques. It provides opportunities for teachers to learn about the latest research in education and apply evidence-based methods in their classrooms (Desimone, 2009). For instance, PD activities focused on differentiated instruction can help teachers address diverse learning needs and improve student engagement.

2.4.2.2 Enhanced Student Achievement and increased Job Satisfaction among teachers

One of the most significant benefits of professional development is its positive impact on student achievement. Research indicates that effective PD programs lead to improved student performance by enhancing teachers' instructional skills and knowledge (Yoon *et al*., 2007). When teachers adopt new teaching strategies and effectively implement them, teachers benefit from more engaging and effective learning experiences.

Professional development contributes to teachers' job satisfaction and motivation by providing them with opportunities for growth and advancement. Teachers who engage in PD activities often feel more competent and confident in their teaching abilities, leading to greater job satisfaction (Guskey, 2002). Additionally, PD can reduce burnout and increase teacher retention by fostering a sense of professional fulfillment and accomplishment.

2.4.2.3 Adaptation to Educational Changes and Personal and Professional Growth

The educational landscape is constantly evolving, with new technologies, curricula, and standards being introduced regularly. Professional development helps teachers stay current with

these changes and adapt their teaching practices accordingly (Darling-Hammond *et al*., 2017). For example, PD programs on integrating technology in the classroom can equip teachers with the skills needed to effectively use digital tools and resources. Professional development supports both personal and professional growth by encouraging lifelong learning and self-improvement. Teachers who engage in PD activities continuously develop their knowledge and skills, which can lead to career advancement and opportunities for leadership roles (Borko, 2004). Personal growth through PD also enhances teachers' ability to inspire and motivate their teachers. PD programs often include training on classroom management techniques, which are essential for creating a positive learning environment. Effective classroom management strategies help teachers maintain order, reduce disruptive behaviors, and create a conducive learning atmosphere. As a result, teachers can focus more on instruction and less on disciplinary issues (Marzano, 2003).

Professional development fosters reflective practice among teachers, prompting them to critically evaluate their teaching methods and student outcomes. This process of reflection enables teachers to pinpoint areas needing improvement and devise strategies to enhance their effectiveness (Dubinsky *et al*., 2019). By continuously reflecting on their practice, teachers can make informed decisions about their instructional approaches. The benefits of professional development for teachers are extensive and multifaceted. By participating in PD activities, teachers can improve their instructional practices, enhance student achievement, increase job satisfaction, develop professional learning communities, adapt to educational changes, and support their personal and professional growth. Investing in high-quality professional development is essential for fostering an effective and dynamic teaching workforce.

2.4.3 Challenges of Professional Development for Teachers

Professional development (PD) is crucial for teachers' growth and effectiveness, but it is often fraught with challenges that can hinder its success. Understanding these challenges is essential for designing and implementing effective PD programs that truly benefit educators and, ultimately, their teachers. Here are some of the main challenges of professional development for teachers:

2.4.3.1 Lack of Time and Interest

One of the most significant challenges teachers face regarding professional development is a lack of time. Teachers are often overwhelmed with their day-to-day responsibilities, including lesson planning, grading, and classroom management, leaving little time for PD activities (Darling-Hammond *et al*., 2017). Finding time within the school day or outside of regular working hours for meaningful professional development can be difficult, and short PD sessions may not be sufficient to produce lasting changes in practice. Teachers, like all professionals, can be resistant to change, especially when it involves altering long-established practices. Professional development initiatives that require significant changes in teaching methods or classroom management strategies can be met with skepticism or resistance (Fullan, 2007).

Professional development programs that are disconnected from the realities of the classroom are less effective. Teachers often find that the strategies and theories presented in PD sessions do not align with their everyday teaching experiences and challenges (Cochran-Smith & Lytle, 1999). PD should be practical and relevant, providing teachers with tools and techniques that can be readily applied in their specific contexts. Successful PD must address teachers' concerns, provide clear rationales for new approaches, and offer support throughout the transition process.

2.4.3.2 Insufficient Funding

Budget constraints can severely limit the availability and quality of professional development opportunities. Schools and districts with limited financial resources may struggle to provide ongoing, high-quality PD programs (Wei *et al*., 2009). This can result in teachers having access only to sporadic or lower-quality training sessions, which are less likely to have a meaningful impact on their teaching practices. Sustained change in teaching practice requires ongoing support and follow-up, which is often lacking in traditional PD models. Without continued coaching, mentoring, and opportunities for reflection and feedback, teachers may struggle to implement new strategies learned during PD sessions (Guskey & Yoon, 2009). Continuous support helps ensure that new practices are effectively integrated into daily instruction.

2.4.3.3 One-Size-Fits-All Approach

Many professional development programs adopt a one-size-fits-all approach, failing to consider the diverse needs, experiences, and backgrounds of teachers (Desimone, 2009). This can lead to disengagement and a lack of relevance, as teachers may feel that the PD does not address their specific instructional challenges or professional goals. Effective PD should be differentiated and personalized to meet the varying needs of educators.

Teachers in rural or underserved areas may have limited access to high-quality professional development opportunities. Geographic isolation, lack of resources, and fewer local PD providers can make it difficult for these teachers to engage in meaningful PD activities (Fishman *et al*., 2013). Online PD can help bridge this gap, but it requires reliable internet access and digital literacy skills. Despite its importance, professional development for teachers faces numerous challenges, including lack of time, insufficient funding, one-size-fits-all approaches, lack of follow-up and support, limited access to high-quality PD, misalignment with classroom

realities, resistance to change, and difficulties in evaluation and accountability. Addressing these challenges requires a comprehensive approach that includes adequate funding, personalized PD opportunities, ongoing support, and effective evaluation strategies (Karlsson *et al*., 2018). By overcoming these obstacles, schools and districts can create more effective PD programs that truly enhance teacher practice and improve student outcomes.

2.4.4 Studies on Teacher Motivation and Professional Development Participation

Teacher motivation and participation in professional development (PD) activities are closely linked and have significant implications for educational quality and student outcomes. Numerous studies have explored the relationship between teacher motivation and their engagement in professional development, highlighting the factors that influence their willingness to participate and the outcomes of such engagement. Teacher motivation is a critical factor in educational success, influencing not only teachers' professional behaviors but also student achievement and school climate (Richardson *et al*., 2014). Motivated teachers are more likely to invest in their professional growth, seek out opportunities for improvement, and implement innovative teaching practices in their classrooms.

Teachers' beliefs about the value of PD and their self-efficacy play a significant role in their participation. Those who believe that PD will enhance their teaching skills and positively impact their teachers are more likely to engage in such activities (Desimone *et al*., 2006). A supportive school culture that encourages continuous learning and provides time and resources for PD is crucial. Teachers are more likely to participate in PD when they feel supported by their administration and peers (Borko, 2004). The relevance and practicality of PD content are vital for teacher engagement. PD activities that address teachers' specific needs and classroom challenges are more likely to be attended and implemented (Avalos, 2011). Participation in

Professional learning community can enhance motivation by providing a collaborative environment where teachers can share experiences, reflect on practices, and support each other's professional growth (Vescio *et al*., 2008).

Engagement in professional development can also enhance teacher motivation. Effective PD activities can boost teachers' confidence in their abilities, renew their enthusiasm for teaching, and provide them with a sense of accomplishment (Tam *et al*., 2020). When teachers see the positive impact of PD on their instructional practices and student outcomes, their intrinsic motivation is likely to increase. Numerous empirical studies and case studies have examined the interplay between teacher motivation and PD participation. For example, a study by Opfer and Pedder (2011) found that teachers' motivation to engage in PD was significantly influenced by their perceptions of the PD's relevance and the support they received from their school leadership. Another study by Richardson *et al*. (2014) highlighted the importance of aligning PD activities with teachers' professional goals and interests to foster sustained engagement. The relationship between teacher motivation and participation in professional development is complex and multifaceted. Intrinsic motivation, supported by a positive school culture and relevant PD content, is key to encouraging teachers' engagement in PD activities. In turn, effective professional development can enhance teacher motivation by improving their skills and confidence, ultimately leading to better educational outcomes. Understanding the Gaps and Inconsistencies in Existing Literature on the Association Between Teacher Motivation and Involvement in PD Activities

The relationship between teacher motivation and their involvement in Professional Learning Communities (Professional learning community) has been a significant focus in educational research. Professional learning community are collaborative groups where educators share

practices, discuss student work, and engage in professional learning to improve teaching and learning outcomes (Jungert *et al*., 2021; Kennedy, 2016; West *et al*., 2007). While existing literature has contributed to understanding this relationship, several gaps and inconsistencies remain, highlighting the need for further investigation.

2.4.5 Gaps in literature

One of the primary gaps in the literature is the inconsistency in defining and measuring both teacher motivation and PD involvement. Teacher motivation can be intrinsic or extrinsic, encompassing factors such as self-efficacy, job satisfaction, and professional commitment (Deci & Ryan, 2000). Similarly, Professional learning community can vary widely in structure, goals, and activities. Some studies define PD involvement in terms of attendance, while others focus on active participation and engagement (Stoll *et al*., 2006). This variability makes it challenging to compare results across studies and draw definitive conclusions. Many studies on the association between teacher motivation and PD involvement are cross-sectional, providing a snapshot at a single point in time. These studies can identify correlations but cannot establish causality or examine changes over time. Longitudinal studies are needed to understand how teacher motivation and PD involvement evolve and influence each other over the course of an academic year or across multiple years (Vescio *et al*., 2008). The impact of contextual factors, such as school culture, leadership support, and socio-economic conditions, on the relationship between teacher motivation and PD involvement is often underexplored. These factors can significantly influence both teacher motivation and their willingness to participate in Professional learning community (Borko, 2004). For instance, a supportive school environment may enhance motivation and encourage active involvement in Professional learning community, while a lack of support can have the opposite effect.

Existing literature often overlooks the differences in educational settings, such as urban vs. rural schools, public vs. private institutions, and differences across countries. These settings can influence the availability and effectiveness of Professional learning community and the factors that motivate teachers to participate in them (Darling-Hammond *et al*., 2009). More comparative studies are needed to understand how these contextual differences impact the relationship between teacher motivation and PD involvement. While many studies examine the direct relationship between teacher motivation and PD involvement, fewer studies explore how this relationship affects student outcomes. Understanding this link is crucial for demonstrating the ultimate value of Professional learning community and the importance of fostering teacher motivation (Vangrieken *et al*., 2017). Research that connects these elements can provide a more comprehensive picture of the benefits of Professional learning community for educational improvement.

There are methodological limitations in many studies, such as small sample sizes, reliance on self-reported data, and lack of control groups. These limitations can lead to biased results and limit the generalizability of findings (Kennedy, 2016). Employing more robust research designs, such as randomized controlled trials and mixed-method approaches, can help address these issues. Another gap is the limited exploration of how different types of professional development (PD) influence teacher motivation and PD involvement. While Professional learning community are a form of PD, they are often studied in isolation from other PD activities. Investigating how various PD forms interact and influence motivation and PD involvement can provide deeper insights into effective teacher development strategies (Opfer & Pedder, 2011). The existing literature on the association between teacher motivation and involvement in PD activities has made significant contributions to understanding this relationship. However, gaps

and inconsistencies remain, particularly regarding definitions and measurements, the need for longitudinal studies, the influence of contextual factors, differences in educational settings, the impact on student outcomes, methodological limitations, and the interaction with other forms of professional development. Addressing these gaps through comprehensive and methodologically sound research can enhance our understanding of how to effectively foster teacher motivation and leverage Professional learning community for educational improvement.

CHAPTER THREE

RESEARCH METHODOLOGY

2.0 Overview

The research methods and processes used to conduct the study are presented in this chapter. It starts by describing the research philosophy, research approach and design chosen for the study before outlining how the data for the research was gathered, analyzed and reported. This chapter also presents the methods used to choose the sample, the data sources, the data collection instruments, the data analysis, validity and reliability, and the ethical considerations.

3.1 Research Philosophy Guiding the Study

This study is anchored on positivism/post-positivism. It is a research philosophy that is particularly well-suited to quantitative methods is positivism. Positivism is a philosophical approach that emphasizes the importance of empirical evidence and the scientific method in understanding the world. In a quantitative research context, positivism involves the following key principles, Positivist researchers strive to be impartial and detached in their research, free from personal beliefs, values, and emotions. They aim to collect and analyze data in a systematic and rigorous manner, using standardized procedures and statistical techniques to ensure the reliability and validity of their findings (Park, *et al*., 2020). Positivist researchers rely heavily on empirical evidence, which refers to observable and measurable phenomena that can be studied through systematic observation, experimentation, or data collection. They believe that by gathering large amounts of quantitative data, they can identify patterns, relationships, and causal mechanisms that can be generalized to a broader population. Positivist researchers formulate hypotheses about the relationships between variables and then test these hypotheses using statistical methods. They use hypothesis testing to determine whether the observed data

are consistent with the hypothesized relationships or whether there is evidence to reject the null hypothesis

Positivism is a research philosophy rooted in the scientific method and emphasizes the use of empirical evidence and objective analysis to study phenomena. Originating from the works of Auguste Comte, positivism is based on the belief that reality is stable, observable, and can be systematically studied using methods that yield reliable and replicable results. This philosophy forms the foundation of many quantitative research approaches in the natural and social sciences. In a positivist framework, research relies heavily on quantitative methods, including. Controlled environments are used to isolate variables and test hypotheses. Structured tools gather numerical data from large populations. Mathematical models and statistical tests are applied to analyze relationships and validate findings. Positivism enables researchers to predict outcomes by identifying consistent patterns. The emphasis on standardized methods ensures that studies can be repeated and validated by other researchers. Quantitative data provides precise measurements that enhance the accuracy of conclusions.

Despite its strengths, positivism has faced criticism, particularly from interpretivist and constructivist paradigms. Positivism often ignores subjective experiences, emotions, and social contexts, which are crucial in understanding human behavior. The focus on measurable data may lead to the oversimplification of complex phenomena. By emphasizing objectivity, positivism may overlook the nuanced meanings individuals assign to their experiences. Positivism is widely used in disciplines like psychology, sociology, economics, and health sciences, particularly when the goal is to identify cause-and-effect relationships or validate theoretical models. It is suitable for studies where precision, generalization, and prediction are essential. Positivism remains a cornerstone of research philosophy, particularly in fields that

value empirical evidence and quantitative rigor. However, researchers must carefully consider its limitations and, when necessary, integrate insights from other philosophical perspectives to address the complexity of their research questions.

Post-positivism is a research philosophy that evolved as a response to the limitations of positivism. It acknowledges the complexity of reality and the inherent limitations of human knowledge, emphasizing the need for a critical, reflexive approach to research. Post-positivism retains the empirical and systematic nature of positivism but introduces a more nuanced view of objectivity, certainty, and the role of the researcher in the knowledge-production process. Post-positivism is grounded in the belief that reality exists independently of human perceptions, but it recognizes that our understanding of reality is inherently imperfect and influenced by context and perspective. This philosophy emphasizes the provisional nature of knowledge. Post-positivists believe that no theory or finding can be considered absolutely true, as all knowledge is subject to revision in light of new evidence.

Post-positivists recognize that complete objectivity is unattainable. Researchers are influenced by their values, assumptions, and biases, which must be critically examined and addressed. Post-positivism supports the use of multiple methods (quantitative, qualitative, or mixed) to triangulate findings and provide a richer understanding of phenomena. Unlike positivism, which seeks universal laws, post-positivism values the context and acknowledges that findings may vary across different environments or populations. Post-positivism advocates a more flexible and reflective approach to research methodology. Key characteristics include. Theories are tested rigorously but are seen as approximations of reality rather than absolute truths. Combining quantitative and qualitative methods allows for a deeper and more holistic understanding of phenomena. Multiple sources of data and perspectives are used to validate

findings and reduce the risk of bias.

Post-positivism encourages researchers to critically examine their own assumptions and potential biases. The inclusion of both quantitative and qualitative methods allows for a more comprehensive approach to research. By acknowledging the limitations of knowledge, post-positivism provides a more realistic framework for understanding complex phenomena. The philosophical flexibility of post-positivism can make it challenging to apply consistently in practice. Its emphasis on context may reduce the ability to make broad generalizations. Critics argue that recognizing the influence of the researcher can undermine the credibility of findings. Post-positivism is widely adopted in social sciences, education, health research, and other fields that involve studying complex human behaviors and social phenomena. It is particularly valuable in. Where multiple perspectives need to be considered. Incorporating both data and stakeholder insights to inform decisions. Post-positivism bridges the gap between the rigid empiricism of positivism and the interpretive insights of constructivist approaches. It offers a pragmatic and critical framework for understanding reality while acknowledging the limitations of human inquiry. By emphasizing reflexivity, methodological pluralism, and the provisional nature of knowledge, post-positivism provides researchers with the tools to navigate the complexities of modern research.

3.2 Research Approach

In this study, the quantitative approach was adopted, as it aligns with the positivist tradition. Every research project begins with a well-defined research strategy or approach, which serves as the foundation for the investigation. This strategy encompasses everything from broad assumptions to specific methods for gathering, analyzing, and processing information, and is referred to as the research approach (Creswell, 2014). As noted by Dangnikuu (2017), the

research approach functions as a guiding framework that outlines the various procedures and pathways that lead the investigator toward finding solutions or gaining a better understanding of the problem under study. It serves as the structure through which answers to the research questions or hypotheses are derived. A quantitative research approach involves measuring and assessing variables to generate results. This approach includes the examination of numerical data using appropriate statistical methodologies to answer research questions (Apuke, 2017). Since this study aims to analyze numerical data using various statistical tools to address the "what" questions posed earlier, the quantitative approach was deemed suitable.

Clarke (2021) explains that a quantitative study is particularly well-suited for describing and determining the relationship between two or more variables, making it an ideal choice for studies that employ questionnaires as tools and seek to explore the connections between an independent and a dependent variable.

3.3 The Research Design

A cross-sectional descriptive survey design was adopted for this research. It is a sort of quantitative research design which is used to collect information from a group of subjects at just one point in time within a specified population. (Alexander *et al*., 2015) said that the most effective method for estimating the prevalence of risk variables in different population segments is analytical cross-sectional design. As the ultimate goal of this research work is to determine the association between teacher motivation and participation in professional development activities, the researcher employed this design. Moreso, this design collects data about an incidence, distribution, and interactions of variables within a population via self-reporting (Appiah Essuman *et al*., 2021b) and this fit the purpose of the study. This design was used because it helps the researcher to association between teacher motivation and participation in

professional development activities.

An analytic cross-sectional descriptive survey design is used when it becomes difficult for the researcher to involve all the members of the population. Thus, a representative sample is considered. It is usually carried out within a limited time so the sample is viewed from two perspectives. That is, those with the risk factor and those without. The prevalence of the risk factor is then determined in the sample. However, it is very difficult to use this design to point out or ascertain the real cause-and-effect relationship. That is, whether the independent variable triggers the effect on the outcome variable.

3.4 Study site

The Sagnarigu Municipal, with its capital at Sagnarigu, is one of the six newly established districts in the Northern Region, created in the first half of 2012. It was formed from the Tamale Metropolis through Legislative Instrument (LI) 2066. The district encompasses a total land area of 200.4 square kilometers and is bordered by the Savelugu-Nanton Municipality to the north, the Tamale Metropolis to the south and east, the Tolon District to the west, and the Kumbungu District to the northwest. Geographically, the district is situated between latitudes 9º16’ and 9º34’ North, and longitudes 0º36’ and 0º57’ West. The Municipality serves as an educational hub for the region, housing several significant educational institutions. These include a polytechnic, two colleges of education, and several senior high schools such as Tamale Senior High School, Northern Business Senior High School, Islamic Senior High School, and Kalpohin Senior High School. Additionally, it is home to the Graduate School of the University for Development Studies, the Community Health Nursing School, and the Tamale School of Hygiene. The Municipality also has various private schools contributing to its educational prominence.

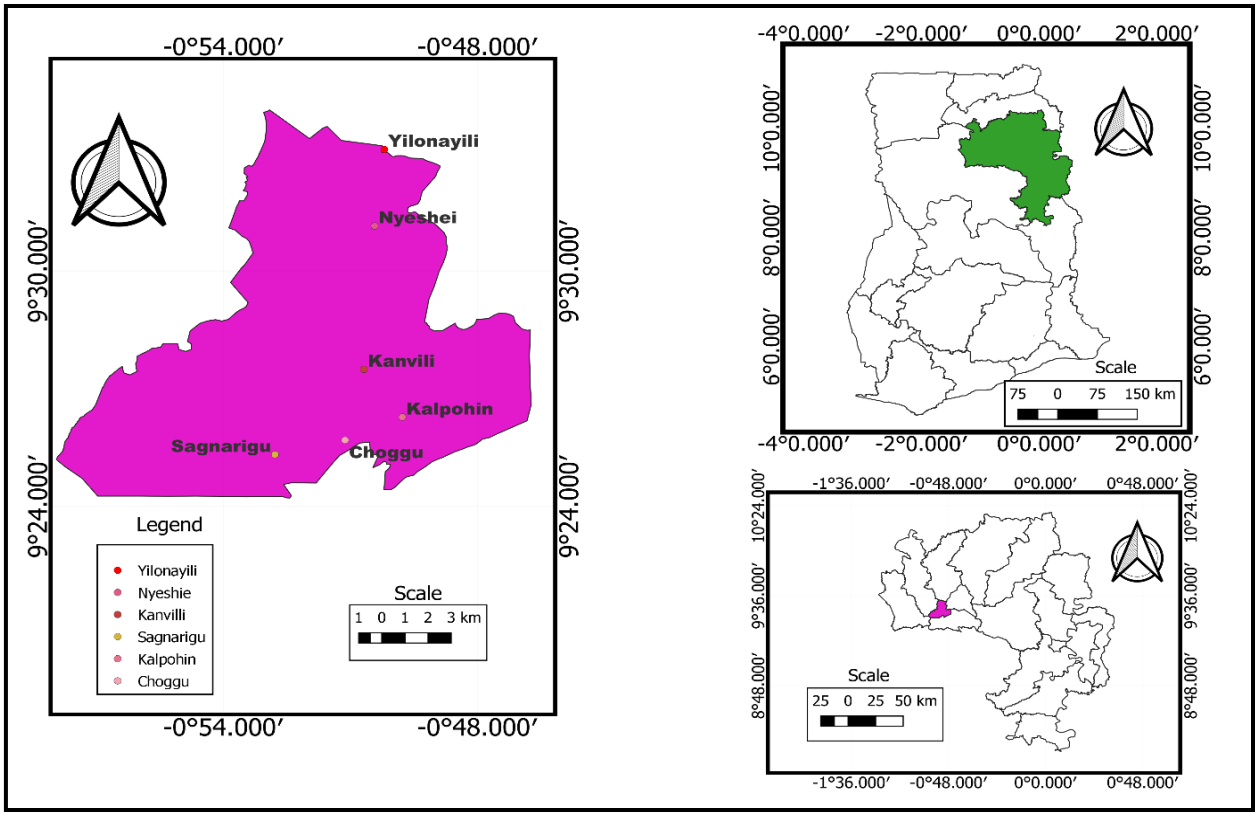

Figure 2: Map of Sagnarigu

3.5 Population

All teachers at the four government assisted senior high schools in the Sagnarigu Municipality, namely: Tamale Senior High School (TAMASCO), made up of One hundred and fifty-one teachers (151), Northern School of Business (NOBISCO), made up of One hundred and forty-three (143) teachers, Tamale Islamic Senior High School (TISEC), made up of One hundred and fifty-two teachers (152) and Kalpohin Senior High School (KALISCO) which has a total of one hundred and thirty-four teachers (134) were the study's target group. Teachers in all these schools are taken part in the PD. The teachers were chosen as a target since they were main participants in the PD. Table1 below displays the breakdown of the desired population.

Table 1: Breakdown of the study's accessible population

Name of School	Teacher Population		
	Males	Females	**TOTAL**
TAMASCO	98	53	151
TISSEC	108	44	152
NOBISCO	96	47	143
KALISCO	90	44	134
TOTAL	**392**	**188**	**580**

3.6 Sample Size and Sampling Procedure

The process of choosing a section of participants to represent the total an entire population is crucial since it establishes the population on whom the research findings can be applied broadly (Rahim et al., 2008). This process is known as sampling.

3.6.1 Sample size Determination

According to (Barão et al., 2017), a sample size should neither be excessively small nor overly large. To ensure the appropriateness of the sample size for this study, the sample size was calculated using Andrew Fisher's formula for sample size determination. A margin of error of 0.05 was selected, and a confidence level of 95% was adopted, which corresponds to a Z-score of 1.96. This formula was chosen based on the recommendation of Charan and Biswas (2013), who identified it as the most suitable method for determining sample sizes in cross-sectional studies, especially when participants are selected using a simple random sampling approach. Given that the present research is cross-sectional and employed a simple random sampling technique, this formula was deemed appropriate.

Using the formula for cross-sectional studies, the required minimum sample size was calculated and adjusted to be 405. This value was derived as follows:

$$n = \frac{\mathrm{Z}\alpha/2^2 \times \mathrm{P}(1-\mathrm{P})}{\mathrm{d}^2}$$

Where:

Zα/2 = 1.96 at 95% confidence interval

d= 5% margin of error.

P= 5(this is assumed for an unknown population)

$$n = \frac{(1.96)^2 \times 0.50(1-0.50)}{(0.05)^2}$$

Therefore, the sample size for the study was 420.

3.6.2 Sampling Procedure

The Sagnarigu Municipality has four government senior high schools. All these four government-assisted SHS were included in the study. Number of respondents required from each of the schools was determined by proportional to sample size. A simple random sampling was then employed to select the respondents from each school. The lottery method is a simple and widely used technique for implementing simple random sampling. This was used to select respondents from each school. A yes or no system was created with the required number to respond to the questions being yes. A teacher was enrolled to respond if yes was selected.

3.7 Data collection instrument

A structured questionnaire was developed, incorporating validated scales for measuring teacher motivation and participation in PD activities. The questionnaire was grouped into three sections.

Section A was meant to capture the demographic characteristics of the respondents. Section B was to capture the number of times a teacher has participated in the PD activity. The third section, C was designed to capture the various motivation levels of the participating teacher. The Teacher Motivation Scale (TMS), which includes subscales for intrinsic and extrinsic motivation, was used (Ryan & Deci, 2000). A PD Participation Scale was developed to measure the frequency e.g., weekly in PD activities. The questionnaire was piloted with a small group of teachers to ensure clarity and reliability. The final questionnaire was distributed electronically via the participating school's main WhatsApp platform. Follow-up reminders and reminders were sent to maximize response.

3.8 Study Variables

3.8.1 Independent Variable

Teacher motivation (measured in terms of intrinsic and extrinsic motivation). Teacher Motivation Scale (TMS), a standardized survey instrument was used to assess teacher motivation. The TMS consists of 30 items, measuring factors such as intrinsic motivation, extrinsic motivation, and self-determination.

3.8.2 Dependent Variable

Participation in PD activities (measured in terms of frequency; low or high). Professional Development Participation Instrument was used to collect data on teachers' participation in professional development activities, including frequency, type, and perceived usefulness.

3.9 Reliability and validity of the questionnaire

Ensuring a questionnaire's validity and reliability is vital for acquiring accurate and consistent research data. Validity measures how well the questionnaire assesses what it is supposed to

measure, while reliability indicates the consistency of responses over time and across various contexts. Both concepts are foundational to the credibility and usefulness of the data collected through questionnaires.

3.9.1 Validity

Validity encompasses several dimensions, each focusing on different aspects of measurement accuracy. The main types of validity relevant to questionnaires were Content Validity and Face Validity. Content validity examines whether the questionnaire comprehensively covers the construct it intends to measure. It involves evaluating whether all relevant aspects of the construct are included and whether the questions are representative of the entire domain. Expert judgment is often used to assess content validity, ensuring that the questionnaire items adequately reflect the theoretical construct (Cook et al., 2022). Face validity refers to the extent to which the questionnaire appears to measure what it is supposed to measure, based on a superficial assessment. While face validity is not a rigorous measure of validity, it is important for respondent acceptance and engagement. If respondents believe the questionnaire is relevant and appropriate, they are more likely to provide accurate and honest responses (Nevo, 1985).

3.9.2 Reliability

Reliability pertains to the consistency and stability of the responses obtained from a questionnaire. The main types of reliability relevant to questionnaires was Internal Consistency, which measures the extent to which items within a questionnaire are consistent with each other and contribute to a single construct. Cronbach's Alpha was relied on and A coefficient that evaluates the average correlation among items within a questionnaire. Values above 0.70 are generally considered acceptable, indicating good internal consistency (Christopher et al., 2021).

3.9.3 Means by Enhancing Validity and Reliability

To enhance the validity and reliability of a questionnaire, several steps were undertaken during the design and pretesting phases; a comprehensive literature review was conducted to help ensure that the questionnaire items were grounded in existing research and theory, thereby enhancing content validity. Subject matter experts involved in the review process and provided valuable insights into the appropriateness and comprehensiveness of the questionnaire items, enhancing both content and face validity.

3.9.3.1 Pretesting of Questionnaire

Pretesting a questionnaire is a critical step in the survey design process. It involves testing the survey instrument on a small, representative sample of respondents to identify potential issues and ensure the questions are understood as intended. The pretesting was done to enhance the reliability and validity of the survey, reduce respondent burden, and improve the overall quality of the data collected (Meyle et al., 2024). A lengthy or complex questionnaire can lead to respondent fatigue, increasing the likelihood of incomplete or careless responses. Pretesting also addresses the issues of appropriate length and complexity of the questionnaire, ensuring it is manageable for respondents while still capturing the necessary information (Fowler, 2014).

The pretesting contributed to the overall reliability and validity of the questionnaire. Reliability refers to the consistency of the responses, while validity refers to the accuracy of what the questionnaire is intended to measure. By identifying and correcting issues during the pretest phase, an improvement on the reliability and validity of the final questionnaire was made (DeVellis, 2016). The pretest sample should be similar to the target population in terms of demographics, behaviors, and other relevant characteristics. A sample size of 30 junior high school respondents was used (Presser *et al*., 2004). Data collected from the pretest was analyzed.

Based on the analysis, necessary revisions such as rewording ambiguous questions, adjusting response options, changing the order of questions, or shortening the questionnaire were made to the questionnaire. (Fowler, 2014). Clear instructions were provided and administration procedures were standardized to minimize variations in how respondents interpret and respond to the questionnaire items, enhancing reliability.

3.10 Data analysis

Data collected through the Kobo collect was exported to STATA 17, checked for completeness, cleaned, reorganized and analyzed. To present the data's findings, both descriptive and inferential statistics was used. Data was presented using descriptive statistics like mean, standard deviation, and graphs for the demographic characteristics of the study sample. The chi-square was used to assess the significance of the relationship between variables. Multiple regression Means, standard deviations, and frequencies to describe the sample characteristics and the levels of motivation and PD participation were calculated. Pearson correlation coefficients were calculated to assess the strength and direction of the relationships between intrinsic motivation, extrinsic motivation, and PD participation. Multiple regression was used to determine the extent to which teacher motivation (both intrinsic and extrinsic) predicts participation in PD activities while controlling for potential confounding variables such as years of teaching experience, school type, and demographic factors. To examine the association between teacher motivation and PD participation. Correlation analysis using Pearson correlation to assess the strength and direction of the relationship between motivation and PD participation. Binary logistic regression analysis and multiple regression to control for potential confounding variables such as years of teaching experience, school type, and demographic factors. Statistical analysis was conducted using the STATA 17 version for Windows.

3.11 Ethical Consideration

Ethical considerations are paramount in conducting research, ensuring that the rights, dignity, and welfare of participants are safeguarded. Researchers must adhere to ethical guidelines and principles to maintain the integrity of the study and protect participants from harm. Ethical considerations encompass a range of issues, including informed consent, confidentiality, privacy, risk minimization, and respect for autonomy. The study abided by the basic ethical principles: Informed consent is a process whereby researchers present participants with comprehensive information about the study, allowing them to make an educated decision regarding their involvement. This process includes sharing details about the study's objectives, procedures, possible risks and benefits, as well as the participants' right to withdraw from the study at any time without facing any penalties. Consent was obtained voluntarily, free from any form of coercion or undue influence. (Beauchamp & Childress, 2013).

Confidentiality involves protecting the personal information and data provided by participants. Researchers must implement measures to ensure that data is securely stored and only accessible to authorized personnel. Confidentiality helps to build trust between researchers and participants and encourages honest and open responses (Wiles *et al*., 2008). Respondents' identifiers were removed to prevent linking data to individuals. Collected data was stored and locked using encrypted digital and access to data was restricted to essential research personnel. Privacy refers to the control participants have over the extent, timing, and circumstances under which their personal information is shared. Researchers must respect participants' privacy by conducting research in a way that minimizes intrusiveness and protects personal boundaries. This includes respecting participants' decisions regarding the sharing of sensitive information (Sieber, 2022). This was equally ensured in carrying out this research.

Maintaining anonymity of a study's participants is very critical in ethical research practices. Ensuring that individuals' identities are protected promotes trust, encourages honest participation, and upholds the integrity of the study. The following measures were taken to ensure anonymity of teachers. Personal identifiers such as names, addresses, phone numbers, and any other direct identifiers were removed or coded. Unique identification numbers were assigned to each participant. Results were presented in aggregate form to prevent identification of individual responses. Participants were informed about the measures taken to protect their anonymity through a clear and transparent consent form. A statement affirming that their identity will not be revealed in the study or its outputs.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESULTS

4.0 Introduction

The results of the study and the analysis of the results are presented in this chapter. It starts with a presentation of the demographic's characteristics of the respondents, including their age, gender, marital status, religion of practice and ethnicity. Descriptive statistics were used to analyzed the background characteristics of the respondents and charts were used to present the results. It then presented remaining data. Percentages were used to analyze both the teachers' PD participation levels and motivation.

Demographic Characteristics of the Respondents

The Table 1 provides an overview of the demographic characteristics of the respondents in the study, including their age, sex, and marital status. A total of 405 responses were used out the targeted 420 respondents. This gives a response rate of 96%. The mean age of the respondents was 41.7 years, with a standard deviation of ±7.4 years, indicating a relatively narrow spread around the mean age. The age was categorized into ranges. This age distribution highlights that a little over a third (37.8%) of the respondents were in the 31-40 years age group, and the smaller group is (23.7%) suggesting a predominantly middle-aged sample. In terms of sex of respondents, the majority of respondents were male, comprising 75.8% (307 individuals), while the remaining were female (24.2%). The gender distribution shows a significant male predominance among the respondents.

The marital status of respondents was heavily skewed towards those who were married, accounting for 81.5% (330 individuals) and respondents who were single constituted 18.5% (75

individuals). This indicates that a substantial portion of the respondents were in a marital relationship. The analysis reveals that the majority of the respondents were middle-aged males, predominantly within the 31-40 years age group, and married. These characteristics may reflect the targeted population for the survey or study and could provide useful context for interpreting further findings related to the respondents' profiles

The majority of respondents hold a degree (78.0%), while 22.0% have master's degree or higher. On average, respondents have 13.8 years of teaching experience, with a significant proportion of respondents have more than 10 years of teaching experience (57.0%) and 37.3% have less than 6 years, and 5.7% have 6-10 years of teaching experience. The distribution of respondents across schools shows that 39.5% are teaching at Tamasco, 35.6% at Tissec, 11.4% at Kalisco, and 13.6% at Nobisco. Respondents are fairly evenly distributed across different wealth index categories, with 33.8% in the low category, 30.4% in the middle category, and 35.8% in the high category. A majority of respondents (62.0%) are not engaged in other business activities, while 38.0% are engaged in other business activities.

Table 2: Demographic characteristics of Respondents

Variable	Frequency	Percent %
Age group of respondents		
20-30 Years	96	23.7
31-40 Years	153	37.8
41-50	108	26.7
51-60	48	11.8
Sex of respondent		
Female	98	24.2
Male	307	75.8
Marital status		
Single	75	18.5
Married	330	81.5
Level of education		
Degree	316	78.0
Masters and above	89	22.0
Number of years group in teaching		
< 6 Years	151	37.3
6-10 Years	23	5.7
> 10 Years	231	57.0
Currently school teaching		
Tamasco	105	26.0
Tissec	106	26.2
Kalisco	100	24.7
Nobisco	94	23.1
Engaged in other business		
No	251	62.0
Yes	154	38.0

4.2 Levels of motivation among teachers in Sagnarigu Municipality

The data (see Table 4) shows that the majority of respondents (69.4%) have a high level of intrinsic motivation, while 30.6% have low level. Given the mean value of 11.8 and a standard deviation of 3.6, this suggests a relatively high average level of intrinsic motivation among the participants, with some variability. 32.3% of respondents have a low level of extrinsic motivation, while 67.7% have a high level. A significant portion of respondents (62.7%) exhibit

low levels of motivation, meaning they generally have reasons for engaging in their activities, while 37.3% have high levels of motivation, which indicates a lack of motivation or understanding of why they engage in certain behaviors. The data highlights that most respondents have high levels of both intrinsic and extrinsic motivation, which suggests that they are motivated by both internal and external factors. The relatively lower levels of motivation among the majority of participants (62.7%) indicate that most of them are generally motivated and have reasons for their actions, although a considerable minority (37.3%) may struggle with motivation or a clear sense of purpose in their activities.

Table 3: Teachers' Motivation Levels

Variable	Frequency	Percent %
Intrinsic motivation M (SD)	11.8 (3.6)	
Intrinsic motivation level		
Low	124	30.6
High	281	69.4
Extrinsic motivation level		
Low	131	32.3
High	274	67.7

4.3 Participation levels of teachers in professional development activities

As shown in Table 5, the average number of PD sessions participated by participants is 19.4, with a standard deviation of 9.2 sessions. This indicates that, on average, participants attended around 19 to 20 sessions, but there is a moderate amount of variability in the number of sessions attended. The majority of participants attended a high number of PD sessions, suggesting strong participation in PD activities. However, nearly 30% of the participants attended fewer sessions,

which could indicate barriers to participation or differing levels of commitment.

A significant majority of participants (75.6%) have high self-efficacy, indicating that most of them feel confident in their ability to execute behaviors necessary to produce specific performance attainments. However, approximately one-quarter of the participants (24.4%) have low self-efficacy, which could affect their motivation and performance in related tasks. The mean number of PD sessions attended (19.4) with a standard deviation of 9.2 suggests that while most participants attended a substantial number of sessions, there is considerable variability. The large proportion of participants (70.6%) who attended a high number of sessions indicates strong overall engagement with the PD. The data shows that the majority of participants have high self-efficacy (75.6%). This is a positive indicator, as high self-efficacy is often associated with better performance, persistence in the face of challenges, and higher levels of motivation. However, the 24.4% of participants with low self-efficacy may need additional support to boost their confidence and effectiveness.

Table 4: Participation Levels of Teachers in Professional Development Activities

Variable	Frequency	Percent %
Number of PD sessions, M (SD)	19.4 (9.2)	
Number of PD session attended grouped		
Low	119	29.4
High	286	70.6
Self-efficacy		
Low	99	24.4
High	306	75.6

4.3 PD Participation

The table provide analysis of PD participation. On average, respondents have attended 19.4 PD (Professional Learning Community) sessions, with a standard deviation of 9.2 sessions, indicating some variability in the number of sessions attended. The majority of respondents (70.6%) have had high PD attended sessions, while 29.4% have low attendance. A significant proportion of respondents (75.6%) report high self-efficacy, while 24.4% report low self-efficacy. Most respondents (69.4%) have high intrinsic motivation, while 30.6% have low intrinsic motivation. Similarly, 67.7% of respondents have high extrinsic motivation, whereas 32.3% have low extrinsic motivation. The majority of respondents (62.7%) have low levels of amotivation, while 37.3% have high levels of amotivation. The data indicates that a majority of the respondents are engaged in PD sessions and exhibit high levels of self-efficacy and motivation.

Table 5: Professional development attendance and related variables

Variable	Frequency	Percent %
Number of PD session attended		
Low	119	29.4
High	286	70.6
Self-efficacy		
Low	99	24.4
High	306	75.6
Intrinsic motivation level		
Low	124	30.6
High	281	69.4
Extrinsic motivation level		
Low	131	32.3
High	274	67.7

Age of respondents

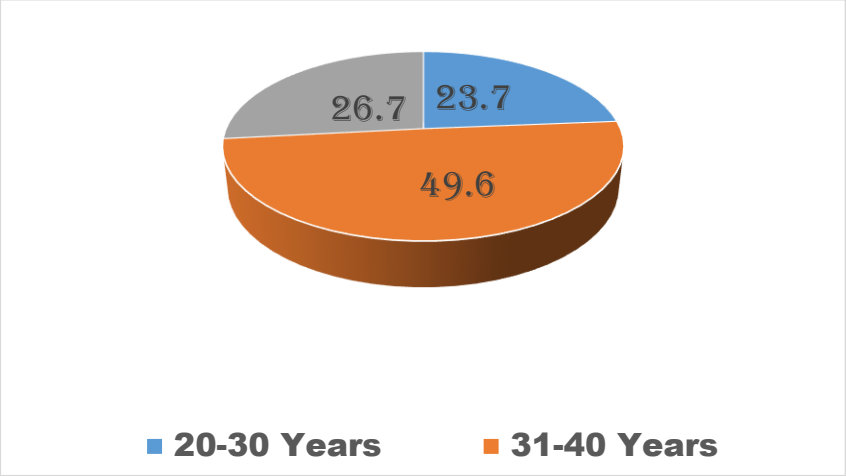

Figure 3: Age of respondents

4.4 Nexus Between Attending PD Sessions and Demographic Variables

The table provides analysis of the association between attending PD sessions and the demographic variables. The data show a significant association between age of respondents and PD attendance. Respondents who are 40 years and older are more likely to have attended more PD sessions compared to those under 40 years old [(63.6% vs 36.4%; $\chi^2 = 22.74$, $p < 0.001$)]. There is a significant association between gender and PD attendance with male respondents more likely to have attended more PD sessions compared to female respondents ($\chi^2 = 19.20$, $p < 0.001$). Also, there is a significant association between marital status and PD attendance. Married respondents are more likely to have attended more PD sessions compared to single respondents ($\chi^2 = 31.42$, $p < 0.001$).

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Table 6: Association Between PD Participation and Demographic Characteristics

Variable	PD Participation		p-value
	Low	High	
N	119	286	
Age group of respondent			0.083
20-30 Years	31 (32.3)	65 (22.7)	
31-40 Years	43 (44.8)	158 (55.2)	
≥ 41Years	45 (46.9)	63 (22.1)	
Gender			**< 0.001**
Female	46 (38.7)	52 (18.2)	
Male	73 (61.3)	234 (81.8)	
Marital status			**< 0.001**
Single	42 (35.3)	33 (11.5)	
Married	77 (64.7)	253 (88.5)	

4.5 Association Between PD Participation and other Socioeconomic Factors

The Table 6 below presents the association between attending PD sessions and other socioeconomic factors. These results indicate that engagement in other business is significantly associated with PD attendance, (χ^2 = 19.20, p < 0.001). Those who are engaged in other businesses are more likely to have attended more PD sessions compared to those who are not engaged in other businesses. However, level of education, years in teaching, school teaching, and wealth index are not significantly associated with PD attendance.

Table 7: Association Between attending PD Sessions and other demographic Factors

Variable	PD Attended		Test statistics	
	Low	High	χ^2	p-value
N	119	286		
Level of education			3.25	0.071
Degree	86 (72.3)	230 (80.4)		
Masters and above	33 (27.7)	56 (19.6)		
Years in teaching			0.27	0.87
< 6 Years	43 (36.1)	108 (37.8)		
6-10 Years	6 (5.0)	17 (5.9)		
> 10 Years	70 (58.8)	161 (56.3)		
School teaching			3.07	0.38
Tamasco	46 (38.7)	114 (39.9)		
Tissec	49 (41.2)	95 (33.2)		
Kalisco	11 (9.2)	35 (12.2)		
Nobisco	13 (10.9)	42 (14.7)		
Engaged in other business			19.20	**<0.001**
No	103 (86.6)	148 (51.7)		
Yes	16 (13.4)	138 (48.3)		

4.6 Teacher Motivation and PD Participation

These results indicate that self-efficacy, intrinsic motivation level, extrinsic motivation level, and amotivation are all significantly associated with PD attendance ($p < 0.05$). Specifically, those with high self-efficacy are more likely to attend PD sessions compared to those with low self-efficacy, ($\chi^2 = 14.32$, $p < 0.001$), intrinsic motivation, and extrinsic motivation are associated with higher participation at PD sessions, while those with high amotivation are less likely to participate PD sessions compared to those with low amotivation.

Table 8: PD Participation and Teacher Motivation

Variable	PD Attended		Test statistics	
	Low	High	χ^2	p-value
N	119	286		
Self-efficacy			14.32	**<0.001**
Low	44 (37.0)	55 (19.2)		
High	75 (63.0)	231 (80.8)		
Intrinsic motivation level			21.69	**<0.001**
Low	76 (63.9)	48 (16.8)		
High	43 (36.1)	238 (83.2)		
Extrinsic motivation level			31.63	**<0.001**
Low	77 (64.7)	54 (18.9)		
High	42 (35.3)	232 (81.1)		

4.7 Multivariate Analysis of PD Attendance Determinants

Significant factors influencing high PD participation are engagement in other businesses, intrinsic motivation, and extrinsic motivation. Respondents who engaged in other businesses are significantly more likely to attend PD sessions, with odds 2.54 times higher than those not engaged in other businesses [OR = 2.54; CI = (1.27, 5.07); p = 0.008]. Respondents with high intrinsic motivation are significantly more likely to attend PD sessions, with odds 4.45 times higher than those with low intrinsic motivation [OR = 4.45; CI = (2.54, 7.81); $p < 0.001$], and extrinsic motivation. Respondents with high extrinsic motivation are significantly more likely to attend PD sessions, with odds 3.42 times higher than those with low extrinsic motivation [OR = 3.42; CI = (1.94, 5.97); $p < 0.001$]. However, the age of respondents, gender, marital status, religion, self-efficacy, and amotivation were not significant predictors of PD attendance.

Table 9: Multivariate Analysis of PD Participation Determinants

Variable	Wald	p-value	Odds Ratio	95% Confidence interval for Odds Ratio	
				Lower	Lower
Gender					
Female	Ref				
Male	0.3	0.762	1.11	0.58	2.12
Marital status					
Single	Ref				
Married	1.01	0.31	1.44	0.71	2.94
Engaged in other business					
No	Ref				
Yes	**2.64**	**0.008***	**2.54**	**1.27**	**5.07**
Self-efficacy					
Low	Ref				
High	0.54	0.858	0.94	0.508	1.76
Intrinsic motivation					
Low	Ref				
High	**5.22**	**< 0.001***	**4.45**	**2.54**	**7.81**
Extrinsic motivation					
Low	Ref				
High	**4.27**	**< 0.001***	**3.42**	**1.94**	**5.97**

Relationship between motivation and PD participation

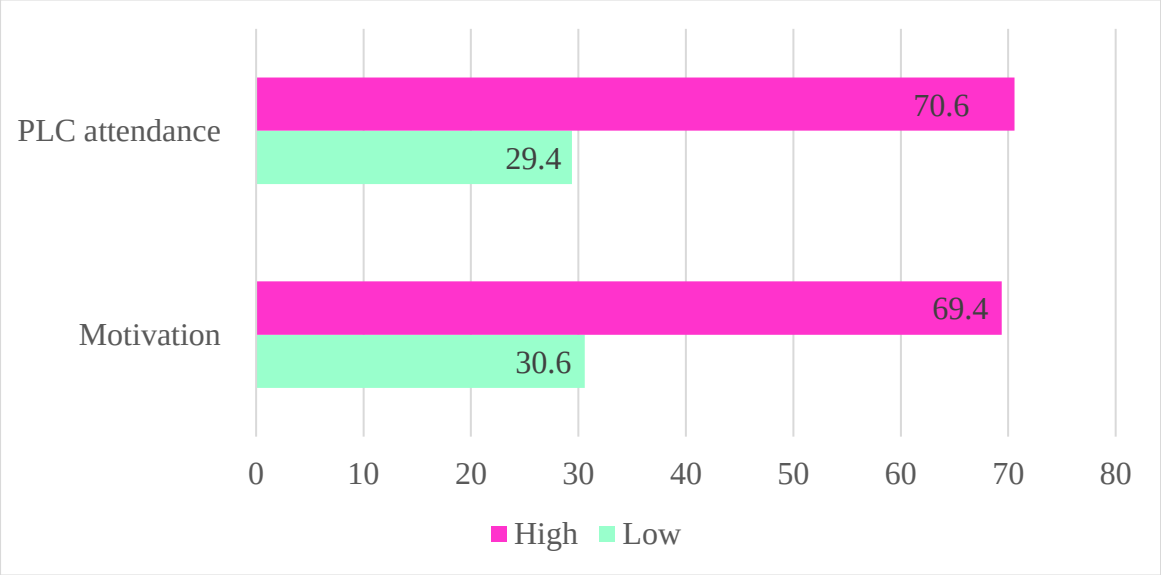

Figure 4: Relationship between motivation and PD attendance

4.8 Association Between Teacher Motivation and PD Attendance

The table shows both unadjusted and adjusted logistic regression models for the intrinsic and extrinsic motivation variables for PD attendance. Respondents with high intrinsic motivation have approximately 8.76 times higher odds of attending PD sessions compared to those with low intrinsic motivation. [OR = 8.76; (5.39 - 14.25); $p < 0.001$]. After adjusting for other variables in the model, those with high intrinsic motivation have approximately 4 times higher odds of attending PD sessions compared to those with low intrinsic motivation. [OR = 4.45; CI = (2.54, 7.81); $p < 0.001$]. Also, respondents with high extrinsic motivation were 8 times more likely to attend PD sessions compared to those with low extrinsic motivation. [OR = 7.88; CI = (4.88 - 12.71); $p < 0.001$] After adjusting for other variables in the model, those with high extrinsic motivation have approximately 3 times higher odds of attending PD sessions compared to those with low extrinsic motivation, [OR = 3.42; CI = (1.94, 5.97); $p < 0.001$].

The results indicate that both intrinsic and extrinsic motivations are strong predictors of PD

attendance in both unadjusted and adjusted models. High levels of intrinsic and extrinsic motivation significantly increase the likelihood of attending PD sessions. However, the odds ratios decrease in the adjusted model, indicating that other factors in the model account for some of the associations.

Table 10: Association between teacher motivation and PD Participation

Variable	Unadjusted model			Adjusted model		
	OR	(95% CI)	p-value	OR	(95% CI)	p-value
Intrinsic motivation						
Low	Ref			Ref		
High	8.76	(5.39-14.25)	< 0.001	4.45	(2.54-7.81)	< 0.001
Extrinsic motivation						
Low	Ref			Ref		
High	7.88	(4.88-12.71)	< 0.001	3.42	(1.94-5.97)	< 0.001

4.4 Discussion of Results

4.4.1 Levels of Motivation Among Teachers in Sagnarigu Municipality

The data reveals that a substantial majority of respondents (69.4%) exhibit a high level of intrinsic motivation, reflected in a mean score of 11.8 (SD = 3.6). Intrinsic motivation involves participating in an activity driven by the inherent enjoyment and interest in the activity itself, rather than by any external rewards or consequences. This high prevalence of intrinsic motivation among respondents suggests that many individuals find personal fulfillment and enjoyment in their tasks, which can be a powerful driver of sustained engagement and performance. Recent research supports the critical role of intrinsic motivation in promoting well-being, creativity, and long-term engagement. Ryan and Deci (2017) emphasize that intrinsic motivation is essential for cognitive, social, and psychological growth, as it leads to more persistent and higher-quality learning and performance outcomes. The variability in

intrinsic motivation observed in the sample, as indicated by the standard deviation, aligns with findings that individual differences, such as personal interests, values, and autonomy, significantly influence levels of intrinsic motivation (e.g., Vansteenkiste, Ryan, & Soenens, 2020).

The data also reveals that 67.7% of respondents have high levels of extrinsic motivation, while 32.3% have low levels. Extrinsic motivation involves engaging in an activity to achieve external rewards or avoid negative outcomes, such as receiving praise, earning a salary, or avoiding punishment. The relatively high prevalence of extrinsic motivation among respondents suggests that external incentives are also a significant driver of behavior. While intrinsic motivation is often idealized, extrinsic motivation is also important, particularly in structured environments where external rewards are prevalent. Gagné and Deci (2018) argue that when extrinsic motivators are perceived as supportive rather than controlling, they can complement intrinsic motivation and lead to positive outcomes, such as increased effort and task persistence. Moreover, extrinsic motivation can be internalized over time, leading to greater personal commitment and satisfaction with activities (e.g., Deci & Ryan, 2016).

A substantial majority of respondents (62.7%) exhibit low levels of amotivation, while 37.3% exhibit high levels. Amotivation refers to a state in which individuals lack motivation or fail to see the connection between their actions and outcomes. The relatively low levels of amotivation among most respondents suggest that they generally understand the purpose of their activities and are motivated to engage in them, whether due to intrinsic or extrinsic factors. However, the considerable minority (37.3%) of respondents with high levels of amotivation highlights the challenges some individuals face in finding meaning or purpose in their activities. Legault (2017) points out that amotivation can stem from feelings of incompetence, lack of autonomy,

or an inability to connect actions with meaningful outcomes. This state can lead to disengagement, lower performance, and decreased well-being. Addressing amotivation requires interventions that enhance perceived competence, autonomy, and relatedness, as these factors are central to fostering motivation according to Self-Determination Theory (SDT).

The data highlights that most respondents have high levels of both intrinsic and extrinsic motivation, suggesting that they are motivated by a combination of internal satisfaction and external rewards. This dual motivation can be advantageous, as it provides multiple sources of motivation that can sustain engagement and performance across different contexts. Cerasoli, Nicklin, and Ford (2014) found that intrinsic and extrinsic motivations are not mutually exclusive and can jointly influence performance, particularly when extrinsic rewards are aligned with intrinsic goals. This balance of motivations can be particularly effective in environments where both personal interest and external rewards are present, such as in educational or professional settings.

The relatively lower levels of amotivation among the majority of participants indicate that most respondents are generally motivated and have reasons for their actions. This is a positive finding, as motivation is crucial for achieving goals, maintaining effort, and overcoming challenges. However, the presence of a significant minority (37.3%) struggling with amotivation suggests the need for targeted support to help these individuals find meaning and purpose in their activities, which could enhance their overall motivation and well-being.

4.4.2 Levels of Participation in PD

The data reveals that a significant proportion of respondents (70.6%) attended a high number of Professional Learning Community (PD) sessions, with an average attendance of 19.4

sessions (SD = 9.2). This high level of participation in PD sessions is notable as it is often linked to the effectiveness of professional development initiatives. PD sessions are designed to foster collaborative learning, reflective practices, and the continuous professional growth of educators. Vangrieken et al. (2017) emphasize that regular participation in Professional learning community can lead to enhanced instructional practices and improved student outcomes due to the collective inquiry and shared practices that Professional learning community promote. Furthermore, Linder, Post, and Calabrese (2017) suggest that frequent engagement in Professional learning community contributes to the development of a strong professional community, which is essential for sustaining educational improvements.

However, the data also shows that approximately 29.4% of respondents attended fewer PD sessions. Lower attendance might be attributed to several factors such as time constraints, lack of motivation, or perceived irrelevance of the content covered in the sessions (e.g., Desimone & Garet, 2015). Addressing these barriers is crucial for ensuring that all educators can benefit from the professional learning opportunities that Professional learning community offer.

Self-efficacy refers to an individual's belief in their ability to succeed in specific situations or accomplish a task. The data indicates that a substantial majority of respondents (75.6%) reported high levels of self-efficacy. This finding is significant as self-efficacy is a critical determinant of how educators approach goals, tasks, and challenges in their professional environment. High self-efficacy among educators is often associated with better classroom management, more innovative teaching practices, and higher levels of student achievement. Zee and Koomen (2016) underscore that teachers with high self-efficacy are more likely to adopt student-centered teaching approaches and persist in the face of challenges. Moreover, Klassen and Tze (2014) highlight that self-efficacy is closely linked to job satisfaction and emotional

well-being, further emphasizing the importance of fostering high self-efficacy in educators.

On the other hand, the 24.4% of respondents who reported lower self-efficacy may require additional support to enhance their confidence and effectiveness in their roles. Research by Tschannen-Moran and Johnson (2015) suggests that targeted professional development, including mentoring and coaching, can significantly improve self-efficacy among educators by providing them with the skills and knowledge needed to succeed.

In all, the high attendance in PD sessions and the correspondingly high levels of self-efficacy reported by most respondents are encouraging findings. These results align with existing literature, which emphasizes the importance of continuous professional development and the cultivation of self-efficacy for effective teaching. However, attention should be given to those with lower attendance and self-efficacy to ensure that all educators have the opportunity to thrive in their professional roles.

4.4.3 Factors That Influence PD Participation Among Teachers

The findings of this study highlight several significant factors that influence the high attendance of PD sessions among respondents. Key predictors identified include engagement in other businesses, intrinsic motivation, and extrinsic motivation. These results align with existing literature on motivational factors and professional development participation. Respondents who engage in other businesses are significantly more likely to attend PD sessions than those not engaged in other businesses. Individuals involved in multiple professional activities might be more motivated to seek continuous improvement and networking opportunities through Professional learning community. Previous researches by Kirby (2004) and Gibb (1993) support this notion, suggesting that entrepreneurial activities can enhance one's drive for continuous

learning and professional development (Gibb, 1993; Kirby, 2004).

Intrinsic motivation is a critical factor influencing PD attendance. Respondents with high intrinsic motivation are significantly more likely to attend PD sessions than those with low intrinsic motivation. This aligns with Deci and Ryan's (1985) Self-Determination Theory, which posits that intrinsically motivated individuals engage in activities out of interest and enjoyment, leading to higher engagement and persistence. Intrinsically motivated teachers are likely to see Professional learning community as valuable opportunities for personal and professional growth, fostering a greater commitment to attend (Ryan & Deci, 2000). Similarly, extrinsic motivation also significantly predicts PD attendance. Respondents with high extrinsic motivation are significantly more likely to attend PD sessions than those with low extrinsic motivation. This is consistent with research indicating that external rewards and recognition can enhance participation in professional development activities (Vallerand, 1997). Teachers motivated by external factors such as career advancement, recognition, and tangible rewards may find Professional learning community beneficial for achieving these goals (Deci, Koestner, & Ryan, 1999).

Interestingly, the study found that age, gender, marital status, religion, self-efficacy, and amotivation were not significant predictors of PD attendance. This suggests that motivational factors (intrinsic and extrinsic) and engagement in other businesses play more crucial roles than demographic or psychological factors in influencing PD attendance. demographic factors such age, gender, marital status, and religion may not significantly influence PD attendance, possibly due to the homogeneous professional environment and shared interests in professional growth among teachers (Guskey, 2002). Again, lack of significance for self-efficacy and amotivation might indicate that while these factors are important in general professional contexts, they may

not directly impact the decision to attend PD sessions, which are more influenced by specific motivational drives and external engagements (Bandura, 1997; Ryan & Deci, 2000).

This study underscores the importance of intrinsic and extrinsic motivation, as well as engagement in other business activities, as significant predictors of PD attendance among respondents. These findings may contribute to a deeper understanding of the factors that drive participation in professional development activities and suggest that enhancing motivation and creating opportunities for entrepreneurial activities could further encourage PD attendance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter provides a summary of all the key findings of the study, along with the conclusions and recommendations that were reached as a result of the findings. It summarizes the results from the first through the fourth objectives. Following the summaries, deductions are drawn based on the objectives of the study. Next, policies recommendations are made, and the chapter concludes with a call for more research.

5.1 Summary of the Objectives and Methodology

This study was commissioned to investigate the influence of SHS teachers' motivation on participation levels in professional development activities as the main objective. The specific objectives included: explore the levels of motivation among teachers to participate in PD in Sagnarigu Municipality to participate in PD; examine the factors that influence teachers' participant in professional development activities and investigate the relationship between teacher motivation and their participation in professional development. In terms of research methodology, the cross-sectional descriptive survey design was employed. Using the simple random sampling, a sample size of 405 participants were recruited. The questionnaire was used to gather the data after pre-testing of the questionnaire. The questionnaire was then analysed using descriptive and inferential statistics.

5.2 Summary of the Demographic Characteristics

5.3 Summary of Key Findings

5.3.1 Levels of Motivation Among Teachers in Sagnarigu Municipality

The data highlights that most respondents have high levels of both intrinsic and extrinsic motivation, which suggests that they are motivated by both internal and external factors. The relatively lower levels of amotivation among the majority of participants (62.7%) indicate that most of them are generally motivated and have reasons for their actions, although a considerable minority (37.3%) may struggle with motivation or a clear sense of purpose in their activities. The standard deviation of 3.6 for intrinsic motivation, in relation to the mean of 11.8, indicates some variability in the intrinsic motivation scores, but overall, the majority of participants are relatively highly intrinsically motivated.

The high levels of intrinsic and extrinsic motivation suggest that most respondents are driven by both personal satisfaction and external rewards, which could contribute to higher overall engagement and performance. The presence of high amotivation in over one-third of the participants may indicate a need for interventions to help these individuals find more meaningful reasons for their activities. This analysis can inform strategies to enhance motivation by focusing on reinforcing intrinsic motivation and addressing the sources of amotivation within the group.

5.3.2 Participation Levels of Teachers in Professional Development Activities

The mean number of PD sessions attended (19.4) with a standard deviation of 9.2 suggests that while most participants attended a substantial number of sessions, there is considerable variability. The large proportion of participants (70.6%) who attended a high number of sessions indicates strong overall engagement with the PD. The data shows that the majority of participants have high self-efficacy (75.6%). This is a positive indicator, as high self-efficacy is

often associated with better performance, persistence in the face of challenges, and higher levels of motivation. However, the 24.4% of participants with low self-efficacy may need additional support to boost their confidence and effectiveness.

5.3.3 Relationship Between Teacher Motivation and Their Participation in Professional Development

Respondents who engaged in other businesses are significantly more likely to attend PD sessions. Intrinsic motivation emerged as a crucial factor, with respondents possessing high intrinsic motivation more likely to attend PD sessions compared to those with low intrinsic motivation This aligns with the Self-Determination Theory, suggesting that intrinsic interest and enjoyment in professional development activities drive higher engagement and commitment.

High extrinsic motivation also significantly increases the likelihood of PD attendance. Respondents with high extrinsic motivation are more likely to attend PD sessions than those with low extrinsic motivation. This finding highlights the impact of external rewards and recognition on professional development participation. Demographic variables (age, gender, marital status, religion) and psychological factors (self-efficacy and amotivation) were not significant predictors of PD attendance. This suggests that while these factors are important in other contexts, they do not directly influence the decision to attend PD sessions in the studied sample.

5.4 Analysis of Hypothesis

Hypothesis 1: The results showed that higher levels of intrinsic motivation are positively associated with greater participation in PD activities. This means that the hypothesis is accepted.

Hypothesis 2: The results portrayed that higher levels of extrinsic motivation are positively associated with greater participation in PD activities. This implies the hypothesis is accepted.

Hypothesis 3: The results indicated that there is a relationship between intrinsic motivation and participation in PD activities mediated by personal factors which is engaging in other business activities. This hypothesis is also accepted.

5.5 Conclusions

The study concludes that PD attendance is significantly influenced by engagement in other businesses, intrinsic motivation, and extrinsic motivation. These factors highlight the importance of addressing both internal and external motivational needs and promoting diverse professional engagements to enhance participation in professional learning communities. By focusing on these areas, educational institutions can foster a more committed and continuously improving teaching workforce, ultimately benefiting the overall quality of education. This study aimed to identify the significant factors influencing attendance in Professional development (PD) sessions among teachers in senior high schools, focusing on the roles of intrinsic and extrinsic motivation, engagement in other businesses, and various demographic and psychological factors. The findings provide valuable insights into the motivational drivers and characteristics that encourage or hinder PD participation. Educational institutions and policymakers should consider implementing strategies that foster intrinsic and extrinsic motivation. Providing recognition, rewards, and opportunities for professional growth can be effective in increasing PD attendance.

5.6 Recommendations

Based on the findings and conclusions of the study, the following recommendations are

proposed to enhance Professional development (PD) participation among teachers.

5.6.1 Levels of Motivation Among Teachers in Sagnarigu Municipality

The study established that intrinsic motivation was high in the majority of teachers (69.4%). The presence of high amotivation in over one-third of the participants may indicate a need for interventions to help these individuals find more meaningful reasons for their activities. It is therefore recommended that strategies to enhance motivation by focusing on reinforcing intrinsic motivation and addressing the sources of amotivation within the group.

5.6.2 Participation Levels of Teachers in Professional Development Activities

The study again found that large proportion of participants (70.6%) participated highly in number of PD sessions indicating strong overall engagement with the PD. The high attendance rates suggest that the PD is well-attended and potentially valued by most participants. However, understanding the reasons behind the lower attendance in nearly 30% of participants might help increase engagement further. This could involve addressing logistical barriers, providing additional incentives, or tailoring content to meet the needs of those less engaged

5.6.3 Relationship Between Teacher Motivation and Their Participation in Professional Development

5.6.3.1 School heads and management

Schools and educational institutions should cultivate a supportive and collaborative environment where teachers feel valued and appreciated. Peer support should be encouraged and opportunities for self-directed learning can enhance intrinsic motivation provided. Professional development programs should be designed to align with teachers' personal interests and professional goals. Offering workshops, seminars, and training sessions that are

relevant and engaging can increase teachers' intrinsic motivation to attend Professional learning community.

Schools should establish recognition programs that acknowledge and reward teachers' participation in PD sessions. This could include certificates, awards, and public recognition during school events. Opportunities should be created for teachers to network with professionals outside the educational sector since this can broaden their perspectives and enhance their engagement in Professional learning community. Schools should promote collaborative learning among teachers by forming learning teams or communities of practice. Facilitating regular meetings and discussions can enhance peer support and knowledge sharing.

5.6.3.2 Government

Professional development plans should be personalized to address the specific needs and interests of teachers. Conducting needs assessments and involving teachers in the planning process can ensure that PD sessions are relevant and impactful. Professional learning community should be integrated into the school culture as a regular and essential component of professional development. Establishing a structured schedule and dedicated time for PD sessions can reinforce their importance.

5.6.3 Future Research Directions

Longitudinal studies should be conducted to examine the long-term impact of PD participation on teacher performance and student outcomes. Tracking changes over several years can provide deeper insights into the sustained benefits and potential areas for improvement. Investigate how intrinsic and extrinsic motivation levels change over time with continuous participation in Professional learning community and what factors contribute to sustained motivation. Research

should be expanded to include various types of schools (e.g., rural vs. urban, public vs. private) to understand how different contexts influence PD participation and effectiveness. Also, comparative studies across different cultural and geographical settings should be conducted to identify universal and context-specific factors that influence PD attendance and outcomes.

Explore the effectiveness of virtual Professional learning community compared to in-person sessions, especially in terms of engagement, collaboration, and learning outcomes. Studies to investigate how technology can be leveraged to enhance PD participation should be conducted. Comparative analysis should be conducted to compare the effectiveness of Professional learning community with other professional development models to determine best practices. This will help to identify which elements of Professional learning community are most beneficial and how they can be integrated into broader professional development strategies. Conduct research to identify barriers to PD participation, such as workload, time constraints, and lack of administrative support. Develop strategies to overcome these barriers and make Professional learning community more accessible to all teachers.

REFERENCE

Ahmad Zaky El Islami, R., Anantanukulwong, R., & Faikhamta, C. (2022). Trends of Teacher Professional Development Strategies: A Systematic Review. *Shanlax International Journal of Education*, *10*(2), 1–8.

Avalos, B. (2011). *Teacher professional development in teaching and teacher education over ten years*. *27*(1), 10–20.

Baluchzada, S. (2023). Effectiveness of Reflective Teaching on Professional Development of English as Foreign Language (EFL) Teachers. *MEXTESOL Journal*, *47*(3).

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory. Prentice-Hall.*

Barão, A., De Vasconcelos, J. B., Rocha, Á., & Pereira, R. (2017). A knowledge management approach to capture organizational learning networks. *International Journal of Information Management*, *37*(6), 735–740. https://doi.org/10.1016/j.ijinfomgt.2017.07.013

Bhatia, A., & Makkar, B. (2020). Stage of development of a country and CSR disclosure – the latent driving forces. *International Journal of Law and Management*, *62*(5), 467–493.

https://doi.org/10.1108/IJLMA-03-2020-0068

Billett, S. (2016). Apprenticeship as a mode of learning and model of education. *Education + Training*, *58*(6), 613–628. https://doi.org/10.1108/ET-01-2016-0001

Blasko, D. G., Kazmerski, V. A., & Torgerson, C. N. (2004). COR V2: Teaching observational research with multimedia courseware. *Behavior Research Methods, Instruments, & Computers : A Journal of the Psychonomic Society, Inc*, *36*(2), 250–255. https://doi.org/10.3758/bf03195570

Borko, H. (2004). *Professional development and teacher learning: Mapping the terrain. 33*(8), 3–15.

Bouchard, J.-P. (2009). [A proposal for reforming psychologists' training in France and in the European Union]. *L'Encephale*, *35*(1), 18–24. https://doi.org/10.1016/j.encep.2007.11.008

Bourne, M. J., Smeltzer, S. C., & Kelly, M. M. (2021). Clinical teacher self-efficacy: A concept analysis. *Nurse Education in Practice*, *52*, 103029. https://doi.org/10.1016/j.nepr.2021.103029

Burgess, A., van Diggele, C., & Mellis, C. (2016). Student teacher training: Participant motivation. *The Clinical Teacher*, *13*(4), 267–270. https://doi.org/10.1111/tct.12447

Cham, H., Hughes, J. N., West, S. G., & Im, M. H. (2014). Assessment of adolescents' motivation

for educational attainment. *Psychological Assessment*, *26*(2), 642–659. https://doi.org/10.1037/a0036213

Cheung, W. C., Ostrosky, M. M., Favazza, P. C., Stalega, M., & Yang, H.-W. (2023). Exploring the Perspectives of Preschool Teachers on Implementing Structured Motor Programs in Inclusive Classrooms. *Early Childhood Education Journal*, *51*(2), 361–370. https://doi.org/10.1007/s10643-021-01295-x

Christopher, A., Kraft, E., Olenick, H., Kiesling, R., & Doty, A. (2021). The reliability and validity of the Timed Up and Go as a clinical tool in individuals with and without disabilities across a lifespan: A systematic review: Psychometric properties of the Timed Up and Go. *Disability and Rehabilitation*, *43*(13), 1799–1813. https://doi.org/10.1080/09638288.2019.1682066

Cook, D. A., Wilkinson, J. M., & Foo, J. (2022). Costs of Physician Continuous Professional Development: A Systematic Review. *Academic Medicine : Journal of the Association of American Medical Colleges*, *97*(10), 1554–1563. https://doi.org/10.1097/ACM.0000000000004805

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development. Palo Alto, CA: Learning Policy Institute*.

Descals-Tomás, A., Rocabert-Beut, E., Abellán-Roselló, L., Gómez-Artiga, A., & Doménech-Betoret, F. (2021). Influence of Teacher and Family Support on University Student

Motivation and Engagement. *International Journal of Environmental Research and Public Health*, *18*(5). https://doi.org/10.3390/ijerph18052606

Desimone, L. M., & Garet, M. S. (2015). *Best practices in teachers' professional development in the United States. 7*(3), 252–263.

Dev, D. A., Garcia, A. S., Tovar, A., Hatton-Bowers, H., Franzen-Castle, L., Rida, Z., Reddish, L., Smith, J. A., Burger, C., Dinkel, D., Behrends, D., Hulse, E., & Sheridan, S. (2020). Contextual Factors Influence Professional Development Attendance Among Child Care Providers in Nebraska. *Journal of Nutrition Education and Behavior*, *52*(3), 270–280. https://doi.org/10.1016/j.jneb.2019.09.011

Dubinsky, J. M., Guzey, S. S., Schwartz, M. S., Roehrig, G., MacNabb, C., Schmied, A., Hinesley, V., Hoelscher, M., Michlin, M., Schmitt, L., Ellingson, C., Chang, Z., & Cooper, J. L. (2019). Contributions of Neuroscience Knowledge to Teachers and Their Practice. *The Neuroscientist : A Review Journal Bringing Neurobiology, Neurology and Psychiatry*, *25*(5), 394–407. https://doi.org/10.1177/1073858419835447

Eccles, J. S., & Wigfield, A. (2002). Motivational Beliefs, Values, and Goals. *Annual Review of Psychology*, *53*(1), 109–132. https://doi.org/10.1146/annurev.psych.53.100901.135153

Elmberger, A., Björck, E., Liljedahl, M., Nieminen, J., & Bolander Laksov, K. (2019). Contradictions in clinical teachers' engagement in educational development: An activity theory analysis. *Advances in Health Sciences Education : Theory and Practice*, *24*(1),

125–140. https://doi.org/10.1007/s10459-018-9853-y

Fasce H, E., Ortega B, J., Ibáñez G, P., Márquez U, C., Pérez V, C., Bustamante D, C., Ortiz M, L., Matus B, O., Bastías V, N., & Espinoza P, C. (2016). [Motivation and self-directed learning among medical students]. *Revista medica de Chile*, *144*(5), 664–670. https://doi.org/10.4067/S0034-98872016000500016

Fishman, B. J., Konstantopoulos, S., Kubitskey, B. W., Vath, R. J., Park, G., Johnson, H., & Edelson, D. C. (2013). *Comparing the impact of online and face-to-face professional development in the context of curriculum implementation. 64*(5), 426–438.

Garden, A. L., Le Fevre, D. M., Waddington, H. L., & Weller, J. M. (2015). Debriefing after simulation-based non-technical skill training in healthcare: A systematic review of effective practice. *Anaesthesia and Intensive Care*, *43*(3), 300–308. https://doi.org/10.1177/0310057X1504300303

Guise, V., Chambers, M., Conradi, E., Kavia, S., & Välimäki, M. (2012). Development, implementation and initial evaluation of narrative virtual patients for use in vocational mental health nurse training. *Nurse Education Today*, *32*(6), 683–689. https://doi.org/10.1016/j.nedt.2011.09.004

Jungert, T., Holm, K., Iotti, N. O., & Longobardi, C. (2021). Profiles of bystanders' motivation to defend school bully victims from a self-determination perspective. *Aggressive Behavior*, *47*(1), 78–88. https://doi.org/10.1002/ab.21929

Karlsson, P., Johnston, C., & Barker, K. (2018). Influences on students' assistive technology use at school: The views of classroom teachers, allied health professionals, students with cerebral palsy and their parents. *Disability and Rehabilitation. Assistive Technology*, *13*(8), 763–771. https://doi.org/10.1080/17483107.2017.1373307

Kennedy, M. M. (2016). *How does professional development improve teaching? 86*(4), 945–980.

Layek, D., & Koodamara, N. K. (2024). Motivation, work experience, and teacher performance: A comparative study. *Acta Psychologica*, *245*, 104217. https://doi.org/10.1016/j.actpsy.2024.104217

Lonsdale, C., Lester, A., Owen, K. B., White, R. L., Moyes, I., Peralta, L., Kirwan, M., Maeder, A., Bennie, A., MacMillan, F., Kolt, G. S., Ntoumanis, N., Gore, J. M., Cerin, E., Diallo, T. M. O., Cliff, D. P., & Lubans, D. R. (2016). An Internet-supported Physical Activity Intervention Delivered in Secondary Schools Located in Low Socio-economic Status Communities: Study Protocol for the Activity and Motivation in Physical Education (AMPED) Cluster Randomized Controlled Trial. *BMC Public Health*, *16*, 17. https://doi.org/10.1186/s12889-015-2583-7

Mahler, D., Großschedl, J., & Harms, U. (2018). Does motivation matter? - The relationship between teachers' self-efficacy and enthusiasm and students' performance. *PloS One*, *13*(11), e0207252. https://doi.org/10.1371/journal.pone.0207252

Marchand, C., Gagnayre, R., d'Ivernois, J. F., Mancheron, P., & Rathat, C. (1995). [Evaluation of a training program for nurses specializing in anesthesia and resuscitation in Cambodia]. *Sante (Montrouge, France)*, *5*(2), 101–110.

Meyle, J., Lambert, F., Winning, L., Bertl, K., Bruckmann, C., Biosse Duplan, M., Harrison, P., Laleman, I., Mattheos, N., Molina, A., Stavropoulos, A., de Waal, Y. C. M., Yousfi, H., Dommisch, H., Polyzois, I., & Kebschull, M. (2024). Continuing Professional Development (CPD) and Vocational Education and Training (VET) in Periodontology and Implant Dentistry. *Journal of Clinical Periodontology*, *51 Suppl 27*, 91–116. https://doi.org/10.1111/jcpe.14071

Moon, J., & Park, Y. (2022). Exploring South Korean Elementary School Classroom Teachers' Beliefs and Practices in Physical Education. *International Journal of Environmental Research and Public Health*, *19*(22). https://doi.org/10.3390/ijerph192215033

Nadon, L., Morin, A. J. S., Olivier, E., Archambault, I., Smodis McCune, V., & Tóth-Király, I. (2023). A longitudinal person-centered representation of elementary students' motivation: Do perceptions of parent and teacher achievement goals matter? *Journal of School Psychology*, *100*, 101228. https://doi.org/10.1016/j.jsp.2023.101228

Njenga, M. (2023). Teacher Participation in Continuing Professional Development: A Theoretical Framework. *Journal of Adult and Continuing Education*, *29*(1), 69–85. https://doi.org/10.1177/14779714221123603

Obee, A. F., Hart, K. C., & Fabiano, G. A. (2022). Professional Development Targeting Classroom Management and Behavioral Support Skills in Early Childhood Settings: A Systematic Review. *School Mental Health*, 1–31. https://doi.org/10.1007/s12310-022-09562-x

Park, Y. S., Anthony, R. J., & Konge, L. A. (2020). *The Positivism Paradigm of Research. 95*(5), 690–694. https://doi.org/10.1097/ACM.0000000000003093

Pintrich, P. R. (2003). A Motivational Science Perspective on the Role of Student Motivation in Learning and Teaching Contexts. *Journal of Educational Psychology*, *95*(4), 667–686. https://doi.org/10.1037/0022-0663.95.4.667

Rahim, A. A., Rocca, E., Steinmetz, J., & Jain Kassim, M. (2008). Inhibitive action of mangrove tannins and phosphoric acid on pre-rusted steel via electrochemical methods. *Corrosion Science*, *50*(6), 1546–1550. https://doi.org/10.1016/j.corsci.2008.02.013

Rasheed, D. S., Brown, J. L., Doyle, S. L., & Jennings, P. A. (2020). The Effect of Teacher-Child Race/Ethnicity Matching and Classroom Diversity on Children's Socioemotional and Academic Skills. *Child Development*, *91*(3), e597–e618. https://doi.org/10.1111/cdev.13275

Roberts, C., Daly, M., Kumar, K., Perkins, D., Richards, D., & Garne, D. (2012). A longitudinal integrated placement and medical students' intentions to practise rurally. *Medical Education*, *46*(2), 179–191. https://doi.org/10.1111/j.1365-2923.2011.04102.x

Ryan, R. M., & Deci, E. L. (2000). *Intrinsic and extrinsic motivations: Classic definitions and new directions. 25*(1), 54–67.

Sachidanandan, G., Bechard, L. E., Hodgson, K., & Sud, A. (2022). Education as drug policy: A realist synthesis of continuing professional development for opioid agonist therapy. *The International Journal on Drug Policy*, *108*, 103807. https://doi.org/10.1016/j.drugpo.2022.103807

Salmerón Aroca, J. A., Moreno Abellán, P., & Martínez de Miguel López, S. (2022). Teachers' Professional Development and Intelligent Ways of Coping with It: A Systematic Review in Elementary and Middle School Education. *Journal of Intelligence*, *11*(1). https://doi.org/10.3390/jintelligence11010001

Sempere-Tortosa, M., Fernández-Carrasco, F., Navarro-Soria, I., & Rizo-Maestre, C. (2021). Movement Patterns in Students Diagnosed with ADHD, Objective Measurement in a Natural Learning Environment. *International Journal of Environmental Research and Public Health*, *18*(8). https://doi.org/10.3390/ijerph18083870

Strömmer, S., Barrett, M., Woods-Townsend, K., Baird, J., Farrell, D., Lord, J., Morrison, L., Shaw, S., Vogel, C., Lawrence, W., Lovelock, D., Bagust, L., Varkonyi-Sepp, J., Coakley, P., Campbell, L., Anderson, R., Horsfall, T., Kalita, N., Onyimadu, O., … Barker, M. (2020). Engaging adolescents in changing behaviour (EACH-B): A study protocol for a cluster randomised controlled trial to improve dietary quality and physical activity. *Trials*, *21*(1), 859. https://doi.org/10.1186/s13063-020-04761-w

Sun, L., & Pan, C. E. (2021). Effects of the Application of Information Technology to E-Book Learning on Learning Motivation and Effectiveness. *Frontiers in Psychology*, *12*, 752303. https://doi.org/10.3389/fpsyg.2021.752303

Sun, X., Fu, R., Zhang, G., & Chen, C. (2022). Effects of multimedia integrated fine arts education on students' learning attitude and learning satisfaction. *Frontiers in Psychology*, *13*, 907468. https://doi.org/10.3389/fpsyg.2022.907468

Tam, K. Y. Y., Poon, C. Y. S., Hui, V. K. Y., Wong, C. Y. F., Kwong, V. W. Y., Yuen, G. W. C., & Chan, C. S. (2020). Boredom begets boredom: An experience sampling study on the impact of teacher boredom on student boredom and motivation. *The British Journal of Educational Psychology*, *90 Suppl 1*, 124–137. https://doi.org/10.1111/bjep.12309

Tilga, H., Hein, V., & Koka, A. (2019). Effects of a Web-Based Intervention for PE Teachers on Students' Perceptions of Teacher Behaviors, Psychological Needs, and Intrinsic Motivation. *Perceptual and Motor Skills*, *126*(3), 559–580. https://doi.org/10.1177/0031512519840150

Tu, H. (2021). A Study on the Construction of Emotion Recognition Based on Multimodal Information Fusion in English Learning Cooperative and Competitive Mode. *Frontiers in Psychology*, *12*, 767844. https://doi.org/10.3389/fpsyg.2021.767844

Turkpenova, D. (2023). Motivation as an Axiological Factor in Learning Chinese. *Journal of*

Psycholinguistic Research, *52*(5), 1559–1570. https://doi.org/10.1007/s10936-023-09963-2

van Braak, M., Veen, M., Muris, J., van den Berg, P., & Giroldi, E. (2022). A professional knowledge base for collaborative reflection education: A qualitative description of teacher goals and strategies. *Perspectives on Medical Education*, *11*(1), 53–59. https://doi.org/10.1007/s40037-021-00677-6

Verhees, M. J. M., Engbers, R. E., Landstra, A. M., Bouwmans, G. A. M., Koksma, J. J., & Laan, R. F. J. M. (2021). Optimizing teacher basic need satisfaction in distributed healthcare contexts. *Advances in Health Sciences Education : Theory and Practice*, *26*(5), 1581–1595. https://doi.org/10.1007/s10459-021-10061-y

Waters, M., & Wall, D. (2008). Educational CPD: an exploration of the attitudes of UK GP trainers using focus groups and an activity theory framework. *Medical Teacher*, *30*(8), e250-259. https://doi.org/10.1080/01421590802258888

West, C. R., Kahn, J. H., & Nauta, M. M. (2007). Learning styles as predictors of self-efficacy and interest in research: Implications for graduate research training. *Training and Education in Professional Psychology*, *1*(3), 174–183. https://doi.org/10.1037/1931-3918.1.3.174

Wright, J. D. (2015). *International encyclopedia of the social & behavioral sciences* (2nd ed). Elsevier.

XiangQing, W. (2023). Analysis of Online Teaching Environment and Satisfaction in the

Context of the Epidemic. *SN Computer Science*, *4*(4), 359. https://doi.org/10.1007/s42979-023-01761-w

Zhang, B. G., & Qian, X. F. (2022). Perceived teacher's support and engagement among students with obesity in physical education: The mediating role of basic psychological needs and autonomous motivation. *Journal of Sports Sciences*, *40*(17), 1901–1911. https://doi.org/10.1080/02640414.2022.2118935

APPENDICES

APPENDIX A: QUESTIONNAIRE

INTRODUCTION: My name is Alhassan Proper, a graduate student from the Department of Education Policy and Management, Faculty of Education, University for development studies. Please, this questionnaire is part of a study intended to investigate the influence of teachers' motivation on participation in professional development activities in Sagnarigu Municipal. I would be grateful if you kindly take some time to respond to the Questionnaires. All responses would be kept anonymous and with outmost confidentiality. Thank you

Please **tick [√]** where options are provided and give short answers where blank spaces are also provided.

SECTION A: PARTICIPANT DEMOGRAPHICS INFORMATION

1. What is your age in completed years e. g (24)? ___ ___
2. What is your gender? a) male [ ] b) female [ ]
3. Marital status; a) single [ ] b) Married [ ] separated [ ]
4. Religion; a) Islam [ ] b) Christianity [ ] African tradi [ ]
5. Ethnicity; a) a) Dagomba c b) Mumprusi [ ] b) akan [ ] other …….
6. Highest educational level; a) degree [ ] b) Masters [ ] other (specify)…..
7. Which school do you currently teach?

   a) Tamasco [ ] b) Tissec [ ] c) Nobisco[ ] d) Kalisco
8. Number of years in the service ___ ___
9. How many times have you taken part in the PD sessions? ___ ___ ___

SECTION B: MOTIVATION

WHY DO YOU ENGAGE IN PD ?

Utilizing the statements below, show to what degree following elements agrees to one of the reasons you engage in PD activities. I being not corresponds at all and 7 being perfectly correspond

WHY DO YOU PARTICIPATE IN PD ?

S/N	Item	Responses						
		1	2	3	4	5	6	7
1	Points obtained from PD attendance are needed to renew my teacher license.							
2	I get experience and satisfaction in learning new things.							
3	Things learned in PD will support me to become better in my teaching profession							
4	I really like taking part I PD.							
5	I certainly sense that PD sessions are time wasting							
6	I experience through better myself in PD activities.							
7	To show to myself that I am skillful of doing group activities							
8	In order to be more professional later on.							
9	During PD, learn new things not once learned before.							
10	PD will empower me to compete in the job market better							
11	I make PD session lovely							

S/N	Item	Responses						
		1	2	3	4	5	6	7
12	I personally on one occasion had sound intentions for involving in PD activities							
13	For the desire that I experience while I am surpassing myself in one of my personal							
14	Because of the fact that when I succeed in my job, I feel important.							
15	I aspire to be on top of my profession in future on.							
16	For the joy that I get in expanding my understanding about matters which interest me.							
17	PD will help me achieve better concerning my profession alignment.							
18	For the joy that I get when I am taken by deliberations with interesting tutors.							
19	I can't tell why I participate in PD events and honestly, I couldn't worry less.							
20	PD offer me fulfillment I feel when I am in the process of realizing difficult educational activities.							
21	To show myself that I am an intellectual							
22	In order to take an enhanced pay in future.							
23	PD sittings grant me opportunity to learn about many things that are relevant to me.							
24	Because I believe that PD activities will improve my competence							
25	For the "high" sense that I experience while reading around many exciting subjects.							
26	I personally can't understand what I am doing in PD.							
27	PD activities give me experience personal fulfillment in my pursuit for excellence							
28	I desire to demonstrate to myself that I can thrive in the teaching profession.							