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Physics Teacher's Personality and Its Influence on Students' Academic Performance in Secondary Schools in the Buea Municipality, South West Region of Cameroon.

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ABSTRACT

This study examined how physics teachers' personality influences students' academic performance in the Buea Municipality. The study was guided by two research questions: How does Physics teachers' openness to experience affect students' academic performance in secondary schools in the South West Region of Cameroon? And what is the influence of physics teachers' conscientiousness on students' academic performance in secondary schools in the Buea municipality in the South West Region of Cameroon? This study adopted the descriptive survey research design. The population of this study was made up of 2875 secondary school physics students during the 2025/2026 academic year. The target population was made up of 867 form five physics students while the sample size consisted of 360 physics students drawn from six selected secondary school in the Buea Municipality. Stratified and Simple random sampling techniques were used to select the sample for the study. Teacher personality questionnaire was the instrument used for data collection. The data collected were analysed using both descriptive and inferential statistics. For descriptive statistics, frequency tables and percentages were used while for inferential statistics, Pearson Product Moment Correlation was used to test the hypotheses at 0.05 level of significance. The finding of the study showed that: there is a significant relationship between teachers' openness and students' academic performance and there is a significant relationship between teachers' conscientiousness and students' academic performance; from the findings it was concluded that teachers' personality plays a significant role in shaping students' academic performance. Based on the above findings, the following recommendations where proffered: Teacher recruitment and professional training programs should prioritize the development of these personality traits to enhance the quality of physics education; The Ministry of Secondary Education and regional pedagogic inspectors in the South West Region should organize regular workshops to encourage teachers to update their pedagogical skills and embrace new educational technology; Teachers with high openness should leverage their curiosity to introduce stimulating classroom projects that encourage students to think critically and solve problems, boosting both engagement and performance; experienced physics teachers (who tend to be more conscientious) should mentor novice teachers to build their confidence, improve their classroom management skills, and enhance their overall effectiveness in guiding student achievement and teachers should exhibit high moral standards in dressing and in classroom expectations for students, act as role models, which directly impacts student attitudes towards the subject. School administrations should take personality into consideration when recruiting or appointing heads of science departments, targeting individuals who are organized (conscientious) and open to new teaching strategies.

INTRODUCTION

Education is widely recognized as a pivotal instrument for national development and personal advancement (Liaqat,Yasin & Nadeem, 2023). In every educational system, the quality of teaching remains a decisive factor in shaping learners' academic performance and overall intellectual growth. Among the various school subjects, the teacher as a critical factor in the students' learning process has constantly carried that pivotal role in educating the students. But just like any person, teachers are human beings (Joena & Junithesmer, 2022). .Physics occupies a particularly important position because it serves as a foundation for technological advancement, engineering, medicine, and other scientific disciplines. Despite its importance, Physics continues to be one of the most challenging subjects for many secondary school students in the Buea Municipality, south West Region of Cameroon. Persistent reports of poor performance in Physics at both internal and external examinations, such as the mock exam and General Certificate of Education (GCE), have raised concerns among educators, policymakers, and parents. Several factors have been identified as contributing to this trend, including inadequate instructional materials, poor teaching methods, large class sizes, and students' negative attitudes toward science subjects. However, an often-overlooked factor that significantly influences students' academic performance is the personality of the teacher.

According to (Anthony, et al., 2023), teacher personality is defined as distinctive sets of behaviors, cognitive functions, and emotional patterns that develop from biological and environmental factors (Winny et al.,

2023). Although there is no generally agreed upon definition of personality, most theories focus on motivation and psychological interactions with the environment (Winny et al., 2023). Trait-based theories of personality, such as those defined by Micheal et al., (2023) define personality as characteristics that predict a person's behavior (Eastburn & Sharland, 2017). On the other hand, more behavioral approaches define personality through learning and habits. However, most theories consider personality to be relatively stable (Anthony, 2023 & Godfrey et al.,2024).

The personality of a teacher encompasses a complex blend of characteristics, attitudes, behaviours, values, and emotional dispositions that define how the teacher interacts with students and approaches the teaching-learning process (Winny et al., 2023). According to educational psychologists, teacher personality influences classroom climate, student motivation, and the development of positive attitudes toward learning (Berkley Personality Lab. 2009). A teacher's enthusiasm, patience, empathy, and openness can foster a supportive learning environment that encourages curiosity and persistence, especially in challenging subjects such as Physics. Conversely, a teacher who exhibits traits of hostility, rigidity, or indifference may create anxiety and apathy among students, leading to poor engagement and academic underachievement (Anthony, et al., 2023).

In the context of the Buea Municipality, South West Region of Cameroon, the dynamics of teacher personality and student performance deserve special attention. The region, known for its cultural diversity and linguistic richness, hosts a variety of public, mission, and private secondary schools where Physics is taught as part of the science curriculum. However, the region has continued to record fluctuating performance levels in Physics at the GCE Ordinary and Advanced Levels. Anecdotal evidence suggests that while some schools consistently produce excellent results, others struggle year after year despite having teachers with similar academic qualifications. This observation suggests that beyond professional training and content knowledge, the individual personality traits of Physics teachers may play a crucial role in determining how effectively students learn and perform.

In many Cameroonian secondary schools, especially in the South West Region, Physics is often perceived as difficult and abstract. Students' performance is frequently hindered by anxiety, lack of motivation, and misconceptions about the subject's relevance. While curriculum reforms and infrastructural improvements have been implemented to address these challenges, less attention has been paid to the human element of instruction which is the teacher's personality. The interpersonal relationship between teachers and students is critical to learning outcomes. Teachers who exhibit positive traits such as friendliness, patience, approachability, and encouragement tend to foster better student engagement, improved comprehension, and higher achievement levels. On the other hand, teachers who display negative personality traits such as irritability, authoritarianism, or indifference often discourage student participation and reduce motivation.

Understanding the effect of teacher personality on students' performance in Physics is therefore vital for improving the quality of science education in the region. It can inform recruitment policies, teacher training programs, and professional development initiatives aimed at nurturing not only pedagogical competence but also emotional intelligence and interpersonal effectiveness among teachers. This study is particularly timely given the growing emphasis on learner-centered education, which recognizes that teaching effectiveness depends as much on who the teacher is as on what the teacher knows. Furthermore, the findings of this study would have far-reaching implications for education policy and practice in Cameroon. By identifying specific personality traits that enhance or hinder students' performance, educational stakeholders can design strategies for teacher selection, mentorship, and appraisal that prioritize both technical expertise and personal attributes. For students, learning under teachers with supportive and motivating personalities may improve their confidence, interest, and persistence in Physics, thus contributing to a stronger pipeline of future scientists, engineers, and innovators.

This study therefore seeks to explore how the personality traits of Physics teachers influence students' academic performance in secondary schools in the Buea Municipality, South West Region of Cameroon. It aims to highlight the often-underestimated human dimension of teaching and to provide evidence-based insights that can enhance both teacher effectiveness and student achievement in Physics.

STATEMENT OF THE PROBLEM

Students' performance in physics in secondary schools across the Buea Municipality, South West Region of Cameroon has continued to show significant variation, with many learners consistently recording poor results in both internal and external examinations. Despite efforts by the Ministry of Secondary Education, school administrators, and other stakeholders to improve the teaching and learning of physics through curriculum reforms, provision of instructional materials, and teacher training, students' achievements in the subject remain unsatisfactory. This persistent underperformance has raised concerns among educators, parents, and policymakers about the possible underlying causes beyond cognitive and instructional factors.

One area that has received relatively little attention is the personality of the physics teacher. Teachers are not only conveyors of knowledge but also influential figures whose attitudes, behaviour, and interpersonal relationships with students can significantly shape learners' motivation, interest, and academic outcomes. A teacher's personality traits such as enthusiasm, patience, sociability, openness, emotional stability, and conscientiousness may affect classroom

climate, student engagement, and ultimately, academic performance. However, in many Cameroonian secondary schools, emphasis has often been placed more on teachers' academic qualifications and content mastery, with limited focus on the personality characteristics that contribute to effective teaching and learning.

Furthermore, anecdotal evidence from schools in the South West Region suggests that while some students excel remarkably under certain teachers, others perform poorly under other teachers, even when similar instructional materials and syllabuses are used. This disparity raises the question of whether the teacher's personality plays a crucial role in determining students' academic success in physics. Yet, empirical research on this aspect in the Cameroonian context remains scarce.

It is therefore imperative to systematically investigate how the personality traits of physics teachers influence students' academic performance in secondary schools in the Buea Municipality South West Region of Cameroon. Understanding this relationship will provide valuable insights into teacher recruitment, professional development, and classroom management strategies aimed at enhancing students' academic performance in physics.

THEORETICAL REVIEW

This study was guided by, Greg and Ben (1998) engagement theory, conscientiousness-driven academic consistency theory (Costa & McCrae, 1992) and Allport's trait theory of personality **(**1936**),** Greg **and** Ben (1998) engagement theory is based on the premise that learning is an active, social, and contextual process, and that engagement is a key factor in facilitating learning. The theory posits that engagement is a multifaceted construct that includes cognitive, emotional, and behavioural dimensions, and that these dimensions are interrelated and mutually reinforcing. In other words, when students are engaged, they are not only thinking deeply about the content they are learning, but they are also experiencing positive emotions and taking actions that reinforce their learning.

Behavioural engagement refers to the actions that students take in the classroom, such as attending class, participating in discussions, and completing assignments. Emotional engagement refers to the feelings that students have about their learning experiences, such as interest, enjoyment, and excitement. Cognitive engagement refers to the level of mental effort that students invest in their learning, such as thinking critically, analysing information, and making connections between concepts. While each dimension of engagement is important in its own right, engagement theory suggests that they are interdependent and that enhancing one dimension can lead to improvements in the others. For example, when students are emotionally engaged in their learning, they are more likely to invest cognitive effort, which in turn can lead to better performance on academic tasks. Similarly, when students are behaviourally engaged, they are more likely to experience positive emotions and invest cognitive effort, leading to deeper and more meaningful learning (Ebralidze, 2023). This theory therefore posits that physics teachers high in openness to experience are more likely to use innovative, creative, and student-centered instructional strategies that stimulate curiosity and engagement among students. Such teachers integrate real-life examples, experiments, and technology in lessons, helping students to connect abstract physics concepts to everyday life.

Similarly, teachers who are high in openness, demonstrate flexibility, curiosity, and a preference for variety in teaching method; Students' engagement and understanding improve when learning is exploratory and connected to real-world contexts and increased student engagement leads to higher academic performance in physics. The theoretical Proposition is that the higher a physics teacher's level of openness to experience, the more engaging and exploratory their instructional methods become, leading to improved students' motivation, conceptual understanding, and academic performance.

The conscientiousness-driven academic consistency theory (Costa & McCrae, 1992) posits that students' academic performance is significantly influenced by the conscientious personality traits of their teachers. The theory emphasizes that teachers high in conscientiousness characterized by diligence, organization, reliability, and goal orientation create structured and consistent learning environments that foster sustained student engagement and achievement. Conscientious teachers tend to be more prepared, punctual, goal-oriented, and responsive to students' academic needs (Komarraju, el.at, 2011). These behavioural tendencies promote academic consistency which is a stable pattern of effective teaching and learning interactions over time. This theory suggests that, conscientious teachers: establish structured learning routines that minimize uncertainty and distraction in the classroom; set clear academic expectations and provide timely feedback, thereby reinforcing students' self-regulated learning behaviours and demonstrate reliability and ethical responsibility, modelling academic integrity and persistence that students tend to emulate (Patrick, Ryan, & Kaplan, 2007). Consequently, students in classrooms led by conscientious teachers experience higher academic consistency that is marked by steady performance, improved discipline, and sustained motivation to achieve (Poropat, 2009).

The mechanism of conscientiousness-driven academic consistency can be conceptualized in three interacting dimensions: Instructional consistency: conscientious teachers maintain uniform standards and instructional quality, ensuring predictable classroom routines that enhance cognitive stability (Duckworth & Seligman, 2005).;Behavioural modelling: students internalize the conscientious behaviours of their teachers

such as persistence, organization, and goal pursuit through observational learning (Bandura, 1986) and motivational reinforcement (Elliot & Dweck, 2005), conscientious teachers consistently reward effort and progress, promoting intrinsic motivation and a growth-oriented mindset (Elliot & Dweck, 2005). Research has consistently linked teacher conscientiousness to student academic achievement and satisfaction. For example, Kim, Dar-Nimrod and MacCann (2018), found that conscientious teachers provide better classroom management and clearer instructional goals. Burić and Kim (2020) also demonstrated that teacher conscientiousness predicts emotional regulation and instructional clarity, both of which contribute to students' consistent academic engagement.

Similarly, Poropat (2009) conducted a meta-analysis showing that conscientiousness has the strongest correlation with academic performance among the Big Five traits, underscoring its centrality to learning outcomes. The theory suggests that enhancing teachers' conscientious traits through professional development programs can lead to sustained academic improvement. It also highlights the need for education systems to incorporate personality development into teacher training, emphasizing consistency, reliability, and goal-directed behaviour as essential components of pedagogical effectiveness. The conscientiousness-driven academic consistency theory provides a psychological lens for understanding how teacher personality shapes educational outcomes. By fostering structured, reliable, and goal-oriented teaching practices, conscientious teachers contribute to a learning environment characterized by stability, predictability, and long-term student success.

Allport's trait theory of personality **(**1936**),** defined personality as a dynamic organization of psychophysical systems, using a hierarchy of cardinal, central, and secondary traits to describe behaviour. The trait theory of personality suggests that people have certain basic traits, and it is the strength and intensity of those traits that account for personality differences. The trait approach to personality is one of the major theoretical areas in the study of personality. Trait theory suggests that individual personalities are composed of broad dispositions. It emphasizes that individual personalities are composed of unique, consistent "personal dispositions" or traits. The term 'trait' was borrowed by early theorists from biology according to educational psychologist Richard (1984) where it is still generally refers to hereditary, permanent, and physically based characteristics. It transmits a sense of immutability or permanence (Heckman and Kautz, 2014) and some prominent sources exceptionally treat traits as "natural born" (Gregoire, 2014). Such perceptions of personality traits are different from the contemporary personality definition. Contrary to previous beliefs that personality traits are set like cement, and will never become soft again is not what many believe today. It is believed that they can be altered by major life experiences (Jackson, el.at, 2012; Lüdtke, el.at, 2011 and Specht, el.at, 2011) while Roberts, Walton, and Viechtbauer, (2006) are of the opinion that they are not entirely constant through the life span. There are also new evidences that personality can be altered through intervention, according to Roberts et al., (2017) and nonclinical according to Hudson & Fraley, (2015). It is essential therefore to note that in consideration of possible correlations between personality traits and teaching effectiveness, it is important to be aware of the fact that the traits in question are not unchangeable, inherited, or inborn. This therefore means that, teacher training colleges can change the personality of a trainee.

REVIEW OF RELATED LITERATURE

Personality traits are the basis of a person's actions. These traits differ from one person to the other and a careful study leading to the understanding of a person's personality traits will allow for strengthening and improvement (Ayeni et al., 2025). Understanding the role of teachers' non-cognitive characteristics such as personality traits in shaping their classroom behaviour is important for promoting student learning and academic achievement (Irena, Ana & Lisa, 2023). This study is anchored on the Big Five Personality Traits developed in the 80s by Lewis (1990, 1993), which comprises five personality traits that includes openness, conscientiousness, extraversion, agreeableness, and neuroticism commonly known for its acronym OCEAN, as cited by Joena and Junithesmer, (2022). Teacher personality traits refer to the enduring patterns of thoughts, emotions, and behaviors that an educator consistently exhibits in the classroom. These characteristics directly shape classroom management, define teacher-student interactions, and heavily influence the academic success and emotional well-being of learners (Joana & Junithesmer, 2022; Agbakwuru, 2019).

For over four decades, the Big Five model, developed through lexical studies (Goldberg, 1990), and the Five Factor Model, developed using both natural language adjectives and theoretically grounded personality questionnaire (Costa & McCrae, 1992), have been dominantly used to describe and assess human personality. According to these models, personality is made up of five broad domains: (1) extraversion (entails an energetic approach to things, events, and other people and is described by adjectives such as energetic, talkative, or assertive); (2) agreeableness (refers to prosocial and collective orientation towards others and is captured by descriptors such as warm, cooperative, or trustful); (3) conscientiousness (refers to impulse control fostering task- and goal directed behaviour and is described by adjectives such as organized, hardworking, or responsible); (4) neuroticism (implies negative emotionality and is characterized by descriptors such as tense, nervous, or discontented); and (5) openness (refers to breadth, originality, and complexity of individual's mental processes and life experiences and is

captured by descriptors such as curious, imaginative, or creative (Goldberg, 1992; John & Srivastava, 1999; Agbakwuru, 2019).

The Big Five domains have been extensively studied and found to be important explanatory predictors of various life outcomes, including well-being (Anglim et al., 2020), job performance and academic performance (Mammadov, 2022), and occupational interests (Larson et al., 2002). However, despite a long history of research attempts to reveal the personality profiles of effective teachers, teacher personality has been rarely examined systematically through the lens of the established personality theories. Nonetheless, the existing studies that assessed teacher personality in a way that they can be classified within the Big Five framework demonstrated the usefulness of the five personality domains for explaining important teacher job-related outcomes such as motivation (Perera et al., 2018), burnout (Kim et al., 2019; Roloff et al., 2022), and teaching quality (Baier et al., 2019). Moreover, it seems that personality matters even at the stage of selecting and entering the teaching profession. For example, a study found that students who enrolled in teacher education programs had higher scores on openness, extraversion, and agreeableness dimensions when compared to students who enrolled in other programs. Moreover, these differences were already present during their secondary level schooling (Savage et al., 2021). Similarly, among German students with study majors in the science, technology, engineering, and mathematics (STEM) fields, those who were teacher candidates scored higher on extraversion than their colleagues (Roloff et al., 2015).

Myers and Dewall (2014) noted that the Big Five traits can predict actual behaviour. Traits appear in a person's language patterns. For example, a person with high agreeableness predicts positive emotion words while a person who is considered high in neuroticism predicts negative emotion words. Also, Fauziah (2009) examined the relationship between teaching effectiveness and personality. In this study, the Big Five dimensions were used. Three dimensions were found to have significant relationship with teaching effectiveness which includes Extroversion, Agreeableness, and Conscientiousness while Neuroticism and Openness were found to have no significant relationship. Several studies were done which made use of the Big Five personality traits which include that of Holmes, Kirwan, and Bova (2015) that examined the relationship of the Big Five personality traits and how they relate to the effectiveness of online teachers. The study revealed that personality traits are correlated with performance of teachers. The Big Five Personality Traits can predict employees' actual behaviour. Effective managers recognize that the various situations and personality types interact to determine feelings, thoughts, attitudes and behaviours at work. Since all are concern with quality and good performance, hence, this study.

Research on the predictive effects of the Big Five personality domains on various life outcomes is based on a premise that personal factors (e.g., teacher personality traits) interact with environmental factors (e.g., characteristics of students within a class) resulting in a unique set of experiences and behaviours. Specifically, personality traits influence how people select, perceive, interpret, and modify their environment, creating an array of behavioural, emotional, social, and material life outcomes (John, 2021). According to the five-factor personality theory (McCrae & Costa, 2008), personality traits are basic tendencies that refer to the underlying potential of a person. Basic tendencies interact with environmental demands and accumulate over time in the form of people's characteristic adaptations (e.g., what people learn, what attitudes and goals they have).

. It is essential to outline how each of the Big Five domains, under the BFI framework namely; extraversion, agreeableness, conscientiousness, negative emotionality, and open mindedness may be associated with teaching quality in different ways (Soto & Joh, 2017; Agbakwuru, 2019). For extraversion, effective teaching often requires assertiveness, high energy levels, and intense social interactions with students (Kim et al., 2019). As such, teachers with higher levels of extraversion may demonstrate these characteristics more easily in classroom situations, such as when managing the classroom, providing support to students, and engaging students in classroom discussions. Moreover, building and maintaining a positive class atmosphere and establishing high quality relationships with students might come more easily to extraverted teachers. Indeed, meta-analytic evidence shows that extraversion is positively related to job performance in occupations requiring high level of interpersonal interactions (e.g., as managers and teachers) compared to employees in other occupational groups ((Metsäpelto et al., 2022).

In the case of agreeableness, teachers with higher levels of agreeableness are more likely to display compassion, warmth, and sensitivity to students. In turn, these qualities may help them in creating supportive and warm learning environments that are needed for successful learning (Pianta & Hamre, 2009). Thus, students taught by teachers with higher levels of agreeableness may report higher levels of teacher enthusiasm and student support. Indeed, this is in line with meta-analytic evidence that, agreeableness is one of the strongest predictor of job performance in occupations that require interpersonal interactions ((Kim et al., 2019). Since teachers spend most of their working hours in intense interpersonal interactions with their students, high levels of agreeableness may be beneficial in creating a supportive classroom climate.

For conscientiousness, individuals with higher levels of conscientiousness tend to be organized, responsible, and oriented toward achievement (John et al., 2008). Since effective teaching requires organization, planning, and persistence in completing tasks (Klassen et al., 2018), it can be expected that teachers with higher levels of conscientiousness will more likely deliver instruction in an organized, structured, and timely

manner, which will further reflect in more positive students' perceptions of classroom management and cognitively activating teaching. Indeed, meta-analyses showed that conscientiousness among all other personality domains is the strongest predictor of job performance (Kim et al., 2019; Salgado, 2003; Godfrey et al., 2024).

Teachers who are more prone to experiences of negative emotions (i.e., with lower levels of emotional stability) are more likely to transmit such emotional states to their students (Agbakwuru, 2019) and thus are expected to negatively affect their ratings of teaching quality, especially learning support and teacher enthusiasm. In addition, dealing with students' sudden disruptive behaviors can be more challenging for teachers who tend to be more nervous and tense. Meta-analytic evidence again supports these assumptions by showing that emotional stability helps individuals to establish trustful and secure relationships with others in jobs marked with frequent and intense interpersonal interactions ((Kim et al., 2019). Moreover, other meta-analytic evidence suggests that emotional stability is the second strongest predictor of job performance across occupations (Kim et al., 2019; Salgado, 2003), thus, pointing to the importance of this personality domain for successful teaching as well.

In the case of open-mindedness, since being creative and flexible in teaching and open to student ideas and opinions are valued qualities in teaching, teachers with higher levels of open mindedness are expected to have higher student-ratings of teaching quality, especially of cognitive activation and teacher enthusiasm. In addition, providing students with challenging and stimulating tasks that can catch their interest and engage them in learning might be easier for more creative, flexible, and open-minded teachers. Indeed, flexibility and adaptability in lesson delivery is recognized as an important personal characteristic for successful teaching (Klassen et al., 2018), thereby suggesting that teacher open-mindedness could be related to students' perceptions of teaching quality. Nonetheless, research indicates that openness is one of the weakest predictors of job performance across occupations (Judge et al., 2013), perhaps as this domain may not be advantageous in job productivity (which can be the focus of job performance measures) but more advantageous in measures of creativity.

Openness to experience/intellect sometimes called the intellect is a trait often considered as the most controversial of the Big Five. People scoring high on openness are viewed by others as creative, imaginative, open-minded, and clever. They are more prone than most people to be politically liberal, to use drugs, and to play a musical instrument. Authors have different ways of grasping openness. This dimension is said to be controversial because among the Big Five, it has the spottiest record of replication across different samples and different cultures. People high in openness are generally viewed as intelligent. They have artistic interests, politically liberal; admit to sometimes having an overactive imagination and smart.

Personality of teacher significantly contributes to academics of the students. Both personality of teacher and motivation of the students in academic activities have significant co-relation (Mohammad, Abraham, & Singh, 2011). Therefore, to improve and promote a student's study, motivation, interest and discipline can be reached by the good quality of a teacher's personality skill (Kheruniah, 2013; Hirota, Anjos, Ferreira, & DeMarco, 2016).

According to Samfira, Dughi and Fuente, (2023), successful teachers are "builders" of destinies, not just people who come to school to share information with students; they are the ones who have a strong influence on the student's development. Beyond the subject they teach, a successful teacher makes students believe in themselves, love school, and have deep values that will channel students' destinies in the future. The personality of the teacher greatly influences the students and can have great consequences many years after the end of school (Samfira, Dughi & Fuente, 2023).

Teacher is considered a role model for students (Mohammad, Abraham, & Singh, 2011). If a teacher maintain his/her personality, update knowledge, maintain class management, and adopt good communication skills during the lecture than it will not only help the students to learn well but will improve overall academics performance of the students (Chek, & Pandey, 2016). This study investigated how much teacher personality which is part of professional attitude of teacher influences physics students' academic performance in secondary schools in the Buea Municipality.

This relationship between teacher personality and students' academic performance can be identified in the relationship between personality and job performance which leads to the achievement of teaching effectiveness. Some reviews show that there are positive relationships between personality traits of conscientiousness with job performance. For example, Kim et al., (2019), were of the opinion that conscientiousness had consistent and positive relationship with job performance across a variety of occupational groups. This is in agreement with the study by Paunonen and Ashton (2001) where they found general intelligence and conscientiousness to be valid predictors of training and job performance. (Chek, and Pandey, 2016), in their meta-analysis study, found that conscientiousness undoubtedly predicted job performance in five occupations. In most of the studies, it was observed that among the Big Five, consciousness has been consistently found as the most reliable predictor of job performance. However, according to Kheruniah, (2013) the other personality traits that have relationship with job performance are openness and agreeableness. He especially found them as valid predictors of training proficiency. Thoreson, el. at, (2003), found significant true-score correlations between work attitudes and dispositions and personality traits. Curtis and Liying (2001), stated that teacher

performance is influenced by teachers' personality characteristics and went further to explain that the personality trait had an effect on teaching practices as well as teaching effectiveness. It for these reasons that this study was carried out so as to find out the influence of teacher personality on physics students' academic performance in the Buea Municipality.

RESEEARCH METHODOLOGY

This study adopted the descriptive survey research design. The population of this study consisted of 2875 secondary school physics students from Buea Municipality during the 2025/2026 academic year. The study targeted 867 form five students. The sample of this study consisted of 360 form five physics students from six selected secondary schools. Stratified and simple random sampling techniques were used to select the sample for the study. The instrument used for data collection was a teacher personality questionnaire adapted from the Big Five Inventory designed by John et al., (1991).The validity was assured by giving the questionnaire to a psychologist and a statistician while the reliability of the questionnaire was computed using Cronbach Alpha that gave the reliability coefficient 0.86. The questionnaire was administered to the students directly by the researcher with the help of six (6) physics teachers. The data collected were analysed using both descriptive and inferential statistics. For descriptive statistics, frequency tables and percentages were used while for inferential statistics, Pearson product moment correlation was used to test the hypotheses at 0.05 level of significance.

ANALYSES AND RESULTS

Research question one: How does Physics teachers' openness to experience influence students' academic performance in secondary schools in the South West Region of Cameroon?

Table 1: Physics teachers' openness to experience and its influence on students' academic performance in secondary schools in the Buea municipality, South West Region of Cameroon

S/N	Statements	Stretched				Collapsed	
		SA (%)	A (%)	D (%)	SD (%)	SA &A (%)	SD&D (%)
1	My physics teacher tends to find fault with students	180	170	15	**5**	340 (94.4%)	20 (5.6%)
2	My physics teacher is helpful to me	130	185	30	15	315 (87.5%)	45 (12.5%)
3	My physics teacher likes to quarrels with students	190	156	8	6	346 (96.1%)	14 (3.9%)
4	My physics teacher Has a forgiving nature	190	160	3	7	350 (97.2%)	10 (2.8%)
5	I trust my physics teacher	180	141	29	10	321 (89.2%)	39 (10.8 %)
6	My physics teacher is usually cold in class	200	70	65	25	300 (83.3%)	60 (16.7 %)
7	My physics teacher Is kind to everyone in our class	180	145	20	15	325 (90.3%)	35 (9.7 %)
	Mean Response Rate					328 (91.1%)	32 (8.9%)

The above table represents data for research question 1, from the data collected, item 1 shows that 340 (94.4%) of the students agreed or strongly agreed that their physics teacher tends to find fault with students while 20 (5.6%) of the students disagreed or strongly disagreed that their physics teacher tends to find fault with students, Item 2 shows that 315(87.5%) of the students agreed or strongly agreed that their physics teacher is helpful to them while 45(12.5%) disagreed or strongly disagreed that their physics teacher is helpful to them. Item 3 show that 346 (96.1%) students agreed or strongly agreed that their physics teacher likes to quarrels with students while 14 (3.9%) of the students disagreed or strongly disagreed that their physics teacher likes to quarrels with students. Item 4 shows that 350(97.2%) of the students agreed or strongly agreed that their physics teacher has a forgiving nature while 10(2.8%) disagreed or strongly disagreed that their physics teacher has a forgiving nature. Item 5 shows that, 321(89.2 %) of the students strongly agree that they trust their physics teacher while 39(10.8 %) of the students disagreed or strongly disagreed that they trust their physics teacher. Item 6 shows that 300(83.3 %) of the students agreed or strongly agreed that their physics teacher is usually cold in class while 60(16.7%) disagreed or strongly disagreed that their physics teacher is usually cold in class. In item 7 shows that 325(90.3 %) teachers agreed or strongly agreed that their physics teacher is kind to everyone in their class while 35(9.7%) disagreed or strongly disagreed that their physics teacher is kind to everyone in their class. The mean response rate show that, 328 (91.1%) of the students agreed or strongly agreed while 32 (8.9%) disagreed or strongly disagreed that physics teachers' openness to experience influence students' academic performance in secondary schools in the Buea Municipality, South West Region of Cameroon

Verification of hypothesis one: Physics teachers' openness to experience has no significant relationship with students' academic performance in secondary schools in the Buea municipality in the South West Region of Cameroon.

Table 2: Pearson product moment correlation analysis of the relationship between physics teachers' openness to experience and students' academic performance in secondary schools in the Buea municipality in the South West Region of Cameroon (N= 360)

Variable	N	Γ_{xy}	p-value
Teacher Openness (x)	360	0.218	0.01
Students' Performance(y)	360		

p** < 0.05; df =358; critical Γ_{xy} =0.196

The result of the analysis reveals that the calculated Γ_{xy} -value of 0.218 is higher than the critical Γ_{xy} -value of 0.196 at 0.05 level of significance with 358 degrees of freedom. Also, the p-value of 0.01 is lower than 0.05. With the result of this analysis, the null hypothesis was rejected and the alternative hypothesis retained. This result therefore means that physics teachers' openness to experience has a significant relationship with students' academic performance in secondary schools in the Buea municipality in the South West Region of Cameroon. A further exploration of the effect shows that the Γ_{xy} = 0.218 is high and positive. This indicates that the more physics teachers' openness, the better the physics students' academic performance in secondary schools in the Buea municipality.

Research Question Two: What is the influence of physics teachers' conscientiousness on students' academic performance in secondary schools in the Buea municipality in the South West Region of Cameroon?

Table 3: Influence of Physics teachers' conscientiousness on students' academic performance in secondary schools in the Buea municipality in the South West Region of Cameroon

S/N	Statements	Stretched				Collapsed	
		SA (%)	A (%)	D(%)	SD(%)	SA &A(%)	SD&D(%)
8	Our physics teacher does a thorough job	180	75	95	10	255 (70.8%)	105 (29.2%)
9	My physics teacher is helpful to me	170	100	63	27	270 (75%)	90 (25%)
10	My physics teacher likes to quarrels with students	190	80	52	38	290 (80.6%)	70 (19.4%)
11	Our physics teacher is disorganized	30	40	120	170	70 (19.4%)	290 (80.6%)
12	Our physics teacher is lazy	80	141	30	19	221 (61.4%)	139 (38.6%)
13	Our physics teacher perseveres until the task given is finished	95	78	87	100	173 (48.1%)	187 (51.9%)
14	Our physics teacher does things efficiently	60	40	120	140	100 (27.8%)	260 (72.2%)
	Mean Response Rate					197 (54.7%)	163(45.3%)

The above table represents data for research question 2, from the data collected, item 8 of the research question shows that 255(70.8%) of the students agreed or strongly agreed that their physics teacher does a thorough job while 105 (29.2%) of the students disagreed or strongly disagreed that Our physics teacher does a thorough job. Item 9 shows that 270(75%) of the students agreed or strongly agreed that their physics teacher is sometimes careless while 90(25%) disagreed or strongly disagreed that their physics teacher is sometimes careless. Item 10 show that 290 (80.6%) students agreed or strongly agreed that their physics teacher is reliable while 70 (19.4 %) of the students disagreed or strongly disagreed that their physics teacher is reliable. Item 11 shows that 70(19.4%) of the students agreed or strongly agreed that their physics teacher is disorganized while 290(80.6%) disagreed or strongly disagreed that their physics teacher is disorganized. Item 12 shows that, 221(61.4%) of the students agreed or strongly agreed that their physics teacher is lazy while 139(28.6 %) of the students disagreed or strongly disagreed that their physics teacher is lazy. Item 13 shows that 173(48.1 %) of the students agreed or strongly agreed that their physics teacher perseveres until the task given is finished while 187(51.9%) disagreed or strongly disagreed that their physics teacher perseveres until the task is finished. Item 14 shows that 100(27.8 %) students agreed or strongly agreed that their physics teacher does things efficiently while 260(72.2%) disagreed or strongly disagreed that their physics teacher does things efficiently. The mean response rate shows that, 197 (54.7%) of the students agreed or strongly agreed while 163(45.3%) disagreed or strongly disagreed that their physics teachers' conscientiousness influence students' academic performance in secondary schools in the Buea Municipality, South West Region of Cameroon.

Table 4: Pearson Product Moment Correlation analysis of Physics teachers' conscientiousness and its influence on students' academic performance in secondary schools in the Buea municipality in the South West Region of Cameroon (N= 360)

Variable	N	Γ_{xy}	p-value
Teacher conscientiousness (X)	360	0.659	0.01
Students' Performance (Y)	360		

p** < 0.05; df=358; critical Γ_{xy} =0.196

The result of the analysis reveals that the calculated Γ_{xy} -value of 0.659 is higher than the critical Γ_{xy} -value of 0.196 at 0.05 level of significance with 358 degrees of freedom. Also, the p-value of 0.01 is lower than 0.05. With the result of this analysis, the null hypothesis was rejected and the alternative hypothesis retained. This result show that physics teachers' conscientiousness has an influence on physics students' academic performance in secondary schools in the Buea municipality in the South West Region of Cameroon. A further exploration of the effect shows that Γ_{xy} = 0.659 is high and positive. This indicates that the more physics teachers' conscientiousness, the better students' academic performance in secondary schools in the Buea municipality in the South West Region of Cameroon**.**

DISCUSSION

This study demonstrates that physics teacher personality traits directly influences student engagement and teacher-student relationships. This study's findings revealed that a teacher's personality traits influences teacher-student relationships and student engagement. Research hypothesis one shows that, teachers' openness influences students' academic performance. This finding is supported by that of Klassen et al. (2018) and Godfrey et al. (2024), who found that teachers' who are openness -minded providing students with challenging and stimulating tasks that can catch their interest and engage them in learning. Indeed, flexibility and adaptability in lesson delivery is recognized as an important personal characteristic for successful teaching (Klassen et al., 2018), thereby suggesting that teacher open-mindedness could be related to students' perceptions of teaching quality. This finding is also supported by engagement theory which states that, teachers who are high in openness demonstrate flexibility, curiosity, and a preference for variety in teaching method; Students' engagement and understanding improve when learning is exploratory and connected to real-world contexts and increased student engagement leads to higher academic performance in physics. The theoretical Proposition is that the higher a physics teacher's level of openness to experience, the more engaging and exploratory their instructional methods become, leading to improved students' motivation, conceptual understanding, and academic performance.

Secondly, research hypothesis two, shows that there is a relationship between teachers' conscientiousness and students' academic performance. This finding is supposed by the study of Klassen et al., (2018) who discovered that, individuals with higher levels of conscientiousness tend to be organized, responsible, and oriented toward achievement. Since effective teaching requires organization, planning, and persistence in completing tasks, hence, teachers with higher levels of conscientiousness deliver instructions in an organized, structured, and timely manner, which further reflect in more positive students' perceptions of classroom management and cognitively activating teaching (Klassen et al., 2018). This finding is also supported by the conscientiousness-driven academic consistency

theory (Costa & McCrae, 1992) which posits that students' academic performance is significantly influenced by the conscientious personality traits of their teachers. The theory emphasizes that teachers high in conscientiousness are characterized by diligence, organization, reliability and goal orientation thereby, creating structured and consistent learning environments that foster sustained student engagement and achievement. All the findings are supported by Greg and Ben (1998) engagement theory, conscientiousness-driven academic consistency theory (Costa & McCrae, 1992) and Allport's trait theory of personality **(**1936**).**

CONCLUSION

In the Buea municipality, physics teachers' personality traits specifically openness and conscientiousness that this study is based on, significantly influence student performance. Highly conscientious teachers who are organized and dependable, combined with open, innovative teaching methods, foster better student engagement and academic success, while positive teacher-student relationships in these schools are crucial to improving performance. The research findings show that, a positive, encouraging, and conscientious teacher personality helps foster a conducive learning environment, which is highly essential for Cameroon's secondary school teacher training programme.

Teacher's behaviour in the classroom is a reflection of his/her personality and students behave according to it. If he is strong, they respect him, and if he is weak, they disrespect him. His personality may affect positively or negatively the students. He is considered as a model for his students. Any action done by him can have a great influence on students' behavior. Therefore he should be careful in his behavior with his students. He should select appropriate words while speaking and use polite requests. He should not only provide them with information but also show them the right paths which lead them to success.

RECOMMENDATIONS

Based on the above findings, the following recommendations where proffered: Teacher recruitment and professional training programs should prioritize the development of these personality traits to enhance the quality of physics education; The Ministry of Secondary Education (MINESEC) and regional pedagogic inspectors in the South West Region should organize regular workshops to encourage teachers to update their pedagogical skills and embrace new educational technology; Teachers with high openness should leverage their curiosity to introduce stimulating classroom projects that encourage students to think critically and solve problems, boosting both engagement and performance; experienced physics teachers who are more conscientious should mentor novice teachers to build their confidence, improve their classroom management skills, and enhance their overall effectiveness in guiding student achievement and teachers should exhibit high moral standards in dressing and in classroom expectations for students, act as role models, which directly influences student attitudes towards the subject. School administrations should take personality into consideration when recruiting or appointing heads of science departments, targeting individuals who are organized (conscientious) and open to new teaching strategies.

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