SCHOOL CLIMATE, PROFESSIONAL DEVELOPMENT AND EFFECTIVENESS OF TEACHERS IN UNIVERSAL SECONDARY EDUCATION SCHOOLS IN BUSIRO COUNTY, WAKISO DISTRICT, UGANDA

BY

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A DISSERTATION SUBMITTED TO THE DIRECTORATE OF RESEARCH AND GRADUATE TRAINING IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF EDUCATION IN POLICY, PLANNING, AND MANAGEMENT OF KYAMBOGO UNIVERSITY

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DECLARATION

I, Rashid Ahimbisibwe, hereby certify that this dissertation is an original work. It was developed in an ethical manner in accordance with the guidelines of the Directorate of Research and Graduate Training of Kyambogo University in pursuit of the master's degree at Kyambogo University and has not been previously submitted elsewhere for consideration.

Signature: …… Date: …….

APPROVAL

This dissertation entitled ‘‘*School Climate, Professional Development, and Effectiveness of Teachers in Universal Secondary Education Schools in Busiro County, Wakiso District, Uganda”* has been developed under our guidance, observation and supervision. Therefore, it is recommended for submission with our approval.

Signature …… Date……

Dr Wilson Mugizi

Signature…….. Date……..

Dr Leticia Komba Rwakijuma

DEDICATION

This study is dedicated to whoever supported and encouraged me throughout my education. Specifically, I dedicate it to Allah the ultimate source of wisdom, inspiration, and resources, with heartfelt gratitude and reverence. With gratitude and love, I dedicate this dissertation to my wonderful wife Hamidah, my daughters Taharah Ampaire, Taibah Fattiha Tusiime and my esteemed supervisors; Dr Wilson Mugizi and Dr Leticia Komba Rwakijuma. I appreciate your unwavering support, kindness, and expertise in guiding and supervising this study.

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ABSTRACT

The study investigated the influence of school climate on the effectiveness of teachers moderated by professional development in universal secondary education schools in Wakiso district, Uganda. Specifically, the study examined the influence of school climate on effectiveness of teachers, assessed the influence of teachers' professional development on effectiveness of teachers and tested the moderating effect of teacher professional development on the influence of school climate on effectiveness of teachers in universal secondary education schools in Wakiso district, Uganda. School climate was studied in terms of school environment, school safety and school engagements. Professional development was studied in terms of behavioural development, attitudinal development and intellectual development, while teacher effectiveness was studied in terms of effective lesson delivery, subject content expertise, classroom management, relational expertise, professional conduct and self-development. Using the quantitative approach, the study adopted the correlational research design. Data' were collected from a sample of 210 teachers from 13 universal secondary education schools using a self-administered questionnaire. The data were analysed using descriptive and Partial Least Squares Structural Equation modelling (PL-SEM) using SmartPLS. Descriptive results revealed that teacher effectiveness was high, school climate and professional development were good. Structural equation modelling (SEM) results revealed that professional development had a positive and significant effect on teacher effectiveness, school climate positively and significantly predicted teacher effectiveness, but professional development had a negative significant moderating effect on the influence of school climate on effectiveness of teachers. It was concluded that school climate is imperative for effectiveness of teachers, professional development is paramount for effectiveness of teachers, and the interaction between professional development and school climate is not the most problem requirement for effectiveness of teachers. School administrators such as head teachers should promote conducive school climate in schools, the Ministry of Education and Sports, head teachers and other stakeholders should provide and encourage high professional development opportunities to teachers, and the Ministry of Education and Sports, and head teachers should provide teachers more professional development without giving equal emphasis to school climate.

CHAPTER ONE: INTRODUCTION

1.0 Introduction

Teacher effectiveness is important for the overall improvement of schools because teachers collaborate with colleagues and participate in school-wide initiatives as effective teachers often leverage their expertise to lead and support school-wide improvement strategies. (Lee & Louis, 2019). Also, Successful educators prioritize inspiring and involving every student throughout the process of learning, rejecting the notion of certain students being inherently unengaged or predetermined to struggle academically (Habib, 2017). Highly effective teachers cultivate students' fundamental skills, thought processes, and healthy habits while promoting scientific curiosity, positive dispositions, value-based decision-making, and adaptability to an evolving social landscape (Halder & Roy, 2018). In addition, effective teachers engage in on-going professional development which enhances their teaching skills and stay current with best practices (Ingersoll & Strong, 2019). To enhance educational outcomes, understanding the determinants of teacher effectiveness in Uganda's educational context was imperative.

1.1 Background to the Study

1.1.1 Historical Background.

Teacher effectiveness is a complex and multifaceted construct that has been studied for decades using various methods and perspectives. The concept of teaching effectiveness has been described using various labels (Sadeghi et al., 2021), including ‘good teaching’ (Watkins & Zhang, 2018), ‘excellent teaching’ (Chen & Tseng, 2018), ‘highly qualified’ teaching (Darling- Hammond & Young, 2020), ‘good and effective’ teaching (Maulana et al., 2017) has all been used in the quest of describing and expounding the meaning of teacher effectiveness. The efforts to understand and

unravel the parameters of what makes a good teacher have been on-going since the 19th century. However, emphasis was on dedication of teachers to their profession and prioritising their responsibilities to students (Darling-Hammond, 2017). Focus was also on their maintaining of discipline and order in the classroom, and maintaining high moral character. The morality of teachers was emphasized because teachers were seen as authority figures and many schools were religious and moral instruction based (Rijal et al., 2022). Effective teachers were identified based on their abilities to plan carefully, make use of appropriate resources, clearly communicate goals to students, make quick decisions, regularly evaluate students work, employ a range of teaching techniques, make good use of class time, and have well thought out teaching tactics (Stronge & Xu, 2021).

The issue of teacher effectiveness has been given attention by different countries globally and for many years. For example, in the USA during the 1700s the clergy supervised teacher effectiveness due to their considerable education and capacity to direct religious instruction in schools (Ersino, 2018). In 1837, the British government for the first time brought on board inspectors to monitor teacher effectiveness. During the late 19th and early 20th centuries, teachers drew on Frederick Taylor's scientific management theory, with its emphasis on productivity, to measure and enhance teacher effectiveness (Zikanga et al., 2021). During the late 20th and early 21st centuries, educational institutions and policymakers realized the value of continual support and professional growth for teachers to improve their effectiveness and educational outcomes. In Australia, Rewards for Great Teachers was introduced in 2011, and Teacher Performance-Based remuneration in the United Kingdom in 2014.

In Africa, the challenge of teacher effectiveness has also been a matter of concern. Many African teachers find it difficult to impart essential skills and knowledge for the modern global economy. For instance, in Nigeria, numerous teachers have faced suspension due to absenteeism. Reports indicate that teachers often sign attendance registers and then leave the school premises (Ugoani, 2016). In Mali, teachers rarely prepare schemes of work, and lesson plans due to low salaries, challenging working conditions, and lack of incentives (Sidibé et al., 2023). In Kenya, teacher ineffectiveness is indicated by teacher absenteeism rates, drug abuse, inadequate curriculum coverage, numerous teachers strikes, demonstrations over low pay and unfavourable working conditions (Oyoo et al., 2023).

In Uganda, teacher effectiveness is similar to other countries in Africa. Teachers do not seem motivated to do their job of teaching. They fail to show up for their classes, reach late at school, and have been failing to effectively carry out their work related responsibilities, like making lesson plans, schemes of work, and conducting weekly tasks (Mugizi et al., 2019). This has led to insufficient coverage of syllabus, deteriorating discipline of both students and teachers, use of improper teaching methods, inadequate practical instructions and ineffective student evaluation methods (Okia et al., 2021). Due to low teacher effectiveness, student performance especially in sciences is low as teachers do not regularly conduct practical lessons, and carry out accurate assessments (Okello et al., 2020).

Previous research highlights several critical components of teacher effectiveness, such as teacher preparation (Ugoani, 2016), professional development (Diakite, 2021), work load and engagement, student characteristics (Ondieki & Jumba, 2020), collaboration with colleagues (Lee & Louis, 2019), and individual learning among

others. Studies further reveal other factors, namely conducive school climate (Veronica et al., 2018), workplace environment and in-service training (Hafeez et al., 2019). However, a recent challenge in secondary schools in Uganda according to anecdotal evidence is that the climate in the schools has become toxic with the arts teachers highly discontented because of discriminated pay with science teachers paid approximately four million and the arts teachers paid less than one million (Nafula, 2022). This prompted the need for this research to investigate the school climate and its impact on teacher effectiveness.. Thus, the study examined how professionalism of teachers moderates the climate in the schools and teachers' effectiveness.

1.1.2 Theoretical Background.

This investigation drew on the concepts of Ecological Systems Theory and Social Learning Theory. The Ecological Systems Theory (EST) is a psycho-sociological theory that was developed by Bronfenbrenner (1979). Ecological Systems Theory, as noted by Crawford (2020), posits that individual growth is impacted by interconnected environmental layers, comprising micro, meso, exo, macro, and chrono-systems. Each layer contributes to the overall environment where individuals carry out their activities. Specifically, the Meso-system level provides the collaboration and communication between the sub-systems of the teachers surrounding and teacher relationships with parents. In the context of this study, it was limited to the Meso-system level because it describes the collaboration and communication between the sub-systems of the teachers surrounding and teacher relationships with parents (Sheridan et al., 2020) hence examining how school climate in the surrounding of the teacher relates to teacher effectiveness. Nonetheless, the Ecological Systems Theory does not address the connection between professional growth and teaching

effectiveness. Hence, professional development and teacher effectiveness was explained by the Social Learning Theory (SLT) by Bandura (1977).

The SLT is a psychological theory that highlights the vital role that social interactions, observational learning, imitation, and modeling play in shaping human behavior (Chuang, 2021). It posits that people can learn through a combination of personal experiences, observing and reflecting on the experiences of others. The theory offers a framework for understanding motivation, performance enhancement, skill development, and self-regulatory strategies (Koutroubas & Galanakis, 2022). In relation to teacher professional growth, SLT emphasizes the value of collaborative learning and peer interactions, which manifest through methods such as peer observation (Rumjaun & Narod, 2020), mentorship (Wenger-Trayner et al., 2020), and participation in professional learning communities (Barton & Dexter, 2020). By creating collaborative environments, leveraging mentorship, and promoting reflective practices, schools can enhance teaching quality and, consequently, the effectiveness of teachers. SLT outlines three specific forms of professional development: behavioral, attitudinal, and intellectual development. These forms significantly impact individual job performance and effectiveness in the workplace (Mitchell, 2013). Thus, Social Learning Theory served as a foundation for relating professional development in terms of behavioural, attitudinal, and intellectual development to teacher effectiveness.

1.1.3 Conceptual Background.

In this study, dependent variable was teacher effectiveness, independent variable was school climate and moderating variable was professional development. Defined, teacher effectiveness is the ability of a teacher to facilitate student learning by employing a combination of content knowledge, pedagogical skills, and classroom

management strategies (Fauzi & Johan, 2024). In this study, teacher effectiveness referred to effective lesson delivery, subject content expertise, classroom management, relational expertise, professional conduct, and self-development (Calaguas, 2012). School climate encompasses the overall ambiance and quality of the school environment, incorporating physical, social, emotional, and academic elements (Cohen et al., 2019). Basing on Belay et al. (2021), school climate operationally referred to school environment, school safety, and school engagement. Within the realm of professional education, it denotes to the intentional and on-going process of acquiring new knowledge, skills, competencies, and experiences that enhance an individual's effectiveness in their profession or occupation. Operationally, as conceived by Mitchell (2013), in this study professional development referred to behavioural development, attitudinal development, and intellectual development.

1.1.4 Contextual Perspective.

This investigation was conducted among teachers from Universal Secondary Education schools in Busiro county, Wakiso District. Today, Busiro has thirteen universal secondary education schools. Ugandan government and schools have put up several measures such as sensitization of head teachers on creating conducive school climate (Mugyenyi et al., 2023), enhancing work motivation and teacher creativity (Kigenyi et al., 2017) and provision of adequate instructional materials (Malunda & Atwebembeire, 2018) in order to enhance effectiveness of teachers. However, teacher effectiveness in these schools is low. Teachers are seeking alternative income sources by abandoning their school duties to ride commercial motorcycles or run personal enterprises (Mugizi, 2019). Teachers arrive at school by 8:00 am, sign the attendance register, and then depart. This causes secondary school teachers neglect making lesson plans, schemes of work, and weekly tasks, ultimately compromising their ability to

deliver quality education (Okia et al., 2021). In terms of school climate, it varies from school to school but generally it is wanting. Teachers suffer the challenge of low salaries, poor working conditions, and limited career advancement opportunities (Kanyike, 2018) which affects their effectiveness.

In addition to the above a recent challenge in Uganda that has distorted school climate in Wakiso district schools like elsewhere in Uganda is salary discrepancy between arts teachers and science teachers with science teachers being paid approximately four million and arts teachers less than one million (Nafula, 2022). Further, there are insufficient systematically organised institutionally based continuous in-service training systems for practicing teachers and also induction and mentorship programs for new teachers (Malunda, 2017). The above contextual evidence showed that teacher effectiveness and school climate was poor as well as professional development. This raised an empirical question regarding the impact of school climate influence on effectiveness of teachers moderated by professional development in USE schools in Wakiso district, Uganda which was investigated by the study.

1.2 Statement of the Problem

Teacher effectiveness is a vital component in the education process within schools for learner attainment. Effective teachers establish positive relationships with parents, promote global awareness and civic responsibility in their students (Munna & Kalam, 2021) and profoundly shape students' life trajectories, influencing academic achievement, social relationships, and labor market outcomes. (Alzobiani, 2020). The Ugandan government and schools have taken proactive measures to boost teacher effectiveness, recognizing its significant impact on student performance.These measures include sensitization of head teachers on creating conducive school climate,

enhancing work motivation and teacher creativity (Mulumba & Masaba, 2024), provision of adequate instructional materials and supervision (Catherine & Andala, 2024). Furthermore, there has been improvement in remuneration especially for science teachers and training (Ssebyatika & Awichi, 2020). The Ministry of Education, Science, Technology, and Sports has initiated SESEMAT, a comprehensive in-service training program designed to improve pedagogical competences and instructional effectiveness among science and mathematics teachers (Manyiraho et al., 2020).

Despite the effort to promote teacher effectiveness, it was still low among teachers in USE schools in Wakiso District. There was the challenge of absenteeism with teachers' abandoning schools to ride boda-bodas (commercial motorcycles) or take care of their enterprises (Mugizi, 2019). Teachers also reached their work stations as early as 8:00am, recorded their attendance in the arrival register and departed. Teachers also did not make lesson plans, schemes of work, and perform weekly assigned duties (Okia et al., 2021). There was also the problem of low productivity with teachers arriving late at school and leaving school before the designated time, failing to evaluate students and provide them with feedback, and low syllabus coverage (Kaahwa & Muwanguzi, 2023). According to Muwanguzi et al. (2021), about 68 percent of teachers were involved in multi-school teaching and 35 percent only worked for two days a week at school (Ssegawa & Matovu, 2020). If the situation remained, low teacher effectiveness would have significant negative consequences on students, schools, and the education system. Therefore, to address the problem it was imperative for this study to examine factors relating to it looking at school climate moderated by teacher professional development.

1.3 Purpose of the study

The purpose of this study was to investigate the influence of school climate on the effectiveness of teachers moderated by professional development in universal secondary education schools in Busiro County, Wakiso district, Uganda.

1.4 Objectives

Specifically, the research endeavoured to;

1. Examine the influence of school climate on the effectiveness of teachers in universal secondary education schools in Wakiso district, Uganda.

2. Assess the influence of teachers' professional development on the effectiveness of teachers in universal secondary education schools in Wakiso district, Uganda.

3. Test the moderating effect of teacher professional development on the influence of school climate on effectiveness of teachers in universal secondary education schools in Wakiso district, Uganda.

1.5 Research Hypotheses

This investigation was informed by the following research hypotheses;

i. School climate has a significant influence on effectiveness of teachers in universal secondary education schools.

ii. Professional development has a significant influence on effectiveness of teachers in universal secondary education schools.

iii. Teacher professional development has a moderating effect on the influence of school climate on effectiveness of teachers in universal secondary education schools.

1.6 Scope of the Study

1.6.1 Geographical Scope.

This research was conducted in Wakiso District located in the central region of Uganda. Wakiso covers two counties of Busiro and Kyadondo. Busiro is divided into three constituencies of Busiro north, south and east respectively with a total of thirteen USE schools. All the USE schools in the three constituencies were considered in this study. The district was selected because teachers' effectiveness was low in the Universal Secondary Education Schools ((Mugizi, 2019). The study sought to suggest how to improve teacher effectiveness.

1.6.2 Content Scope.

The scope of this investigation encompassed school climate, professional development, and teacher effectiveness. School climate was studied looking at school environment, safety issues, and engagement. Professional development was studied in the form of behavioural development, attitudinal development, and intellectual development. Teacher effectiveness was studied in the form of effective lesson delivery, subject content expertise, classroom management, relational expertise, teacher professionalism, and self-development.

1.6.3 Time Scope.

The research took place between February and May 2024. This study employed a cross-sectional design, gathering data on the current state of affairs. More so, during that time the schools were open enabling the researcher to access the teachers. The selected period proved sufficient for conducting field research, collecting data, analyzing results, and completing the report.

1.7 Significance of the Study

This investigation might make an imperative contribution to policymakers, schools, and the body of knowledge. To the policymakers, it may inform policy decisions on how to enhance effectiveness of teachers. This is due to the study findings which revealed the impact of school climate on effectiveness of teachers moderated by professional development. The findings can be used to find areas of improvement and making of fair policies. To the schools, the findings clearly demonstrate the relevance of establishing appropriate school climate and providing professional development to teachers. This might help school administrators to create conducive working environment that can enhance effectiveness of teachers. In addition, the study helps in identifying school climate that can be benchmarked by secondary school administrators and communities to enhance effectiveness of teachers. More so, the study offers fresh knowledge and clear understanding of the studied variables (school climate, professional development, and effectiveness of teachers). This might be the basis for further research on the same variables.

1.8 Conceptual Framework

The conceptual framework (figure 1.1) describes the interaction between school climate, professional development, and teacher effectiveness.

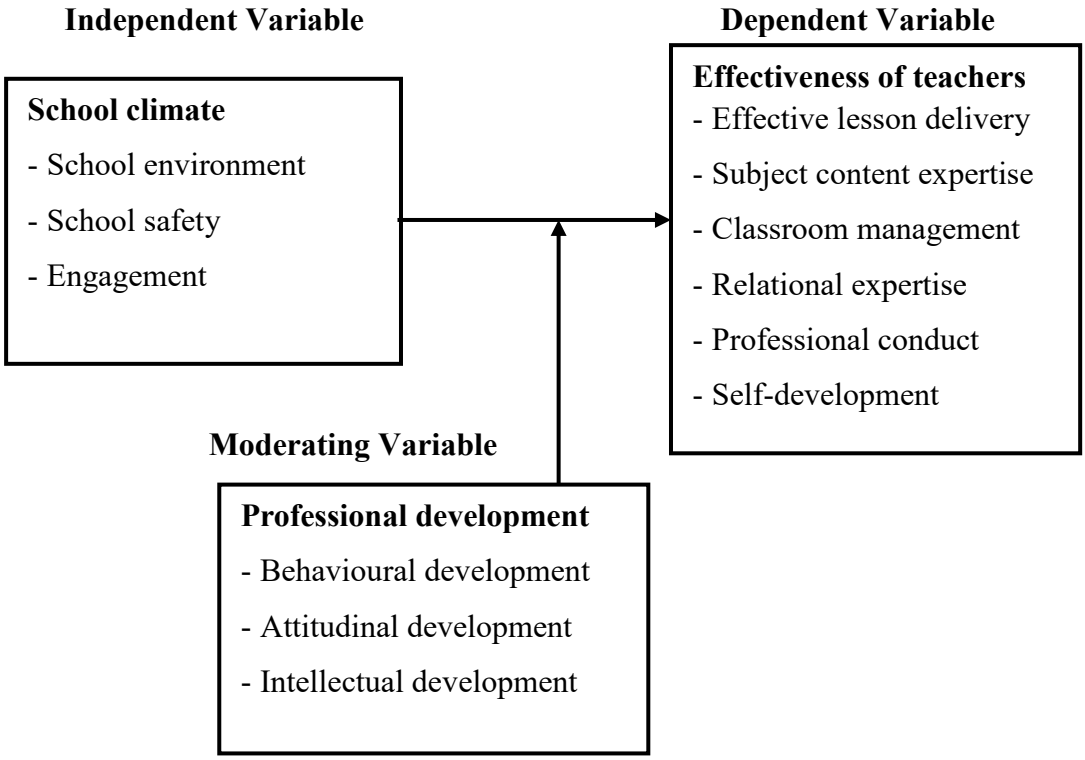

Figure 1.1: Conceptual Framework

Source: Conceptual framework based on ideas adapted from Calaguas (2012), Belay et al. (2021), Reinke et al. (2013), Ryberg et al. (2020), and Mitchell (2013).

The conceptual framework (figure 1.1) indicates that school climate has a direct influence on teacher effectiveness. School climate covers school environment, school safety issues, and engagement. The framework further shows that the intaraction between school climate and teacher effectiveness is moderated by teacher professional growth. Professional development is in terms of behavioural development, attitudinal development, and intellectual development. The dependent variable of teachers' effectiveness is in terms of effective lesson delivery, subject content expertise,

classroom management, relational expertise, professional conduct, and self-development.

1.9 Operational Definition of Concepts

School climate: school climate referred to the school environment, school safety issues, and school engagement.

Teacher effectiveness: Teacher effectiveness referred to effective lesson delivery, subject content expertise, classroom management, relational expertise, professional conduct, and self-development.

Professional development: Professional development referred to behavioural, attitudinal, and intellectual development.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This section presents a comprehensive literature review and theoretical underpinnings. Literature review has been organized and presented according to the themes and study objectives. The literature review contains previous studies' empirical results and the identified gaps that the study intended to fill. In the context of this study, school climate was studied in terms of school environment, school safety issues, and engagements that involve teacher relationships with the surrounding environment.

2.1 Theoretical Review

This investigation was underpinned by Ecological Systems Theory (EST) proposed by Bronfenbrenner (1979) and Social Learning Theory (SLT) proposed by Albert Bandura in the 1960s. The EST is a structure for comprehension of human development and behaviour that emphasizes the interplay between individuals and their environments (Crawford, 2020). EST suggests that people are not isolated entities but are instead embedded within various systems or contexts, and these systems influence their development and behaviour. Bronfenbrenner's theory consists of multiple levels like the micro, meso, exo, macro, and chrono-systems. Each level with its own unique characteristics and impact on an individual's life (Crawford, 2020). The Micro-system is the innermost layer and represents the immediate surroundings with which a person directly interacts. Meso-system encompasses the links and interactions with various components of the micro-system. The exo-system includes settings or systems that indirectly affect the individual's life but still have a significant impact (Alford & Dabach, 2021).

The macro-system represents the broader cultural, societal, and ideological context in which an individual lives. It encompasses cultural norms, values, laws, and belief systems that influence human development and behaviour. The chrono-system examines the temporal dimensions of development, focusing on how individuals change and adapt across time. However, the theory does not offer detailed guidance on how to address specific educational challenges or interventions because it places relatively less emphasis on individual agency, participation of students in modelling their own academic experiences and educators find it hard to navigate and address the numerous factors and interactions within educational settings which potentially limits its practicality (Ettekal & Mahoney, 2017). The investigation dwelled on the hypothetical proposition that where dimensions such as the school environment, school safety issues, and engagements are favourable in schools, teacher effectiveness is realized. Thus, the theory was adopted by this study because it enables one to examine contextual factors, how they relate with one another and how they shape teacher effectiveness.

The Social Learning Theory (SLT) is a Psychological Theory that demonstrates how individuals acquire new behaviours, attitudes, and emotional reactions by observing, imitating, and modelling the actions of others (Rumjaun & Narod, 2020). It highlights the vital role of social interactions and environmental factors in molding individual behaviour leading to enhancement in teaching practices, promoting collaboration among educators, and improving student outcomes (Johnson & Davis, 2018). Three forms of professional development that emanate from the SLT include behavioural, attitudinal, and intellectual developments. Behavioural development involves the changes in teachers' behaviour overtime (Demol et al., 2020). Attitudinal development involves teachers cultivating and enhancing their positive attitudes,

beliefs, and mind-sets by observing and learning from experienced colleagues (Rock et al., 2018). Intellectual development involves continuous efforts to expand knowledge, refine skills, and enhance teaching practices (Ingersoll & Strong, 2019). SLT is a productive approach for teacher professional development because the expertise of teachers can be enhanced through professional learning environments and formative feedback leading to teacher effectiveness (Meijs et al., 2016; Worth & Van den Brande, 2020).

The weakness of the Social Learning Theory is that it does not adequately address individual differences in learning and behaviour, specify the cognitive mechanisms involved in attention, memory, and motivation, does not fully account for other forms of learning, such as trial-and-error learning which significantly influences behaviour acquisition and change among individuals (Huesmann, 2018). However, the theory provides a framework for professional development showing that it involves behavioural, attitudinal, and intellectual developments (Demol et al., 2020). Thus, the SLT provided the framework for investigating the impact of professional development in terms of behavioural, attitudinal, and intellectual developments on teacher effectiveness.

2.2 Conceptual Review of Teacher Effectiveness

Effective teaching encompasses a teacher's capacity to facilitate student learning by employing a combination of content knowledge, pedagogical skills, and classroom management strategies (Strong & Villarreal, 2018). It encompasses the teacher's ability to establish a well-organized classroom atmosphere, manage student behaviour and employ effective instructional strategies. It is closely linked to collaboration with colleagues, engaging in ongoing professional development, and contributing to a

shared learning culture among school communities (Lee & Louis, 2019). The effectiveness of the teacher is manifested through execution of assigned tasks basing on individual skills, expertise, sincerity, efficient and effective use of time (Mastrokoukou et al., 2022).

Burroughs et al. (2019) examined and analysed literature on student outcomes and teacher effectiveness measures. Results indicated that teacher expertise, teacher professional knowledge, and provision of learning opportunities for teachers leads to increased student achievement. In Turkey, Ghaffarian and Osam (2021) conducted a study to evaluate teacher effectiveness. Findings revealed that effectiveness of teachers greatly influence the magnitude of satisfaction among students in line with assignments, exams, and grading systems. In a systematic review, Mastrokoukou et al. (2022) examined literature on teacher effectiveness in Italy. Findings revealed that teacher effectiveness manifests itself through improvement in scores of student performance assessments, classroom interactions that are rewarding, improved instructional practices, organization of classroom, teacher expectations, and utilizing resources in the classroom to increase student performance.

2.3 Literature review

2.3.1 School climate and effectiveness of teachers.

The term "school climate" refers to the complex interplay of physical, social, emotional, and psychological elements that shape a school's environment (Ismail et al., 2020). An environment at school that makes teachers happy, improves the school's reputation, and boosts teachers' motivation and effectiveness (Fei & Han, 2020). A supportive school climate boosts teacher commitment, leading to improved teacher effectiveness (Khan, 2019). Several scholars have studied the influence of school

climate on teacher effectiveness. For example, In a study done in Jordan, Al-Omari and Okasheh (2017) investigated work environments influence on effectiveness of employees of engineering company. The findings revealed that good physical environment positively and significantly influenced effectiveness of workers. In a study done in Pakistan, Atta et al. (2019) investigated the effects of organizational climate on workers performance in hospitals. The results showed that worker performance and organizational atmosphere are positively correlated which obliquely pointed to effectiveness.

In a study done in Ethiopia, Gemechu (2020) investigated the relationship between school climate and teachers' effectiveness in secondary schools of East Wollega Zone, Oromia. The findings indicated that school climate significantly and positively influenced teachers' effectiveness. Relatedly, Hafeez et al. (2019) explored the effect that the physical and behavioural workplace environments have on employees' productivity in software companies in Pakistan. The findings revealed that physical and behavioural workplace environments positively affected employee effectiveness. In a critical review, Oder and Eisenschmidt (2018) analysed literature on what constitutes school climate and its influence on effectiveness of teachers. The findings showed that "school climate" concept is multifaceted, encompassing concerns about student participation, safety, and the school environment that influences effectiveness of teachers. Also, in their review, Larson et al. (2020) employed a two-stage method to analyze 35 studies that met the specified eligibility requirements. The study's findings revealed that school climate has a profound impact on student success and teacher effectiveness.

Manla (2021) investigated school climate impact on teacher effectiveness and school performance in Philippines. A descriptive correlational design was adopted, with participants including teachers, school administrators (principals), and parents. The study revealed a strong correlation between school climate and teacher effectiveness, as well as school performance. Mera (2021) carried out an investigation into the relationship between school climate and teacher effectiveness in Nigerian public senior secondary schools, specifically in Yauri Education Zone, Kebbi State. The study's results yielded a statistically significant positive correlation coefficient between school climate and teacher effectiveness. Nzewi et al. (2018) carried out an investigation on the effects of physical work environment on employee productivity and effectiveness in Nigerian breweries, specifically in Anambra State. Findings demonstrated a significant positive linkage between physical work environment and effectiveness of employees. In a study done in Nigeria, Okeke et al. (2020) studied teachers' impression of the school environment as an indicator of their effectiveness in Anambra State's secondary schools. A correlational study design was utilized to analyze data from a selected group of teachers, the findings revealed that teacher's impression of the school environment does not predict their effectiveness.

In a study done in Turkey, Ozgenel (2020) sought to determine whether the school climate affected school effectiveness. Study findings demonstrated that school climate predicts teacher effectiveness. In their study in Indonesia, Pradoto et al. (2022) examined the impact of organizational climate on employee effectiveness. Findings revealed that the organisational climate favourably and considerably impacted on effectiveness of employees. In their study Saidi et al. (2019) examined the intaraction between the working environment and employee effectiveness in Malysia. Results indicated a strong positive and significant association between work environment and

effectiveness of employees. Veronica et al. (2018) examined the impact of school climate on teaching effectiveness in select secondary schools within Northern Samar's first congressional district, Philippines. The sample involved secondary school teachers and students. The findings revealed that a highly conducive school climate significantly influenced effectiveness of teachers. In their study, Zafar et al. (2017) investigated the ineraction of working environmental factors on effectiveness of employees working in Greenwich University of Karachi, India. The findings indicated that environmental factors did not have any influence on the productivity of employees.

The aforementioned literature demonstrates that researchers have attempted to explore the interplay between teacher effectiveness and school climate. Nevertheless, contextual, empirical gaps and methodological gaps emerged. A critical examination of existing literature reveals a contextual gap, as no studies have explored the relationship between school climate and teacher effectiveness in Uganda. Empirically, although numerous studies (Mera, 2021; Nzewi et al., 2018; Okeke et al., 2020; Ozgenel, 2020; Pradoto et al., 2022; Saidi et al., 2019) have reported positive significant correlations, contradictory findings by Okeke et al. (2020) in Nigeria and Zafar et al. (2017) in Karachi, India, underscore the complexity of this relationship. Furthermore, methodological limitations are evident, as Oder and Eisenschmidt (2018) and Larson et al. (2020) relied on review-based approaches, emphasizing the need for original research to corroborate these results. The existence of contextual, empirical, and methodological gaps underscores the necessity for this research to investigate the school climate-teacher effectiveness relationship further.

2.3.2 Professional development and effectiveness of teachers.

Professional development refers to the intentional and on-going process of acquiring new knowledge, skills, competencies, and experiences that enhance an individual's effectiveness in their profession or occupation (Sancar et al., 2021). Extensive scholarly inquiry has been undertaken on the role of professional development in enhancing teacher effectiveness. For instance, Iqbal et al. (2020) analyzed the correlation between in-service training and effectiveness of technical vocational education and training teachers in South Asia. Findings revealed that teacher effectiveness was significantly impacted by in-service training. In a study done in Pakistan, Junejo et al. (2018) aimed to investigate how in-service training affected the STEVTA Karachi region's teachers' effectiveness. Findings indicated that in-service training significantly enhances teacher's effectiveness and positively teachers regarded their professional growth an element of effectiveness among teachers. In a meta-analysis, Lisa et al. (2020) investigated whether the program of study or characteristics of participants influenced the effectiveness of teacher professional development on student reading outcomes (K-8) across 28 studies from 1975 to 2017. Results indicated that teacher professional development had moderately significant positive impact on teacher effectiveness.

In a study done in Uganda, Malunda (2017) examined the effects of induction, coaching, and training workshops on teaching quality and effectiveness. The findings suggested that teacher professional development has a positive impact on teacher preparation, instructional methods, and student assessment hence teacher effectiveness. In their study, Mduma and Mkulu (2021) Investigated the interrelationship between teacher professional development practices and teaching effectiveness in Nyamagana District, Mwanza Region, Tanzania. Findings indicated

that investing in teacher training resulted in improved instructional practices, reduced teacher burnout and stress, and increased teacher retention, ultimately boosting teacher effectiveness. Mugarura et al. (2022) investigated the impact of teacher in-service training on student and teacher performance in public schools in Kisoro District. Findings showed that in-service training has a significant impact on teacher performance, ultimately enhancing teacher effectiveness. In a study done in Uganda, Nabunya et al. (2019) investigated the link between professional development practices and academic activities (teaching, research, and community service) at Kampala International University (KIU) and Kyambogo University (KYU). Results indicated that professional development practices have a substantial impact on teaching effectiveness.

In their study, Powell and Bodur (2019) investigated the creation and execution of an online teacher professional development program integrated into the workplace in United States. The results demonstrated how teachers' effectiveness is shaped by their participation in online professional development. In Ethiopia, Wolde (2021) conducted a study to comprehend how ongoing professional development enhances the skills of secondary school instructors in instructing and educating students at Basso Prep and Secondary School. Findings revealed that continuous professional development improves teachers' effectiveness.

However, contextual, and methodological gaps surface from the literature above. At contextual level, studies Junejo et al. (2018), Mduma and Mkulu (2021), Iqbal et al. (2020), Powell and Bodur (2019), Wolde (2021) and Lisa et al. (2020) were not conducted in Uganda. At methodological level, the study by Lisa et al. (2020) reported findings of the empirical studies reviewed. Addressing contextual and methodological

gaps necessitated a deeper exploration of the interplay between teacher professional growth and instructional effectiveness.

2.3.3 School climate, professional development, and effectiveness of teachers.

Strong school climate characterized by supportive leadership, teacher collaboration, adequate school facilities, instructional resources, supportive surrounding neighbourhood, and participating in making decisions that are strongly related to improved morale, strong teacher commitment to teaching, more collegiality and teacher retention enables teachers to perform to their fullest potential hence teacher effectiveness (Manla, 2021). In addition, professional development encourages teachers to expand their pedagogical knowledge through acquisition of relevant strategies to them and the special needs of the students. It enhances teachers' comprehension of how students learn and their familiarity with efficient and effective teaching techniques hence teacher effectiveness.

Few studies have explored the moderating effect of professional development in the inaraction between school climate and teacher effectiveness. For example, In their study Zhenjing et al. (2022) studied the effects of working environment on the effectiveness of employees in China. The results showed that increasing employee effectiveness could be achieved by creating a positive work environment. In a study done in USA, Zhou et al. (2023) examined the effects of teachers' perceptions of school climate and their involvement in professional development on teacher effectiveness. Findings indicated that participation in professional development and the atmosphere at school had a lot of beneficial direct effects on teaching efficacy which points to teaching effectiveness of teachers. However, literature search indicated insufficient studies on the moderating effect of professional development.

To address the research gap, this study explores the moderating effect of teacher professional growth in improving teacher effectiveness within varying school climates.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This section outlines the research methodology, approach, design, population, sampling technique, data collection tools, instrument quality, data analysis, and ethical considerations employed in this study.

3.1 Research Approach

The study adopted quantitative research approach. This involved studying of the study problem, its predictor and moderator variable through collection and analysis of numerical data using particular statistical procedures (Apuke, 2017). The study gathered quantitative data that were numerically analysed with statistical procedures to make generalisations. Descriptive statistics, specifically frequencies, percentages, means and standard deviation were employed in the statistical analysis of the data while inferential statistics involved structural equation modelling. This helped to draw inferences on the study variables.

3.2 Research Design

The study employed a correlational research design to examine the relationships between the study variables. Correlational studies determine whether a predictive relationship exists (Stangor & Walinga, 2019). The research design focused on identifying the relationships, correlations, and interactions between the independent, dependent, and moderating variables. The design helped in collecting data necessary for testing the direct and interactional relationship between the variables. Additionally, this design facilitated efficient data collection, minimizing time and costs needed for completion of this research. Consequently, the study employed statistical analysis to investigate the relationships between the variables.

3.3 Study population

The study obtained responses representative of teachers in universal secondary education schools in Busiro, Wakiso District. The target population was 460 teachers drawn from thirteen (13) universal secondary education schools in Busiro constituencies, Wakiso district. The teacher population was deemed ideal for this study, as they possess intimate knowledge of school climate, professional development initiatives, and teaching effectiveness.

3.4 Sample size

A sample of 210 teachers was selected utilizing Krejcie and Morgan's (1970) sample size determination table (Appendix A), ensuring representative adequacy. To maintain representativeness, the sample size of teachers from each school was determined using proportionate sampling, guided by the formula presented in Table 3.1. Sample Size for School Nampunge Community Seed School

$$n = \frac{36}{460}\ X\ 210 = 16.$$

Table 3.1: Population and sample size

Category	Target population	Sample size
Nampunge Community Seed School	36	16
Balibaseka seed school	39	18
Bussi seed school	20	9
Mende Kalema Secondary School	29	13
Mmanze Senior Secondary School	27	12
Masuliita Senior Secondary School	37	17
Jjungo secondary school	25	12
Kitala Senior Secondary School	53	24
Naggulu Seed Secondary School	31	14
Kyasa Secondary School	21	10
Kasengejje Secondary School	46	21
Nsangi Secondary School	58	27
Kitende Secondary School	38	17
TOTAL	**460**	**210**

Source: Wakiso district education offices

3.5 Sampling Technique

Participants were selected utilizing simple random sampling, ensuring unbiased selection from the sampling frame comprising names of eligible teachers (Berndt, 2020). The simple random sample was selected using a sampling frame provided by excel listing all the teachers in their respective schools. In each school, teachers were selected using random sampling technique where teachers were randomly made to pick from a pack containing “Yes” and “No”. All teachers who picked “Yes” were then selected for the study and provided with questionnaires to fill which were then picked on agreed date. The technique ensured each teacher had same opportunity of being selected for the study. This assisted in gathering the information that was needed for the generalization of the research findings.

3.6 Measurement of Variables

The study variables included school climate, professional development, and effectiveness of teachers. The measures for the same were presented in Table 3.2.

Table 3.2:Measurement of the Variables and their Sources

Variable	Nature of variable	Indicators	Sources
Teacher effectiveness	Dependent variable	-Effective lesson delivery -Subject content expertise -Classroom management -Relational expertise -Teacher professionalism -Self-development	Bülent and Güven (2022), Calaguas (2012), Reinke et al. (2013), İlgan et al. (2015)
School climate	Independent variable	- School environment - School safety - Engagement	Belay et al. (2021)
Professional development	Moderating variable	- Behavioural development - Attitudinal development - Intellectual development	Miller-Young et al. (2021), Torff et al. (2005), Amiri Shayesteh and Baleghizadeh (2023), Mourão et al. (2022)

3.7 Data Collection Instrument

This study was quantitative in nature; therefore, the data collection instrument was a self-administered questionnaire (SAQ). The SAQ comprised three sections, namely, A through D. Section A was on demographic (Background) characteristics of the respondents which include: gender of the respondent, age category, education level attained, teaching experience, and responsibility in the school. Section B was about teacher effectiveness, section C contained questions on school climate and section D was on professional development. The measurements of the indicators were scaled using a five-point Likert Scale (Where 1 = strongly disagree 2 = disagree 3 = not sure 4 = agree 5 = strongly agree). The SAQ was selected because it helps in collecting data necessary for quantitative analysis.

3.8 Quality control

Quality control is about validity and reliability of the instrument. Therefore, these were attained for quantitative data.

3.8.1 Validity.

The researcher ascertained content validity of the instrument using face validity. Validation of the question involved affirming the relevance and clarity of the question items with the help of my supervisors. After data collection, validity was confirmed using Confirmatory Factor Analysis using structural modelling, convergent validity and calculating Heterotrait-Monotrait discriminant validity. In this study, Discriminant validity was employed to ensure that the latent constructs used to measure the connection under study were actually distinct from one another and were not assessing the same thing, which may have resulted in the development of multicollinearity. Using Factor Analysis, indicators of the different constructs

considered valid were those that loaded highly above 0.50. Items that loaded low or cross loading were deleted. For convergent validity, the values were considered at above 0.5 which is the minimum while for discriminant validity, the values were below the maximum value of 0.9 (Rogge et al., 2019). This ensured validity of the instrument and results. The validity results are displayed in the measurement model below in Table 3.3.

Table 3.3: Heterotrait Monotrait (HTMT) Ratio Correlations for Discriminant Validity

Measures	**Means**	**AVE**	**CM**	**ELD**	**PC**	**RE**	**SD**	**SME**	**TE**
TE	4.20								
CM	3.72	0.526	0.379						
ELD	4.36	0.541	0.696	0.491					
PC	4.30	0.690	0.558	0.727	0.782				
RE	4.37	0.748	0.883	0.442	0.896	0.806			
SD	4.24	0.623	0.426	0.819	0.641	0.732	0.592		
SME	4.20	0.512	0.786	0.801	0.828	0.900	0.882	0.868	
Measures	**Means**	**AVE**	**SEs**	**SE**	**SS**	**SC**			
SC	4.00								
SEs	4.26	0.513	0.889						
SE	3.57	0.660	0.874	0.725					
SS	4.17	0.776	0.619	0.181	0.314				
Measures	**Means**	**AVE**	**AD**	**BD**	**ID**	**PD**			
PD	4.08								
AD	4.13	0.693	0.737						
BD	4.20	0.569	0.330	0.420					
ID	3.93	0.567	0.706	0.806	0.880				

Key: AD = Attitude Development, BD = Behavioural Development, CM = Classroom Management, ELD = Effective Lesson Delivery, ID = Intellectual Development, PC= Professional Conduct, RE= Relational Expertise, SC = School Climate, SD = Self-development, SME = Subject Matter Expertise, SEs = School Engagements, SE = School Environment, SS =, School Safety, TE = Teacher Effectiveness.

Table 3.3 shows that the Heterotrait–Monotrait ratio of correlations (HTMT) condition was fulfilled because all values did not exceed 0.90 (Henseler et al., 2015). Therefore,

the measures were discriminately valid. In addition, convergent validity which refers to assessment that measures level of correlation of multiple indicators of same construct was established using Average Variance Extracted (AVE). AVE measures convergent validity showing that variations in items were explained by the constructs. All constructs had AVE values greater than acceptable threshold of 0.5 confirming convergent validity (Alarcon et al., 2024).

3.8.2 Reliability.

Reliability describes the degree to which measures of a construct are consistent and dependable to measure what they are supposed to measure (Sürücü & Maslakci, 2020). Thus, measurement is considered reliable if the same results can be obtained consistently by applying the same methodology under similar conditions. In this study, the reliabilities of the indicators of the various constructs were tested using Cronbach's Alpha (α) and composite reliability (CR) using SmartPls. Both composite reliability and Cronbach's Alpha (α) were attained at 0.70 and above (Lai, 2021). However, Composite Reliability was preferred because Cronbach's Alpha has the inadequacy of assuming that all indicator features are the same in the population which affects the strength of reliability values (Stangor & Walinga, 2019). This ensured the reliability of the instrument. The results are presented in Table 3.4.

Table 3.4: Reliabilities and Value Inflation Factor for study constructs

Measures	α	CR	VIF
Classroom Management	0.849	0.885	2.012
Effective Lesson Delivery	0.787	0.854	1.935
Professional Conduct	0.775	0.870	2.169
Relational Expertise	0.665	0.856	1.951
Self-development	0.698	0.832	2.563
Subject Mater Expertise	0.763	0.840	2.040
School Engagements	0.762	0.840	1.510
School Environment	0.825	0.885	1.583
School Safety	0.711	0.874	1.065
Attitude Development	0.910	0.931	1.739
Behavioural Development	0.844	0.886	1.897
Intellectual Development	0.937	0.944	1.191

The composite reliability (CR) and Cronbach's Alpha (α) were used to determine the internal consistency of the measurement tool. Composite reliability (construct reliability) refers to a measure of internal consistency in scale items. Thus, the reliability of a construct should be at least 0.70 (Lai, 2021). Conversely, Cronbach's Alpha is a statistical method used to show that the indicators developed or adopted effectively measure constructs that are suitable for their intended purpose (Taber, 2018). In testing reliability, Composite Reliability (CR) was chosen due to the limitations of Cronbach's Alpha, which assumes that all indicator traits should be uniform across the population, potentially resulting in lower reliability values. Cronbach's Alpha has limitations, particularly its sensitivity to scale length, which can result in underestimation of internal consistency reliability (Lai, 2021). Conversely, Composite Reliability is considered liberal, as it incorporates the outer loadings of indicator variables, potentially inflating reliability estimates. Results show Cronbach's Alpha and Composite Reliability for study constructs. The results show that values for

composite reliability that were used to test the reliability of all the Constructs, all above 0.7 indicating the satisfactory level of reliability for the items measuring the Constructs. This is because, according to Lai (2021), the minimum level of composite reliability is 0.70. Therefore, the data obtained was reliable and the results are presented in the appropriate models in Chapter 4.

Furthermore, the VIF test which is a measure of Collinearity affirming the independence of the variables, the obtained values fell below the threshold of 5, indicating an absence of multicollinearity, as recommended by Hair Jr. et al. (2021). This suggested that the constructs were distinct and the independent variables could independently predict the dependent variable. Therefore, the condition of Collinearity did not exist.

3.9 Procedure of Data Collection

After the approval of the proposal at the department school of education, it was submitted to the Directorate of research and postgraduate training (DRGT) for approval. An introduction letter was obtained from the office of the dean, school of education which was presented to the district education officer (DEO) who granted permission to collect data from selected secondary schools. Following formal protocol, the researcher presented a letter to the head teachers, who then introduced the researcher to potential participants and provided authorization for teacher involvement.

3.10 Data Management and Analysis

Data processing and analysis are facets of data management. The data collected was processed by coding them, entering them, and summarizing them into frequency tables to identify errors and removing them. The data were tested for normality and linearity.

The study employed a mixed analytical approach, combining descriptive analysis (frequencies, percentages, means, and standard deviations) with inferential Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS. PLS-SEM, a versatile statistical approach, facilitates the estimation of path models, accounting for latent variables and their complex interactions (Sarstedt et al., 2022). PLS-SEM analyses helped in identifying key success factors for the target constructs and also determining casual links between variables producing results necessary for generalisation (Dijkstra & Henseler, 2015).

3.11 Ethical Considerations

Ethical considerations were strictly observed in conducting this research. First informed consent was observed by making sure that the study participants got involved voluntarily. Also, anonymity and confidentiality were ensured by the researcher by making sure that the study participants remained anonymous and information provided remained confidential. Hence, their names were not indicated anywhere in presentation of research findings. Risks and benefits were ensured by teachers providing their responses in privacy. The study's results will be disseminated to relevant stakeholders through online peer-reviewed journals, promoting broad accessibility and scholarly engagement.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This section involves the presentation, analysis, and interpretation of results on school climate, professional development, and effectiveness of teachers in universal secondary education schools in Busiro, Wakiso district, Uganda. These include descriptive statistics, correlation and confirmatory regression results explanations.

4.1 Teacher's Demographic Characteristics

This section presents data on demographic characteristics of teachers including gender, age group, education level, responsibility in the school, and teaching experience. The study's sample size of 210 teachers was determined utilizing Morgan and Krejcie's sample size table, ensuring adequate representation. The results are presented in Table 4.1.

Table 4.1:Teachers' demographic characteristics

Variables	Categories	Frequency	Percent
Gender	Male	114	54.3
	Female	96	45.7
	Total	**210**	**100%**
Age Group	Up to 30 years	67	31.9
	30-40 years	92	43.8
	40-50 years	42	20.0
	50 and above	9	4.3
	Total	**210**	**100%**
Level of Education	Diploma	40	19.0
	Bachelor's degree	153	72.9
	Postgraduate	17	8.1
	Total	**210**	**100%**
Responsibility in the school	Subject teacher	110	52.4
	Class teacher	52	24.8
	Head of subject	15	7.1
	Head of department	33	15.7
	Total	**210**	**100%**
Teaching Experience	Less than 5 years	50	23.8
	5-10 years	86	41.0
	10 years and above	74	35.2
	Total	**210**	**100%**

The results in Table 4.1 on gender indicate the higher percentage (54.3%) of the teachers ware males and (45.7%) were females. The larger percentage (43.8%) was 30 to 40 years, followed by up to 30 years (31.9%), then those between 40-50 years (20.0%), and only (4.3%) above 50 years. The majority (73.9%) possessed bachelor's degree, with smaller proportions holding diplomas (19.0%) and postgraduate degrees (8.1%). The larger percentage (52.4%) were subject teachers, (24.8%) were class teachers, (7.1%) heads of subjects and (15.7%) heads of departments. The larger percentage (41.0%) had taught between 5-10 years, (35.2%) more than 10 years and (23.8%) less than 5 years. The diverse characteristics of the participating teachers suggested that the study's findings were generalizable to the broader population of teachers in USE schools.

4.2 Descriptive Results on the effectiveness of teachers

Effectiveness of teachers was studied in terms of effective lesson delivery, subject content expertise, relational expertise, professional conduct, self-development, and classroom management. The descriptive results are discussed below.

4.2.1 Effective lesson delivery

Effective lesson delivery was operationalized as a key aspect of teacher effectiveness, assessed through nine items detailed in Table 4.2.

Table 4.2: Descriptive results for effective lesson delivery

Effective lesson delivery	SD	D	N	A	SA	MEAN
I prepare effective lesson plans and conduct lessons accordingly	2 (1.0%)	3 (1.4%)	4 (1.9%)	105 (50.0%)	96 (45.7%)	4.38
I select and use approaches and strategies suitable for the goal and subject matter.	1 (0.5%)	- -	6 (2.9%)	98 (46.7%)	105 (50%)	4.45
I utilise teaching materials effectively	- -	2 (1.0%)	11 (5.2%)	94 (44.8)	103 (49.0)	4.41
I clearly communicate the objective of the subject and lesson.	- -	1 (0.5%)	8 (3.8%)	97 (46.2%)	104 (49.5%)	4.44
I give timely and accurate instructions.	2 (1.0%)	4 (1.9%)	12 (5.7%)	104 (49.5)	88 (41.9%)	4.29
I conduct and adapt activities supporting individual differences during teaching process.	2 (1.0%)	3 (1.4%)	19 (9.0%)	116 (55.2%)	70 (33.3%)	4.18
I organize activities designed specifically for students in need of special education.	8 (3.8%)	18 (8.6%)	26 (12.4%)	91 (43.3%)	67 (31.9%)	3.90
I organize learning opportunities during the teaching process that are suitable for the developmental stages and characteristics of the students.	2 (1.0%)	4 (1.9%)	12 (5.7%)	112 (53.3%)	80 (38.1%)	4.25
I enable students to actively participate in teaching process.	2 (1.0%)	1 (0.5%)	3 (1.4%)	75 (35.7%)	129 (61.4%)	4.56

The findings in Table 4.2 on whether teachers prepared effective lesson plans and conducted lessons accordingly cumulatively indicated that most teachers (95.7%) agreed, (1.9%) were not sure, and (2.4%) disagreed. The mean (mean = 4.38), which

is high, agreed, meaning that teachers prepared effective lesson plans and conducted lessons accordingly. With regards to whether teachers selected and used approaches and strategies suitable for the goal and subject matter, the overwhelming majority (96.7%) of respondents expressed agreement, while a minority (2.9%) remained uncertain and a negligible proportion (0.5%) dissented. The mean is high (mean = 4.45), showing that teachers knew well how to select and use approaches and strategies suitable for the goal and subject matter. As to whether teachers utilise teaching materials effectively, cumulatively the highest percentage (93.8%) agreed, (5.2%) were uncertain, and (1.0%) dissented. The mean is high (mean = 4.41), showing that teachers utilised teaching materials effectively.

As regards to clearly communicating the objective of the subject and lesson, the biggest number of teachers (95.7%) agreed, (3.8%) was not sure, and (0.5%) disagreed. The mean (mean = 4.44) showed that teachers clearly communicate the objective of the subject and lesson. Regarding whether teachers give timely and accurate instructions, (91.4%) agreed, (5.7%) were uncertain and (2.9%) dissented. The mean is high (mean = 4.29), showing that teachers give timely and accurate instructions to learners accordingly. As to whether teachers conduct and adapt activities supporting individual differences during teaching process, (88.5%) agreed, (9.0%) was not sure and (2.4%) disagreed. The mean is high (mean = 4.18) showed that teachers conduct and adapt activities supporting individual differences during teaching process. Regarding whether teachers organize activities designed specifically for students in need of special education, cumulatively the majority percentage (75.2%) agreed, (12.4%) were not sure and (12.4%) disagreed. The mean is high (mean = 3.90) showed that teachers organize activities designed specifically for students in need of special attention. Regarding to whether teachers organize learning

opportunities during the teaching process that are suitable for the developmental stages and characteristics of the students, cumulatively (91.4%) agreed, (5.7%) we not sure and (2.9%) disagreed. The mean is high (mean = 4.25) showed that teachers organize learning opportunities during the teaching process that are suitable for the developmental stages and characteristics of the students. Lastly regarding whether teachers enable students to actively participate in teaching process, (97.1%) agreed, (1.4%) were uncurtain and (1.5%) dissented. The high mean (mean = 4.56%) indicated that teachers enable students to actively participate in teaching process. The descriptive results are shown in Table 4.3.

Table 4.3: Summary table for effective lesson delivery

Descriptives			**Statistic**	**Std. Error**
Effective lesson delivery	Mean		4.36	0.03
	95% Confidence Interval for Mean	Lower Bound	4.30	
		Upper Bound	4.43	
	5% Trimmed Mean		4.41	
	Median		4.44	
	Variance		0.21	
	Std. Deviation		0.45	
	Minimum		1.67	
	Maximum		5.00	
	Range		3.33	
	Interquartile Range		0.44	
	Skewness		-2.16	0.16
	Kurtosis		9.04	0.33

The results presented in Table 4.3 demonstrate a mean (4.36) in proximity to the median (4.44), suggesting symmetry and normality in the distribution. The high mean also meant that teachers rated effective lesson delivery to be good. The low standard deviation (0.45) indicated a normal distribution of the responses and results are also displayed by the normal curve in Figure 4.1.

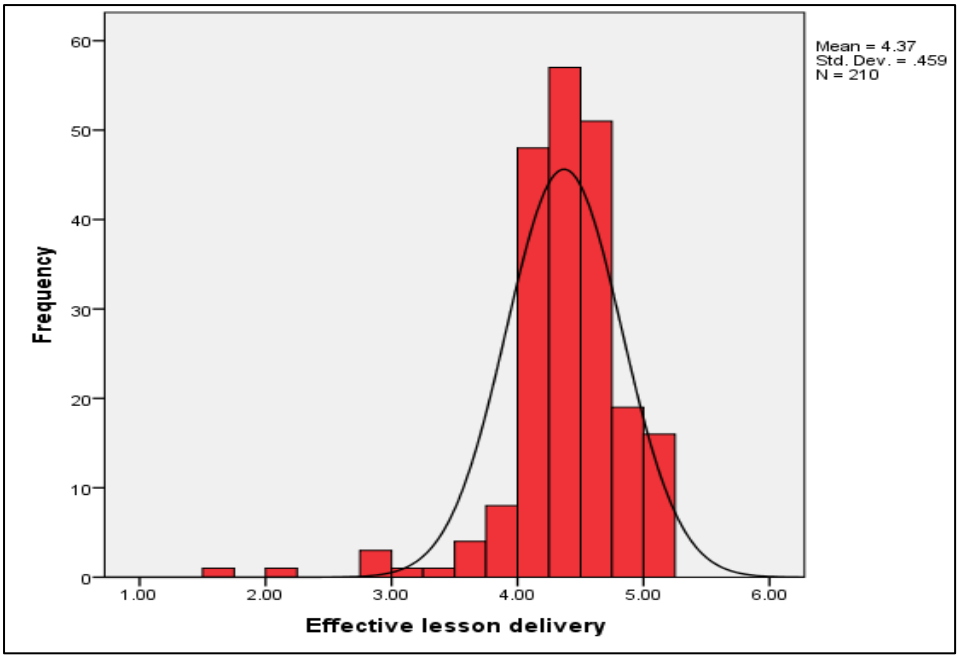

Figure 4.1: Histogram for effective lesson delivery

The results in Figure 4.1 show a high mean = 4.37, which indicated that teachers agreed effective lesson delivery was good. With the low standard deviation (0.45) and the curve in the figure showing normality, it was inferred that the results on effective lesson delivery by teachers were normally distributed.

4.2.2 Subject content expertise.

The second concept of teacher effectiveness was subject content expertise. It was studied using 9 Items as shown in Table 4.4.

Table 4. 4: Descriptive results for subject content expertise

Subject content expertise	SD	D	N	A	SA	MEAN
I have knowledge of related disciplines/subject and use it effectively.	2 (1.0%)	2 (1.0%)	1 (0.5%)	75 (35.7%)	130 (61.9%)	4.56
I adapt the process of instruction in light of the demands in the event of unforeseen circumstances.	4 (1.9%)	4 (1.9%)	12 (5.7%)	95 (45.2%)	95 (45.2%)	4.30
I enable students to use higher-order thinking skills.	2 (1.0%)	1 (0.5%)	11 (5.2%)	105 (50.0%)	91 (43.3)	4.34
I assign tasks based on research and inquiry.	- -	3 (1.4%)	21 (10.0%)	101 (48.1%)	85 (40.5%)	4.27
I share many insightful concepts pertaining to the lessons taught.	1 (0.5%)	1 (0.5%)	5 (2.4%)	115 (54.8)	88 (41.9%)	4.37
I display authority in the classroom.	6 (2.9%)	6 (2.9%)	2 (1.0%)	91 (43.3%)	105 (50.0%)	4.34
I know how to respond to inquiries concerning lessons delivered.	5 (2.4%)	- -	6 (2.9%)	85 (40.5%)	114 (54.3%)	4.44
I show comprehensive comprehension of the lessons taught.	- -	2 (1.0%)	3 (1.4%)	93 (44.3%)	112 (53.3%)	4.50
I share facts that are solely pertinent to the lessons being taught.	7 (3.3%)	11 (5.2%)	10 (4.8%)	92 (43.8%)	90 (42.9%)	4.17

The findings in Table 4.4 regarding whether teachers have the knowledge of related discipline/subject and uses it effectively, cumulatively the larger percentage, (97.6%) of the teachers agreed, (0.5%) were uncurtain and only (2%) dissented. The high mean (4.56) means that teachers rated their knowledge of related discipline/subject and its effective use as high. Regarding whether the teachers adapt process of instruction in light of the demands in the event of unforeseen circumstances, (90.4%) concurred, (5.7%) were not sure and (3.8%) disagreed. The high mean (4.30) implied that teachers adapt process of instruction in light of the demands in the event of unforeseen circumstances. As to whether teachers enable students to use higher-order thinking skills, cumulatively the larger percentage (93.3%) agreed, (5.2%) were uncurtan, and

(1.5%) dissented. The mean is high (4.34) showing that teachers enable students to use higher-order thinking skills. As to whether teachers assign tasks based on research and inquiry, (88.6%) agreed, (10%) were not sure, (1.4%) disagreed. The mean (mean = 4.27) shows that teachers assign tasks based on research and inquiry.

With respect to whether teachers share many insightful concepts pertaining to the lessons taught, cumulatively (96.7%) agreed, (2.4%) were not sure and (1%) disagreed. The high mean (4.37) shows that teachers share many insightful concepts pertaining to the lessons taught. Regarding whether teachers display authority in the classroom, cumulatively (93.3%) agreed, (1%) was not sure and (5.8%) disagreed. The mean (4.34) implied that the teachers rated their display of authority in the classroom as high. Regarding whether teachers know how to respond to inquiries concerning lessons delivered, cumulatively (94.8%) concurred, (2.9%) were uncurtain, and (2.4%) dissented. The mean is high (4.44), showing that teachers know how to respond to inquiries concerning lessons delivered. Concerning whether the teachers show comprehensive comprehension of the lessons taught, cumulatively (97.6%) agreed, (1.4%) were uncurtain and (1.0%) dissented. The mean is high (4.50), showing that the teachers show comprehensive comprehension of the lessons taught highly. With respect to whether teachers share facts that are solely pertinent to the lessons being taught, (86.7%) concurred, (4.8%) were not sure, and (8.5%) disagreed. The high mean (4.17) implied that teachers share facts that are solely pertinent to the lessons being taught.

Table 4. 5: Summary table for subject content expertise

Descriptives			Statistic	Std. Error
Subject content expertise	Mean		4.20	0.0380
	95% Confidence Interval for Mean	Lower Bound	4.13	
		Upper Bound	4.28	
	5% Trimmed Mean		4.25	
	Median		4.28	
	Variance		0.304	
	Std. Deviation		0.55	
	Minimum		1.29	
	Maximum		5.00	
	Range		3.71	
	Interquartile Range		.57	
	Skewness		-2.277	0.168
	Kurtosis		8.712	0.334

The results presented in Table 4.5 demonstrate a high degree of central tendency, with a mean of 4.20 and median of 4.28, and minimal variability (SD = 0.55), suggesting normality. The average mean also suggested that the teachers rated their subject content expertise to be high. The normal distribution of the results is also displayed by the normal curve in Figure 4.2.

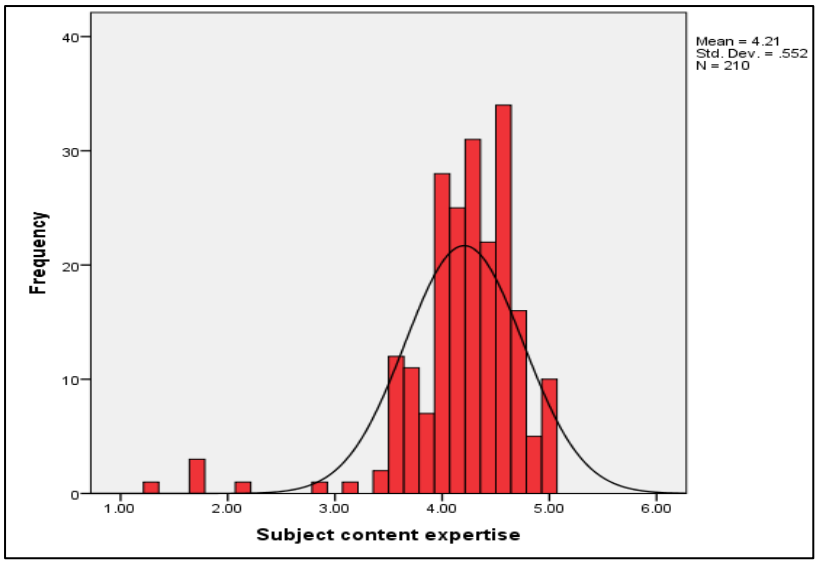

Figure 4.2: Histogram for subject content expertise

The results in Figure 4.1 show a high mean = 4.21, which indicates that teachers agreed that their subject content expertise was good. With the low standard deviation (0.552) and the curve in the figure showing normality, it was inferred that the results on subject content expertise by teachers were normally distributed.

4.2.3 Relational Expertise.

Relational expertise was the third concept of the effectiveness of teachers. This construct was studied using seven items as shown in Table 4.6.

Table 4.6: Summary results for relational expertise

Relational expertise	SD	D	N	A	SA	MEAN
I professionally cooperate with administrators and colleagues.	1 (0.5%)	2 (1.0%)	3 (1.4%)	103 (49.0%)	101 (48.1%)	4.43
I regularly inform parents regarding the development of students.	7 (3.3%)	23 (11.0%)	24 (11.4%)	93 (44.3%)	63 (30.0%)	3.86
I communicate effectively in both written and oral amongst themselves, parents and are role models for students.	7 (3.3%)	8 (3.8%)	24 (11.4%)	107 (51.0%)	64 (30.5)	4.01
I normally think thoroughly before making any decision.	2 (1.0%)	3 (1.4%)	2 (1.0%)	98 (46.7%)	105 (50.0%)	4.43
I cooperate with families and always show concern for others.	5 (2.4%)	5 (2.4%)	17 (8.1%)	122 (58.1)	61 (29.0%)	4.09
I use encouraging words when declaring exam, project, and assignment results.	5 (2.4%)	1 (0.5%)	8 (3.8%)	119 (56.7%)	77 (36.7%)	4.24
I accept all students at school regardless of the class.	4 (1.9%)	1 (0.5%)	9 (4.3%)	99 (47.1%)	97 (46.2%)	4.35

Table 4.6 shows that regarding whether teachers professionally cooperate with administrators and colleagues, cumulatively (97.1%) agreed, (1.4%) were not sure, and (1.5) % disagreed. The high mean (4.43) shows that teachers professionally cooperate with administrators and colleagues. Concerning whether teachers regularly

inform parents regarding the development of students, cumulatively (74.3%) concurred, (11.4%) were not sure, and (14.3%) disagreed. The mean is relatively high (3.86) meaning that teachers regularly inform parents regarding the development of students. With regard to whether teachers communicate effectively in both written and oral amongst themselves, parents and are role models for students, cumulatively (81.5%) agreed, (11.4%) were not sure and (7.1%) disagreed. The mean is high (4.01) which means that teachers communicate effectively in both written and oral amongst themselves, parents and are role models for students. Regarding whether teachers normally think thoroughly before making any decision, cumulatively (96.7%) agreed, (1.0%) were not sure and (2.4%) disagreed. The mean is high (4.43) meaning that teachers normally think thoroughly before making any decision.

As to whether teachers cooperate with families and always show concern for others, cumulatively (87.1%) agreed, (8.1%) were not sure and (4.8%) disagreed. The mean is high (4.09) meaning teachers cooperate with families and always show concern for others. Regarding whether teachers use encouraging words when declaring exam, project, and assignment results, cumulatively (93.4%) agreed, (3.8%) were not sure, and (2.9%) disagreed. The mean is high (4.24) meaning that teachers use encouraging words when declaring exam, project, and assignment results. Lastly as to whether teachers accept all students at school regardless of the class, cumulatively (93.3%) agreed, (4.3%) were not sure, and (2.4%) disagreed. The mean is high (4.35) indicating that teachers accept all students at school regardless of the class.

Table 4.7: Summary results for relational expertise

Descriptives			Statistic	Std. Error
Relational expertise	Mean		4.37	0.031
	95% Confidence Interval for Mean	Lower Bound	4.30	
		Upper Bound	4.43	
	5% Trimmed Mean		4.41	
	Median		4.42	
	Variance		0.214	
	Std. Deviation		0.463	
	Minimum		1.29	
	Maximum		5.00	
	Range		3.71	
	Interquartile Range		0.43	
	Skewness		-2.327	0.168
	Kurtosis		11.00	0.334

The results in Table 4.7 show a mean = 4.37 close to the median = 4.42 and a low standard deviation = 0.46 implying that the results were normally distributed. The mean also proposed that the teachers rated their relational expertise to be high. The normal distribution of the results is also displayed by the normal curve in Figure 4.3.

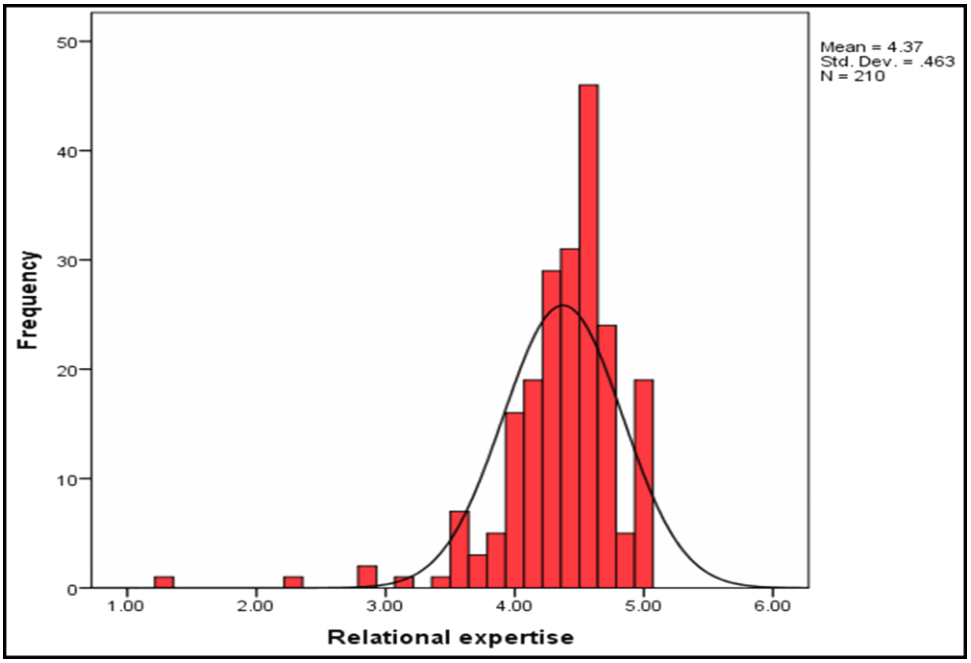

Figure 4.3:Histogram for relational expertise

The results in Figure 4.3 show a high mean (mean = 4.37) which indicates that teachers rated their relational expertise to be high. With the low standard deviation (0.46) and the curve in the figure showing normality, it was inferred that the results on relational expertise by teachers were normally distributed.

4.2.4 Professional Conduct.

The professional conduct was the fourth concept of the effectiveness of teachers. It was studied in seven items, as shown in Table 4.8.

Table 4.8: Professional conduct

Professional Conduct	SD	D	NS	A	SA	Mean
I manifest charisma and do teaching with self-devotion.	1 (0.5%)	2 (1.0%)	5 (2.4%)	77 (36.7%)	125 (59.5%)	4.53
I have strong self-control.	1 (0.5%)	1 (0.5%)	6 (2.9%)	82 (39.0%)	120 (57.1%)	4.51
I exhibit grace under pressure.	1 (0.5%)	3 (1.4%)	12 (5.7%)	101 (48.1%)	93 (44.3%	4.34
I manifest an outgoing personality.	2 (1.0%)	5 (2.4%)	20 (9.5%)	103 (49.0%)	80 (38.1%)	4.20
I do self-evaluation analytically and critically of what i do in and out of the classroom.	4 (1.9%)	- -	13 (6.2%)	88 (41.9%)	105 (50.0%)	4.38
I spend time reflecting.	4 (1.9%)	2 (1.0%)	14 (6.7%)	123 (58.6%)	67 (31.9%)	4.17
I teach according to the subject/ course purpose.	3 (1.4%)	8 (3.8%)	3 (1.4%)	75 (35.7%)	121 (57.6%)	4.44

Table 4.8, regarding whether teachers manifest charisma and teach with self-devotion, cumulatively (96.2%) agreed, (2.4%) were not sure and (1.5%) disagreed. The mean is high (mean = 4.53), implying that teachers manifest charisma and do teaching with self-devotion. With regard to whether teachers have strong self-control, cumulatively (96.1%) agreed, (2.9%) were not sure, and (1.0%) disagreed. The high mean (4.51%) showed that teachers have strong self-control. As to whether teacher's exhibit grace under pressure, the majority (92.4%) agreed, (5.7%) were not sure, and (1.9%)

disagreed. The high mean (mean = 4.34) showed that teachers exhibit grace under pressure. Regarding whether the teachers manifest an outgoing personality, cumulatively (87.1%) agreed, (9.5%) were not sure and (3.4%) disagreed. The high mean (4.20) shows that teachers manifest an outgoing personality highly. With respect to whether teachers do self-evaluation analytically and critically of what they do in and out of the classroom, cumulatively (91.9%) agreed, (6.2%) were not sure, and (1.9%) the minority disagreed. The high mean (4.38) showed that teachers do self-evaluation analytically and critically of what they do in and out of the classroom. Regarding whether teachers spend time reflecting, majority (90.5%) agreed, (6.7%) were not sure, and (2.9%) disagreed. The high mean (4.17) implies that teacher rate highly the time they spend reflecting. Lastly concerning teaching according to the subject/ course purpose, cumulatively (93.3%) which is the majority agreed, (1.4%) were not sure, and (5.2%) disagreed. The high mean (4.44) shows that teaching is done according to the subject/ course purpose.

Table 4.9:Summary results for professional conduct

Descriptives			**Statistic**	**Std. Error**
Professional Conduct	Mean		4.30	0.032
	95% Confidence Interval for Mean	Lower Bound	4.24	
		Upper Bound	4.37	
	5% Trimmed Mean		4.34	
	Median		4.28	
	Variance		0.226	
	Std. Deviation		0.475	
	Minimum		1.14	
	Maximum		5.00	
	Range		3.86	
	Interquartile Range		0.43	
	Skewness		-1.763	0.168
	Kurtosis		8.99	0.334

The results in Table 4.9 shows a mean (4.30) close to the median (4.28) which suggested that the results were normally distributed. The low standard deviation

(0.475) also indicated a normal distribution of the responses. The mean is high (4.30), meaning that teachers rated their professional conduct as good. The normal distribution of the results is also displayed by the normal curve in Figure 4.4.

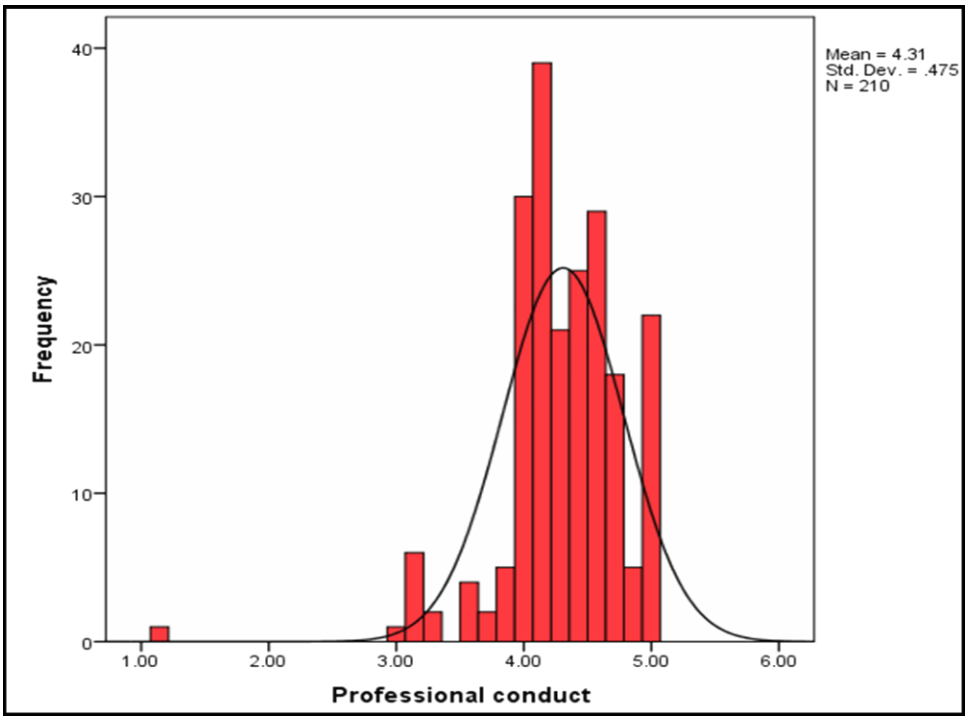

Figure 4.4: Histogram for Professional Conduct

The results in Figure 4.4 show a high mean (4.31) indicating that teachers agreed that their professional conduct was high. With the low standard deviation (0.475) and the curve in the figure showing normality, it was inferred that the results on professional conduct by teachers were normally distributed.

4.2.5 Self-development.

Self-development was the fifth concept of effectiveness of teachers. It was studied in seven items as shown in Table 4.10.

Table 4. 10: Self-development

Self-development	SD	D	NS	A	SA	Mean
I seek strategies for enhancing my performance and learning through self-evaluation.	2 (1.0%)	- -	13 (6.2%)	102 (48.6%)	93 (44.3%)	4.35
I take part in ongoing professional development activities to enhance my teaching abilities.	2 (1.0%)	3 (1.4%)	16 (7.6%)	104 (49.5%)	85 (40.5%)	4.27
I take part in events for professional development to enhance the school.	2 (1.0%)	13 (6.2%)	7 (3.3%)	112 (53.3%)	76 (36.2%)	4.17
I exhibit digital citizenship qualities like knowing and using technology-enhanced instructional opportunities.	2 (1.0%)	4 (1.9%)	23 (11.0%)	91 (43.3%)	90 (42.9%)	4.25
1 feel free to be who I am, accept the consequences, and not be afraid to do so.	1 (0.5%)	10 (4.8%)	6 (2.9%)	99 (47.1%)	94 (44.8%)	4.30
I am comfortable with who I am, despite my imperfections.	2 (1.0%)	3 (1.4%)	6 (2.9%)	117 (55.7%)	82 (39.0%)	4.30
I find myself continually learning.	1 (0.5%)	1 (0.5%)	4 (1.9%)	93 (44.3%)	111 (52.9%)	4.48

The outcomes in Table 4.10, it shows that concerning whether teachers seek strategies for enhancing their performance and learning through self-evaluation, cumulatively (92.9%) agreed, (6.2%) were not sure, and only (1.0%) disagreed. The mean is high (4.35), meaning that teachers make efforts to seek strategies for enhancing their performance and learning through self-evaluation. As to whether teachers take part in ongoing professional development activities to enhance their teaching abilities, cumulatively (90%) concurred, (7.6%) were not sure and (2.4%) disagreed. The mean is high (4.27), meaning that teachers take part in ongoing professional development activities to enhance their teaching abilities.

As to whether teachers take part in events for professional development to enhance the school, cumulatively (89.5%) agreed, (3.3%) were not sure and (7.2%) disagreed. The high mean (4.17) shows that teachers take part in events for professional development to enhance the school. Regarding whether teachers exhibit digital

citizenship qualities like knowing and using technology-enhanced instructional opportunities, cumulatively (86.2%) agreed, (11.0%) were not sure, and (2.9%) disagreed. The mean is high (4.25) implying that teacher's exhibit digital citizenship qualities like knowing and using technology-enhanced instructional opportunities. Regarding whether teachers feel free to be who they are, accept the consequences, and not be afraid to do so, cumulatively (91.9%) agreed, (2.9%) were not sure and (5.3%) disagreed. The mean is high (4.30) meaning that teachers feel free to be who they are, accept the consequences, and not be afraid to do so. With regard to whether teachers are comfortable with who they are despite their imperfections, cumulatively (94.7%) concurred, (2.9%) were not sure and (2.4%) disagreed. The high mean (4.30) implied that teachers are comfortable with who they are despite their imperfections. Lastly regarding whether teachers find themselves continually learning, cumulatively (97.2%) agreed, (1.9%) were not sure, and only (1%) disagreed. The high mean (4.48) shows that teachers find themselves continually learning.

Table 4.11:Summary table for self-development

Descriptives			**Statistic**	**Std. Error**
Self-development	Mean		4.24	0.033
	95% Confidence Interval for Mean	Lower Bound	4.17	
		Upper Bound	4.31	
	5% Trimmed Mean		4.28	
	Median		4.30	
	Variance		0.235	
	Std. Deviation		0.484	
	Minimum		1.50	
	Maximum		5.00	
	Range		3.50	
	Interquartile Range		0.50	
	Skewness		-1.432	0.168
	Kurtosis		5.146	0.334

The results in Table 4.11 show a high mean (4.24) and median (4.30) which suggests that results were normally distributed. The high mean also meant that teachers rated self-development to be good. The low standard deviation (0.48) indicated a normal distribution of the responses. The normal distribution of results is also displayed by the normal curve in Figure 4.5.

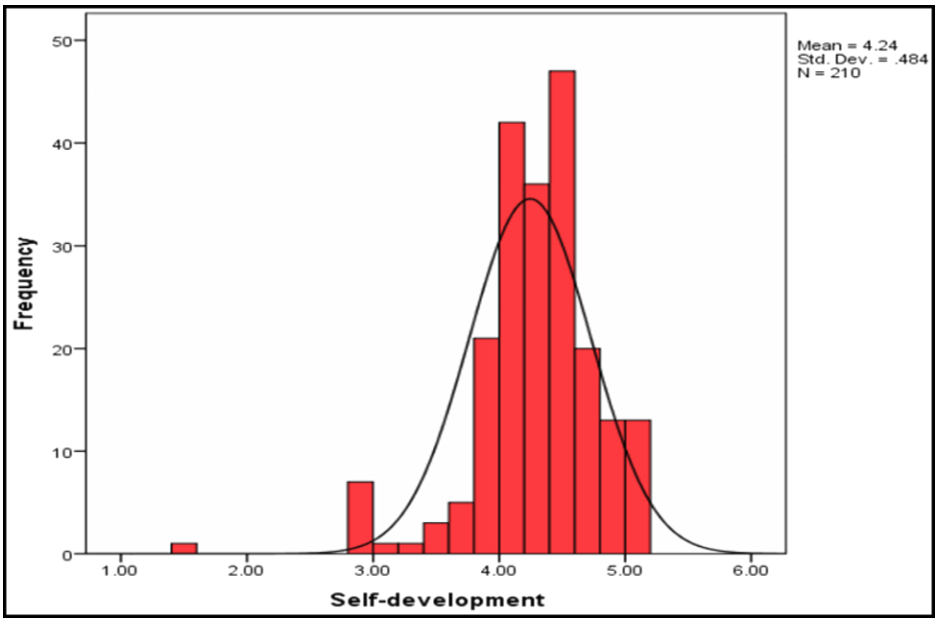

Figure 4. 5: Histogram for self-development

The results in Figure 4.5 show high mean = 4.24, which indicates that teachers rated their self-development as good. With the low standard deviation (0.484) and the curve in the figure showing normality, it was inferred that the results perceived by teachers were normally distributed.

4.2.6 Classroom Management

Classroom management was the sixth concept of effectiveness of teachers. It was studied in ten items as shown in Table 4.12.

Table 4.12: Classroom management

Classroom management	SD	D	NS	A	SA	Mean
I establish clear expectations for student behaviour in my classroom.	1 (0.5%)	1 (0.5%)	16 (7.6%)	115 (54.8%)	77 (36.7%)	4.26
I provide frequent positive feedback to students for appropriate behaviour.	3 (1.4%)	8 (3.8%)	7 (3.3%)	91 (43.3%)	101 (48.1%)	4.32
I have a system for providing consequences for misbehaviour that is fair and consistent.	- -	9 (4.3%)	10 (4.8%)	105 (50.0%)	86 (41.0%)	4.27
I use positive reinforcement strategies to encourage on-task behaviour.	2 (1.0%)	3 (1.4%)	13 (6.2%)	131 (62.4%)	61 (29.0%)	4.17
I establish and maintain positive relationships with my students.	- -	1 (0.5%)	3 (1.4%)	108 (51.4%)	98 (46.7%)	4.44
I use instructional time effectively and minimize disruptions.	1 (0.5%)	7 (3.3%)	7 (3.3%)	104 (49.5%)	91 (43.3%)	4.31
I use strategies to prevent behaviour problems from occurring.	1 (0.5%)	4 (1.9%)	15 (7.1%)	113 (53.8%)	77 (36.7%)	4.24
I can redirect misbehaviour without disrupting the flow of instruction.	5 (2.4%)	10 (4.8%)	18 (8.6%)	111 (52.9%)	66 (31.4%)	4.06
In order to satisfy the needs of every student, I employ a range of instructional strategies.	2 (1.0%)	2 (1.0%)	6 (2.9%)	130 (61.9%)	70 (33.3%)	4.25
I monitor student behaviour closely during independent work time.	7 (3.3%)	20 (9.5%)	6 (2.9%)	93 (44.3%)	84 (40.0%)	4.08

The results in table 4.12 on whether teachers establish clear expectations for student behaviour in my classroom, cumulatively (91.5%) concurred, (7.6%) were not sure and (1%) disagreed. The high mean (4.26) revealed that teachers establish clear expectations for student behaviour in my classroom. Regarding whether teachers provide frequent positive feedback to students for appropriate behaviour, the largest percentage (91.4%) concurred, (3.3%) were not sure, and (5.2%) disagreed. The high

mean (4.32) implied that teachers provide frequent positive feedback to students for appropriate behaviour.

As to whether teachers have a system for providing consequences for misbehaviour that is fair and consistent, cumulatively (91.0%) agreed, (4.8%) were not sure and (4.3%) disagreed. The high mean (4.27) shows that teachers have a system for providing consequences for misbehaviour that is fair and consistent. With regard to whether teachers use positive reinforcement strategies to encourage on-task behaviour, the largest percentage (91.4%) concurred, (6.2%) were not sure, and (2.4%) disagreed. The high mean (4.17%) proved that teachers use positive reinforcement strategies to encourage on-task behaviour. About whether teachers establish and maintain positive relationships with students, the biggest percentage (98.1%) concurred, (1.4%) were not sure, and only (0.5%) disagreed. The high mean (4.44) reflects that teachers establish and maintain positive relationships with students highly.

Regarding whether teachers use instructional time effectively and minimize disruptions, cumulatively (92.8%) concurred, (3.3%) were not sure and (3.8%) disagreed. The high mean (4.31) implied that teachers highly use instructional time effectively and minimize disruptions. About whether teachers use strategies to prevent behaviour problems from occurring, the biggest percentage (90.5%) agreed, (7.1%) were not sure, minority (2.4%) disagreed. The high mean (4.24) reflects that teachers highly use strategies to prevent behaviour problems from occurring. Regarding whether teachers can redirect misbehaviour without disrupting the flow of instruction, cumulatively (84.3%) agreed, (8.6%) were not sure, (7.2%) disagreed. The high mean (4.06) shows that teachers can highly redirect misbehaviour without disrupting the flow of instruction. Concerning whether teachers employ a range of instructional

strategies in order to satisfy the needs of every student, cumulatively (95.2%) concurred, (2.9%) were not sure, and (2%) disagreed. The high mean (4.25%) implies that teachers highly employ a range of instructional strategies in order to satisfy the needs of every student. Lastly regarding whether teachers monitor student behaviour closely during independent work time, (84.3%) agreed, (2.9%) were not sure and (12.8%) disagreed. The high mean (4.08) reflects that teachers monitor student behaviour closely during independent work time.

Table 4.13: Summary table for classroom management

Descriptives			Statistic	Std. Error
Classroom management	Mean		3.72	0.057
	95% Confidence Interval for Mean	Lower Bound	3.61	
		Upper Bound	3.83	
	5% Trimmed Mean		3.76	
	Median		4.00	
	Variance		0.691	
	Std. Deviation		0.831	
	Minimum		1.43	
	Maximum		5.00	
	Range		3.57	
	Interquartile Range		1.04	
	Skewness		-0.751	0.168
	Kurtosis		-0.206	0.334

The results in Table 4.13 show a high mean (3.72) and median (4.00) which suggested that results were normally distributed. The high mean also meant that teachers rated classroom management to be good. The low standard deviation (0.83) indicated a normal distribution of the responses. The normal distribution of results is also displayed by the normal curve in Figure 4.6.

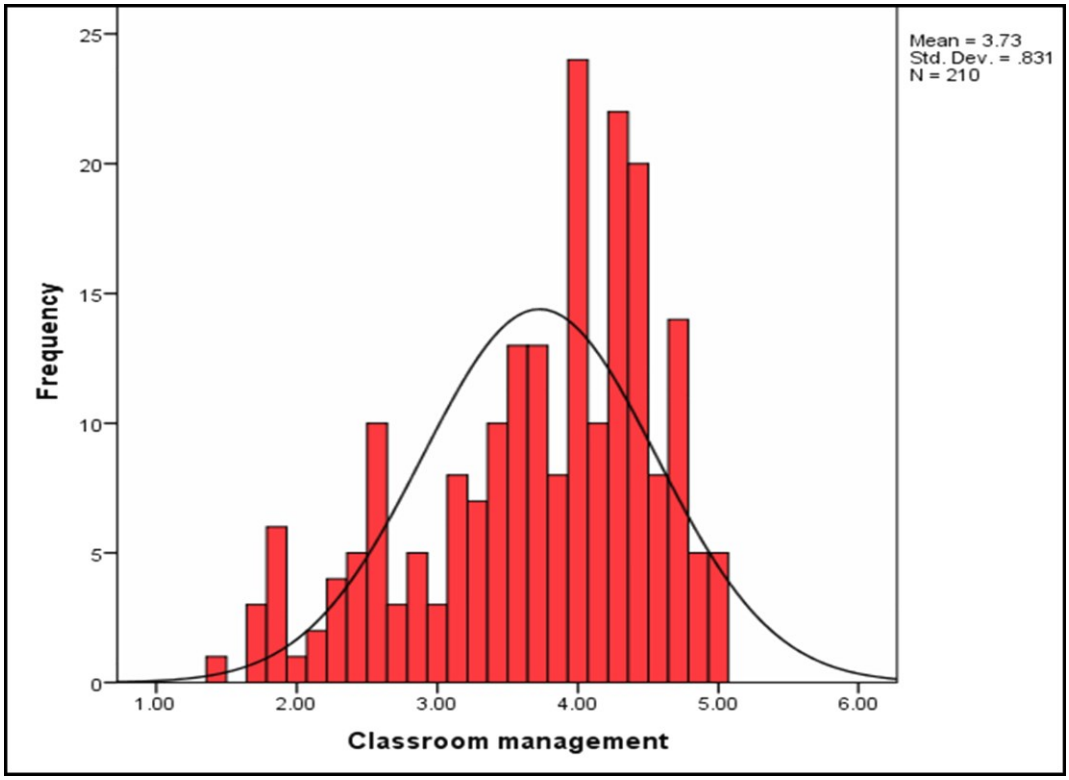

Figure 4. 6: Histogram for classroom management

The results in Figure 4.6 show a high mean (3.73), which indicated that teachers rated their classroom management as good. With the low standard deviation (0.831) and the curve in the figure showing normality, it was inferred that the results perceived by teachers were normally distributed.

4.2.7 Teacher Effectiveness.

To test how overall the teachers rated their teaching effectiveness, an average index was calculated for the six aspects measuring the concept, namely effective lesson delivery, subject matter expertise, relational expertise, professional conduct, self-development and classroom management. The results on the same are presented in Table 4.14.

Table 4.14: Summary table for teacher effectiveness

Descriptives			Statistic	Std. Error
Teacher effectiveness	Mean		4.30	0.02
	95% Confidence Interval for Mean	Lower Bound	4.25	
		Upper Bound	4.35	
	5% Trimmed Mean		4.32	
	Median		4.35	
	Variance		0.14	
	Std. Deviation		0.38	
	Minimum		1.45	
	Maximum		5.00	
	Range		3.55	
	Interquartile Range		0.37	
	Skewness		-2.66	0.16
	Kurtosis		15.98	0.33

The results from Table 4.14 show high mean (4.30) close to the median (4.35) and a low standard deviation (0.38) which suggested that the results were normally distributed. The high mean also proposed that the teachers rated their teaching effectiveness to be good. The low standard deviation also indicated normal distribution of the responses. The normal distribution of the results is also displayed by the normal curve in Figure 4.7.

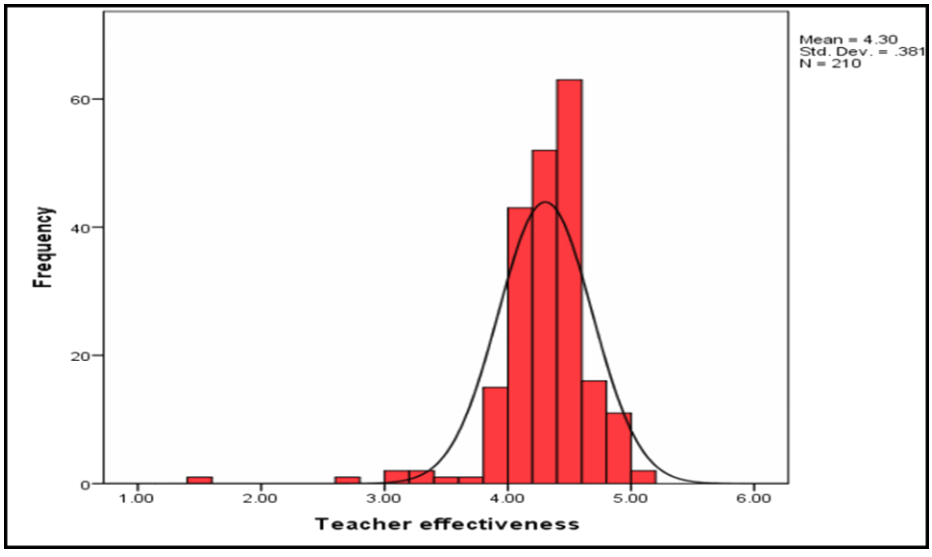

Figure 4.7: Histogram for teacher effectiveness

Figure 4.7 reveals mean (4.30) which implied that teacher effectiveness was good. The low standard deviation (0.381) implied that the results were normally distributed. Therefore, results obtained could be subjected to linear correlation and regression.

4.2.8 Structural model for Teacher effectiveness.

Figure 4.8 shows the variable of teacher effectiveness which was studied in terms of effective lesson delivery, subject matter expertise, relational expertise, professional conduct, and self-development and classroom management.

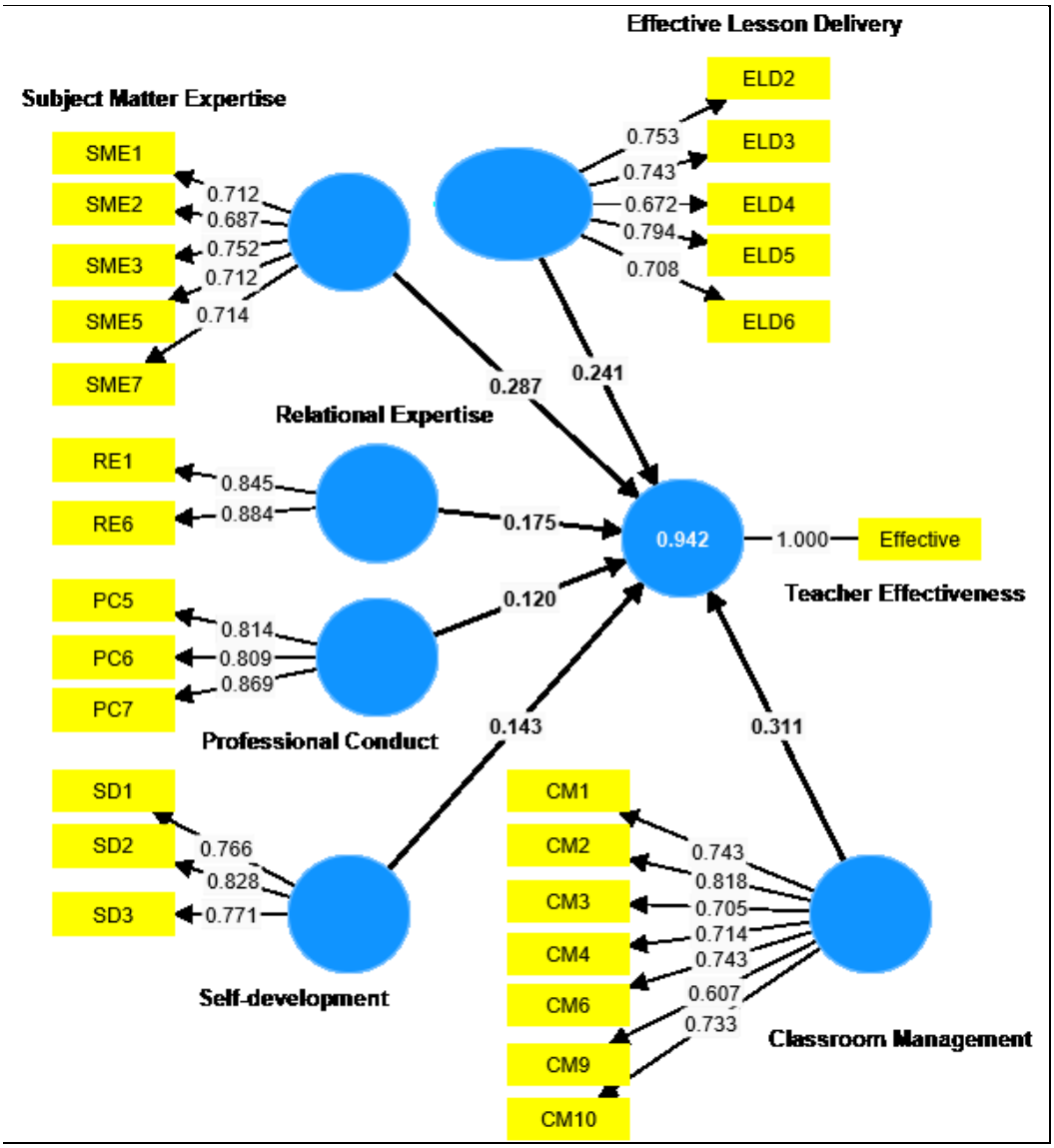

Figure 4.8: Structural model for teacher effectiveness

The structural model Figure 4.8 describes the measures of teacher effectiveness. Teacher effectiveness was studied in terms of six factors namely, effective lesson delivery, subject matter expertise, relational expertise, professional conduct, self-development and classroom management. The factor loadings obtained show that regarding effective lesson delivery, five indicators (ELD2, ELD3, ELD4, ELD5 & ELD6) loaded highly and four (ELD1, ELD7, ELD8 & ELD9) were dropped, five for subject matter expertise (SME1, SME2, SME3, SME5 & SME7) were retained and four (SME4, SME6, SME8 & SME9) were dropped, with respect to relational expertise, two indicators (RE1 & RE6) were retained and five (RE2-RE5 & RE7) were dropped, three items for professional conduct (PC5, PC6 & PC7) were retained and four (PC1-PC4) were dropped, three (SD1-SD3) items loaded for self-development and four (SD4-SD7) were dropped and lastly regarding classroom management, seven items (CM1, CM2, CM3, CM4, CM6, CM9 & CM10) and three indicators (CM5,CM7 & CM8) were dropped. The constructs that measured the same loaded above the minimum validity value (0.5) when using factor analysis as recommended by Hair et al (2021). The items retained for all the constructs in the model were valid measures of those constructs and those items dropped were excluded from subsequent analyses.

4.3 School Climate

School climate was studied in terms of school environment, school safety and engagement.

4.3.1 School environment

School environment was the first concept of school climate and was studied in seven items as shown below.

Table 4.15: School environment

School environment	SD	D	NS	A	SA	Mean
This school's buildings, including its labs, libraries, and classrooms, are clean	9 (4.3%)	21 (10.0%)	8 (3.8%)	113 (53.8%)	59 (28.1%)	3.91
This school has the required laboratory required materials	15 (7.1%)	29 (13.8%)	13 (6.2%)	79 (37.6%)	74 (35.2%)	3.80
This school has the required sports field	18 (8.6%)	38 (18.1%)	12 (5.7%)	93 (44.3%)	49 (23.3%)	3.55
There is ample space and infrastructure at this school for extracurricular activities.	24 (11.4%)	44 (21.0%)	16 (7.6%)	91 (43.3%)	35 (16.7%)	3.32
The students take pride in the external appearance of this school.	4 (1.9%)	11 (5.2%)	32 (15.2%)	95 (45.2%)	68 (32.4%)	4.00
This school has comfortable temperatures all year long.	7 (3.3%)	29 (13.8%)	14 (6.7%)	115 (54.8%)	45 (21.4%)	3.77
The bathrooms and restrooms in this school are sufficient and clean.	21 (10.0%)	30 (14.3%)	7 (3.3%)	84 (40.0%)	68 (32.4%)	3.70

The results in Table 4.15 on whether the school's buildings, including their labs, libraries, and classrooms are clean, cumulatively (81.9%) agreed, (3.8%) were not sure, and (14.3%) disagreed. The relatively high mean (3.91) implied that teachers rated the cleanliness of the school's buildings, including their labs, libraries, and classrooms as good. Regarding whether the schools have the required laboratory materials, cumulatively (72.8%) concurred, (6.2%) were not sure, (20.9%) disagreed. the relatively high mean (3.80) shows that teachers rated good the schools have the required laboratory materials. As to whether this school has the required sport field, majority (67.6%) concurred, (26.7%) disagreed and (5.7%) were not sure. The mean (3.55) implied that the school has the required sport field. With regard to whether there is ample space and infrastructure at this school for extracurricular activities, majority (60%) agreed, (32.4%) disagreed, and (7.6%) were not sure. The average mean (3.32)

reflects that there is fairly ample space and infrastructure at this school for extracurricular activities.

Regarding whether the students take pride in the external appearance of this school, cumulatively (77.6%) concurred, (15.2%) were not sure and (7.1%) disagreed. The high mean (4.00) shows that the students take pride in the external appearance of this school. With respect to whether this school has comfortable temperatures all year long, cumulatively (76.2%) concurred, (6.7%) were not sure, and (17.1%) disagreed. The mean (3.77) reflects that fairly the school has comfortable temperatures all year long. Regarding whether the bathrooms and restrooms in this school are sufficient and clean, majority (72.4%) concurred, (3.3%) were not sure, and (24.3%) disagreed. The relatively high mean (3.70) reflects that teachers rated fairly the bathrooms and restrooms in this school to be sufficient and clean.

Table 4.16: Descriptive results for the school environment

Descriptive			**Statistic**	**Std. Error**
School Environment	Mean		3.57	0.041
	95% Confidence Interval for Mean	Lower Bound	3.48	
		Upper Bound	3.65	
	5% Trimmed Mean		3.58	
	Median		3.56	
	Variance		0.35	
	Std. Deviation		0.59	
	Minimum		1.13	
	Maximum		5.00	
	Range		3.88	
	Interquartile Range		0.75	
	Skewness		-0.35	0.168
	Kurtosis		1.07	0.334

The results in Table 4.16 show a mean (3.57) close the median (3.56) which suggested that the results were normally distributed. The low standard deviation (0.59) indicated

normal distribution of the responses. The normal distribution of results is also displayed by the normal curve in Figure 4.9.

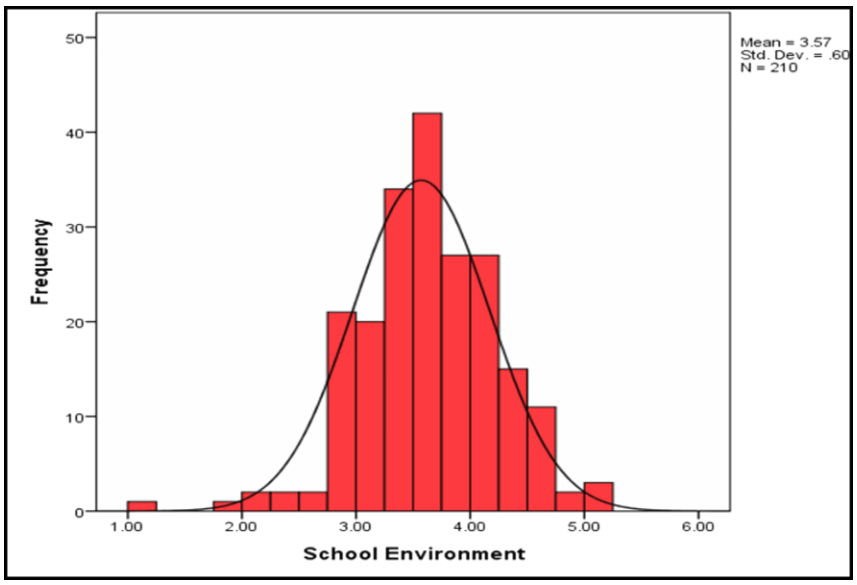

Figure 4.9: Histogram for the school environment

The results in Figure 4.9 show a moderate mean (3.57) which indicated that teachers rated school environment fairly good. With the low standard deviation (0.60) and the curve in the figure showing normality, it was inferred that the results on school environment by teachers were normally distributed.

4.3.2 School Safety Issues.

School safety was the second concept of school climate. It was studied in eight items, as shown in Table 4.17.

Table 4. 17: Summary table for school safety

School safety issues	SD	D	NS	A	SA	Mean
This school has explicit policies prohibiting harassment, teasing, insulting, physical harm, and other verbal abuse.	2 (1.0%)	7 (3.3%)	4 (1.9%)	90 (42.9%)	107 (51.0%)	4.39
If teachers witness students verbally abusing, insulting, teasing, harassing, or physically harming someone else, they stop them.	4 (1.9%)	5 (2.4%)	2 (1.0%)	93 (44.3%)	106 (50.5%)	4.39
In this school, rules against verbal and physical harassment are fairly enforced by teachers.	2 (1.0%)	5 (2.4%)	5 (2.4%)	110 (52.4%)	88 (41.9%)	4.31
While at school, students at this school steal cash, gadgets, or other valuables.	57 (27.1%)	31 (14.8%)	55 (26.2%)	37 (17.6%)	30 (14.3%)	2.77
Students at this school practice listening to others in order to comprehend what they are attempting to say.	9 (4.3%)	12 (5.7%)	26 (12.4%)	134 (63.8%)	29 (13.8%)	3.77
Students at this school discuss how important it is to comprehend both their own and other people's feelings.	4 (1.9%)	14 (6.7%)	30 (14.3%)	121 (57.6%)	41 (19.5%)	3.86
Alcohol and drug use by students occurs during school hours and during school-sponsored events.	73 (34.8%)	33 (15.7%)	45 (21.4%)	39 (18.6%)	20 (9.5%)	2.52
Students can easily use or experiment with drugs or alcohol at school or during events sponsored by the school without being detected.	66 (31.4%)	46 (21.9%)	36 (17.1%)	45 (21.4%)	17 (8.1%)	2.52

According to Table 4.17 regarding whether this school has explicit policies prohibiting harassment, teasing, insulting, physical harm, and other verbal abuse, cumulatively (93.9%) agreed, (1.9%) were not sure, and (4.3%) disagreed. The high mean (4.39) showed that teachers rated school explicit policies prohibiting harassment, teasing, insulting, physical harm, and other verbal abuse high. Regarding whether If teachers witness students verbally abusing, insulting, teasing, harassing, or physically harming someone else, they stop them, cumulatively (94.8%) agreed, (1.0%) were not sure, (4.3%) disagreed. The mean is high (4.39) implying that If teachers witness students verbally abusing, insulting, teasing, harassing, or physically harming someone else, they stop them. Concerning In this school, rules against verbal and physical harassment are fairly enforced by teachers, cumulatively (94.3%) agreed, (2.4%) were not sure, (3.4%) disagreed. The high mean (4.31) showed that the teachers rated school rules against verbal and physical harassment to be fairly enforced by teachers.

Regarding while at school, students at this school steal cash, gadgets, or other valuables, majority (41.9%) disagreed, (26.2%) were not sure, and (31.9%) agreed. The mean (2.77) shows that teachers rated while at school, students at this school steal cash, gadgets, or other valuables to be low. As to whether Students at this school practice listening to others in order to comprehend what they are attempting to say, cumulatively (77.6%) agreed (12.4%) were not sure, (10%) disagreed. The moderate mean (3.77) implied that students at this school practice listening to others in order to comprehend what they are attempting to say fairly as rated by teachers. Regarding whether students at this school discuss how important it is to comprehend both their own and other people's feelings, cumulatively (77.1%) agreed, (14.3%) were not sure,

(8.6%) disagreed. The moderate mean (3.86) shows that students at this school discuss how important it is to comprehend both their own and other people's feelings fairly. As to whether alcohol and drug use by students occurs during school hours and during school-sponsored events, cumulatively (50.5%) disagreed, (21.4%) were not sure, and (28.1%) concurred. The low mean (2.55) implied that teachers rated alcohol and drug use by students during school hours and during school-sponsored events to be low. With respect to whether students can easily use or experiment with drugs or alcohol at school or during events sponsored by the school without being detected, majority (53.3%) disagreed, (17.1%) were not sure and (29.5%) agreed. The low mean (2.52) implied that teachers rated students use or experiment with drugs or alcohol at school or during events sponsored by the school without being detected to be low.

Table 4.18:Summary table for school safety issues

Descriptives			**Statistic**	**Std. Error**
School Safety	Mean		4.17	0.036
	95% Confidence Interval for Mean	Lower Bound	4.10	
		Upper Bound	4.24	
	5% Trimmed Mean		4.20	
	Median		4.25	
	Variance		0.28	
	Std. Deviation		0.53	
	Minimum		1.25	
	Maximum		5.00	
	Range		3.75	
	Interquartile Range		0.50	
	Skewness		-1.37	0.168
	Kurtosis		4.432	0.334

The results in Table 4.18 show a mean (4.17) close to the median (4.25) with a negative skew (skew = -1.37) which suggested that the results were normally distributed. The low standard deviation (0.53) indicated normal distribution of the responses. The normal distribution of results is also displayed by the normal curve in Figure 4.10.

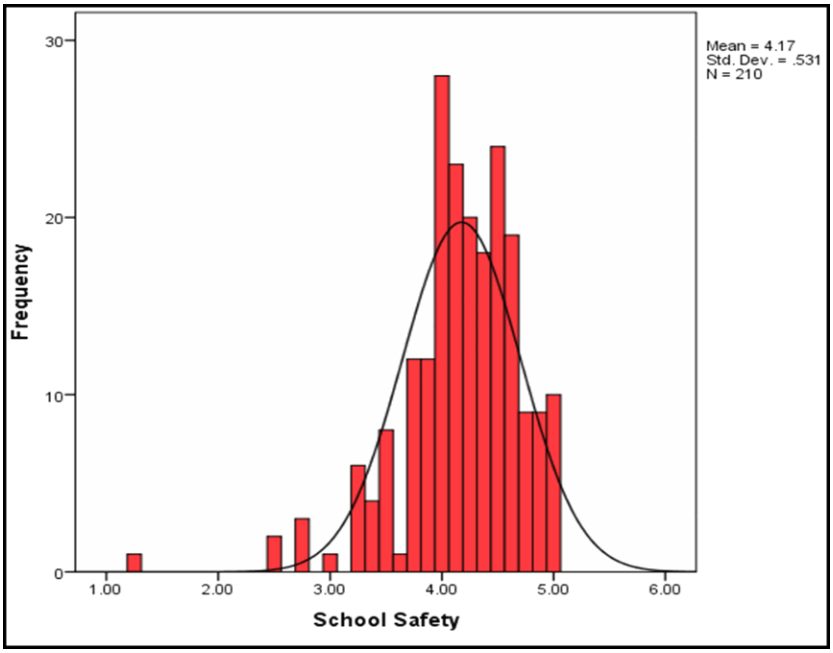

Figure 4.10 : Histogram for school safety

The results in Figure 4.10 show a high mean (4.17) which indicates that teachers rated school safety high. With the low standard deviation (0.531) and the curve in Figure 4.10 showing normality, it was inferred that the results on school safety by teachers were normally distributed.

4.3.3 Engagement.

Engagement was the third concept of teacher effectiveness. It was studied in eight items as shown in Table 4.19.

Table 4.19: Descriptive table for engagement

Engagements	SD	D	NS	A	SA	Mean
In our school, students respect teachers and the relationships we have with them are agreeable.	2 (1.0%)	1 (0.5%)	4 (1.9%)	131 (62.4%)	72 (34.3%)	4.28
Parent and teacher communication is excellent at our school.	- -	13 (6.2%)	11 (5.2%)	107 (51.0%)	79 (37.6%)	4.20
Teachers perceive empathetic treatment from their peers.	1 (0.5%)	14 (6.7%)	24 (11.4%)	105 (50.0%)	66 (31.4%)	4.05
Teachers frequently participate in school-sponsored events like plays, dances, athletic events, and other school-related activities.	7 (3.3%)	5 (2.4%)	7 (3.3%)	104 (49.5%)	87 (41.4%)	4.23
Teachers frequently take part in extracurricular activities provided by the school, including student government, athletic teams, musical ensembles, school clubs, and other extracurricular activities.	- -	12 (5.7%)	6 (2.9%)	121 (57.6%)	71 (33.8%)	4.19
Students at this school have numerous opportunities to participate in extracurricular activities such as clubs, sports, and extracurricular activities.	5 (2.4%)	7 (3.3%)	8 (3.8%)	120 (57.1%)	70 (33.3%)	4.15
Students who require assistance due to violence or sexual assault can go to a teacher or another adult at this school.	10 (4.8%)	6 (2.9%)	7 (3.3%)	103 (49.0%)	84 (40.0%)	4.16
In our school, teacher relationships are typically described as amicable.	8 (3.8%)	8 (3.8%)	17 (8.1%)	97 (46.2%)	80 (38.1%)	4.10

Table 4.19 shows that in our school, students respect teachers and the relationships we have with them are agreeable, cumulatively (96.7%) agreed, (1.9%) were not sure, and (1.5%) disagreed. The mean is high (4.28) meaning that students highly respect teachers and the relationships they have with them are agreeable. Regarding whether parent and teacher communication is excellent at our school, cumulatively (88.6%) agreed, (5.2%) were not sure, and (6.2%) disagreed. The mean is high (4.20) meaning that parent and teacher communication is excellent at our school. As to whether teachers perceive empathetic treatment from their peers, (81.4%) of the teachers agreed, (11.4%) were not sure, (7.2%) disagreed. The mean is high (4.05) meaning that teachers averagely perceive empathetic treatment from their peers. As to whether teachers frequently participate in school-sponsored events like plays, dances, athletic events, and other school-related activities, cumulatively (90.9%) agreed, (3.3%) were not sure, and (5.7) disagreed. The mean is high (4.23) meaning that teachers frequently participate in school-sponsored events like plays, dances, athletic events, and other school-related activities. Regarding whether teachers frequently take part in extracurricular activities provided by the school, including student government, athletic teams, musical ensembles, school clubs, and other extracurricular activities, majority (91.4%) agreed, (2.9%) were not sure, and (5.7%) disagreed. The mean is high (4.19) meaning that teachers frequently take part in extracurricular activities provided by the school, including student government, athletic teams, musical ensembles, school clubs, and other extracurricular activities.

As to whether students at this school have numerous opportunities to participate in extracurricular activities such as clubs, sports, and extracurricular activities, cumulatively (90.4%) agreed (3.8%) were not sure, and (5.7%) disagreed. The mean

is high (4.15) meaning that students at this school have numerous opportunities to participate in extracurricular activities such as clubs, sports, and extracurricular activities. With regard to students who require assistance due to violence or sexual assault can go to a teacher or another adult at this school, majority (89.0%) concurred, (3.3%) were not sure, and (7.7%) disagreed. The mean is high (4.16) meaning that students who require assistance due to violence or sexual assault can go to a teacher or another adult at this school. Lastly in our school, teacher relationships are typically described as amicable, cumulatively (84.3%) agreed, (8.1%) were not sure, (7.6%) disagreed. The mean is high (4.10) implying that teacher relationships are typically described as amicable.

Table 4.20:Summary results for engagement

Descriptives			**Statistic**	**Std. Error**
Engagements	Mean		4.26	0.041
	95% Confidence Interval for Mean	Lower Bound	4.17	
		Upper Bound	4.34	
	5% Trimmed Mean		4.32	
	Median		4.33	
	Variance		0.35	
	Std. Deviation		0.59	
	Minimum		1.17	
	Maximum		5.00	
	Range		3.83	
	Interquartile Range		0.67	
	Skewness		-2.046	0.168
	Kurtosis		6.316	0.334

The results in Table 4.20 show a mean (4.26) close to the median (4.33) which suggested that the results were normally distributed. The low standard deviation (0.59) indicated a normal distribution of the responses. The normal distribution of results is also displayed by the normal curve in Figure 4.11.

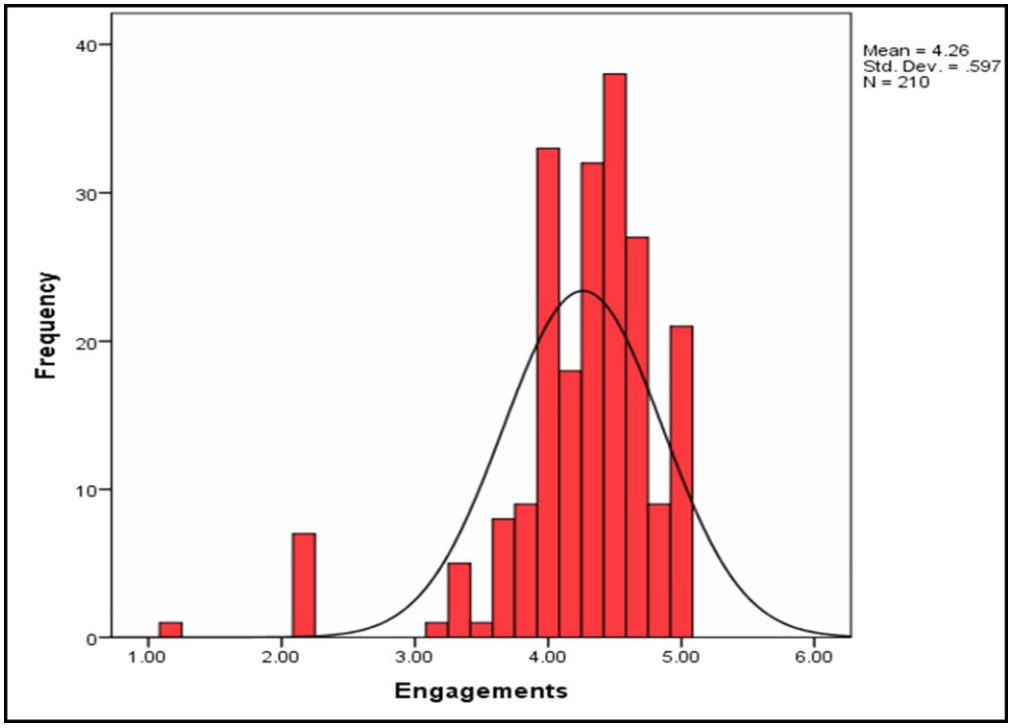

Figure 4. 11: Histogram for engagement

The results in Figure 4.11 show high mean (4.26), which indicated that teachers rated their engagement good. With the low standard deviation (0.597) and the curve in the figure showing normality, it was inferred that the results on engagement by teachers were normally distributed.

4.3.4 School Climate.

To establish, how overall teachers rated school climate in their schools, an index was calculated for the three measures, namely school environment, school safety and engagements. The results on the same are presented in Table 4.21.

Table 4. 21:Overall summary table for school climate

Descriptives			Statistic	Std. Error
School climate	Mean		3.82	0.036
	95% Confidence Interval for Mean	Lower Bound	3.75	
		Upper Bound	3.89	
	5% Trimmed Mean		3.84	
	Median		3.95	
	Variance		0.276	
	Std. Deviation		0.524	
	Minimum		1.26	
	Maximum		5.00	
	Range		3.74	
	Interquartile Range		0.62	
	Skewness		-0.948	0.168
	Kurtosis		2.001	0.334

The results in Table 4.21 show high mean (3.82) close to the median (3.95) which suggested normal distribution. The high mean also meant that teachers rated their school climate to be good. The low standard deviation (0.52) also indicated normal distribution of the responses. The normal distribution of the results is also displayed by the normal curve in Figure 4.12

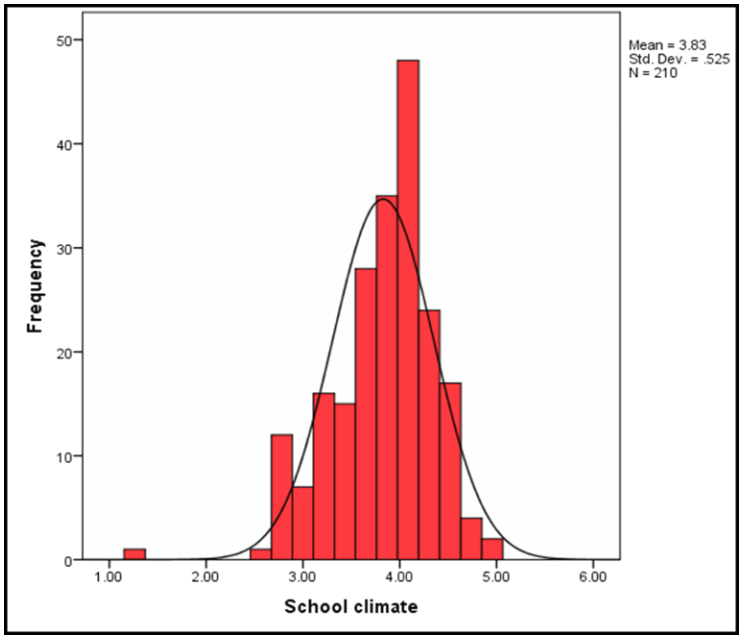

Figure 4.12 : Histogram for school climate.

Figure 4.12 reveals mean (3.83) which implies that school climate was good according to teachers. The low standard deviation (0.525) implied that the results were normally distributed. Therefore, results obtained could be subjected to linear correlation and regression.

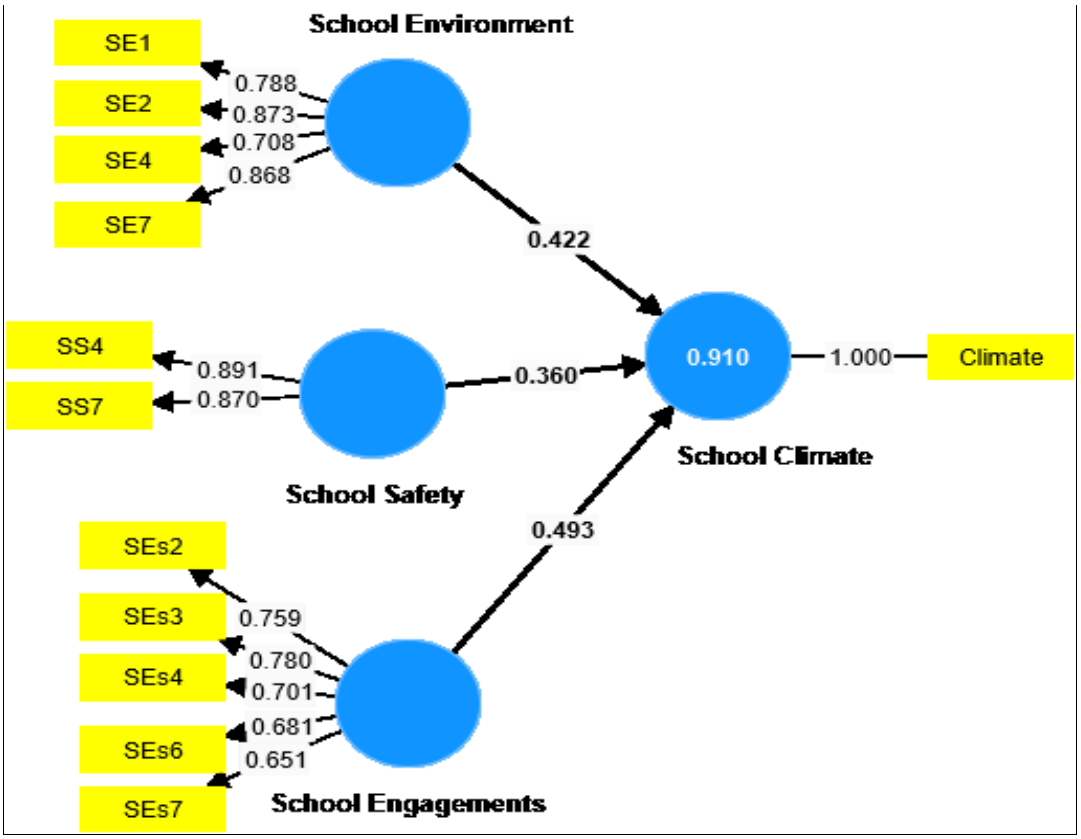

Figure 4.13:School climate model

The structural model Figure 4.13 describes a concept of school climate. The model shows that school climate is a multi-dimensional concept that includes school environment, school safety issues and school engagements. For school environment, four indicators (SE1, SE2, SE4 & SE7) loaded highly and three (SE3, SE5 & SE6) were dropped, two indicators of school safety (SS4 & SS7) loaded and six (SS1, SS2, SS3, SS5, SS6 & SS8) were dropped, and five indicators measuring school engagements (SEs2, SEs3, SEs4, SEs6 & SEs7) loaded highly while three (SEs1, SEs5 & SEs8) were dropped. All the retained indicators loaded highly above the minimum

validity value of (0.5) when using factor analysis as recommended by Hair et al. (2021). Therefore, the items retained for all the constructs in the model were valid measures of those constructs and those items that were dropped, were excluded from subsequent analyses.

4.3.5 School climate and teacher effectiveness structural model.

To test whether school climate had an influence on effectiveness of teachers, a structural equation model was developed. The results on the same are indicated in Figure 4.14.

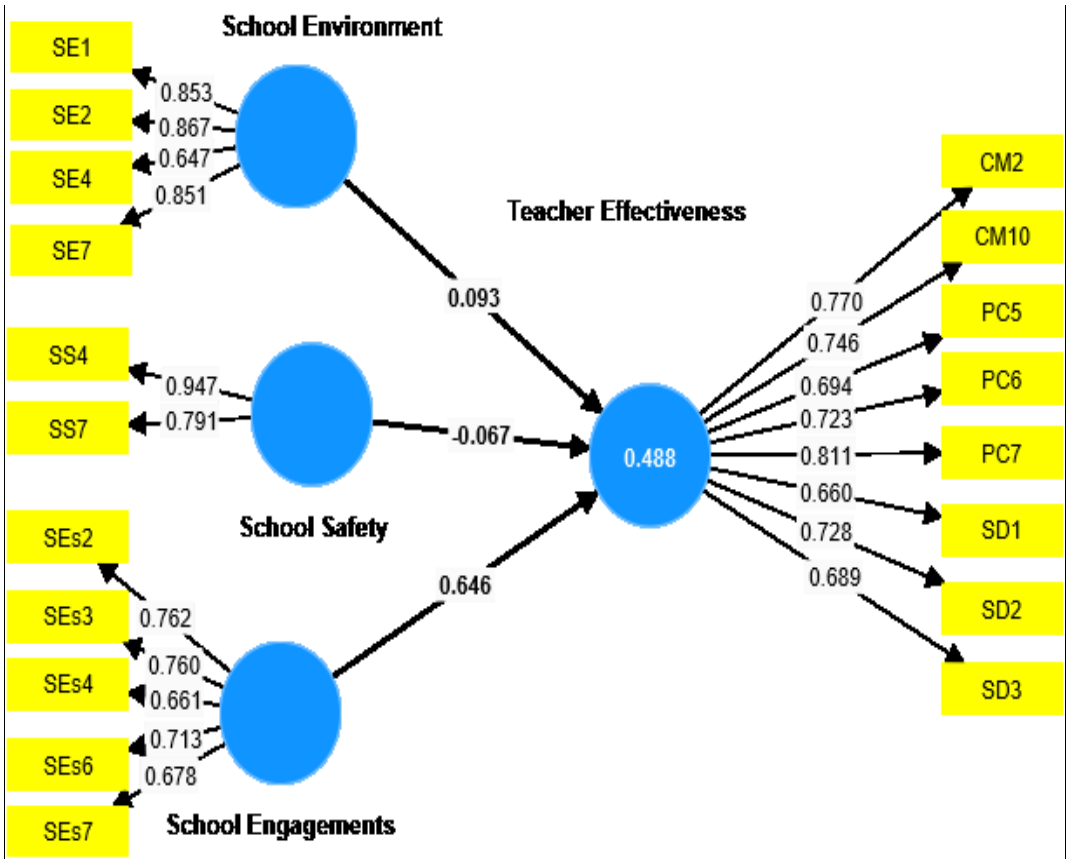

Figure 4.14: School climate and teacher effectiveness Structural Model

The results in Figure 4.14 show that school climate relates to teacher effectiveness. Teacher effectiveness was studied in terms of six factors namely, effective lesson delivery, subject matter expertise, relational expertise, professional conduct, self-

development and classroom management. School climate was studied in terms of school environment, school safety and school engagements. The model (Figure 4.14) shows that all the aspects of school climate, namely school environment (SE), school safety issues (SS) and school engagements (SEs) loaded on the variable. However, for teacher effectiveness the models show that only three aspects, namely classroom management, professional conduct, self-development loaded while effective lesson delivery, subject content expertise and relational expertise were dropped. For school environment, four indictors (SE1, SE2, SE4 & SE7) were retained with three dropped, for school safety issues only two indicators (SS4 & SS7) were retained with six dropped and for school engagements, five indicators (SEs2, SEs3, SEs4, SEs6 & SEs7) were retained with three dropped. The model also shows that for classroom management, two indicators (CM2 & CM10) with eight indicators dropped, for professional conduct and self-development three indicators (PC5-PC7) were retained with four dropped and also three (SD1-SD3) four dropped respectively. The study tested the hypotheses to the effect that school climate has a significant influence on effectiveness of teachers in universal secondary education schools, Professional development has a significant influence on effectiveness of teachers in universal secondary education schools and teacher professional development has a moderating effect on the influence of school climate on effectiveness of teachers in universal secondary education schools. It should be noted that whereas the figure reveals the Betas and co-efficient of determination (R2), the details are presented in the path-coefficient Table 4.22.

Table 4.22: Structural Equation Model Predictions for School climate and teacher effectiveness

Path coefficients	β	Mean	STD	T	p
School Engagement → Teacher Effectiveness	0.646	0.649	0.073	8.902	0.000
School Environment → Teacher Effectiveness	0.093	0.088	0.062	1.493	0.136
School Safety → Teacher Effectiveness	-0.067	-0.049	0.056	1.184	0.236
$R^2 = 0.488$					
R^2 Adjusted = 0.481					

The results in Table 4.22 show that the influence of the constructs of school climate on teacher effectiveness was tested. The results revealed that school engagement ($\beta = 0.646$, $t = 8.902$, $p = 0.000 < 0.05$) had a positive and significant influence on teacher effectiveness. However, school environment ($\beta = 0.093$, $t = 1.493$, $p = 0.136 > 0.05$) had a positive and insignificant influence on teacher effectiveness while school safety issues ($\beta = -0.067$, $t = 1.184$, $p = 0.236 > 0.05$) had a negative and insignificant influence on teacher effectiveness. The coefficients of determination R^2 suggested that the three school climate measures explained 48.8% ($R^2 = 0.488$) of the variation in teacher effectiveness but adjusted R^2 showed that the only significant aspect of climate explained 48.1 % (adjusted $R^2 = 0.481$). Therefore, the coefficient of determination suggested that (51.9%) of variation in teacher effectiveness was contributed to by other factors not considered for in this model. Therefore, while school engagements have a positive and significant influence on teacher effectiveness, school environment and school safety does not.

4.4 Professional development

Professional development was studied in terms of behavioural development, attitudinal development and intellectual development.

4.4.1 Behavioural development.

Behavioural development was the first concept of professional development and it was studied in 6 Items as shown in Table 4.23.

Table 4.23: Descriptive results for Behavioural development

Behavioural development	SD	D	NS	A	SA	Mean
My supervisor has already expressed gratitude for my growth as a professional.	6 (2.9%)	17 (8.1%)	28 (13.3%)	104 (49.5%)	55 (26.2%)	3.88
My ability to manage classes and deal with issues of student discipline has improved due to my professional development and education.	12 (5.7%)	3 (1.4%)	13 (6.2%)	100 (47.6%)	82 (39.0%)	4.12
I have learned how to mentor and counsel students about their academic and career futures through professional development activities.	9 (4.3%)	6 (2.9%)	4 (1.9%)	95 (45.2%)	96 (45.7%)	4.25
Gaining knowledge and developing professionally have enabled me to be more well-respected by peers and the community.	4 (1.9%)	7 (3.3%)	16 (7.6%)	120 (57.1%)	63 (30.0%)	4.10
My relationships with the students have improved due to my professional growth and education.	3 (1.4%)	4 (1.9%)	17 (8.1%)	95 (45.2%)	91 (43.3%)	4.27
My learning and professional growth have aided in my readiness to handle the unique differences amongst students.	1 (0.5%)	8 (3.8%)	14 (6.7%)	110 (52.4%)	77 (36.7%)	4.20

According to Table 4.23, With regard to my supervisor has already expressed gratitude for my growth as a professional, cumulatively (75.7%) agreed, (3.3%) were not sure, and (11%) disagreed. The high mean (3.88) showed that supervisors averagely expressed gratitude for the growth of teachers as professionals. Whether my ability to manage classes and deal with issues of student discipline has improved due to my professional development and education, cumulatively (86.6%) agreed (6.2%) were not sure, and (7.1%) disagreed. The mean is high (4.12) implying that a high number

of teachers' ability to manage classes and deal with issues of student discipline has improved due to professional development and education. Regarding whether teachers have learned how to mentor and counsel students about their academic and career futures through professional development activities, majority (90.9%) agreed, (1.9%) were not sure, (7.2%) disagreed. The high mean (4.25) showed that most teachers have learned how to mentor and counsel students about their academic and career futures through professional development activities.

As to whether gaining knowledge and developing professionally have enabled me to be more well-respected by peers and the community, cumulatively (87.1%) agreed, (7.6%) were not sure, (5.2%) disagreed. The high mean (4.10) shows that teachers feel that gaining knowledge and developing professionally have enabled them to be well-respected by peers and the community. Regarding whether my relationships with the students have improved due to my professional growth and education, cumulatively (88.5%) agreed, (8.1%) were not sure, (3.3%) disagreed. The mean is high (4.27) meaning that teacher's relationships with the students have highly improved due to their professional growth and education. Regarding whether my learning and professional growth have aided in my readiness to handle the unique differences amongst students, cumulatively (89.1%) agreed, (6.7%) were not sure, (4.3%) disagreed. The high (4.20) implied that teachers learning and professional growth have highly aided them in their readiness to handle the unique differences amongst students.

Table 4.24: Summary results for Behavioural development

Descriptives			Statistic	Std. Error
Behavioural development	Mean		4.20	0.047
	95% Confidence Interval for Mean	Lower Bound	4.10	
		Upper Bound	4.29	
	5% Trimmed Mean		4.28	
	Median		4.28	
	Variance		0.47	
	Std. Deviation		0.68	
	Minimum		1.29	
	Maximum		5.00	
	Range		3.71	
	Interquartile Range		0.57	
	Skewness		-2.169	0.168
	Kurtosis		6.477	0.334

The results in Table 4.24 show a high mean (4.20) and median (4.28) which suggests that the results were normally distributed. The low standard deviation (0.68) indicated a normal distribution of the responses. The normal distribution of results is also displayed by the normal curve in Figure 4.15.

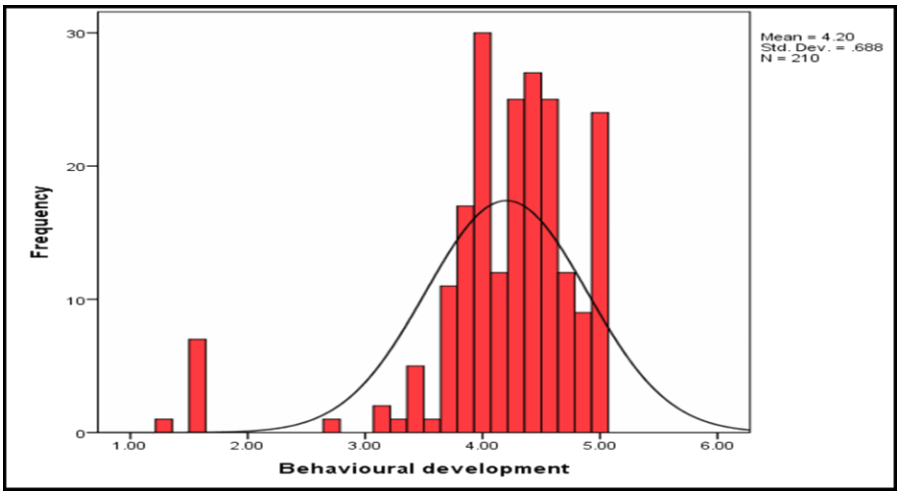

Figure 4. 15: Histogram for Behavioural development

The results in Figure 4.15 show an average high mean (4.20), which indicated that teachers rated behavioural development highly. The low standard deviation (0.688)

meant that the results were normality distributed. Therefore, results on behavioural development were fit for correlation and regression.

4.4.2 Attitudinal development.

Attitudinal development was the second construct of professional development. It was studied in seven items as shown in Table 4.25.

Table 4.25: Descriptive table for attitudinal development

Attitudinal development	SD	D	NS	A	SA	Mean
I have everything I need to finish developing my work assignments.	9 (4.3%)	16 (7.6%)	13 (6.2%)	106 (50.5%)	66 (31.4%)	3.97
I believe that mentorship and in-service training have helped me perform better professionally.	9 (4.3%)	7 (3.3%)	18 (8.6%)	109 (51.9%)	67 (31.9%)	4.03
My sense of fulfilment and reward has increased due to my professional growth and education.	8 (3.8%)	1 (0.5%)	4 (1.9%)	119 (56.7%)	78 (37.1%)	4.22
My ability to plan and deliver lessons has improved because of my professional development and education.	8 (3.8%)	1 (0.5%)	12 (5.7%)	97 (46.2%)	92 (43.8%)	4.25
My ability to work with students from diverse backgrounds and in a variety of teaching contexts has improved due to my professional development and education.	9 (4.3%)	3 (1.4%)	6 (2.9%)	116 (55.2%)	76 (36.2%)	4.17
My level of job satisfaction has increased as a result of professional growth and education.	8 (3.8%)	1 (0.5%)	5 (2.4%)	90 (42.9%)	106 (50.5%)	4.35
I have found that learning and professional development have increased my confidence as a teacher.	7 (3.3%)	20 (9.5%)	13 (6.2%)	111 (52.9%)	59 (28.1%)	3.92

In Table 4.25 regarding whether I have everything I need to finish developing my work assignments, cumulatively (81.9%) agreed, (6.2%) were not sure and (11.9%)

disagreed. The mean is high (3.97) implying that teachers have everything they need to finish developing their work assignments. Regarding whether teachers believed that mentorship and in-service training have helped them perform better professionally, majority (83.8%) agreed, (8.6%) were not sure and (7.8%) disagreed. The mean is high (4.03), indicating that teachers believe that mentorship and in-service training have helped them perform better professionally. As to whether my sense of fulfilment and reward has increased due to my professional growth and education, cumulatively (93.8%) agreed, (1.9%) were not sure, (4.3%) disagreed. The mean is high (4.22), showing that a high number of teachers sense of fulfilment and reward has increased due to their professional growth and education.

As to whether teacher's ability to plan and deliver lessons has improved because of professional development and education, cumulatively (90%) agreed, (5.7%) were not sure and (4.3%) disagreed. The mean is high (4.25), reflecting that teachers' ability to plan and deliver lessons has improved because of professional development and education. Concerning whether teachers' ability to work with students from diverse backgrounds and in a variety of teaching contexts has improved due to professional development and education, majority (91.4%) agreed, (2.9%) were not sure and (5.7%) disagreed. The mean is high (4.17) showing that teachers' ability to work with students from diverse backgrounds and in a variety of teaching contexts has improved due to their professional development and education. Regarding my level of job satisfaction has increased as a result of professional growth and education, cumulatively, (93.4%) agreed, (2.4%) were not sure, (4.3%) disagreed. The high mean (4.35) showed that teacher's level of job satisfaction has increased as a result of professional growth and education. Regarding I have found that learning and

professional development have increased my confidence as a teacher, cumulatively (81%) agreed, (6.2%) were not sure and (12.8%) disagreed. The high mean (3.92) implied that teachers have found that learning and professional development have increased their confidence as teachers

Table 4.26: Summary table for attitudinal development

Descriptives			Statistic	Std. Error
Attitudinal development	Mean		4.13	0.048
	95% Confidence Interval for Mean	Lower Bound	4.04	
		Upper Bound	4.23	
	5% Trimmed Mean		4.23	
	Median		4.28	
	Variance		0.49	
	Std. Deviation		0.70	
	Minimum		1.14	
	Maximum		5.00	
	Range		3.86	
	Interquartile Range		0.43	
	Skewness		-2.82	0.168
	Kurtosis		9.88	0.334

The results in Table 4.26 show mean (4.13) and median (4.28) which indicated that the outcomes were normally distributed. The low standard deviation (0.70) indicated a normal distribution of the responses. The normal distribution of results is also displayed by the normal curve in Figure 4.16.

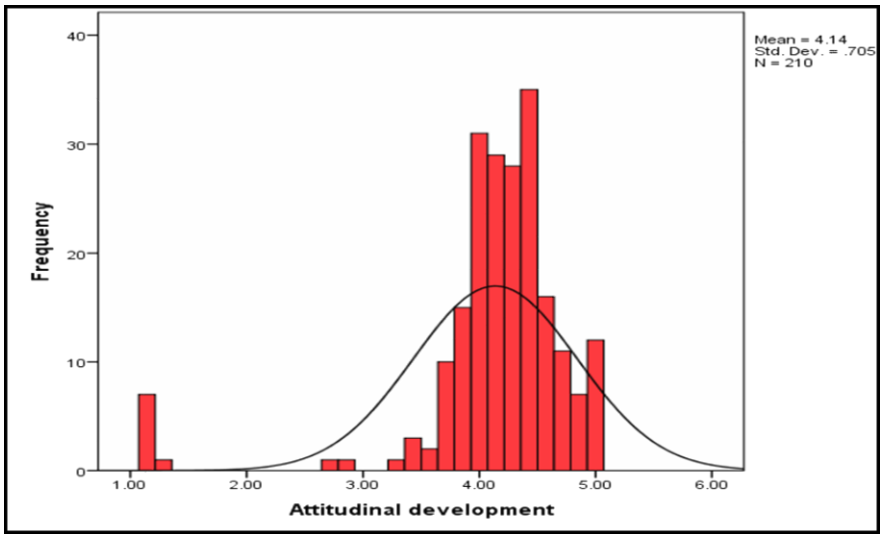

Figure 4.16: Histogram for attitudinal development

The results in Figure 4.16 show a high mean (4.14) which indicated that teachers rated their attitudinal development fair with a low standard deviation (0.705) and the curve in the figure showing normality, it was deduced that the results on attitudinal development by teachers were normally distributed.

4.4.3 Intellectual development.

Intellectual development was the third concept of professional development and it was studied in thirteen items, as shown in Table 4.27.

Table 4.27: Descriptive statistics for Intellectual development

Intellectual development	SD	D	NS	A	SA	Mean
Since I started working, I have significantly advanced my professional development	4 (1.9%)	15 (7.1%)	30 (14.3%)	95 (45.2%)	66 (31.4%)	3.97
My teaching practices have overall improved through in-service training.	4 (1.9%)	13 (6.2%)	22 (10.5%)	115 (54.8%)	56 (26.7%)	3.98
My ability to relate theory to practice has improved due to professional development and education.	2 (1.0%)	12 (5.7%)	25 (11.9%)	111 (52.9 %)	60 (28.6%)	4.02
I now know more about instructional strategies and techniques.	5 (2.4%)	12 (5.7%)	24 (11.4%)	108 (51.4%)	61 (29.0%)	3.99
My grasp of pedagogy and methodology has improved because of professional development and education.	2 (1.0%)	25 (11.9)	36 (17.1%)	90 (42.9%)	57 (27.1%)	3.83
My understanding of how to establish a welcoming learning environment has improved.	5 (2.4%)	14 (6.7%)	36 (17.1%)	101 (48.1%)	54 (25.7%)	3.88
My proficiency with computers and digital literacy have improved thanks to professional development activities.	5 (2.4%)	21 (10.0%)	13 (6.2%)	119 (56.7%)	52 (24.8%)	3.91
My understanding of learner assessment and feedback has improved.	14 (6.7%)	7 (3.3%)	20 (9.5%)	128 (61.0%)	41 (19.5%)	3.83
Through participation in professional development activities, I have improved my capacity to create materials (multimedia content, for example) and modify existing content for my students.	7 (3.3%)	6 (2.9%)	18 (8.6%)	121 (57.6%)	58 (27.6%)	4.03
My understanding of professional development and teaching reflection has improved.	11 (5.2%)	19 (9.0%)	53 (25.2%)	67 (31.9%)	60 (28.6%)	3.69
My comfort level in handling novel teaching scenarios has increased.	4 (1.9%)	19 (9.0%)	45 (21.4%)	100 (47.6%)	42 (20.0%)	3.74
I feel more comfortable using technology in my teaching because of the training received.	2 (1.0%)	26 (12.4%)	33 (15.7%)	83 (39.5%)	66 (31.4%)	3.88
I have looked for more chances to learn from my colleagues.	1 (0.5%)	1 (0.5%)	20 (9.5%)	176 (83.8%)	12 (5.7%)	4.32

According to Table 4.27, concerning since I started working, I have significantly advanced my professional development, cumulatively (76.6%) concurred, (14.3%) were not sure, and (9%) disagreed. The high mean (3.97) shows that teachers have significantly advanced their professional development since they started working. Regarding whether my teaching practices have overall improved through in-service training, cumulatively (81.5%) agreed, (10.5%) were not sure, (8.1%) disagreed. The mean is high (3.98) meaning that teachers teaching practices have overall improved through in-service training. Concerning whether my ability to relate theory to practice has improved due to professional development and education, cumulatively (81.5%) agreed, (11.9%) were not sure, (6.7%) disagreed. The mean is high (4.02) indicating that teacher's ability to relate theory to practice has improved due to professional development and education.

As to whether teachers now know more about instructional strategies and techniques, cumulatively (80.4%) agreed, (11.4%) were not sure and (8.1%) disagreed. The mean is high (3.99), meaning that teachers now know more about instructional strategies and techniques. As to whether my grasp of pedagogy and methodology has improved because of professional development and education, cumulatively (70%) agreed, (17.1%) were not sure, and (12.9%) disagreed. The mean is high (3.83) meaning that teachers grasp of pedagogy and methodology has improved because of professional development and education. As to whether my understanding of how to establish a welcoming learning environment has improved, cumulatively (73.8%) agreed (17.1%) were not sure and (9.1%) disagreed. The mean is high (3.88) showing that teachers understanding of how to establish a welcoming learning environment has improved.

Concerning whether my proficiency with computers and digital literacy have improved thanks to professional development activities, cumulatively (81.5%) agreed, (6.2%) were not sure, (12.4%) disagreed. The mean is high (3.91), indicating that teachers' proficiency with computers and digital literacy have improved due to professional development activities. Regarding my understanding of learner assessment and feedback has improved, cumulatively (80.5%) agreed, (9.5%) were not sure, (10%) disagreed. The mean is high (3.83) showing that teachers understanding of learner assessment and feedback has improved. With regard to through participation in professional development activities, I have improved my capacity to create materials (multimedia content, for example) and modify existing content for my students, majority (85.2%) agreed, (8.6%) were not sure, (6.2%) disagreed. The high mean (4.03) implied that through participation in professional development activities, teachers have improved their capacity to create materials (multimedia content, for example) and modify existing content for the students.

Regarding to whether my understanding of professional development and teaching reflection has improved, cumulatively (60.5%) agreed, (25.2%) were not sure and (14.2%) disagreed. The high mean (3.69) implied that teachers understanding of professional development and teaching reflection has improved. With respect to my comfort level in handling novel teaching scenarios has increased, cumulatively (67.6%) agreed, (21.4%) were not sure and (10.9%) disagreed. The mean is high (3.74) meaning that teacher's comfort level in handling novel teaching scenarios has increased. Regarding whether I feel more comfortable using technology in my teaching because of the training received, cumulatively (70.9%) agreed, (15.7%) were not sure, (13.4%) disagreed. The mean is high (3.88) indicating that teachers feel more comfortable using technology in their teaching because of the training received. As to

whether I have looked for more chances to learn from my colleagues, majority (89.5%) agreed, (9.5%) were not sure and only (1%) disagreed. The high mean (4.32) implied that teachers have looked for more chances to learn from their colleagues.

Table 4.28: Summary for Intellectual Development

Descriptives			**Statistic**	**Std. Error**
Intellectual development	Mean		3.93	0.046
	95% Confidence Interval for Mean	Lower Bound	3.84	
		Upper Bound	4.02	
	5% Trimmed Mean		3.96	
	Median		4.01	
	Variance		0.44	
	Std. Deviation		0.67	
	Minimum		1.44	
	Maximum		5.00	
	Range		3.56	
	Interquartile Range		0.85	
	Skewness		-0.847	0.168
	Kurtosis		1.055	0.334

The results in Table 4.28 show mean (3.93) and median (4.01) which suggested that the results were normally distributed. The low standard deviation (0.67) indicated a normal distribution of the responses. The normal distribution of results is also displayed by the normal curve in Figure 4.17.

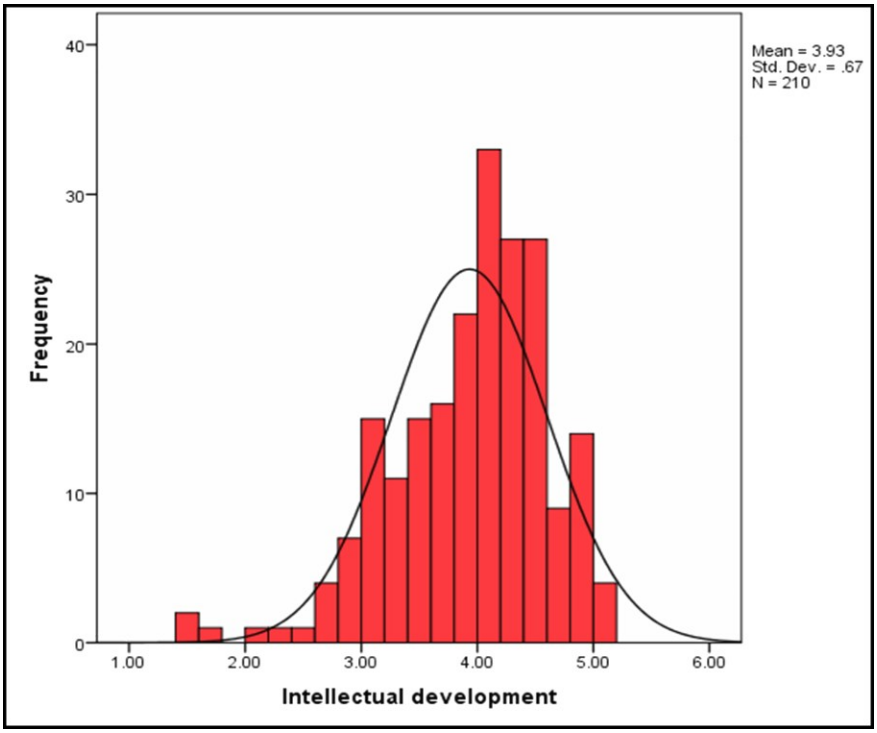

Figure 4.17: Histogram for Intellectual development

The results in Figure 4.17 show a high mean (3.93) which indicated that teachers rated their intellectual development as moderate. With the low standard deviation (0.67) and the curve in the figure showing normality, it was inferred that the results on intellectual development by teachers were normally distributed.

4.4.4 Professional development

To establish how all the teachers rated their professional development, an index was calculated for the measures namely behavioural development, attitudinal development and intellectual development. The results on the same are presented in Table 4.29.

Table 4.29: Overall summary table for professional development

Descriptives			Statistic	Std. Error
Professional development	Mean		4.03	0.037
	95% Confidence Interval for Mean	Lower Bound	3.96	
		Upper Bound	4.10	
	5% Trimmed Mean		4.07	
	Median		4.10	
	Variance		0.29	
	Std. Deviation		0.54	
	Minimum		1.33	
	Maximum		5.00	
	Range		3.67	
	Interquartile Range		0.50	
	Skewness		-1.56	0.168
	Kurtosis		4.54	0.334

The results in Table 4.29 show mean (4.03) and median (4.10) which suggest that the results were normally distributed. The low standard deviation (0.54) indicated a normal distribution of the responses. The normal distribution of the results is also displayed by the normal curve in Figure 4.18

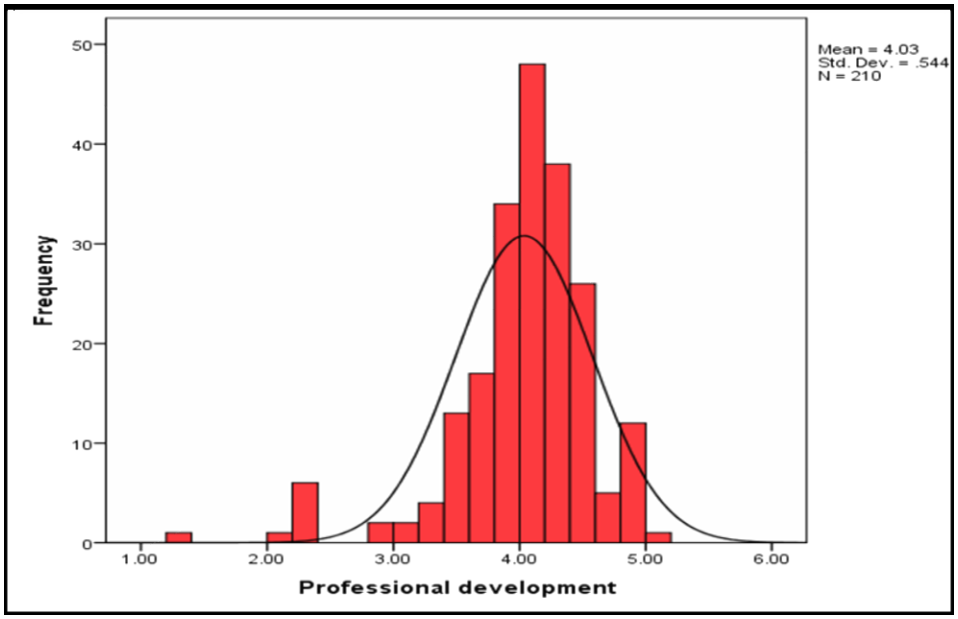

Figure 4.18: Histogram for professional development

Figure 4.18 reveals mean (4.03) which implied that professional development was high among teachers. The low standard deviation (0.54) implied that the results were normally distributed. Therefore, results obtained could be subjected to linear correlation and regression.

4.4.5 Structural Model for Professional Development

Figure 4.19 shows that the variable of professional development was studied in three concepts: behavioural development, attitudinal development and intellectual development.

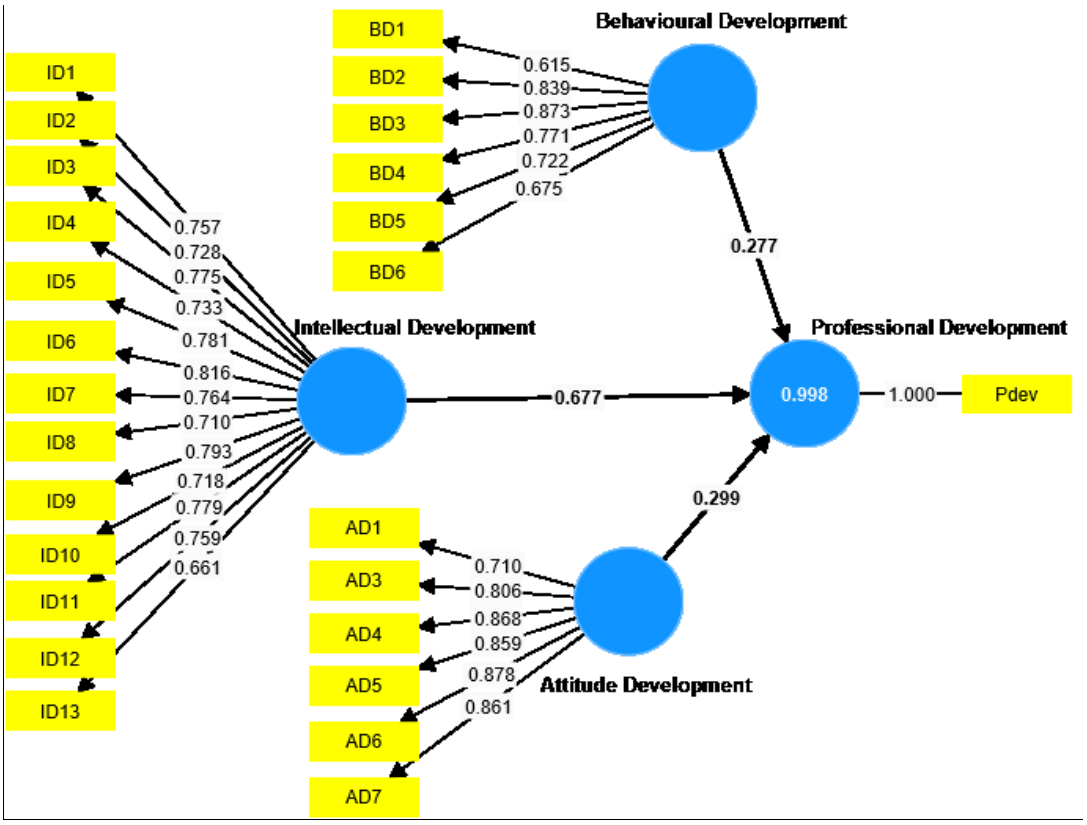

Figure 4.19: Professional Development Model

Figure 4.19 describes the variable of professional development, showing its measures. Professional development was studied in three constructs: behavioural development (BD), attitudinal development (AD) and intellectual development (ID). All the six items (BD1-BD6) loaded for behavioural development and thirteen (ID1-ID13) for

intellectual development and were all retained respectively. For attitudinal development, six items (AD1, AD3, AD4, AD5, AD6 & AD7) were retained with one (AD2) dropped. The constructs that measured the same loaded above the minimum validity value (0.5) when using factor analysis.

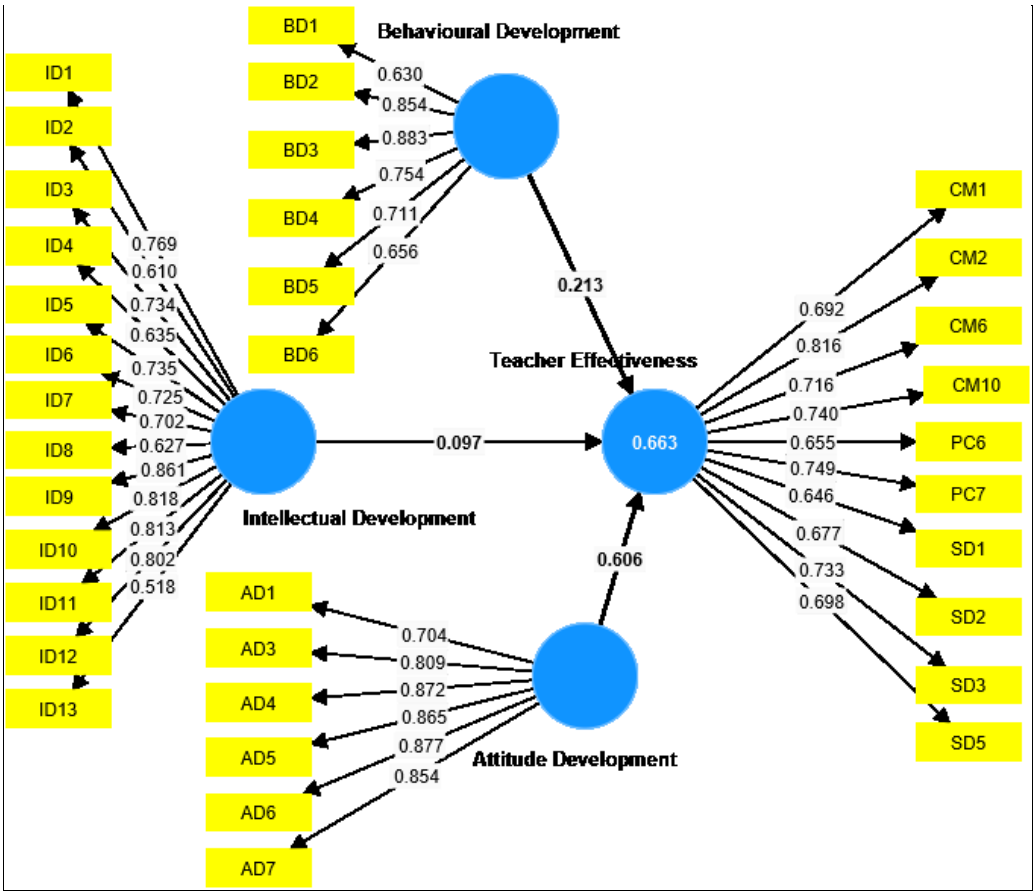

Figure 4.20:Structural Model for Professional development and Teacher effectiveness

The model (Figure 4.20) shows that all the aspects of professional development, namely behavioural development (BD), attitudinal development (AD) and intellectual development (ID) loaded on the variable. However, for teacher effectiveness the models show that only three aspects, namely classroom management, professional conduct, self-development loaded while effective lesson delivery, subject content expertise and relational expertise were dropped. For behavioural development, All the six indicators (BD1-BD6) were retained and none dropped, similarly, all the thirteen

indicators (ID1-ID13) for intellectual development were retained and six out of seven indicators for attitudinal development (AD1, AD3, AD4, AD5, AD6, AD7) were retained with one (AD2) dropped. The model also shows that for classroom management, four indicators (CM1, CM2, CM6 & CM10) with six indicators dropped, for professional conduct and self-development two indicators (PC6-PC7) were retained with four dropped and four (SD1, SD2, SD3 & SD5) with three dropped respectively. The model shows that the hypothesis to the effect that professional development has a significant influence on effectiveness of teachers was tested. The results for the same are also indicated in Table 4.30 and the explanation follows after the table.

Table 4.30: Professional development and Teacher effectiveness Structural Equation Model Predictions

Path coefficients	β	Mean	STD	T	P
Attitude Development → Teacher Effectiveness	0.606	0.600	0.061	9.900	0.000
Behavioural Development →Teacher Effectiveness	0.213	0.212	0.072	2.970	0.003
Intellectual Development → Teacher Effectiveness	0.097	0.107	0.052	1.855	0.064
$R^2 = 0.488$					
R^2 Adjusted = 0.481					

The structural equation model estimates (Table 4.30) suggest that attitudinal development ($\beta = 0.606$, $t = 9.900$, $p = 0.000 < 0.05$) had a positive and significant influence on teacher effectiveness, behavioural development ($\beta = 0.213$, $t = 2.970$, $p = 0.003 < 0.05$) positively and significantly predicted teacher effectiveness. However, intellectual development ($\beta = 0.097$, $t = 1.855$, $p = 0.064 > 0.05$) had a positive but insignificant influence on teacher effectiveness. The coefficients of determination R^2 suggested that the three professional development measures explained 48.8% ($R^2 = 0.488$) of the variation in teacher effectiveness but adjusted R^2 showed that the only

significant aspect of professional development explained 48.1 % (adjusted R^2 = 0.481). Thus, the coefficient of determination suggested that (51.9%) of variation in teacher effectiveness was contributed by factors not considered in this model.

Therefore, while attitudinal development and behavioural development have a positive and significant influence on teacher effectiveness, intellectual development does not.

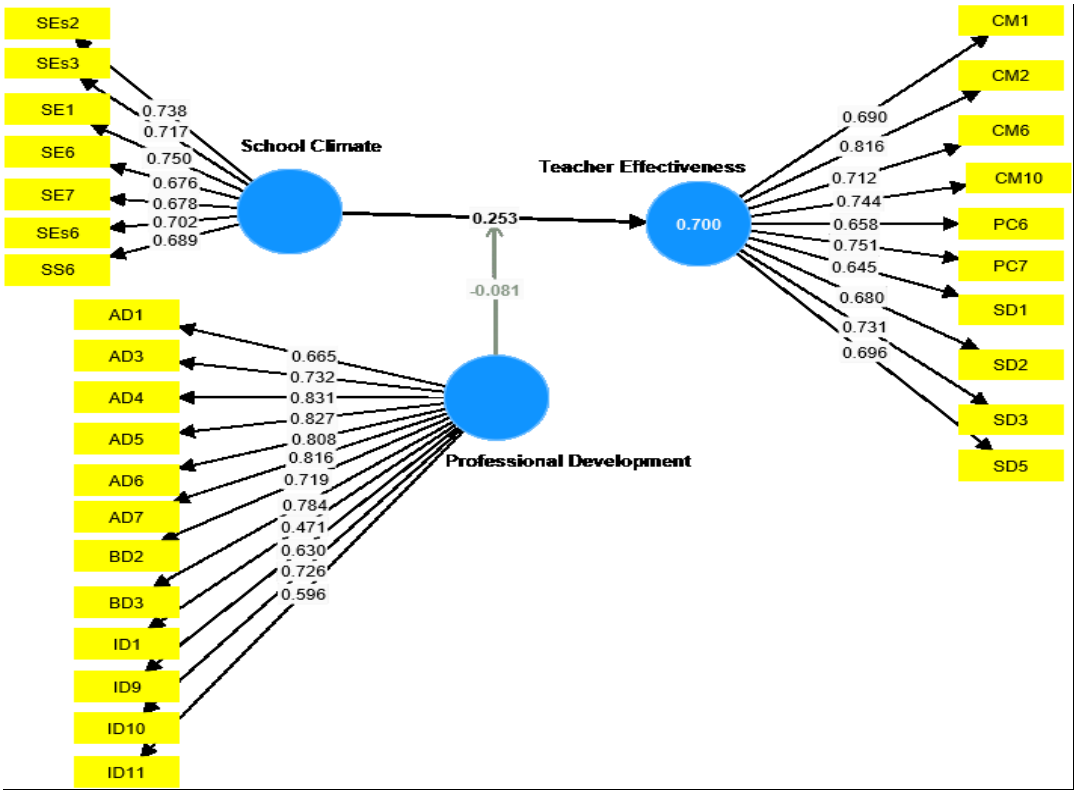

Figure 4.21: School Climate, Professional Development and Teacher Effectiveness Moderation Model

The model (Figure 4.21) shows that all the aspects of school climate, namely school environment (SE), school safety issues (SS) and school engagements (SEs) loaded on the variable. Similarly, all aspects of professional development, namely attitudinal development (AD), behavioural development (BD) and intellectual development (ID) loaded on the variable. However, for teacher effectiveness the models show that only three aspects, namely classroom management, professional conduct, self-development loaded while effective lesson delivery, subject content expertise and relational

expertise were dropped. For school environment, three indictors (SE1, SE6, & SE7) were retained with four dropped, for school safety issues only one indicator (SS6) was retained with seven dropped and for school engagements, three indicators (SEs2, SEs3 & SEs6) were retained with five dropped. Regarding behavioural development, only two indicators (BD2 & BD3) were retained and four dropped, attitudinal development, six indicators (AD1, AD3, AD4, AD5, AD6 & AD7) were retained with one dropped, for intellectual development, four indicators (ID1, ID9, ID10 & ID11) were retained with nine dropped. With respect to teacher effectiveness, the model shows that for classroom management, four indicators (CM1, CM2, CM6 & CM10) were retained with six dropped, for professional conduct, only two indicators (PC6 & PC7) were retained with five dropped and self-development three (SD2, SD3 & SD5) were retained with four indicators dropped. The model shows that three hypotheses to the effect that school climate (H1), professional development (H2) have a significant influence on effectiveness of teachers and teacher professional development have a moderating effect on the influence of school climate on effectiveness of teachers (H3) were tested. The results for the same are also indicated in Table 4.31 and the explanation follows after the table. The constructs of professional development measured (-0.081), which is far below the minimum validity value (0.5) when using factor analysis.

Table 4.31: Structural Equation Model for School Climate, Professional Development and Teacher Effectiveness.

Moderation effect	β	Mean	STD	T	P
Professional Development → Teacher Effectiveness	0.468	0.483	0.097	4.841	0.000
School Climate →Teacher Effectiveness	0.253	0.253	0.065	3.888	0.000
Professional Development x School Climate → Teacher Effectiveness	-0.081	-0.074	0.034	2.372	0.018
$R^2 = 0.700$					
R^2 Adjusted = 0.695					

The structural equation model estimates (Table 4.31) suggest that professional development ($\beta = 0.468$, $t = 4.841$, $p = 0.000 < 0.05$) had a positive and significant influence on teacher effectiveness. School climate ($\beta = 0.253$, $t = 3.888$, $p = 0.000 < 0.05$) positively and significantly influenced teacher effectiveness. However, professional development ($\beta = -0.081$, $t = 2.372$, $p = 0.018 < 0.05$) had a negative and significant moderating effect on the influence of school climate on effectiveness of teachers. The coefficients of determination R^2 suggested that the two variables explained 70.0% ($R^2 = 0.700$) of the variation in teacher effectiveness but adjusted R^2 showed that the only significant aspect explained 69.5 % (adjusted $R^2 = 0.695$).

Therefore, the hypothesis to the effect that school climate has a significant influence on effectiveness of teachers (H1) was accepted. The hypothesis to the effect that professional development has a significant influence on effectiveness of teachers (H2) was accepted. However, the hypothesis to the fact that teacher professional development has a moderating effect on the influence of school climate on effectiveness of teachers (H3) was rejected. However, the magnitude of the respective

Betas (βs) shows that professional development had more contribution on teacher effectiveness than school climate.

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATION

5.0 Introduction

The final chapter presents a comprehensive discussion, conclusion, and policy recommendations derived from an investigation into the impact of school climate and professional development on teacher effectiveness in USE schools in Busiro County, Wakiso District, Uganda. Additionally, this chapter acknowledges the study's limitations and proposes avenues for future research to address existing gaps.

5.1 Discussion of the Findings

This section provides an in-depth discussion of the study's findings on school climate, professional development, and teacher effectiveness in Universal Secondary Education schools in Busiro County, Wakiso District, Uganda, contextualized within the existing body of literature.

5.1.1 School Climate and Effectiveness of Teachers.

The first hypothesis stated that school climate has a significant influence on effectiveness of teachers in universal secondary education schools. School climate was operationalized in terms of school environment, school engagements and school safety issues. The hypothesis testing revealed a statistically significant positive relationship between school climate and teacher effectiveness. This result aligns with the existing body of literature, corroborating the findings of previous researchers. For example, Al-Omari and Okasheh (2017) established that good physical environment positively and significantly influenced effectiveness of workers. Relatedly, Gemechu (2020) indicated a positive significant interplay between school climate and teachers'

effectiveness. Similarly, Hafeez et al., (2019) established that physical and behavioural workplace environments positively affected employee effectiveness.

Also, Manla (2021) indicated that school climate has a significant impact on teachers' effectiveness and school performance. Congruent with the findings of this investigation, Mera (2021) revealed a significant positive correlation between school climate and teacher effectiveness. In addition, Nzewi et al., (2018) indicated existance of a significant positive connection between organisational physical environment and effectiveness of workers. Moreso, Ozgenel (2020) revealed that school climate predicts teacher effectiveness. Similarly, Pradoto et al. (2022) revealed that the organisational climate had a favourable and considerable influence on employee effectiveness. In addition, Saidi et al. (2019) established a positive significant interplay between the working environment and employee effectiveness.

Lastly, Veronica et al. (2018) revealed that a highly conducive school climate significantly influenced the level of teaching effectiveness as perceived by both the educators and the students. However, contrary to the current study's findings, Okeke et al. (2020) indicated that teacher's impression of the school environment does not significantly predict their effectiveness. Similarly, Zafar et al. (2017) indicated that environmental factors did not have any influence on the productivity of employees. Notwithstanding the divergent findings of Okeke et al. (2020) and Zafar et al. (2017), the cumulative evidence, including this study, supports the positive impact of school climate on teacher effectiveness.

5.1.2 Professional Development and Effectiveness of Teachers.

The second hypothesis stated that professional development has a significant influence on effectiveness of teachers in universal secondary education schools. Hypothesis test results indicated that professional development positively and significantly impact on teacher effectiveness. This finding concurs with the finding in existing literature. For instance, Iqbal et al. (2020) revealed that teacher effectiveness was significantly impacted by in-service training which points to professional development. Similarly, Junejo et al. (2018) showed that in-service training programs improved teachers' effectiveness and positively teachers regarded their professional growth an element of effectiveness amongst themselves. In addition, Lisa et al. (2020) revealed that teacher professional development had moderately significant positive impact on teacher effectiveness.

Consistently, Malunda (2017) revealed a significant positive relationship between teacher professional development and the quality of teacher preparation, teaching practices, and student assessment hence teacher effectiveness. More so, Mduma and Mkulu (2021) indicated that teacher training has a profound impact on multiple dimensions, including enhanced teaching strategies, reduced burnout, stress, and turnover, ultimately leading to improved teacher effectiveness. Also, Congruent with the findings of this investigation, Mugarura et al. (2022) found that in-service teacher training enhances performance of teachers which obliquely pointed to effectiveness of teachers. Relatedly, Nabunya et al. (2019) demonstrated a positive and significant association between professional development practices and teaching effectiveness.

Consistent with the results of this investigation, Powell and Bodur (2019) demonstrated how teachers' effectiveness is shaped by their participation in online

professional development. Lastly, Wolde (2021) revealed that continuous professional development improves teachers' effectiveness. Consequently, given the convergence of findings between this study and existing research, it can be concluded that professional development has a profoundly positive and significant impact on teacher effectiveness.

5.1.3 School Climate, Professional Development and Effectiveness of Teachers.

The third hypothesis stated that teacher professional development has a moderating effect on the influence of school climate on effectiveness of teachers in universal secondary education schools. Contrary to existing literature, the hypothesis test results revealed a significant negative moderating effect of professional development on the relationship between school climate and teacher effectiveness. For instance, Zhenjing et al. (2022) revealed that increasing employee effectiveness could be achieved by creating a positive work environment. Similarly, Zhou et al. (2023) revealed that participation in professional development and the atmosphere at school had a lot of beneficial direct effects on teaching efficacy which points to teaching effectiveness of teachers. Due to contradicting findings with previous scholars, it can be ascertained that in promoting teacher effectiveness, it is not essential to have equal investment in school climate and professional development.

5.2 Conclusions

This section synthesizes the study's findings, drawing conclusions aligned with the predetermined research objectives. From the discussion on the findings, it is here concluded that;

1. School climate is imperative for effectiveness of teachers. If in schools, students respect teachers and their relationships are agreeable, excellent parent and

teacher communication, empathetic treatment of colleagues, teachers frequently participate in school-sponsored events like plays, dances, athletic events, and other school-related activities, teacher effectiveness will be high. More so, if students who require assistance due to violence or sexual assault are helped, have numerous opportunities to engage in extracurricular sessions such as clubs, sports, and have amicable relationship with teachers, teacher effectiveness will be high.

2. Professional development is paramount for effectiveness of teachers. This is when supervisor's express gratitude for teachers growth as professionals, improve their ability to manage classes and deal with issues of student discipline, mentor and counsel students about their academic and career futures, well-respected by peers and the community, improved teacher-student relationships and improve readiness to handle the unique differences amongst students. In addition, if teachers finish their work assignments, engage in mentorship and in-service training, increased sense of fulfilment and reward, improve the ability to plan and deliver lessons, teacher effectiveness will be high. More so, improved ability to work with students from different backgrounds and in a wide range of teaching contexts, increased job satisfaction and increased confidence will improve effectiveness of teachers.

3. The interaction between professional development and school climate is not the most problem requirement for effectiveness of teachers. Professional development is more essential for teacher effectiveness than school climate.

5.3 Recommendations

This study intended to investigate the influence of school climate on the effectiveness of teachers moderated by professional development in USE schools in Busiro county, Wakiso district, Uganda. From the conclusions, the following recommendations were made;

1. School administrators such as head teachers should promote conducive school climate. Therefore, school administrators should ensure that students respect teachers and their relationships are agreeable, excellent parent and teacher communication, empathetic treatment of colleagues, teachers' frequent participation in school-sponsored events like plays, dances, athletic events, and other school-related activities, teacher effectiveness will be high. More so, school administrators should ensure that students, who require assistance due to violence or sexual assault should be helped, provide numerous opportunities to engage in extracurricular sessions such as clubs, sports, and have amicable relationship with teachers.

2. The Ministry of Education and Sports, head teachers and other stakeholders need to provide high professional development opportunities to teachers. Thus, head teachers should express gratitude for teachers' growth as professionals, improve teachers' ability to manage classes and deal with issues of student discipline, ensure that teachers' mentor and counsel students about their academic and career futures, improve teacher-student relationships and improve their readiness to handle unique differences amongst students. In addition, head teachers should ensure that teachers finish their work assignments, engage them in mentorships and in-service trainings, increase

their sense of fulfilment and reward, improve teachers' ability to plan and deliver lessons, teacher effectiveness will be high. In addition, head teachers should improve teacher's ability to engage students from diverse backgrounds and in varying teaching contexts, increase teacher job satisfaction and confidence.

2. The Ministry of Education and head teachers should provide teachers more professional development without giving equal emphasis to school climate. Therefore, it is not essential to have equal investment in school climate and professional development. Professional development is more imperative for teacher effectiveness.

5.4 Limitations and Suggestions for Further Research

This study makes a substantial contribution in showing teacher professional development moderating effect on school climates influence on effectiveness of teachers. Nevertheless, several limitations inherent to this study highlight the necessity for additional investigation. For instance, with respect to school climate, constructs of school environment and safety issues produced unexpected results with effectiveness of teachers. Similarly, the construct of intellectual development test results did not show significant relationship with teacher effectiveness. Therefore, these constructs should be studied again in different contexts. Further, the results indicated that professional development had no moderating effect on the influence of school climate on teacher effectiveness. Therefore, this hypothesis should further be examined using different school contexts and even other organisations like universities. Furthermore, the study's geographical scope was limited to a single district, suggesting that future research should be conducted in multiple districts to enhance generalizability. Future

scholars should consider employing qualitative methodologies, such as in-depth interviews or focus groups, to gain a more nuanced understanding of teacher experiences and perspectives on professional development. This would complement the quantitative findings of this study and provide richer insights into the complex relationships between professional development, school climate, and teacher effectiveness.

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APPENDICES

Appendix A: Table for determining sample size from a given population.

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	102	1800	317
45	40	290	105	1900	320
50	44	300	109	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	198	3000	341
80	66	420	201	2500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note: *N* = population size *S* = sample size

Source: Krejcie and Morgan (1970).

Appendix B: Questionnaire for Teachers on School Climate, Professional Development and Effectiveness of Teachers in Universal Secondary Education Schools

Kyambogo University
P.O. Box 1 Kyambogo
Uganda November 2023

Dear Respondent.

My name is Rashid Ahimbisibwe, a student of Kyambogo University pursuing a Master of Education in Policy, Planning and Management. As partial requirement for the award of same, I am conducting a study titled "*School climate, Professional development and effectiveness of teachers in USE schools in Busiro county, Wakiso district, Uganda"*. The main objective of the study is to examine the influence of school climate on teacher effectiveness moderated by professional development. Your participation is important for the success of this proposed study. You are requested to choose the response that most suits your level of agreement or disagreement with the question. To help with this study, I humbly ask that you fill out this questionnaire as honestly and truthfully as you can.

Thank you.

Researcher

Section A: Background Characteristics

Tick (✓) where appropriate

1. Your gender: 1) Male 2) Female

2. Your age group: 1) Up to 30 years; 2) 30-40 years; 3) 40-50; 4) 50 and above

3. Your highest level of education attained: 1) Diploma; 2) Bachelor' degree; 3) Postgraduate.
4. Your responsibility in this school: 1) Subject teacher; 2) Class teacher; 3) Head of Subject; 4) Head of department; 5) Specify others……
5. Your teaching experience: 1) Less than 5 years; 2) 5-10 years; 3) 10 years and above

Section B: Teacher Effectiveness (Dependent Variable)

The items on dependent variables (DV) are presented in this section. Please indicate your thoughts regarding the effectiveness of teachers by utilizing the scale where, strongly disagree (1), disagree (2), not sure (3), 4 = Agree and 5 = Strongly Agree.

ELD	**Effective lesson delivery**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
ELD1	I prepare effective lesson plans and conduct lessons accordingly					
ELD2	I select and use approaches and strategies suitable for the goal and subject matter.					
ELD3	I utilise teaching materials effectively					
ELD4	I clearly communicate the objective of the subject and lesson.					
ELD5	I give timely and accurate instructions.					
ELD6	I conduct and adapt activities supporting individual differences during teaching process.					
ELD7	I organize activities designed specifically for students in need of special education.					
ELD8	I organize learning opportunities during the teaching process that are suitable for the developmental stages and characteristics of the students.					

ELD9	I enable students to actively participate in teaching process.					
SME	**Subject content expertise**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
SME1	I have the knowledge of related discipline/subject and uses it effectively.					
SME2	I adapt process of instruction in light of the demands in the event of unforeseen circumstances.					
SME3	I enable students to use higher-order thinking skills.					
SME4	I assign tasks based on research and inquiry.					
SME5	I share many insightful concepts pertaining to the lessons taught.					
SME6	I display authority in the classroom.					
SME7	I know how to respond to inquiries concerning lessons delivered.					
SME8	I show comprehensive comprehension of the lessons taught.					
SME9	I share facts that are solely pertinent to the lessons being taught.					
RE	**Relational expertise**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
RE1	I professionally cooperate with administrators and colleagues.					
RE2	I regularly inform parents regarding the development of students.					
RE3	I communicate effectively in both written and oral amongst themselves, parents and are role models for students.					
RE4	I normally think thoroughly before making any decision.					
RE5	I cooperate with families and always show concern for others.					
RE6	I use encouraging words when declaring exam, project, and assignment results.					
RE7	I accept all students at school regardless of the class.					
TP	**Professional conduct**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
TP1	I manifest charisma and do teaching with self-devotion.					

TP2	I have strong self-control.					
TP3	I exhibit grace under pressure.					
TP4	I manifest an outgoing personality.					
TP5	I do self-evaluation analytically and critically of what i do in and out of the classroom.					
TP6	I spend time reflecting.					
TP7	I teach according to the subject/ course purpose.					
SD	**Self-development**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
SD1	I seek strategies for enhancing my performance and learning through self-evaluation.					
SD2	I take part in ongoing professional development activities to enhance my teaching abilities.					
SD3	I take part in events for professional development to enhance the school.					
SD4	I exhibit digital citizenship qualities like knowing and using technology-enhanced instructional opportunities.					
SD5	1 feel free to be who I am, accept the consequences, and not be afraid to do so.					
SD6	I am comfortable with who I am, despite my imperfections.					
SD7	I find myself continually learning.					
CM	**Classroom management**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
CM1	I establish clear expectations for student behaviour in my classroom.					
CM2	I provide frequent positive feedback to students for appropriate behaviour.					
CM3	I have a system for providing consequences for misbehaviour that is fair and consistent.					
CM4	I use positive reinforcement strategies to encourage on-task behaviour.					
CM5	I establish and maintain positive relationships with my students.					
CM6	I use instructional time effectively and minimize disruptions.					

CM7	I use strategies to prevent behaviour problems from occurring.					
CM8	I can redirect misbehaviour without disrupting the flow of instruction.					
CM9	In order to satisfy the needs of every student, I employ a range of instructional strategies.					
CM10	I monitor student behaviour closely during independent work time.					

Section C: School Climate

The items on Independent Variable (IV) are presented in this section. Please use the scale provided to indicate your feelings about the climate at your school. Strongly disagree (1), disagree (2), not sure (3), 4 = Agree and 5 = Strongly Agree.

SE	**School Environment**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
SE1	This school's buildings, including its labs, libraries, and classrooms, are clean					
SE2	This school has the required laboratory required materials					
SE3	This school has the required sport field					
SE4	There is ample space and infrastructure at this school for extracurricular activities.					
SE5	The students take pride in the external appearance of this school.					
SE6	This school has comfortable temperatures all year long.					
SE7	The bathrooms and restrooms in this school are sufficient and clean.					
SS	**School Safety**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
SS1	This school has explicit policies prohibiting harassment, teasing, insulting, physical harm, and other verbal abuse.					
SS2	If teachers witness students verbally abusing, insulting, teasing, harassing, or physically harming someone else, they stop them.					

SS3	In this school, rules against verbal and physical harassment are fairly enforced by teachers.					
SS4	While at school, students at this school steal cash, gadgets, or other valuables.					
SS5	Students at this school practice listening to others in order to comprehend what they are attempting to say.					
SS6	Students at this school discuss how important it is to comprehend both their own and other people's feelings.					
SS7	Alcohol and drug use by students occurs during school hours and during school-sponsored events.					
SS8	Students can easily use or experiment with drugs or alcohol at school or during events sponsored by the school without being detected.					
SE	**Engagement**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
SE1	In our school, students respect teacher and the relationships we have with them are agreeable.					
SE2	Parent and teacher communication is excellent at our school.					
SE3	Teachers perceive empathetic treatment from their peers.					
SE4	Teachers frequently participate in school-sponsored events like plays, dances, athletic events, and other school-related activities.					
SE5	Teachers frequently take part in extracurricular activities provided by the school, including student government, athletic teams, musical ensembles, school clubs, and other extracurricular activities.					
SE6	Students at this school have numerous opportunities to participate in extracurricular activities such as clubs, sports, and extracurricular activities.					
SE7	Students who require assistance due to violence or sexual assault can go to a teacher or another adult at this school.					
SE8	In our school, teacher relationships are typically described as amicable.					

Section D: Professional Development

The items on moderating variables (MV) are presented in this section. Please use the scale below to indicate how you feel about your professional development. Strongly disagree (1), disagree (2), not sure (3), 4 = agree, and 5 = strongly agree.

BD	**Behavioural development**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
BD1	My supervisor has already expressed gratitude for my growth as a professional.					
BD2	My ability to manage classes and deal with issues of student discipline has improved due to my professional development and education.					
BD3	I have learned how to mentor and counsel students about their academic and career futures through professional development activities.					
BD4	Gaining knowledge and developing professionally have enabled me to be more well-respected by peers and the community.					
BD5	My relationships with the students have improved due to my professional growth and education.					
BD6	My learning and professional growth have aided in my readiness to handle the unique differences amongst students.					
AD	**Attitudinal development**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
AD1	I have everything I need to finish developing my work assignments.					
AD2	I believe that mentorship and in-service training have helped me perform better professionally.					
AD3	My sense of fulfilment and reward has increased due to my professional growth and education.					
AD4	My ability to plan and deliver lessons has improved because of my professional development and education.					

AD5	My ability to work with students from diverse backgrounds and in a variety of teaching contexts has improved due to my professional development and education.					
AD6	My level of job satisfaction has increased as a result of professional growth and education.					
AD7	I have found that learning and professional development have increased my confidence as a teacher.					
ID	**Intellectual development**	**SD**	**D**	**NS**	**A**	**SA**
		1	**2**	**3**	**4**	**5**
ID1	Since I started working, I have significantly advanced my professional development					
ID2	My teaching practices have overall improved through in-service training.					
ID3	My ability to relate theory to practice has improved due to professional development and education.					
ID4	I now know more about instructional strategies and techniques.					
ID5	My grasp of pedagogy and methodology has improved because of professional development and education.					
ID6	My understanding of how to establish a welcoming learning environment has improved.					
ID7	My proficiency with computers and digital literacy have improved thanks to professional development activities.					
ID8	My understanding of learner assessment and feedback has improved.					
ID9	Through participation in professional development activities, I have improved my capacity to create materials (multimedia content, for example) and modify existing content for my students.					
ID10	My understanding of professional development and teaching reflection has improved.					
1D11	My comfort level in handling novel teaching scenarios has increased.					

ID12	I feel more comfortable using technology in my teaching because of the training received.					
ID13	I have looked for more chances to learn from my colleagues.					

Thank you for participating!

Appendix B: Introduction Letter

Appendix D: Similarity Index