UNIVERSITY OF CAPE COAST

PERCEIVED IMPACT OF PROFESSIONAL DEVELOPMENT ON COMPETENCE AND INSTRUCTIONAL PRACTICES AMONG JUNIOR HIGH SCHOOL TEACHERS IN THE ADANSI-SOUTH DISTRICT

ENOCH APPIAH

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BY

ENOCH APPIAH

Thesis submitted to the Department of Education and Psychology of the Faculty of Educational Foundations, College of Education Studies, University of Cape Coast, in partial fulfilment of the requirements for the award of Master of Philosophy degree in Educational Psychology.

DECEMBER 2021

DECLARATION

Candidate's Declaration

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

Candidate's Signature:……..... Date:…….....

Name: ……

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature:..... Date:…….....

Name: ……..

Co-Supervisor's Signature:..... Date:.....

Name: ……..

ABSTRACT

The study examined perceived impact of professional development on competence and instructional practices among junior high school teachers in the Adansi-South District. A descriptive survey design approach was used for the study. Using the census technique, junior high school teachers from the various public schools were contacted with 285 participants responding to a structured questionnaire. Statistical procedures adopted in the data analysis were mainly means and standard deviations, multiple regression, and one-way MANOVA. The study found that the predominant teachers' professional development was the ones that were concerned with planning in the classroom. Teachers also believed they had high levels of professional competence. Also, teachers believed they had good instructional practices. Teachers' professional development predicted both professional competence and instructional practices. There were no significant gender differences in teachers' professional competence whilst there were gender differences in instructional practices. Finally, there were no significant gender differences in teachers' professional development. Based on the findings, it was recommended that the Ministry of Education, Ghana Education Service and head teachers should ensure that teachers go through regular continuous professional development. Educational policy makers as well as organisers of Continuous Professional Developments should organise training programmes that are relevant for teachers in the classroom.

KEYWORDS

Professional Development

Professional Competences

Instructional Practices

Self-efficacy

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DEDICATION

To my entire family

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LIST OF ACRONYMS

CPD	Continuous Professional Development
GES	Ghana Education Service
GNAT	Ghana National Association of Teachers
IEPA	Institute Educational Planning and Administration
INSET	In-Service Education and Training
IoE	Institute of Education
JICA	Japan International Cooperation Agency
MoE	Ministry of Education
NEA	National Education Association
OECD	Organization for Economic Cooperation and Growth
PD	Professional Development
TALIS	Teaching and Learning International Survey
TED	Teacher Education Division
TIP	Teacher Instructional Practices
TPC	Teacher Professional Competence
TPD	Teacher Professional Development
UCC	University of Cape Coast
UNESCO	United Nations Educational, Scientific & Cultural Ogranisation

CHAPTER ONE

INTRODUCTION

This chapter is the introductory part of this thesis work. It has been carefully written to capture the necessary sub-topics such as the background to the study, statement of the problem, purpose of the study, research questions, research hypothesis, significance of the study, delimitations, limitations and the organization of the study in the paragraphes below.

Background to the Study

Education is a crucial component of national development. Quality education is very essential to get the best out of it for better national development. While various elements have been found as contributing to students' exam success, it is well documented that great teachers are the most significant component in ensuring quality education and student success (Usman, 2016). Education has become a complicated process that brings various facets to play and the success of any educational process rests around the success of the teachers. The importance of a teacher in this difficult process cannot be overstated. Education achieves its purpose of teaching and nurturing pupils through teachers. Teachers must be properly educated to provide an acceptable teaching-learning environment. Literature suggests that teachers' academic and professional training has a direct and beneficial impact on pupils' performance and achievement. The goal of teacher education and other professional development is to encourage teachers to learn and grow as

individuals and as professionals. The world is in continuous transition in every area of life. This explains that the position and training of schools are evolving in many countries and so is what teachers expect. However, teachers most especially in the Adansi South District often face immense obstacles in the schools driven by relentless technical progress and the expectations of the 21st century. There is therefore the need for constant professional development for the teachers to boost their competence level as well as equip them with advanced instructional practices to help them meet the constant advancement in the education sector.

Every culture's primary factor of transformation is education. It also can engineer and guide socioeconomic growth, with the broad purpose of transforming people's character and equipping them with the skills and intellectual understanding needed to address society's problems. This necessitates educational sector uniformity, which is the sixth priority of education for all programs, with the goal of improving all aspects of education, fostering excellence, and producing visible learning results (United Nations Educational, Scientific and Cultural Ogranisation- UNESCO, 2015, p4). Every educational system's standard is mostly determined by the teacher's ability, dedication, and commitment (Rahman, Jumani, Akhter, Chisthi & Ajmal, 2011). To reach this criterion, teachers should receive ongoing education and professional development that will equip them with the skills they need to keep up with changing trends and changes in the classroom.

Changes in the nation's education system, as well as worldwide demands, necessitate the development of well-equipped instructors in their particular fields of instruction. Global issues such as hyper-competition,

technical advancement, and financial constraints serve as catalysts for human progress (Osei-Owusu, 2020). "For individuals to respond to these global concerns and its climate, they must continue to learn" (Galbraith & Founch, 2007, p. 14). Teachers frequently confront challenges in the classroom as a result of rapid technological advancement and the high expectations of the twenty-first century. Schools and organizations are now expecting more output from their teachers as a result of the major shift in how things are done (Galbraith & Founch, 2007). This means that no matter how good pre-service teacher preparation is, teachers cannot be prepared for all of the challenges they will face in their careers. This is because these impediments are always changing.

Teachers in Ghanaian classrooms are being asked to teach in more inclusive classrooms, place a greater emphasis on including students with special learning needs in their classes, allow for more efficient use of information and communication technology for teaching, participate more in preparation within evaluation and accountability frameworks, and do more to involve parents in schools (Teaching and Learning International Survey (TALIS), 2013). In this regard, Haileselasse (2004) suggests that, because the world is rapidly changing, teachers, like most other specialist classes, must determine whether their initial teaching skills are adequate for the rest of their lives; they must enliven and develop their skills and strategies throughout their career development.

Professional Development (PD) for teachers has become more important around the world as a result of the increased need for improved skills and competency. The reason for this is that professional development is frequently

utilized to improve learner efficiency and the development of necessary abilities (Coolahan, 2002). Because of the premise that students' progress and success are mostly reliant on the productivity of teachers, teachers' professional development (TPD) has become a prominent issue in education reform and teacher development literature (Organization for Economic Cooperation and Growth [OECD], 2009). In most countries around the world, TPD has become a focal point in education. It is often recognized as the most effective way of professionally educating teachers and improving their teaching and intervention skills when they first enter the teaching area (Fraser, Kennedy, Reid & Mckinney, 2007). Individuals who wish to expand their technical abilities and obtain competence above the fundamental qualifications required to do their jobs are supported by PD (Gray, 2005).

All of the practices that teachers engage in during their careers are meant to help them better their work, according to the concept of professional development (PD) (Day & Saches, 2004). Pupils are expected to continue learning as a result of these practices, providing a framework for students to advance toward competency (Kelly, 2006). Instructors' professional development (TPD) is an organized, primary, and ongoing process in which teachers grow their skills and ethics per their specialized abilities (Isaacs, 2006). Professional development is defined as "actions that strengthen individual skills, experience, abilities, and other characteristics as instructors" by the OECD (OECD, 2009 p.49). Instruction, training, and criticism, as well as lots of time and support, are all part of the PD process. The TPD, in general, refers to ongoing chances for teachers to improve their human ability, knowledge, and other teaching qualities (Schostak, et al, 2010; Opfer & David, 2011). TPD is

primarily made available to teachers through workshops, seminars, or standardized qualification programs, as well as through school partnerships and shared teachers. "Coaching/mentoring, collaborative planning and teaching, and the exchange of good experience" are all helpful to TPD (OECD, 2009; Dampson, Antor, & Eshun, 2018).

Teachers benefit from professional development because it allows them to validate their abilities, experience, behavior, and strategies for implementing a certain curriculum. Teachers' participation in professional development services would help improve the curriculum and other academic functions in the classroom. According to Bolam (2000), professional development has a favorable impact on curricula and instructional practices, as well as the effectiveness of instructors and their interactions with students. Furthermore, Clarke and Hollingsworth (2002) claim that the "most immediate and relevant benefits of any successful PD for teachers have a beneficial effect on teachers' changing experience and practice." However, questions have been raised concerning whether male and female teachers had differing experiences with TPD. The findings of the literature (Gudmundsdottir & Hatlevik, 2018; Lauermann & König, 2016; Lumpe, Czerniak, Haney & Beltyukova, 2012; Lamote & Engels, 2010; Erdogan & Sahin, 2010) appear to be inconsistent, as they give different results on how male and female teachers experience TPD, professional competence, and instructional practices. Nonetheless, the crux of the matter is that TPD, in essence, leads to greater teacher and learner success.

TPD is a well-known strategy for improving teacher instructional practices and increasing comprehension of teaching courses. More effective professional teaching opportunities for teachers at schools that contribute to big

changes for instructors and their pupils are one way for teachers to improve their performance (Opfer & David, 2011). As a result, professional development is critical for educators to excel and get familiar with their global jobs. While teachers and other stakeholders benefit from professional learning opportunities, recent research suggests that the requirement for professional development varies by country. Gizaw (2006), for example, argues that it is unclear whether the PD program at the school/classroom level, like that of other schools and students, is enforced.

According to the OECD (2009), a large majority of teachers say their job does not match their needs. "Educators in Bulgaria, Denmark, and Lithuania require content, subject matter, and success criteria," according to the OECD (2009, p.13), "whereas educators in Austria, Hungary, Iceland, the Slovak Republic, and Slovenia require professional development in ICT teaching skills, special learning needs of pupils, student discipline, and behavioural issues." This shows that, while professional development is vital for teachers, it is equally critical to ensure that these programs match the needs of the teachers. This appears to be a serious issue in some parts of Ghana, particularly in the Adansi South District, where teachers claim that CPDs organized for them do not adequately address their needs.

Hussin and Al-Albri (2015) found that school administrators in Malaysia require professional development in the areas of goal-setting, preparation, program delivery, and evaluation, teacher leadership and teaching skills development, problem-solving, school performance evaluation, student learning, and awareness development. It also covered the development of

collaborative decision-making, data analysis, ICT use, the acknowledgment of fundamental basic and ideal education principles, the establishment of a learning organization, successful cooperation, better team involvement, workforce skills, and conflict resolution. In Africa, Etana (2009) found that teachers' teaching operations are less relevant due to a lack of quality teaching and lesser participation of faculty members and directors in secondary education in Ethiopia's West Wollega Zone. According to Melkie's (2010) research at South Gonder High Schools, the majority of instructors are aware of the purpose of professional development for teachers and have a positive impression of the system. Some teachers, on the other hand, hold negative views. It has also been discovered that over 60% of Ghanaian teachers support professional development in some way (Essel, Badu, Owusu-Boateng & Saah, 2009). According to Desalgne's (2010) research, PD's activities are quite bad. Belay (2016) revealed that teachers had an inadequate understanding of TPD logic in another study. Teachers needed professional development in extracurricular and academics, athletics, teaching and appraisal systems, teacher-student connections, and instructional management environments, according to Sagir's (2014) research.

Teachers should be professionally developed in the areas of teaching methods, institutional skills, organization, administration, ICT, research, publishing, mentoring, and supervision, according to Odoom, Opoku, and Ntiakoh Ayipah (2016). Chepkole, Koross, and Kiptoo-Tarus (2017) found that Heads of Department (HODs) were required to be established in technical sectors such as curriculum distribution, teaching, and learning evaluation. Teachers, school directors, and School Improvement Support Officers (SISOs)

study-specific personnel in Ghana, according to Dampson and Mensah (2018), needed advancement initiatives across both geographical locations, such as classroom courses/workshops, in-service training in new school curricula, school management, and communication, and an education degree/certificate. Some barriers prevent instructors from participating in PD programs around the world. According to the OECD (2009, p.23), "the primary source of unfulfilled demand (according to teachers) is a conflict with their work schedule, but a lack of sufficient development opportunities is also a big factor." Cobbold and Dare (2011) conducted a review of TPD programs in Ghana and found that CPD programs in Ghana had various difficulties, including poor TPD provision and ad hoc nature. Similarly, Alemayehu (2011, p.15) states that "the key factors affecting the implementation of TPD programs are a lack of well-organized concerned body, lack of commitment/motivation, lack of coordination across schools, lack of trustworthy support, lack of follow-up, and lack of understanding."

According to a study conducted by Gosa (2012) in Jimma Zone SHS, "the lack of enthusiasm among teachers for the program, as well as the lack of encouragement from education experts and supervisors, were the key reasons impeding the implementation of TPD programs" (p.14). Chemir (2013) looked into the Gurage Zone High Schools and found that "the lack of commitment of teachers to engage in instruction, the lack of support from school administrators, and the lack of cooperation between teachers and school leaders were all factors that influenced the implementation of TPD programs" (p.16). According to the findings of an Ashebir (2014) study conducted at Kemashi Zone Secondary Schools, "teacher involvement in professional development activities, such as

mentorship, portfolio development, action research, and peer observation, was negligible" (p, 19). These data show that, while TPD is necessary, it may only be effective if teachers are enthusiastic and collaborate because it most likely serves their purpose.

Ghana, in particular, faces worldwide problems in developing employee skills and building capacity through ongoing professional development, teachers, and entities such as the Ghana Education Service (GES). The GES, in particular, and its affiliated organizations, have championed the cause of providing teachers and schools with services aimed at improving student achievement. Ghana and its High Schools have been primarily prepared by significant educational endeavors. Instructors' development is defined in this study as specialized education, technical training, or advanced practical formation meant to help teachers increase their professional knowledge, competence, ability, and work performance.

In Ghana, in-service education and training (INSET) programs have mostly concentrated on supporting applicants in passing their promotion examinations throughout the last few decades. The Ghana National Association of Teachers (GNAT) initiated this effort for its members (Essel, Badu, Owusu-Boateng, & Saah, 2009). Furthermore, the Teacher Education Division (TED) of the Ghana Education Service (GES), the Institute of Education (IoE of the University of Cape Coast [UCC]), the Institute for Educational Planning and Administration (IEPA of UCC), and the District and Regional Education Offices all organized CPDs aimed at improving teacher proficiency (Essel, Badu, Owusu-Boateng, & Saah, 2009). For the most part, such training for

better teaching and learning was uncommon and did not follow any planned pattern.

In 2005, the Ministry of Education (MoE) and the GES, with the assistance of the Japanese government, implemented an arrangement aimed at operationalizing PD at the primary and secondary school levels, which had hitherto been neglected. INSET became systematized and institutionalized in Ghana as a result of this endeavor. According to the Ministry of Education (2012), a policy for pre-tertiary continuous professional development was established and enacted at the end of the operationalization of the Japan International Cooperation Agency (JICA), which encouraged nationwide INSET engagement. "The national CPD intends to develop an institutionalized system for teacher CPD," according to the GES (2013, p.6). As a result, the GES intends to offer instructors with resources for in-service career progression to maintain a high level of teaching personnel." It was also to guide the development of teachers' professional principles and behaviors, as well as their professional experience and competence, and professional instructional techniques (GES, 2013).

When scientifically proven, competence is defined as the ability to achieve anything an individual believes they are capable of (Ayeni, 2005). According to Ololube (2006), applying competence in education refers to a person's ability to fulfill specific tasks, one of which is teaching. According to Ayeni (2005), teachers' competence is determined by their sense of vision and interest in information sharing. Goodall, Day, Lindsay, Muijs, and Harris (2005) updated Ayeni (2005) by saying that teacher competency goes beyond basic interest in disseminating knowledge and instead emphasizes dynamic

involvement in the transmission of knowledge, in which teachers demonstrate mastery of the subject matter (Kanu & Ukpabi, 2007). Competence has been used in the evaluation of teachers at three different phases, according to Hamdam, Ghafar, and Li (2010): student-teachers, foundation teachers, and experienced teachers. Diverse parties, including teacher instructors, investigators, and governments in various countries, guide these exams.

Professional competence is defined as the collaborative type of considerations, ability, attitudinal variables, and motivational variables for carrying out a certain activity or work (Epstein & Hundert, 2002; Kunter, Kleickmann, Klusmann & Richter, 2013). Professional competency, according to Epstein and Hundert (2002), is described as the regular and meticulous application of the message, knowledge, practical skills, scientific reasoning, feelings, worth, and similarity in daily practice for the benefit of the specific and general population served. Professional competence is unnatural, but it may be cultivated through teaching and learning, according to these explanations (Nhu, Loi, & Thao, 2016).

Professional competence of teachers, according to Tang, Cheng, and Wong (2016) and Lauermann, and König (2016), is about the integration of information and thoughts, talents and abilities, opinions, and ethical values. Organizational issues have been mentioned as one of the many aspects that have been claimed to influence teachers' professional competency. Workplace environment, school leadership, importance of interpersonal relationships among members, and reliance on the extent of teamwork and learning on the creation level of professional knowledge prospects were among the most common organizational factors noted to influence professional competence.

Professional development for teachers is viewed as an important strategy for improving their professional competence (Opfer & David, 2011). Teachers' professional competence has been connected to well-planned teacher professional development, according to Bolam and Weindling (2006).

Teachers' competencies, according to Caena (2014), are complex mixtures of information, abilities, understanding, values, and attitudes that lead to effective action in situations. The breadth and complexity of competencies required for teaching in the twenty-first century are so vast that no single person is likely to possess all of them, let alone have developed them all to the same high level. Though professional competencies may span a wide range of topics, including instructional practices, teacher instructional practices have been isolated from professional competencies for the sake of this study. This is because most teacher professional development programs have a strong focus on classroom activities.

In the classroom, teachers' instructional techniques are precise approaches that govern teamwork. These are teaching behaviors that are comfortable and dependable because they are based on consistent or regular practice (Ahmed, 2013). According to Hoge (2016), to receive a teaching qualification, several countries require teachers to demonstrate understanding by passing tests in their academic subject matter as well as general ability in their areas. Teachers' instructional practices, which have been a key component of teachers' professional qualifications, are involved in this process. Teachers' success in the classroom is inextricably linked to their instructional approaches (Tay & Saleh, 2019).

Knowing the potential effects of teacher professional development, the Ghana Education Service (GES) has made numerous efforts over the years to provide ongoing professional development programmes for teachers to improve their abilities and knowledge to provide quality education (Mensah, 2016). This is demonstrated by the creation of a National in-service training (INSET) unit inside the GES' Teacher Education Division (TED) entrusted with identifying teacher professional development needs and connecting them with appropriate training schools to provide teachers with the appropriate training (Abonyi, Yeboah, & Luguterah, 2020). Nonetheless, research into the Ghanaian education sector suggests that PD is ineffective in classrooms since most PD does not target the requirements of specific instructors (Ananga, Tamanja & Amos, 2015).

The existing professional learning environment in the country allows instructors to upgrade their knowledge and gain the necessary pedagogical skills through institutional training models and other open and remote learning options (Cobbold, Ghartey, Mensah, & Ocansey, 2009). However, teachers in some districts, particularly in the Adansi South District, frequently complain that professional development programs organized for them do not always address their needs. Teachers in the Adansi South District have expressed dissatisfaction with PD organizers who have failed to ask them what type of PD they want. This affects their competence levels and consequently their instructional practices. It is in this milieu that this study seeks to find out what the PD teachers in the Adansi South go through and the impact it has on professional competence and instructional practices.

Statement of the Problem

Anamuah-Mensah (2002), Adamu-Issah, Elden, Forson, & Schrofer (2007), Ministry of Education (2010), and Ministry of Education and Ghana Education Service (2012) all issued reports and policy approvals recommending the creation of a policy outline and the implementation of professional development programs for teachers. Evidence from literature (Dampson and Mensah, 2018; Chepkole, Koross and Kiptoo-Tarus 2017; Odoom, Opoku, and Ntiakoh Ayipah, 2016; Essel, Badu, Owusu-Boateng & Saah, 2009) suggest that specific teachers from specific context demand certain specific training and PD at any particular point in time. However, some sections of teachers in the Adansi South District have the perception that though PDs are sometimes organised for them, their specific needs are mostly not considered before organising PDs. Mostly general PDs are organised for teachers with considering their specific needs which tend to affect the effectiveness of the PD programmes. This therefore gives the room for this study to investigate on what kind of professional development teachers go through.

Education policy in Ghana recognizes TPD as a major part of education and learning. The Ministry of Education (2010, 2012) suggests that teacher education should be continuously extended throughout the individual years of intensive teacher training. The Ministry argues too that the fundamentals set out in the PD Programmes, however, are not ideal for life. To this end, the MoE has started incorporating the PD services into the schools in coordination with the Japan International Cooperation Agency (JICA). The PD seeks to establish an institutionalized teacher PD system, as set out in the GES (Ghana Education Service, 2013). The ultimate aim of TPD is therefore suggested in Ghanaian

schools to develop the teacher to function effectively in the school. It is not clear, however, whether the intended objective of the TPD is achieved or not. Furthermore, in the face of these, Ghana government measures to improve the standard of education in schools, such interventions do not seem to yield the required returns most especially in the Adansi South District; as teachers in the Adansi South continue to complain about the effectiveness of the TPD programmes in the district.

Teachers in Adansi South District, like teachers worldwide, require professional development programs in planning, executing, and assessing classroom activities in order to improve their competence, knowledge, and instructional skills. There are some beneficial links between teacher professional development, teaching quality, and student academic achievement, according to the literature (Dampson, Antor, & Eshun, 2018; Hussin and Al-Albri, 2015; Opfer & David, 2011; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). These studies suggested that further researches are conducted to establish how professional development impacted on some variables like professional competence and instructional practices and quality. On this backdrop, this sought to find out the impact PD have on competence and instructional practices.

From this, it is evident that teachers of Adansi South need PD programmes to meet their specific needs and interest. It, however, appears that little empirical studies have been conducted to find out the TPD needs of teachers in the Adansi South District. Besides, it also appears that studies that have been conducted in Ghana focused extensively on other teachers in other districts and mostly in Post Basic Schools (Dampson, Antor, & Eshun, 2018,

Essel, Badu, Owusu-Boateng & Saah, 2009, Cobbold & Dare, 2011 Odoom, Opoku & Ntiakoh Ayipah, 2016). To fill this gap, this current study intends to investigate the impact of a professional development programme organised by Ghana Education Service in Adansi South District on teachers' professional competences and instructional practices.

Purpose of the Study

The study sought to investigate the impact of teachers' professional development on teachers' professional competence and teachers' instructional practices. Specifically, the study addressed the following:

1. Examine the kind of professional development teachers goes through in the Adansi South District.
2. Examine the perceived professional competence among teachers in the Adansi South District.
3. To find out the perceived instructional practices adopted by teachers in the Adansi South District.
4. To establish the extent to which teachers' professional development impact on teachers' professional competence and teachers' instructional practices in the Adansi South District.
5. To establish gender differences in teachers' professional competence and teachers' instructional practices in the Adansi South District.
6. To establish gender differences in the kind of professional development teachers' go through in the Adansi South District.

Research Questions

1. What kind of professional development do teachers go through in the Adansi South District?

2. What is the perceived level of professional competencies among teachers in the Adansi South District?
3. What perceived instructional practices are adopted by teachers in the Adansi South District?

Research Hypotheses

$H_0$1: Teachers' professional development will not impact on teachers' professional competence and teachers' instructional practices in the Adansi South District

***H_1*:** Teachers' professional development will impact on teachers' professional competence and teachers' instructional practices in the Adansi South District.

$H_0$2: Gender difference does not exist in teachers' professional competence and teachers' instructional practices in the Adansi South District.

***$H_1$2*:** Gender differences exist in teachers' professional competence and teachers' instructional practices in the Adansi South District.

1. **$H_0$3:** Gender difference does not exist in the kind of professional development teachers go through in the Adansi South District.

$H_1$3: Gender difference exists in the kind of professional development teachers' go through in the Adansi South District.

Significance of the Study

The findings of this study will help teachers to have a say in the specific TPD that they need. This will help to design PD programmes that target what teachers want to improve on. Doing so will raise their interest to participate. And again as teachers participate and engage more in TPD, it is likely to

influence their competence levels as well as their competence levels as well as inform their instructional practices.

Again, the findings of the study will help head teachers and school authorities to run continuous checks on what exactly teachers may need training on. This will help them in organising more effective PD programmes. Though general CPDs may be organised, the results of this study would allow GES and other stakeholders like the organisers of TPD to become aware of the specific TPDs that support teacher growth and development.

This research project has the potential to contribute to future research, educational practice, and policy. It could be important to everyone in education since it adds to the growing corpus of quantitative research linking organizational characteristics, teacher professional development, teacher professional competence, and teacher instructional practices.

This study is expected to help policy makers in education to create new and relevant policies in the development of teacher competency and instructional techniques, hence raising the standard of education in Ghana.

Delimitations

To ensure a comprehensive study, the following delimitations were observed. Contextually, this study looked into Teacher professional development effects on Teacher Professional Competence (TPC) and Teacher Instructional Practices (TIP) because they were the variables of concern. The study did not take into consideration the teacher-related issues that affect their TCP and TIP in the Adansi South District. Geographically, the study was delimited to only public Junior High Schools in the Adansi South District. This is because TPD programmes and training sessions are mostly done by public

schools. The target population were teachers of public Junior High Schools in the Adansi South District. JHS teachers were the target because these teachers were the ones who were preparing students for final exams. JHS teachers are the ones who mostly go through PDs and therefore prudent to find out if TPD impacts their TPC and TIC.

Limitations of the Study

The study did not reflect the entire population of Junior High School teachers in Ghana. The study used only JHS teachers in Adansi- South. The target population was small which made the researcher use a census method. This makes it difficult to make inferences about all JHS teachers in Ghana. Again, not all respondents responded to the questionnaire. The questionnaire yielded a response rate of 95%.

Organisation of the Study

This study is divided into five chapters. Chapter one presents an introduction to the entire study including the background to the study, statement of problem, purpose, objectives, research questions and hypotheses, significance, delimitations and limitations of the study. Chapter two presents a review of related literature taking into consideration the theoretical and conceptual as well as the empirical base of the study. Chapter three presents the methodology of the study which includes the research design, study area, the population of the study, sampling procedure, data collection instruments, data collection procedures and data processing and analysis. Chapter four presents the results and the discussion. Finally, chapter five presents the summary, conclusions and recommendations as well as suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

The preceding chapter captured the background of the study, statement of the problem, the purpose of the study, research questions, research hypotheses, significance of the study, delimitations and limitations of the study. This chapter presents the theories that underpin the study, and the proposed conceptual model together with a review of literature related to the study. The literature review is structured under various headings to expedite smooth reading.

Theoretical Framework

The theoretical framework of a study is the framework that holds and supports a research study's theory (Swanson, 2013). The theoretical framework introduces and describes the theories that explain why the research challenges are being investigated. This study exploited the Bandura Social Cogntive Learning Theory on TPD, Bandura Self-Efficacy Theory on TPC and the Social Constructivist Theory to describe the theoretical relationships between the variables of concern in the study. These theories are considered appropriate for this study because of their theoretical connection to the variables in question in the study. These theories are expounded below.

Bandura's Social Learning Theory and Self-Efficacy (1977)

Social learning theory is a learning and social behaviour theory that suggests that new behaviours can be learned by watching and imitating others (Bandura, 1971). It claims that learning is a social cognitive process that can proceed solely through observation or direct instruction, even in the absence of motor reproduction or direct reinforcement (Bandura & Walters, 1963).

Learning happens through the observation of rewards and punishments, a process known as vicarious reinforcement, in addition to the observation of behaviour. When a behaviour is consistently rewarded, it is more likely to continue; on the other hand, if the behaviour is consistently punished, it is more likely to stop (Renzetti, Curran & Maier, 2012). The theory builds on classic behavioural theories that emphasize the importance of many internal processes in the learning individual, rather than focusing exclusively on reinforcements (Bandura, 1971). This idea is used to explain how teachers grow and can grow to improve their competence and teaching abilities. Learning takes many ways, according to the idea, including observation, vicariously, imitation, and direct instruction. This means that teachers can learn how to improve by watching other teachers and professionals. They may also learn to develop when they recognize the benefits of professional development, particularly when they observe other teachers getting recognized. Teachers can learn to develop by following in the footsteps of their mentors and following directions.

Cornell Montgomery, who claimed that social learning occurs through four primary stages of constraints, is said to have inspired social learning theory (Rotter, 1954). Close contact, imitation of superiors, conceptual understanding, and role model behaviour are among them. Observing, imitating, and reinforcing are the three components of social learning. Julian Rotter developed learning theories instead of psychosis and behaviourism-based ideas. Bandura's (1979) social learning theory is one of the tenets and possibly the most fundamental theoretical underpinning of entertainment education. Experimental psychology research show how youngsters learn and copy modelled behaviours, which led to the development of this hypothesis. Despite being originated from

the subject of social psychology, it is a general explanation of human behaviour. Bandura's social learning theory emphasizes the necessity of seeing and modelling other people's behaviour, attitudes, and emotional responses. People learn via witnessing role models in everyday life, according to Bandura (1977).

Albert Bandura researched interpersonal learning mechanisms that were not fully explained by operant conditioning theories or existing social learning models (Bandura & Walters, 1963). Bandura claimed, for example, that "The shortcomings of learning techniques that ignore the impact of social variables are most evident in their consideration of the acquisition of novel responses" (Bandura & Walters, 1963). Skinner's theory of learning new responses was based on the process of successive approximation, which required repeated trials, reinforcement for behaviour components, and gradual modification (Skinner, 1963). The chance of a behaviour occurring, according to Rotter's hypothesis, was a function of the subjective expectancy and value of the reinforcement (Rotter, 1954). Because this approach expected a hierarchy of prior responses, it didn't account for a response that hadn't been learned yet. The Bobo doll experiments were the most famous of Bandura's investigations on the quick acquisition of unfamiliar behaviours through social observation.

The notion of observational learning was proven in this Bobo doll experiment. The social cognitive theory describes how people learn through watching others. Students copying the teacher is an example of social cognitive theory. Self-efficacy is the belief in one's ability to plan and carry out the steps necessary to deal with a potential circumstance." To put it another way, self-efficacy is the belief in one's own ability to act. Albert Bandura used the Bobo Doll Experiment to study aggression and non-aggression in children. In terms

of professional growth, instructors can learn from other teachers and professionals who have advanced their careers. They not only observe but also emulate what their mentors did to improve.

For many experts in the subject of professional development and learning, Bandura's Social Learning Theory is a well-researched theory. People learn by witnessing and imitating others' behaviours (modelling), as well as by observing people's experiences (vicarious learning). Self-efficacy is at the heart of this theory, and this study focuses heavily on it as a determinant of teachers' professional competence.

"People make causal contributions to their psychosocial functioning through systems of personal agency," Bandura (1997) wrote in one of his landmark books, summarizing the importance of self-efficacy. Personal efficacy beliefs are the most central and widespread of the agency mechanisms. People are only motivated to act if they feel their activities will result in the desired outcomes. As a result, believing in one's efficacy is a powerful incentive for action. Personal efficacy beliefs guide how people spend their life. This means that for teachers to develop and sustain professional competence, they must first trust in their ability to perform and give their best.

According to Bandura (1986), self-efficacy beliefs are at the heart of human functioning, thus teachers must have faith in their ability to do the essential actions under normal and, more crucially, demanding conditions. According to Artino (2012), effective functioning necessitates both skills and efficacy beliefs, two components that evolve together as people grow and learn. Furthermore, these two components of the good human functioning act in a reciprocal manner, a phenomenon Bandura (1997) dubbed "reciprocal

causation," in which one component's functioning is partially dependent on the other's.

Bandura (1986) defined self-efficacy as assessment of people's abilities to plan and carry out the actions required to attain various types of results. Two major characteristics distinguish this notion, both of which merit more consideration. To begin, self-efficacy is a conviction in one's competence, which may or may not correspond to one's real aptitude in a certain field. According to Pajares, most people overstate their academic abilities based on study data (as cited in Artino, 2012). According to Bandura (1986), the most beneficial efficacy judgements are those that slightly exceed one's actual capabilities, as this minor overemphasis may boost effort and persistence in challenging situations. The next important element of self-efficacy, according to Bandura, is that people use their efficacy assessments about some goal. This shows efficacy beliefs' task and situation-specific characteristics.

This aspect of self-efficacy contrasts with other more general measures of anticipation, such as self-concept and self-perceptions of competence, which, while domain-specific, tend to be more global self-perceptions, according to Pajares (1996). Bandura (1977) believed that self-efficacy influenced an individual's activity choice, effort, and perseverance in some situations. People who have low self-efficacy for completing a task are less inclined to participate, but those who believe they can succeed are more likely. Furthermore, people who are confident in their talents are regarded to put in more effort and endure longer in the face of hardship than those who are unsure (Bandura, 1977).

According to Bandura (1997), the tendency for competent people to "expend more effort and endure longer" is particularly essential because most

personal accomplishment takes ongoing work. As a result of low self-efficacy, a self-limiting process emerges. To succeed, people must have a high level of task-specific self-efficacy as well as the resilience to confront life's unavoidable adversities.

Self-efficacy is derived from several primary sources, according to Artino (2012), including mastery of actual performances, vicariously observing others, persuasion formation, and physiological and affective states from which people judge their abilities, strength, and vulnerability to dysfunction.

Because it gives the most direct, real evidence that a person may gain the personal resources needed to achieve, mastery of actual performance is regarded to be the most influential source of efficacy information among the sources (Bandura, 1997). According to Bandura (2006), domain specificity is an important component of self-efficacy, which indicates that people appraise their potential based on the specific domain of functioning. As a result, personal efficacy is a self-evaluation that is specific to the activity domain, rather than a generic disposition that is unrelated to context. Bandura (1997) noted that high self-efficacy in one domain does not necessarily imply high efficacy in another. To have predictive potential, measures of perceived self-efficacy should be tailored to specific domains of functioning and represent gradations of task demands within those domains.

Using Bandura's theory as a guide in this study, instructors must develop positive self-perceptions and think that they have a chance to obtain professional competence in education and teaching regardless of the conditions. Again, it is prudent for instructors to model behaviours that will attract the attention of other teachers in whatever they are doing and allow them to emulate (vicariously)

them to their benefit. For their professional development, other teachers could benefit from modelling and vicarious learning.

Theory of Social Constructivism (Vygotsky, 1986)

The social constructivism theory of knowledge is that in which Human development is socially situated, and knowledge is formed via interaction with others (McKinley, 2015). "Constructivism is a theory founded on observation and scientific research of how individuals learn," (Hein, 1991 p4). It claims that "humans develop their understanding and knowledge of the world by experiencing and reflecting on things." When one is presented with new information or facts about life, he/she must reconcile newly acquired knowledge and experience with what they have previously known and believed. This is essentially a constructivist mindset in practice, whether one is aware of it or not. New facts, new experiences, and new information all present one with the task of integrating the new with what is currently known and belief about life and the world in general. This means that teachers could professionally develop and learn new things through creating new experiences and interacting with other teachers.

Teaching and learning, under the constructivist approach, is neither a mechanistic nor deterministic method or process of transferring knowledge from the teacher's mind to the minds of learners. Constructivism, on the other hand, is the process by which a teacher develops an atmosphere and environment in which learners feel comfortable enough to collaborate with the teachers in the pursuit of knowledge, mastery, and self-actualization. As a result, constructivist learning is a process in which teachers in the Adansi South

construct their meaning from their own experiences: what they see and hear assists them in making sense of what they have learned.

Knowledge is constructed, according to social constructivists, when people discuss and do things together about common problems or tasks (Ewur, 2011). In this case by application, teachers could learn new skills and professionally develop by sharing issues and learning from one another. Learning is defined as the process by which more experienced members introduce newcomers to a culture. Active learning, discovery learning, and knowledge development are all examples of constructivism (Ewur, 2011). Constructivism promotes an unlimited investigation by a learner inside a framework or structure, regardless of variation. The teacher acts as a guide, encouraging students to find principles for themselves and apply what they've learned to real-world problems. Constructivism encompasses self-directed learning, transformational learning, experiential learning, contextual cognition, and reflective practice (Greenberg, 1987).

The constructivist theory questions the traditional goals of education by encouraging learners (teachers in the Adansi South District) to develop their expertise rather than merely obtaining it from more seasoned teachers (head teachers, head of departments, CPD coordinators, or facilitators, etc.). Since Vygotsky assumes that people consciously build new information through the relationship with a new world, design theory, and how it applies to the learning process then the same processes could be adopted in gaining new professional skills. PD systems, which are based on Vygotsky's constructivist principles, are devising the perfect classroom to systematically organize and even

institutionalize TPDs by tying two more philosophies for teachers to maximize their general potential.

Conceptual Review

Concept of Teacher Professional Development

Professional Development

Professional development is an indispensable element for all employees at all levels of their employment. Professionals must be well-versed in a broad range of subject matter. Furthermore, understanding the theory and research that underpins the knowledge base is crucial in guiding the thousands of decisions made every day by professionals. To develop their abilities and professional judgment, every worker must engage in the purposeful practice.

Professional development is defined by the Organisation for Economic Co-operation and Development (OECD) (2009) as "actions that enhance an individual's skills, knowledge, competence, and other characteristics as a teacher (p 49)." Professional development can help individuals and teams increase and/or improve their knowledge and talents as educators. Professional development might take the form of formal classes, seminars, or workshops. Professional development, on the other hand, can refer to anyway by which a person might better his or her understanding of their profession and advance their career, such as attending work-related conferences, taking online courses, or even conducting independent research (National Education Association, NEA, 2021).

Professional development can be required (at the school, district, or state level) or done voluntarily with some financing. Professional development might concentrate on broad skills such as interpersonal communication or specialized

topics such as child psychology. Professional development is distinct from graduate work in that it is considered a form of continuing education rather than a means of acquiring a traditional, formal degree. Basic training, which focuses on the acquisition of specific skills, is also distinct from professional growth. Professional development offers a more holistic approach, seeking to promote overall improvement and growth (NEA, 2021). Medicine, law, and education are all professions that require continuous professional development throughout a person's career.

Teacher Professional Development

In many nations, the nature and purpose of schools, as well as what is expected of teachers, are changing. Teachers are being asked to teach in increasingly multicultural classrooms, to put a greater emphasis on integrating students with special learning needs into their classes, to use information and communication technologies more effectively in the classroom, to participate more in planning within evaluative and accountability frameworks, and to do more to involve parents in schools (Teaching and Learning International Survey (TALIS), 2013). No amount of pre-service training, no matter how thorough, will be able to prepare teachers for all of the challenges they will face during their careers. Education systems try to provide opportunities for in-service professional development for teachers to maintain a high standard of teaching and retain a high-quality teacher workforce.

Effective professional development is ongoing, according to the Organisation for Economic Co-operation and Development (OECD) (2009), and includes training, practice, and feedback, as well as enough time and follow-up. Teachers are encouraged to build learning communities and participate in

learning activities comparable to those they would do with their students. The idea of transforming schools into learning organizations and creating more systematic ways for instructors to share their expertise and experience is gaining traction.

Teacher professional development is defined by Kampen (2019) as "any sort of continuing education effort for educators." It's one strategy for teachers to improve their skills and, as a result, student outcomes. The term recognizes that development can take a variety of forms, from formal to informal. It can be made available through external expertise (seminars, workshops, or formal qualification programs), a collaboration between schools or between teachers (e.g. observational visits to other schools or teacher networks), or collaboration within the schools where teachers work. Development can be aided through coaching/mentoring, collaborative planning and teaching, and the sharing of best practices. In other words, learning can take place in both formal and informal settings. Formal settings include conferences, courses, seminars, retreats, and workshops. Informal opportunities for teacher professional development include independent research or investigation, peer learning programs, or simply speaking with a colleague in the staff lounge. Professional development is provided to instructors on a variety of levels, including district-wide, among teachers at a particular school, and even in the classroom or individually.

Obtaining new teaching ideas and methodology based on the latest research, as well as implementation tactics, is the most common purpose of teacher professional development. According to (NEA, 2021), the importance

of professional development for educators originates from a variety of factors, including:

1. Research to increase our understanding of beneficial approaches is underway (e.g., emerging research in such areas as informed pedagogy and social-emotional learning)
2. The ever-changing set of issues and needs that teachers must address in their interactions with children, families, and communities.
3. Modifications to the regulations and legislation that govern teachers' work (e.g., changes in the curriculum requirements for graduation)
4. Teachers' professional obligations are altering, particularly as assignments and responsibilities change (e.g., changing grading levels assigned to a teacher, or making a switch to online learning environments in response to a national crisis such as COVID-19).

States, districts, schools, legislators, and teachers' unions all play a role in cultivating a positive culture in which all teachers engage in ongoing professional development throughout their careers (NEA, 2021). Additionally, districts and schools must enhance their capacity to provide teachers with the time, space, support, and systems they need to facilitate ongoing, job-embedded professional learning. As a result, school leaders are vital in cultivating and promoting an organizational culture of lifelong learning and collaborative practice.

Importance of Teacher Professional Development

New strategies and approaches are constantly being tested, according to Kay and Greenhill (2011), and our understanding of the best ways to educate children is always changing. Best practices from a few years ago are no longer

appropriate due to the rapidly rising technology and expanding globalization of the twenty-first century. Federal and state rules are always changing, demanding ongoing training in how these changes affect the teaching profession.

Teacher professional development has an impact on student learning, according to Kampen (2019). Good teachers are better at instructing students. Instructors who have access to continual learning opportunities and professional development resources are better prepared to become great teachers, especially if their students have special needs or are functioning below or above grade level.

"The most successful professional development engages teams of instructors to focus on the needs of their pupils," noted Ducut (2019, p 1). They collaborate to learn and solve problems so that all pupils succeed." Student accomplishment should be the ultimate goal of all teacher professional development activities. As a result, professional development assists teachers in prioritizing what is best for their pupils while attempting to keep up with changing teaching and learning trends.

According to Ducut (2019), a third of teachers quit after three years, and half quit after five years. While there are a multitude of explanations for this statistic, there is no substitute for hands-on experience when it comes to effective classroom learning. Teachers spend their entire careers cultivating new skills in response to the challenges they confront, but new teachers haven't had that chance. Both new and experienced teachers can benefit from professional development to achieve the confidence they need in the classroom. Effective professional development aids instructors in shaping career-long learning (Kampen, 2019).

Teacher professional development encourages instructors to adopt a growth mentality. Teachers who participate in meaningful and targeted professional development programs increase student outcomes and foster a growth mindset. Teacher professional development allows instructors to actively participate in their education, ensuring that both students and teachers are eager to learn. When instructors give learning and support to students, teacher professional development shows them that the school community values their work and wants them to succeed. (2019, Ducut).

How to Make Teacher Professional Development Effective and Engaging

The difficulty of preparing a successful teacher professional development session is exacerbated by time, money, engagement, effectiveness, and other factors. While the challenges may be daunting, organizers should not let them prevent them from creating opportunities for your teachers to learn more. Kampen (2019) presented some things to examine to ensure that teacher professional development is both effective and interesting.

Make it Specific: Every teacher has unique challenges in the classroom and brings a diverse set of skills to work every day. However, in the interests of time, cost, and efficiency, many professional development alternatives for teachers are unduly broad and irrelevant to the majority, if not all, of the instructors who attend. If organizers want professional development to be relevant, they should seek teachers for ideas; there's a good chance they'll have a lot to say. Teachers should be able to study whatever they choose and in whatever way they want. Teachers should be able to choose from a choice of seminars or courses. If a variety of solutions are not available, issues should be minimized to a minimum. Rather than focusing on width, focus on depth, and

ensure that instructors leave with all of the information they need to begin implementing it in the classroom. Feedback should be solicited at the end of the session and then used to continue the cycle. Inquire of the teachers about what went well, what did not, what they would change, and what they want to learn more about next time. Perdue (2018, p 1) writes:

"Change in education is driven by teachers, but teachers have been left out of the conversation. They know what their classrooms need, yet they don't feel empowered or emboldened by their school systems and their states, and they lack the tools and funding they need to help their students succeed."

Teacher professional development can be tailored in a variety of ways. To begin, according to Perdue (2018), data on what instructors desire to learn more about and comments on the success of past sessions should be collected using methods such as surveys and questionnaires. Other options include dividing teachers into groups depending on their grade level or topic area. A general session on inquiry-based learning, for example, will be more effective if all of your school's physics professors establish techniques to execute the concept systematically inside their departments.

Make sure the problem is connected to the school's overall educational goals. Teachers are not expected to sit through an in-service if it cannot be articulated how it would help the school achieve its goals.

To construct an interdisciplinary educational activity, teachers should be teamed up. By collaborating, two teachers can create a dynamic learning environment for their students by thinking outside the box.

Get Teachers Invested: Most teachers will tell you that being treated like a student bothers them; they are trained professionals who are there to

perfect an already formed, one-of-a-kind, and powerful skill set. In this instance, the workshop is unlikely to make a significant impact or inspire change in the classroom. Teacher disengagement is just as bad for students as it is for them. Use active learning tactics again if you're running an active learning session in the classroom. Have teachers explore activities or organizations in which their students can join if the topic is service learning. Teachers must also be eager and engaged. Teachers, like their students, learn in a variety of ways and have various reactions to auditory, kinesthetic, written, and visual learning methods.

Make Professional Development On-going: Professional development session was focused and interactive, and your teachers left feeling well-informed. Now it is time for teachers to put what they learned in the classroom into practice. Schools employ data-driven instruction approaches to plan professional development for teachers, but not to figure out how effective the efforts are. According to a 2016 poll conducted in collaboration with Learning Forward and the National Education Association,

"Many teachers indicate that their backgrounds, experience levels, or learning needs are not considered in the planning or design of their professional learning. Teacher responses are fairly low when asked whether professional learning programs in their schools are continuously evaluated to ensure quality results."

If teachers are not always learning from what worked and what did not, teacher professional development becomes a self-defeating loop. Teachers will not incorporate new teaching tactics or ideas into their classrooms if they do not believe they will receive the support they require, resulting in a loss of time, effort, and money. Teachers are typically hesitant to try new tactics in their

classrooms due to uncertainty, unresolved questions, and a lack of confidence. As an administrator, the best thing is to ensure that teachers are supported in their efforts to enhance their teaching. Make it clear to teachers that they may come to you with any questions or concerns they may have. Make judgments based on student and teacher achievement statistics on what to focus on next and how to motivate students to study.

Personalize Teacher Learning with a Professional Development Plan: A Professional Development Plan lays out short and long-term learning objectives for instructors, as well as the steps necessary to achieve them. Administrators should meet with teachers to identify which aspects of their plans should be considered: What is some of the subjects that they teach? What is the age range of the participants? Are they happy with their existing circumstances? What are their long-term plans? What information do they require for this to occur? Administrators should look at how individual teachers compare to the school's goals. Encourage teachers to keep learning and expanding their professional horizons to develop their careers. Using the SMART goal method, create goals that are Specific, Measurable, Attainable, Relevant, and Timely. Monitor how teachers are progressing on a monthly and annual basis by keeping track of them. Work with teachers to ensure that they have access to any additional resources they might need, such as courses, certification programs, or even emotional support as they try out new teaching strategies. Teacher professional development will be accomplished and sustained as a result of this.

The Concept of Teacher Professional Competence

Competency has been defined in light of the individual's and work's actual circumstances (Philip & Ramya, 2017). "A competency is a description of something that a person who works in a certain occupational sector should be able to achieve," Lasse (2015) said of training agencies. It's a description of a precise action, behaviour, or outcome that a person should be capable of." We can tie the three perspectives together with a red thread: Competence is simply a picture of what should be done for someone at work in terms of actions, behaviours, and the outcomes that should be demonstrated. Someone with the relevant knowledge, attitude, and abilities is required to complete the task. According to Philip and Ramya (2017), competence is defined as the ability to teach and educate after receiving education and training.

The term "professional competence" has been frequently used since the 1990s, and it has been the subject of thorough research by several educational academics (Toshboeva, 2015). Communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection are all used in everyday practice for the benefit of the individual and community served (Epstein & Hundert, 2002). The ability to master knowledge is referred to as professional competence (Rahman, 2014). The word refers to the skills required to offer high-quality care. Professional competence is a set of high-performing non-technical behaviours demonstrated with proficiency when interacting with patients, peers, and members of the healthcare team. People who practice these high-performing behaviours develop into highly skilled humanistic, ethically vigilant, thinking, socially responsive, and responsible physicians who are also resilient (Angelle, 2018). These skills go beyond the typical traits, trappings,

and traditions associated with becoming a doctor. Professional competence is defined as the ability to perform the tasks of one's profession in general, or a specific professional task, with acceptable proficiency.

The development of professional competence is at the centre of all discussions about what makes a "good teacher." Understanding why instructors have diverse levels of professional competence is likely to inform both teacher education and the recruitment of more qualified candidates for the teaching profession (Korthagen 2004). Lautermann and König (2016) found that teachers' professional competency is a crucial factor in their professional progress and success. Stone (Wajdi, Rahayu, Ulfatin, Wiyono, & Imron, 2018) defines teaching competency as a descriptive qualitative property of purposeful teacher action.

Teacher professional competence refers to skills that relate to a teacher's ability in the classroom. A comprehensive and deep understanding of learning materials, including curriculum content and the philosophical essence of scientific subjects, is defined as teacher professional competence (Jamal, 2009). According to Hakim (2015), professional competence is defined as the ability to cope with adjustment duties and lecturers' competence, and it is extremely important because it is linked to their performance. Teacher professional competency, according to Philip and Ramya (2017), is a set of knowledge, skills, values, attitudes, capacities, and beliefs that teachers must have to be successful in their jobs. Pedagogical, cultural, communicational, personal, intellectual, and other professional competencies are essential for effective teaching.

Controlling materials, managing learning programs, managing the classroom, using a media source, mastering the foundations of education, managing the interaction of learning to teach, assessing student achievement for the sake of teaching participants, and knowing the functions and procedures are among the professional abilities that the teacher should possess in the learning process, according to Saragih (2008). Mastery of the stages in research and critical analysis to examine teaching materials, as well as a grasp of the teaching materials and proper curriculum, understanding of the concepts and links with other sciences, and mastery of the stages in research and critical analysis to examine teaching materials are all indicators used to gauge professional competency.

Professionalism (specialized, methodical, psychological, and pedagogical training), work (work relations, the learning process itself, and the most effective use of resources, procedures, and training methods), and the arts (acting and oratory) combine to make up a teacher's competency (Toshboeva, 2015). Furthermore, because it is now obvious that a simple combination of knowledge is insufficient to "produce" certified professional specialists, today's teachers must have a strong sense of responsibility. The purpose of teaching is to inculcate in students new concepts and operating procedures, as well as the scientific knowledge system. The purpose of education is to assist students in the development of personality traits as well as specific character traits. The development's primary purpose is to strengthen students' mental talents in the classroom, such as intellect (thinking, cognitive, social, and political capacities), willpower, and self-sufficiency (Toshboeva, 2015). A teacher must be skilled in his teaching profession to attain all of these aims in students.

Importance of Teacher Professional Competence

Professional competency, according to Yeh (2009), is defined as a teacher's ability to perform professionally in the classroom as well as in response to the profession's general expectations. Professional competence is designed to help you practice successfully, which will lead to professional success (e.g., broad knowledge, and adaptive motivation). In this context, "success" might refer to a variety of outcomes. The most crucial measure of instructional success is students' learning outcomes and developmental trajectories (Kunter, Kleickmann, Klusmann & Richter, 2013). However, measures such as teacher participation in school growth outside of the classroom, acceptance of innovative new ideas, and career progression or professional development can all be used to assess excellent teaching practice (Kunter, et al, 2013).

Toshboeva (2015) defines professional competence development as the growth of creative originality, sensitivity to educational innovation formation, and the ability to respond to changes in the educational environment. Teachers' professional status is inextricably linked to the economical and spiritual growth of society. This suggests that a teacher's professional ability benefits not only the teacher but also society as a whole. A set of professional and personal abilities essential for successful teaching can be understood under the professional competence of instructors.

The Concept of Teacher Instructional Practices

A classroom is a lively place where students of various backgrounds, abilities, and personalities interact. Being a competent teacher demands the use of creative and novel teaching strategies to meet the specific needs of students.

Whether you've been teaching for two months or twenty years, determining which teaching methods will work best with your students can be difficult. As a teacher, there is no such thing as a "one-size-fits-all" solution, thus good teaching techniques to get you started are essential.

Specific teaching tactics that guide classroom involvement are known as teacher instructional practices (Virginia, 2019). Student learning research led to the discovery of these effective strategies. Teachers use optimal teaching methods as vehicles to take students through their learning more quickly. Instructional strategies help students reach their learning goals. To begin, determine the learning outcomes (the changes that should be seen in the students) and then ask yourself, "What experiences will cause these changes in the pupils?" 2021) (Center for Educational Innovation).

More than the teacher's background, beliefs, and attitudes define excellent instruction; it must also be responsive to students' needs as well as many students, classroom, and school background components. The OECD (2009) looks into whether teaching methods "adapt" to students' social and linguistic backgrounds, grade level, academic achievement level, and class size. Children with low intellectual abilities benefit more from structured, teacher-centred education, while students with high intellectual abilities may gain more from less structured, more challenging learning, according to research on aptitude-treatment relationships (OECD, 2009). The OECD (2009) does not allow for a study of whether classroom approaches are adapted to individual students, instead focusing on macro-adaptivity or the adaptation of instructional procedures to class characteristics.

Appropriate Teacher Instructional Practices

Components of teaching techniques have been connected to good classroom learning and student outcomes in studies. Students' progress has been proven to be improved by close supervision, suitable pacing, and classroom management, as well as clarity of presentation, well-structured lessons, and helpful and encouraging feedback – all acknowledged as fundamental aspects of "direct instruction" (OECD, 2009). This is insufficient; to be effective, the teacher must give learning opportunities that the student recognizes and takes advantage of. Motivation, goals, and outcomes must all be taken into account. As a result, the instructional quality framework extends beyond the above-mentioned direct instruction (OECD, 2009).

Klieme, Lipowsky, Rakoczy, and Ratzka (2006) propose three basic (second-order) dimensions of instructional quality: clear and well-structured classroom management (which includes key components of direct instruction), student orientation (which includes a supportive climate and individualised instruction), and cognitive activation (including the use of deep content, higher order thinking tasks and other demanding activities). These qualities should be seen as "hidden" characteristics that are related to, but not identical to, specific educational methodologies (Lipowsky et al., 2008). Basic features of teaching strategies include structure, student orientation, and increased activities. What teachers bring to the classroom has an impact on teaching methods (Baumert and Kunter, 2006; Campbell, Schwier & Kenny, 2009).

To stimulate instructional practices, Heather (2018) identified some effective classroom teaching tactics.

Visualisation: This is accomplished by using visual and hands-on learning activities to bring dry academic concepts to life, allowing students to

realize how their education applies in the real world. Showing a movie or a projection of what is being taught, as well as conducting classroom experiments and field trips, are examples.

Cooperative learning: This includes organizing small group or whole-class activities to encourage mixed-ability students to collaborate. Students' self-confidence, as well as their communication and critical thinking abilities, will improve as a result of verbally expressing their opinions and replying to others.

Inquiry-based instruction: Pose thought-provoking questions that inspire pupils to think for themselves and improve their learning abilities. To improve problem-solving skills and get a deeper understanding of academic difficulties, teachers should encourage students to ask questions and study their ideas. Both of these skills are essential in daily living.

Differentiation: Teachers should differentiate instruction by assigning exercises based on students' abilities to ensure that no one is left behind. When classroom activities are assigned according to children's specific learning requirements, those with better academic talents are stretched, while those who are struggling receive the necessary help. This can involve assigning worksheets of varying complexity to different groups of students or setting up a variety of workstations around the classroom with a choice of projects for kids to choose from.

Classroom Technology: Technology integration into the classroom is a fantastic way to actively engage students, especially since that young person in the twenty-first century is surrounded by digital media. On interactive whiteboards or mobile devices, images and videos can be projected to assist

students to visualize new academic ideas. Learning can become more participatory when technology is used since students can physically engage during lessons as well as examine their ideas instantly, increasing autonomy.

Behaviour Management: If teachers want to earn students' respect and give them an equal chance to reach their full potential, they must use an effective behaviour control strategy. Creating a mutually respectful environment through a combination of discipline and reward can benefit both you and your students. Classrooms that are noisy and disorderly are not conducive to learning.

Professional Development: Attending professional development seminars regularly is a fantastic way to improve classroom teaching and learning. With educational standards always changing, it is extremely helpful for instructors to attend events where they can gain inspiration from other teachers and academics. It's also a terrific method to collaborate with other educators outside of the classroom. Being an effective teacher is difficult since each student is unique. You can accommodate students' different learning styles and academic talents while also making the classroom a vibrant and motivating environment for students by mixing teaching approaches.

Empirical Review

Professional Development Teachers go through

A study on an affinity for learning: Teacher identity and powerful professional growth was undertaken by Noonan (2019). The study's goal was to see if teachers' "anchoring beliefs" were reflected in or refracted by their descriptions of effective professional learning. The study was designed using the phenomenological inquiry method. Teachers from five surrounding school districts in the northeastern United States were recruited using a stratified

sample technique. Participants were asked to "reconstruct and reflect" in semi-structured interviews. Professional development includes presentations from content experts, teacher-led reflective inquiry groups, and intense training on prescriptive programs and curricula, according to the data collected. Teachers go through several types of learning as part of their professional development. It was suggested that all efforts be made to make these types of professional development available to instructors.

Darling-Hammond, Hyler, and Gardner (2017) worked on teacher professional development as well. The purpose of the study was to identify the characteristics of good professional development. Teacher professional learning is gaining popularity as a means of supporting students' development of increasingly sophisticated skills in preparation for future education and career in the twenty-first century. To develop student competencies such as a deep understanding of the tough topic, critical thinking, complex problem-solving, effective communication and teamwork, and self-direction, sophisticated styles of teaching are required. Effective professional development is required to assist teachers in learning and refining the pedagogies needed to teach these abilities. Many PD initiatives, however, are ineffectual in encouraging changes in teacher practices and student learning, according to research. The data was collected from the participants using structured questionnaires. Teachers engage in active learning, and foster collaboration, models of effective practice, coaching, and expert support as forms of professional development, according to the data. It was suggested that for these well-designed programs to be effective, they must also be well-implemented. Even the best-designed PD can fail to get the desired results if it is not applied properly.

Hilliard (2015) studied worldwide blended learning strategies for teaching and learning, leadership, and professional development once more. The study's major goal was to come up with a guiding definition for blended learning, as well as to look at the benefits, team support, policy, management issues, the reason for expansion, professional development, purchasing, funding, evaluation, and future lenses and implications. Blended learning is becoming more popular around the world. Professional development training and general classroom offerings for a variety of educational programs across disciplines in global communities use blended learning. More professional development training organizations, and programs in departments and units at universities and colleges are incorporating blended learning as another educational instrument to employ in the delivery of instructional and managerial services, due to money and time restrictions. Data was collected and analyzed with the use of standardized questionnaires. Teachers were put through blended learning to discover new and enhanced ways of utilising instructional services, according to the conclusions of the analysis. Teachers also received leadership development training as part of their continuing education. Participation in the course description and collaborative learning were two more modes of professional development.

Pareja Roblin and Margalef (2013) further investigated learning from dilemmas: teacher professional development through collaborative action and reflection. The study's goal was to describe and analyze the interpersonal and intrapersonal issues that a group of five university professors had while participating in collaborative inquiry, as well as how they dealt with these dilemmas and how they influenced their professional development. To get an

in-depth insight into the general functioning of the inquiry community and the issues faced within it, a descriptive case-study technique was used. Over nine months, data were collected across two research cycles. In-depth interviews, working sessions, participant observation, and instructor narratives were the primary sources of data for this study. After each research cycle, in-depth interviews with participating teachers were conducted. Atlasti was used to transcribe and code all of the data collected. Teachers engaged in collaborative inquiry and critical reflection as modes of professional growth, according to the findings. It was suggested that teachers be supported in their efforts to improve themselves to keep up with changing trends.

The synthesis of the literature showed that different researchers reported varied forms of professional development teachers to go through. Some of this professional development included collaborative learning and training. Reasons for these varied forms of professional development are not highlighted. How it could be related to the fact that these studies were organised in different settings with different methodologies. Therefore methodological differences might have accounted for the differences in results. It is therefore important to find out what forms of professional development are common in Ghana.

Level of Professional Competence among Teachers

Professional competence is very crucial if teachers are to meet the needs of their students. It is therefore imperative to find out the levels of professional competence as reported in previous studies. Wachidi, Rodgers, and Tumanov (2020) did a study on the professional competency comprehension level of an elementary school in implementing a curriculum to report the degrees of professional competence of instructors. The goal of this study is to determine

the level of professional competence and comprehension of elementary school teachers in applying the 2013 curriculum in Bengkulu. The method employed in this investigation was analytical descriptive. The analytical descriptive research design was used in this study. The study's sample includes 100 elementary school teachers from Bengkulu City. Data was gathered through the use of a questionnaire and a paper. The data on professional competence comprehension level of elementary school teachers in implementing Curriculum 2013 was collected using a questionnaire. Experts investigated and verified the validity of the questionnaire. The number of elementary school teachers in Bengkulu City was determined using this document. After collecting the data, it was validated and processed using the % statistic approach. The findings demonstrated that school instructors were well-versed in their job and have high levels of competence. Professional competence was determined to be extremely significant, as it has the potential to improve student learning outcomes.

Jabborov (2020) went on to model England's pedagogical experience as a factor in increasing the quality of future teacher preparation. The goal of the study was to look at England's pedagogical experience as the most progressive in Europe, as well as the potential of incorporating it into the process of enhancing the preparation of future English instructors in Uzbekistan's pedagogical universities. The study also employed observation, statistical analysis, and content analysis methods, as well as comparative analysis and generalization of the sources and data used, scientific interpretation and synthesis of specific factual materials, and the integration of inductive and deductive methods. The sample included 360 students from Uzbekistan's

pedagogical universities. To determine the overall pedagogical and motivational variables in the preparation of future English instructors, the participants answered a bundle of diagnostic materials that included questionnaires, requirements, procedures, and exercises. Teachers had problems with professional competence, according to the data collected, implying that they had poor levels of professional competence. It may be stated that there is a need for deliberate and specifically structured actions to teach students of the republic's pedagogical universities foreign language professionally-oriented communication as an important component in the formation of highly competent specialists. Teachers' professional competency will be enhanced as a result of this.

Hakim (2015) also investigated the impact of teacher competence (pedagogical, personality, professional competence, and social) on learning performance. The goal of this study was to examine and determine the impact of teacher competencies (pedagogical, personal, professional, and social competence) on learning performance. Correlation using proportional sampling was the method utilized in the investigation. The samples were proportionately gathered from 117 faculty members scattered throughout 25 high schools in Konawe, Southeast Sulawesi. Teachers indicated excellent levels of professional competence, according to the results of data analysis using multiple regression. In part, pedagogical, personal, professional, and social competence all had a substantial impact on enhancing learning performance. The simultaneous or combined declaration of the major contribution of all teaching competencies has an impact on increasing the quality of performance in the learning process. Competency is an underlying quality of a person related to the

efficacy of individual performance on the job, and competence is the foundation of a personal attribute that determines whether a person succeeds or fails in a specific situation. As a result, teacher professional competency must be greatly enhanced.

Voitovska (2013) further did a study in the biological disciplines on computer diagnostics of levels of professional competence formation of prospective physical culture instructors. The study's goal was to assess the outcomes of students' questioning at Ukrainian higher educational institutions, as well as to describe the computer program "VSD: monitoring of future physical culture instructors' professional competency in the biological disciplines study process." The researcher used pedagogical observation, pedagogical experiment, and mathematical statistics methods to perform theoretical analysis and generalization of scientific literature, as well as pedagogical observation, pedagogical experiment, and mathematical statistics methods. A total of 448 people were included in the study's sample. Teachers had greater levels of professional competence, according to the examination of the data obtained. Students responded well to these high levels of professional competence. As a result, it is suggested that teachers strive to maintain high levels of competency that will benefit pupils.

Instructional Practices adopted by Teachers

Francisco and Celon (2020) investigated the influence of teachers' instructional approaches on students' academic achievement. The researchers' main goal was to see how teachers' instructional approaches affected students' academic achievement. The descriptive-correlational approach of the study was used by the researchers since it is concerned with the description of the

independent and dependent variables. A total of 55 teachers and 295 pupils from private schools in Meycauayan were used in the study. A standardized questionnaire called the Instructional Methods Survey was used to identify teachers' instructional practices, and a documentary analysis called the Classroom E-Record was utilized to determine the point average of the respondents' academic performance status. Statistical Packages for Social Sciences were used to examine and analyse the acquired data statistically (SPSS). The findings found that instructional approaches were classified into three categories: planning, teaching, and assessment. Organizing the physical setting, implementing norms and procedures, maintaining pupils' attention to teachings, and committing to activities were all common techniques. It was suggested that instructional techniques had a significant impact on student's performance and that school principals should undertake frequent teacher evaluations and training needs assessments to identify instructors' professional requirements.

Ozdem Yilmaz, Cakiroglu, Ertepinar, and Erduran (2017) investigated the pedagogy of argumentation in science education, specifically the instructional methods of science teachers. The purpose of the study was to look into the instructional strategies used by science teachers when teaching argumentation-based science. To describe and analyze the significance of an experience from the researchers' and participants' viewpoints, a qualitative study was used. The research was conducted in a Turkish public university. One elementary science teacher, two chemistry instructors, and four graduate students took part in the study. The data analysis found that teaching techniques were identified. Basic instructional practices, meta-level instructional practices,

and meta-strategic instructional practices were among the instructional tactics used. The basic instructional practices covered instructional tactics for initiating or advancing argumentation that was evident in the participants' teaching practices and lesson plans. Meta-level instructional practices examined instructional methods in participants' teaching practices and lesson plans that necessitate higher-order thinking. Meta-strategic knowledge is described as "generic information about the cognitive operations that are being controlled" by meta-strategic instructional approaches. These are tactics that are extremely important in a student's academic performance and should be given a lot of thought.

Carter, Stephenson, and Strnadová (2011) also looked at the prevalence of evidence-based instructional techniques among Australian special educators. The study replicated Burns and Ysseldyke's North American study by looking at the reported level of application of eight techniques in a national sample of Australian special education teachers. The survey design was used by the researchers. A total of 902 people took part in the poll, making up the sample. Only 193 people responded to the survey. Data were entered into a FileMaker Pro database that was created specifically for this project. Direct instruction, formative evaluation, mnemonic, multimodal, perpetual motor training, psycholinguistic, and social skills were among the instructional strategies used by teachers, according to the data. However, some of these approaches were found to be ineffective, such as perpetual motor training and modality instruction. The findings underscored the importance of postsecondary education institutions and state education agencies actively promoting

evidence-based methods while discouraging the use of unproven and questionable initiatives.

van Es and Sherin (2010) further studied the impact of video clubs on teachers' thinking and practice. The study's goal was to look into a professional development concept known as "video clubs," in which teachers watch and discuss clips from videos in their classrooms. The researchers looked at how teachers' thinking and practice are influenced by video club participation in three contexts: (a) teachers' comments during video club meetings, (b) teachers' self-reports of the video club's effects, and (c) teachers' instruction practices throughout the year. This was longitudinal research that used data from seven fourth and fifth-grade teachers from an urban school who attended video club meetings for a year. Interviews and classroom observations were among the data sources used in the study. The information was coded and analyzed. Making space for student thinking to emerge in the classroom and questioning students' underlying understandings were found to be typical instructional methods utilized by teachers. Teachers should ensure that their educational approaches are both productive and meaningful for both students and teachers, it was advised.

When these studies were synthesized, it could be seen that every study brought out its instructional practices that were commonly used by teachers. These disparities could largely be attributed to the fact that different researchers used different data collection strategies including interviews and different questionnaires.

Teachers' professional development predicting teachers' professional competence and teachers' instructional practices

Schiefele and Schaffner (2015) conducted a study on teacher interests, mastery objectives, and self-efficacy as determinants of instructional practices and student motivation. The purpose of the study was to look into the motivation of primary school instructors as determinants of instructional practices and student motivation. The sample included 110 teachers (20 males, 90 females) from 30 primary schools in and around a large German city, as well as their children. During a routine lecture, a questionnaire was given to both the teachers and their pupils at the same time. Teachers' didactic motivation in learning more or upgrading, as well as their self-efficacy, were found to predict teacher instructional practices. As a result, it was suggested that frequent teacher training programs be held to mould their educational techniques.

Another study on teacher professional competence: implications on instructional quality and student growth was undertaken by Kunter, Klusmann, Baumert, Richter, Voss, and Hachfeld (2013). The study's major goal was to create a complete model of the consequences of various characteristics of teacher competency. The research focused on data from the COACTIV project, which took place in Germany. COACTIV was included in the German version of the OECD's Programme for International Student Assessment for the 2003 cycle. Both cross-sectional and longitudinal study designs were used by the researchers. In total, 181 teachers from 194 classes took part in the study. The participants completed standardized structured questionnaires. Teacher professional competence predicted teacher instructional quality, according to the data analysis. Teachers' general academic competence or professional

growth had no bearing on how they taught. Teacher educators should concentrate on content-specific information that will improve teaching practices, according to the findings.

Lumpe, Czerniak, Haney and Beltyukova (2012) focused on elementary teachers' ideas about teaching science: the relationship between professional development involvement and student accomplishment. The study's main purpose was to evaluate elementary teachers' scientific teaching efficacy while they were enrolled in a large-scale professional development program and to see how these beliefs related to student learning. The questionnaires were filled out by around 450 elementary teachers who took part in professional development events. After analysis, the findings indicated that teachers who took part in a research-based professional development program were strongly associated with their students' science achievement. The inference is that teacher professional development is likely to have an impact on instructors' instructional techniques, allowing them to achieve whatever level of accomplishment they desire in their pupils.

Buczynski and Hansen (2010) also carried out a qualitative case study on the impact of professional development on teacher practice: finding links. The research examined classroom practice in light of the guidelines (as highlighted in professional development) and makes a case for inquiry learning in elementary schools. The goal of this qualitative case study is to assess the impact of a professional development intervention on students' scientific achievement and teachers' practices after year one of a four-year-long intervention. 118 experienced teachers from two urban school districts' low-performing schools, evenly split between grade levels 4–6, engaged in the

professional development project voluntarily. The participants filled out a variety of questionnaires about the variables that they were concerned about. Teacher professional development predicted teacher instructional methods, according to the findings. Professional development knowledge/skills were being transferred to classrooms by teachers. It was determined that professional growth is necessary and that ways to overcome obstacles are needed to optimize the impact of professional development.

Finally, Parise and Spillane (2010) looked at how formal and on-the-job learning opportunities affect primary school teachers' practice. The study focuses on the learning possibilities available to teachers, including formal professional development and on-the-job learning from interactions with coworkers. The study's findings come from an assessment of a leadership professional development program in a mid-sized metropolitan school system in the southeast. Data was gathered from all 30 elementary schools in the district. Staff members from the 30 elementary schools were requested to complete an 18-page questionnaire as part of a mixed-method evaluation. There were around 600 teachers in the average school. Formal professional development and on-the-job learning opportunities are both strongly connected with changes in teachers' instructional practice in mathematics and English language arts, according to the findings of the study. It was suggested that school administrators and policymakers should pay more attention to on-the-job learning opportunities than they have in the past by giving time for teachers to collaborate or modifying policy levers governing teacher recertification. This will assist teachers in achieving better levels of professional growth, which will result in more effective teaching practices.

This review showed that teacher professional development predicted teacher instructional practices. However, literature on teacher professional development predicting teacher professional competence seems scarce. One piece of literature that was reviewed revealed that teacher professional development predicted teacher professional competence. Therefore, there is room to add more to the literature which is what this literature seeks to do.

Gender Difference in Teachers' Professional Competence and Teachers' Instructional Practices

Gudmundsdottir and Hatlevik (2018) investigated newly trained teachers' professional digital competency and its consequences for teacher education. The study's goal was to see how newly trained teachers are prepared to use information and communication technology (ICT) during their initial teacher training. The study's data was derived from a countrywide survey of newly qualified instructors. A total of 925 people were enlisted to take part in the study. TNS Gallup was in charge of the data collection. Structured questionnaires on the factors were completed by teachers. The findings demonstrated that teachers' skills differed based on gender, particularly when it came to ICT. Male instructors claimed to have higher confidence in their use of technology than female teachers. It was suggested that efforts be made to bridge the gender gap so that males and females can have the same impact on students.

Lauermann and König (2016) also conducted a study on teachers' professional competence and welfare: understanding the relationships between general pedagogical knowledge, self-efficacy, and burnout. The study's goal was to look into the links between two dimensions of teachers' professional competence, general pedagogical knowledge (GPK) and self-efficacy, and the

risk of burnout in teachers, as well as any changes in these constructs as a function of gender and teaching experience. A total of 119 in-service teachers from two elementary and one secondary school took part in this research. These individuals replied to items that measured the variables in question. Gender variations in teacher competence were discovered once the data was analyzed. This implies that professional knowledge, skills, views, and motivation differed between men and women.

Erdogan and Sahin (2010) also looked into the relationship between technology pedagogical and content knowledge (TPACK) and achievement levels among math teacher candidates. The goal of the study was to look into teacher candidates' TPACK and see if it predicted student achievement or not. The study included a total of 137 teacher applicants. The TPACK knowledge of college students is compared using an independent t-test based on their departmental affiliation (elementary and secondary) and gender information. When the TPACK of teacher candidates was compared by gender, substantial differences were discovered in the TPACK dimensions of male and female students, favouring males. This implies that both professional competence and instructional practice vary between male and female teachers. However, because there is a stereotype that women are technologically weak or insufficient, this outcome was not surprising.

Gender Difference in Teachers' Professional Development

Lumpe, Czerniak, Haney and Beltyukova (2012) focused on elementary teachers' ideas about teaching science: the relationship between professional development involvement and student accomplishment. The study's main purpose was to evaluate elementary teachers' scientific teaching efficacy while

they were enrolled in a large-scale professional development program and to see how these beliefs related to student learning. The questionnaires were filled out by around 450 elementary teachers who took part in professional development events. After analysis, the findings indicated that teachers' instructional development differed based on gender. The implication is that male teacher professional development will differ from female teacher professional development. Males were more optimistic about their career development than their female colleagues.

Lamote and Engels (2010) also conducted longitudinal research on the development of student teachers' professional identities. The research looked into how student instructors felt about their professional identity. Students from three-course years in a bachelor's degree program for secondary school teachers teaching 'general academic topics' made up the study population. N = 104 first-year students from the two colleges filled out a questionnaire that included scales on the four components of professional identity mentioned above. The first-year students (N = 116) completed the survey a second time. The three sets of participants had their data taken at separate times. Participants were given standardized Likert scale questionnaires to complete. There were considerable gender variations in teacher professional identity and development, according to the study. While males place a higher value on classroom discipline, females place a higher value on student participation as a method of learning and instruction.

Synthesis of the literature reviewed above showed that there were gender differences in all the findings. Reasons for such similar results could not be emphatically stated. However, it was noted that the various researchers used

different approaches in design, data collection as well as analyses. Despite these differences in addition to contextual differences, similar results were found. This study was also conducted in Ghana to find the situation in the Ghanaian context as literature seems porous.

Conceptual Framework

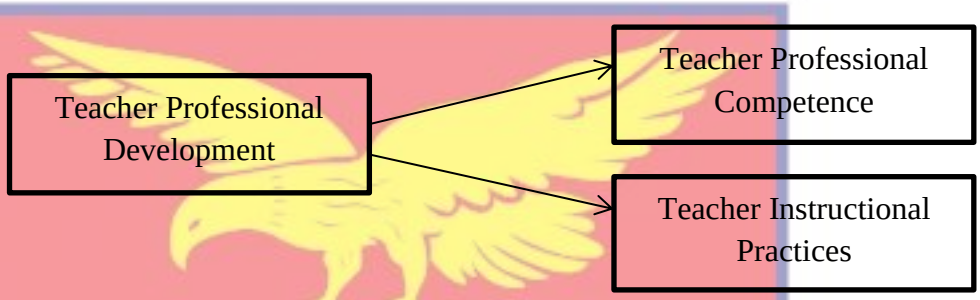

Figure 1: A conceptual framework depicting how the predictor variable (TPD) links with the criterion variables (TPC and TIC)

Literature Summary

Literature on Bandura's Self-Efficacy theory and Social Constructivism Theory by Vygotsky is the framework to explain the connection that exists between the various variables used in the study. The researcher explored aspects of teacher professional development, teacher professional competence and teacher instructional practices.

The literature reviewed indicated that different researchers reported varied forms of professional development teachers to go through and varied levels of professional competence. Some of this professional development included collaborative learning and training (Hilliard, 2015). Reasons for these varied forms of professional development and levels of competence are not highlighted. How it could be related to the fact that these studies were organised in different settings with different methodologies. Therefore, methodological differences might have accounted for the differences in results. It is therefore

important to find out what forms of professional development are common in Ghana.

It could also be seen that studies brought out various instructional practices that were commonly used by teachers. These disparities could largely be attributed to the fact that different researchers used different data collection strategies including interviews and different questionnaires.

It was again found that teacher professional development predicted teacher instructional practices (Buczynski & Hansen, 2010). However, this study was conducted to find the situation in the Ghanaian context to help fill the gap of literature scarcity.

Finally, it was realised that there were gender differences in teacher professional development, teacher professional competence and teacher instructional practices. However, most of the participants that were used in the various studies were not professional teachers. Some were student teachers whilst some were teachers at the tertiary level. It is premised on this that this study sought to find out how TPD predicted TPC and TIP as well as the gender differences in the JHS teachers in the Adansi-South district of Ghana.

CHAPTER THREE

RESEARCH METHODS

Introduction

The chapter presents the methodology that was used for the study. The chapter focused on research design, study area population and sampling procedure. It also provides information regarding the data collection instrument, data collection procedure and data analysis.

Research Design

The term "research design" refers to a method for organizing the study's entire procedure. It refers to the study's overarching structure or plan (Singleton & Straits, 2010), as well as the overall strategy for integrating the many components of the study coherently and logically, ensuring that the research challenge is adequately addressed (Labaree, 2009). Research designs, according to Morse and Niehaus (2009), are procedures for collecting, analysing, interpreting, and reporting data in research studies that guide the methods and decisions that researchers must make during their studies and set the logic by which they make interpretations at the end. It constitutes the blueprint for the collection, measurement and analysis of data. It is more or less the foundation under which the study revolves. According to Rockinson-Szapkiw (2012), study design directs the researcher's decisions concerning the research's conduct, such as when and how often to collect data, what data to obtain and from whom, and how to analyse the data.

With diverse sorts of study designs, there are three research paradigms or approaches: quantitative, qualitative, and mixed methods. Quantitative

research is a systematic approach to gathering and analysing data from various sources, involving the use of computational, statistical, and mathematical methods to arrive at conclusions (Goertzen, 2017). Qualitative research delves extensively into specific experiences to define and analyse meaning through text, narrative, or visual data, by identifying themes unique to that group of people (Glesne, 2011). As a result, the goal of qualitative research is to explain and interpret social laws, cultures, and human experiences. Ethnography, narrative, phenomenology, and grounded theory are all examples of qualitative research. The mixed method approach is the third paradigm, which incorporates quantitative and qualitative procedures, as well as statistical and exploratory approaches (Cohen, Manion & Morrison, 2011). This study was guided by the quantitative research paradigm since data was gathered and analysed using computational method and statistical method.

This study employed a descriptive survey design. Because the goal of the study was to determine how TPD interacts with TPC and TIP, the design was deemed adequate. This design allows for the use of a questionnaire to collect vast amounts of data, which is what this study wants to do. Descriptive study design, according to Koul (2009), entails measurement, classification, analysis, comparison, and interpretation. It gathers three categories of data: what is already in existence, how to compare what is already in existence to the norm or desired, and how to attain goals. Even though descriptive research design is regarded as basic, it is capable of providing information to address problems and, in some cases, data to serve as the foundation for further research. The use of a descriptive research design entails focusing on events that have occurred and are relevant to current occurrences. It depicts a situation as it

occurs in its natural surroundings, with no alterations (Frankfort-Nachmias & Nachmias, 2007).

The descriptive survey approach was once again ideal for the study since it aids in the discovery of factors linked to specific events, outcomes, situations, or patterns of behaviour (Labaree, 2009). As a result, determining the correlations between TPD, TPC, and TIP would be beneficial. More specifically, a descriptive survey design was chosen because it has the benefit of giving a high level of general competence in representing a big population by assisting in the collection of rich data in huge quantities. In comparison to other data collection approaches, surveys can extract data that is close to the actual characteristics of the wider population (Creswell, 2013). Again, because descriptive surveys are extremely representative, finding statistically significant results is generally easier, and they have higher validity and reliability than other research methodologies (Creswell, 2013). The descriptive survey design may successfully analyse multiple variables and is more objective because the researcher has no emotional attachment to the subjects (Bernard, 2017). Descriptive research can serve as a springboard for future studies by identifying variables that can be examined (Bernard & Bernard, 2013). The findings could indicate particular elements that are influencing or mediating the relationship, indicating that more research is needed.

The difficulty of descriptive research design varies substantially. It can be used to explore local problems by counting the frequency of events without a strong research idea. In another case, it tries to figure out if there are any significant interrelationships between phenomena (Koul, 2009). A descriptive study approach has several flaws. For example, the results of the analysis do not allow for strong conclusions about a cause-and-effect relationship between variables, and it also does not reflect an in-depth description of the phenomenon (Jackson, 2009). It's also worth noting that descriptive research methods can only describe a collection of observations or facts. Descriptive surveys can also produce incorrect data if the questions to be answered are misleading and unclear, and participants may not answer honestly due to inadequate control over the relatively large sample size, resulting in written responses that are not indicative of actual behaviour (Punch, 2013). However, steps were put in place to limit reactivity, as well as the use of highly clear and non-misleading questionnaires.

Population

A research population is a well-defined group of people or items who are known to share comparable features (Alzahrani, 2012). A population is a big group of humans or items that are the subject of a scientific inquiry. Common, binding property or trait is frequently shared by all individuals or items within a population (Creswell, 2013). Research is carried out for the benefit of the general public. However, due to the huge size of the population, it is often impossible for researchers to examine every single person in the community because it is too costly and time-consuming. This is why scientists rely on the sampling technique. In research, there are two categories of

populations: the target population and the accessible population (Saha & Paul, 2016). The term "target population" refers to the total set of people or things that researchers are interested in generalizing their findings. The target population, also known as the theoretical population, has a variety of features, whereas the accessible population is the group in the study to whom the researchers can apply their findings (Asiamah, Mensah & Oteng-Abayie, 2017). The target population for this study were all teachers in the Adansi South District of the Ashanti Region of the Republic of Ghana, with a total number of teachers believed to be in the thousands. The accessible population, also known as the study population, is a subset of the target population (Saha & Paul, 2016). Researchers take samples from the readily available population. The population that is accessible may be limited to a region, state, city, county, or institution. The accessible population of 300 teachers from the district's public junior high schools were used for this study.

Sampling Procedure

A purposive sample was used since the researcher selected to study only J.H.S teachers in the Adansi South District and not any other instructors at any educational level. JHS teachers in the Adansi South District were chosen because most of the professional development programmes are organised for the JHS teachers with the intention that these teachers were the ones preparing students for their final exams. Thus, these JHS teachers were chosen to give their account of the development programmes they go through. Purposive sampling, according to Crossman (2017), is a non-probability sample that is chosen based on demographic characteristics and the study's goal. Judgmental, selective, or subjective sampling is all terms used to describe purposive

sampling. When you need to reach a specified sample rapidly and proportionality isn't the primary issue, this sort of sampling can be extremely effective (Crossman, 2017).

The census-sampling method was employed for the study because the target population was quite small. Although most researchers use samples, to represent any target population, Rothman, Gallacher, and Hatch (2013) advocated for census-based estimates whenever available. Because the researcher planned to use all J.H.S. teachers in the Adansi South District because the number was not large and all of the instructors could be reached out to, the census sample approach was appropriate. On this note, the survey included all 300 Junior High School instructors in the Adansi South District. The quality of any research, according to Cohen, Manion, and Morrison (2011), is determined not only by the appropriateness of methodology and apparatus but also by the suitability of the sampling technique used. As a result, the approaches listed above need to be deemed appropriate for the research.

Data Collection Instruments

The major instruments used in this investigation were structured questionnaires. A questionnaire is a tool that consists of a set of questions about psychological, social, and educational themes that are provided to an individual or a group of people to gather information about a problem under investigation. To meet the study's goal, responders must read, interpret, and then write down their responses (Howitt & Cramer, 2010). The dependent variables in this study were Teacher Professional Competence and Teacher Instructional Practices, and the independent variable was Teacher Professional Development. These variables were measured using the adapted questionnaires described below.

The questionnaire was put into four parts, part 'A' part 'B', part C, and part D. Part 'A' focused on the bio data of the respondent. Part 'B' was focused on teachers' professional development and this was measured using an adapted version of Shakuna, Mohamad, and Ali (2016) Professional Development of Teachers Scale (DDTS). The scale had 13-items shared among three dimensions such as planning (5 items; reliability coefficient is .92), executing (4 items; reliability coefficient is .92) and evaluation (4 items; reliability coefficient is .92). The composite had a reliability coefficient of .91. it was scored on a four-point Likert-scale ranging from Strongly Disagree (1), Disagree (2), Agree (3) and Strongly Agree (4).

Part 'C' was about teachers' professional competence and this was measured using an adapted version of a 4-point scale, 8-item Self-Competence Questionnaire developed by Tafarodi and Swann (2001) with a Cronbach's alpha coefficient of .83 was used for the study. The scale was adapted because the content of the items was appropriate for the current study. In this regard, a few items were rephrased from general to specific and the response set with the scoring was changed to Strongly Disagree (1), Disagree (2), Agree (3) and Strongly Agree (4). The scale had items like "I am highly effective with the things I do".

Part 'D' was about teachers' instructional practices and this was measured using an adapted version of a 5-point scale 18-item Instructional Practices developed by Berger (2010) with a Cronbach's alpha coefficient of .89 used for the study. The scale was adopted because the scoring was 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always.

Validity and Reliability of the Instruments

My supervisors reviewed the revised questionnaire to guarantee the construct's validity. Because of their expert knowledge and expertise, the supervisors were able to determine whether the individual questionnaire items accurately reflected the variables of interest. The supervisors also double-checked that the questionnaire was measuring what it claimed to be measuring.

To ensure instrument reliability, the instruments were pilot tested among 40 teachers before being used in the actual study in Adansi North District. This was done to ensure that the instruments were relevant to the research goals and that the instruments, particularly the questionnaire questions, were clear. This was done to reduce phrasing ambiguities, find repetitive questions and misunderstood elements, and obtain feedback on the instruments' validity.

Data Collection Procedures

A letter of introduction was obtained from the Department of Education and Psychology. The goal of the study, the need for individual involvement, anonymity, and confidentiality of respondents' responses were all spelt out in the letter. The obtained letter was presented to the Institutional Review Board, together with the plan, for review and ethical clearance. To obtain authorization to administer the questionnaire, the researcher made contact with the head teachers of the selected schools.

Before incorporating participating teachers from the Adansi South District in the data collection, their permission was requested. This was accomplished by describing the study's goal to them and providing them with an informed consent form to sign, showing their desire to participate in the study. The selected teachers were informed that they might stop the process at

any point if they felt that answering certain questions infringed on their privacy or right to privacy.

Selected teachers for the study were informed that their names and other demographic characteristics, which identify them personally, would not be disclosed with the information they provided to me, ensuring anonymity of the data provided. The researcher also allowed the respondents to ask questions for clarity in the items if the need be. They were allowed to seek a detailed explanations of items that seemed ambiguous to them. With the cooperation of the head teachers, the questionnaires were given to the instructors all at once. The majority of respondents took at least 15 minutes to complete the questionnaires. The teachers were asked not to write their names or the name of their schools on the questionnaire for the sake of confidentiality.

Data Processing and Analysis

Following the collection of data, the data was processed and managed by coding it, editing it where necessary, entering it into the appropriate software (Statistical Package for the Social Sciences, version 22) to generate results, and finally cleaning it to remove any errors that may have gone unnoticed. Descriptive statistics were employed to analyse the background information because it was suitable for meaningful interpretation, conclusions and recommendation of data. Research questions 1, 2 and 3 were analysed using means and standard deviations. Concerning the hypotheses, research hypothesis one was tested using inferential statistics (Linear Regression). Hypotheses two and three were tested using One-Way MANOVA. This test tool determined whether a statistically significant difference between the means in two unrelated groups using multi-dimensional continuous variables as basis. In finding

differences in two or more categorical groups and two or more continuous variables, MANOVA was deemed appropriate for the analyses.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

Introduction

The previous chapter dealt with the research methodology that guided the study. This chapter presents the results of the data collected from the field and discusses the findings from 285 questionnaires completed by junior high school teachers. The purpose of this study was to investigate the impact of teachers' professional development on teachers' professional competence and teachers' instructional practices. The study employed a descriptive survey design.

The results are presented in sections according to demographics, research questions and hypotheses. The first section deals with the demographics of the study. The other sections covered the three research questions and three hypotheses.

Section 1: Analysis of Demographic Information

This section covered the respondents' gender, educational qualification, years of service, subject and age. Table 1 presents the analysis of the responses on the gender of the respondents.

Table 1- Gender Distribution of Respondents

Gender	Frequency	Percentage
Male	154	54.0
Female	131	46.0
Total	**285**	**100**

Source: Field survey, Enoch (2021)

Table 1 shows that out of the 285 respondents, 154 representing 54% were males and 131 representing 46% were females. This means that the schools had more male teachers as compared to female teachers.

This section covered the educational qualification of the respondents. Frequencies and percentages were used to analyse responses on the educational qualification. Table 2 below presents the analysis of the responses on the educational qualification of the respondents.

Table 2- Educational Qualification of Respondents

Educational Qualification	Frequency	Percentage
Certificate A	15	5.3
Diploma	188	66.0
Bachelors	80	28.0
Masters/PhD	2	.7
Total	**285**	**100**

Source: Field survey, Enoch (2021)

From Table 2, it could be seen that 188(66.0%) of the respondents had diplomas whilst only 2(0.7%) had postgraduate qualifications. This shows that the majority of the JHS teachers had diploma qualifications with only two of the teachers having postgraduate qualifications.

This section covered the years of service of the respondents. Frequencies and percentages were used to analyse responses on the years of service. Table 3 below presents the analysis of the responses on the years of service of the respondents.

Table 3- Educational Qualification of Respondents

Years of Service	Frequency	Percentage
1-10	237	83.2
11-20	33	11.5
21-30	12	4.2
31 and above	3	1.1
Total	**285**	**100**

Source: Field survey, Enoch (2021)

Table 3 showed that 237(83.2%) of the respondents had 1-10 years of service while only 3(1.1%) of the respondents had 31 and above years of service. This indicates that majority of the teachers had 1-10 years of teaching experience. On the other side, only 3 teachers had taught for 30 years and over.

This section covered the teaching subjects of the respondents. Frequencies and percentages were used to analyse responses on the teaching subjects. Table 4 below presents the analysis of the responses on the teaching subjects of the respondents.

Table 4- Teaching Subjects of Respondents

Years of Service	Frequency	Percentage
BDT	28	9.8
Catering	3	1.1
English Language	30	10.5
ICT	36	12.6
Integrated Science	26	9.1
Mathematics	45	15.8
RME	36	12.6
Social Studies	45	15.8
Twi	36	12.6
Total	**285**	**100**

Source: Field survey, Enoch (2021)

From Table, it could be realised that mathematics and social studies 45(15.8%) were the dominant subjects as compared to catering 3(101%). This means that majority of the teachers were teaching mathematics and social studies with only a few of them teaching catering.

This section covered the age range of the respondents. Frequencies and percentages were used to analyse responses on the age range of the respondents. Table 5 below presents the analysis of the responses on the age range of the respondents.

Table 5- Age Range of Respondents

Age Range	Frequency	Percentage
18-30	126	44.2
31-40	119	41.8
41-50	31	10.9
51-60	9	3.1
Total	**285**	**100**

Source: Field survey, Enoch (2021)

Table 5 indicated that of the 285 respondents, 126 representing 44.2% were between the ages of 18-30 years while only 9 respondents representing 3.1% were between the ages of 51-60 years with an overall mean age of 33.2 years. The results indicated that the majority of the teachers were between the ages of 18 to 40 years of age.

Research Question One: What kind of professional development do teachers go through in the Adansi South District?

This research question aimed to find out the kind of professional development teachers went through. Data on this question was collected using the teacher professional development questionnaire and analysed using means

and standard deviations. Items with means above 3 were considered as the most prevalent or dominant kind of professional development teachers went through. In all, the sub-dimension with the highest mean was considered the most predominant form of teacher professional development. Table 6 below shows the analysis of the responses on the kind of professional development teachers goes through.

Table 6- Professional Development of Teachers

Statement	Mean	SD
Planning	**16.21**	**1.92**
Training programmes benefit me in developing my ability to prepare the annual plan.	3.31	.55
They benefit me in the necessity of diversity of the goals to include the three areas of conceptual and procedural knowledge and problem-solving.	3.03	.71
They guide me in selecting suitable educational aids and techniques for creating effective learning activities.	3.28	.63
They help me to choose learning and teaching activities in a way that contributes to achieving the goals.	3.61	.58
They enable me to formulate various classroom questions.	2.98	.76
Executing	**12.66**	**1.71**
Training programmes benefit me in how to raise learners' motivation.	3.29	.59
Training programmes develop my skill of raising classroom questions.	3.01	.69
Training programmes help to take into account individual differences.	3.24	.68
They develop my teaching of facts, concepts and principles.	3.12	.71
Evaluating	**12.12**	**2.03**
Training programmes improve my ability to prepare for objective tests.	3.22	.68
They improve my ability to prepare for oral tests.	2.98	.69
Training programmes help in the preparation of improved essay tests that reveal learners' weaknesses.	2.89	.81

They enable to acquire the skill of building or developing treatment plans based on the results of the evaluation.	3.02	.89

Source: Field survey, (2021) *n* = 285

Table 6 showed that the most predominant teacher professional developments were training programmes that helped them to choose learning and teaching activities in a way that contributes to achieving the goals (M= 3.61, SD=.58); training programmes that benefited them in developing their ability to prepare the annual plan (M= 3.31, SD=.55); followed by training programmes that benefited them in how to raise learners' motivation (M=3.29, SD=.59); training programmes that guided them in selecting suitable educational aids and techniques for creating effective learning activities (M=3.28, SD=.63); programmes that helped to take into account individual differences (M=3.24, SD=.68); training programmes that improved their ability to prepare objective tests (M=3.22, SD= .68); training programmes that developed their teaching of facts, concepts and principles (M=3.12, SD=.71), training programmes that benefited them in the necessity of diversity of the goals to include the three areas of conceptual and procedural knowledge and problem-solving (M=3.03, SD=.71) and training programmes that enabled them to acquire the skill of building or developing treatment plans based on the results of the evaluation (SD=3.02, SD=.89). In all, the table showed that planning had the highest mean (SD=16.21, SD=1.92). This means that JHS teachers in Adansi South District went through a kind of teacher professional development that mostly developed their ability to plan and execute in the classroom.

Research Question Two**: What is the level of professional competence among teachers in the Adansi South District?**

This research question aimed to find out the level of professional competence among teachers. Data on this question was collected using the teacher professional competence questionnaire and analysed using means and standard deviations. In answering the research question, eight (8) items under the TPC questionnaire were used and scored using agreement and disagreement dimensions. However, the determination of level was based on mean scores of low (1.0-2.5) and high (2.6-4.0) against the average or total mean. In this sense, observed mean similar to determination range becomes the description of the level of teacher professional competence. Table 7 below shows the analysis of the responses on the level of professional competence of teachers.

Table 7- Level of Teacher Professional Competence

Statement	Mean	SD
I am highly effective at teaching what I do in school.	3.24	.60
I am almost always able to accomplish what I try to do in school.	2.88	.75
At times, I find it difficult to achieve the things that are important to me in school.	2.44	.96
I sometimes deal poorly with challenges in school.	2.36	.88
I perform very well at many things in school.	2.93	.74
I sometimes fail to fulfil my goals in school.	2.65	.91
I am very talented in teaching in school	2.81	.82
I wish I were more skilful in my activities in school	3.06	.89
Total	**2.79**	**.36**

Source: Field survey, (2021) *n* = 285

From Table 7, it could be seen that the average mean was (M= 2.79, SD=.36). This average mean was within the criterion of 2.6-4.0 which meant that the respondent had high levels of professional competence. Respondents agreed that they were highly effective at teaching what they do in school (M= 3.24, SD= .36); again respondents were more skilful in their activities in school (M= 3.06, SD= .89). Respondents again performed very well at many things in school (M= 2.93, SD= .74) as well as always accomplishing what they tried doing in school (M= 2.88, SD= .75). Respondents were very talented in teaching in school (M= 2.81, SD= .82). This result indicated that JHS teachers in the Adansi South District were competent in teaching their subjects in the classroom. The JHS teachers were effective, skilful and talented which helped them to accomplish their activities in the classroom.

Research Question Three: What instructional practices are adopted by teachers in the Adansi South District?

This research question aimed to find out the instructional practices that are adopted by teachers in the Adansi South District. Data on this question was collected using the teacher instructional practices questionnaire and analysed using means and standard deviations. In answering the research question, eighteen (18) items under the TIP questionnaire were used and scored using how often teachers adopted instructional practices. The highest mean indicated the most predominant instructional practices adopted. However, the determination of usage was based on the average mean score criterion of 2.00 against the average or total mean. In this sense, the observed mean similar to the criterion becomes the description of the teacher's instructional practices.

Table 8 below shows the analysis of the responses on the instructional practices teachers adopted.

Table 8- Teacher Instructional Practices

Statement	Mean	SD
I assess the level of challenge an academic task will provide to students	3.52	1.08
I take the time to assess students' prior knowledge and skills before teaching a lesson	3.78	.922
I preview reading materials to ensure that students will be able to read text with at least 93% level of accuracy	3.54	1.08
I monitor students' understanding or the content of a skill during activities and make adjustments accordingly	3.66	1.21
I make adjustments during lessons based on students' understanding of the content or skill	3.74	1.18
I walk around to give immediate and specific feedback to students while they are practicing a new skill	4.19	.94
I prepare practice exercises for students so that he or she knows at least 75% of the material before starting the task	3.55	.852
For critical skills, I ensure that students' practice is continued to the point of mastery	3.41	1.22
I ensure that the students' engagement is high during independent work activities	3.75	1.19
I do more than the school system and curriculum requires to assess students	2.63	1.24
I assess students to pinpoint the most important instructional needs	3.26	1.07
I set short-term goals for students	3.85	1.03
I collect data on students to monitor progress toward short-term goals	3.51	1.07
I flexibly group students with other students by skill or objective	3.72	1.06
I assess students' academic skills in the subject areas in which there are weaknesses	3.47	1.13
I define students' behaviour in specific and observable terms	3.25	1.03
I analyse what happens immediately before and after students' behaviour	3.45	1.09
I graph data about students' increase in appropriate behaviours	2.54	1.32
Total	**3.49**	**.66**

Source: Field survey, (2021) *n* = 285

The results from Table 8 indicated that the most predominant instructional practice was walking around to give immediate and specific feedback to students while they were practicing a new skill (M= 4.19, SD= .94)

followed by setting short-term goals for students (M= 3.85, SD= 1.03); taking the time to assess students' prior knowledge and skills before teaching a lesson (M=3.78, SD= .922); ensuring that the students' engagement is high during independent work activities (M= 3.75, SD= 1.19); previewing reading materials to ensure that students will be able to read text with at least 93% level of accuracy (M= 3.54, SD= 1.08) and flexibly grouping students with other students by skill or objective (M= 3.72, SD= 1.06). On the whole, there was an overall mean of (M= 3.49, SD= .66) which was above the criterion. The overall mean indicated that respondents regularly adopted good instructional practices. This means that JHS teachers in the Adansi South District regularly adopted good instructional practices in the classroom. Teachers adopted instructional practices that could help their students in the classroom.

Research hypothesis one

H_0: Teachers' professional development does not predict (a) teachers' professional competence and (b) teachers' instructional practices in the Adansi South District

H_1: Teachers' professional development will predict (a) teachers' professional competence and (b) teachers' instructional practices in the Adansi South District.

This hypothesis sought to test how teachers' professional development predicted (a) teachers' professional competence and (b) teachers' instructional practices in the Adansi South District. The test was in two folds such as (a) and (b). To conduct this test, standard simple linear regression was deemed appropriate for the process. In doing so, certain assumptions were met. These included the normality test, linearity and multicollinearity test. Figures 2 and 3

showed the normality test for the test variables for the part (a) and (b) of the test.

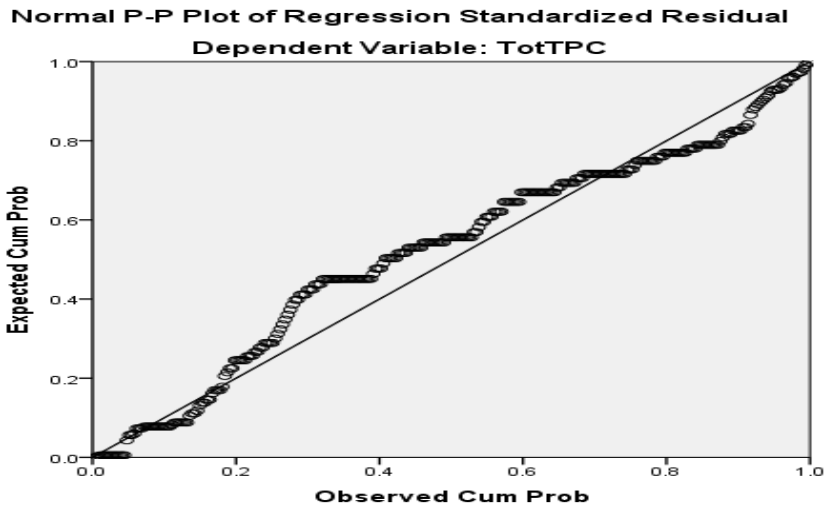

Figure 2: Normal P-P Plot

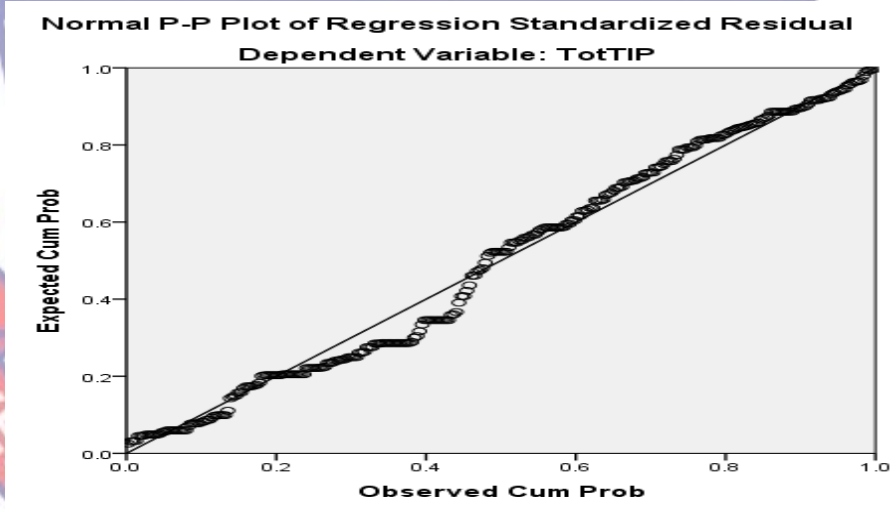

Figure 3: Normal P-P Plot

From Figures 2 and 3, the data could be described as normal as a majority of the points lied in a reasonably straight diagonal line from down left to up-right. This indicated that the data met the assumption of normality for regression analysis.

Homoscedasticity was equally catered for. Concerning the multicollinearity, there was a correlation coefficient of .31 which was greater

than .3 and also less than .7 (Tabachnick & Fidell, 2001, p. 84). This means that the assumption of multicolinearity was not violated. The coefficient output of the collinearity statistics produced Variable Index Factors (VIF) of 1.00 that fell between 1 and 10. There was also a tolerance value of 1.0 which was greater than .10. This indicates that there was no multicollinearity observation among the variables. Table 9 presents the descriptive results of the regression on the (a) aspect:

Table 9- Results of Descriptive Statistics

Variables	Mean	SD	N
Teacher Professional Competence	22.35	2.87	285
Teacher Professional Development	41.07	4.82	285

Source: Field Survey (2021)

Table 9 showed the descriptive statistics (means and standard deviations) of the test variables. The results indicated that TPD had the highest mean (M =41.07, SD=4.82) followed by TPC (M=22.35, SD=2.87). Table 10 presents regression results on how TPD predict TPC

Table 10- Multiple Regression Analysis for Teacher Professional Development Predicting Teacher Professional Competence

Variables	*B*	*SE B*	β	*t*	*p*
Teacher Professional Development	.182	.034	.305	5.385	.000
R^2	.93				
F	28.99				

Source: Field Survey (2021) *Significant @ 0.05 level

a. Predictors: (Constant), (Teacher Professional Development)

b. Dependent Variable: Teacher Professional Competence

Simple linear regression analysis was conducted to investigate how teacher professional development predicted teacher professional competence.

The results of the regression indicated that the model explained 9.3% of the variance and that the model was a significant predictor of teacher professional competence, $F(1,283) = 28.99$, $p < .001$. It was found that teacher professional development predicted teacher professional competence ($\beta = .305$, $p<001$). This result means that as teacher professional development increased, teacher professional competence also increased and vice versa. This implies that the kind of professional development teachers had some form influence on their professional competence level.

Concerning the (b) part of the hypothesis which is how teacher professional development predicted teacher instructional practices, homoscedasticity was equally catered for. Concerning the multicollinearity, there was a correlation coefficient of .55 which was greater than .30 and also less than .70 (Tabachnick & Fidell, 2001, p. 84). This means that the assumption of multicolinearity was not violated. The coefficient output of the collinearity statistics produced Variable Index Factors (VIF) of 1.00 that fell between 1 and 10. There was also a tolerance value of 1.0 which was greater than .10. This indicates that there was no multicollinearity observation among the variables. Table 11 presents the descriptive results of the regression on the (b) aspect:

Table 11- Results of Descriptive Statistics

Variables	Mean	SD	N
Teacher Instructional Practices	62.80	11.96	285
Teacher Professional Development	41.07	4.82	285

Source: Field Survey (2021)

Table 11 showed the descriptive statistics (means and standard deviations) of the test variables. The results indicated that TPD had the highest mean (M =41.07, SD=4.82) followed by TIP (M=62.80, SD=11.96). Table 10 presents regression results on how TPD predict TIP.

Table 12- Multiple Regression Analysis for Teacher Professional Development Predicting Teacher Instructional Practices

Variables	*B*	*SE B*	β	*t*	*p*
Teacher Professional Development	1.360	.123	.548	11.013	.000
R^2	.300				
F	121.278				

Source: Field Survey (2021) *Significant @ 0.05 level

a. Predictors: (Constant), (Teacher Professional Development)

b. Dependent Variable: Teacher Instructional Practices

Simple linear regression analysis was conducted to investigate how teacher professional development predicted teacher instructional practices. The results of the regression indicated that the model explained 3.0% of the variance and that the model was a significant predictor of teacher professional competence, $F(1,283) = 121.28$, $p < .001$. It was found that teacher professional development predicted teacher instructional practices ($\beta = .548$, $p<001$). This result means that as teacher professional development increased, teacher

instructional practices also increased and vice versa. This implies that better teacher professional development could lead to better teacher instructional practices.

Research hypothesis Two

H_0: Gender difference does not exist in teachers' professional competence and teachers' instructional practices in the Adansi South District.

H_1: Gender difference exist in teachers' professional competence and teachers' instructional practices in the Adansi South District.

This hypothesis was tested to find the difference in teachers' professional competence and teachers' instructional practices based on gender. Multivariate Analysis of Variance (MANOVA) was used to test this hypothesis to establish how male and female differed on TPC and TIP. Two dependent variables were used: TPC and TIP. The independent variable was gender. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity, with no serious violations noted. The test of homogeneity of variance-covariance assumption was met using the Box's M Sig. value of 6.042, which was greater than .001. Levene's Test was also checked for violation of equality of variance for TPC and TIP. The results showed that one of the variables violated the equality of variance assumptions, TPC with a sig. value of .331 and TIP with a sig value of .023 which was less than .05. Tabachnick and Fidell (2001) suggested that when this assumption is not met, an alpha of .025 or .01 rather than the conventional .05 level. After checking for and meeting all assumptions, Table 11 below displays the results on the descriptive statistics:

Table 13- Descriptive Statistics for Teacher Professional Competence and Teacher Instructional Practices

Variable	Gender	Mean	SD	N
TPC	Male	22.45	3.01	154
	Female	22.24	2.71	131
	Total	22.35	2.87	285
TIP	Male	60.73	12.07	154
	Female	65.23	11.06	131
	Total	62.80	11.96	285

Source: Field Data (2021)

The results from Table 13 present the descriptive results of the study variables which indicated that there were no significant differences in the mean scores of male and female teachers concerning TPC but there were mean differences in TIP. The results suggested that both males and females had almost the same mean scores on TPC but had different mean scores for TIP with comparatively the largest difference for females (M=65.23, SD= 11.06), male (M= 60.73, SD = 12.07) at .05 level of significance. This implied that descriptively, male and female did not differ in terms of teacher professional competence but differed in teacher instructional practices. However, the descriptive results were not enough to ascertain significant differences in mean scores of TPC and TIP, hence the need to examine the MANOVA Multivariate Tests in Table 14:

***Table 14*-Multivariate Tests**

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.041	6.058	2.000	282.000	.003	.041
	Wilks' Lambda	.959	6.058	2.000	282.000	.003	.041
	Hotelling's Trace	.043	6.058	2.000	282.000	.003	.041
	Roy's Largest Root	.043	6.058	2.000	282.000	.003	.041

Source: Field Data (2021)

Table 14 showed the results of the multivariate test to check for gender differences in teacher professional competence and teacher instructional practices. The results showed there was a statistically significant difference between males and females on TPC and TIP: F (2, 282) = 6.058, p= .041; Wilks' Lambda=.959; partial eta squared=.041. This implies that male or female teachers may have different TPC and TIP. These were general male and female differences on the combined dependent variables (TPC and TIP). It was therefore necessary that the tests of between subjects effect was conducted to find where the specific difference was among TPC and TIP. Table 15 below displays the test of between subjects effects.

Table 15-Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	TPC	3.361	1	3.361	.408	.524	.001
	TIP	1439.390	1	1439.390	10.394	.001	.035
Intercept	TPC	141380.961	1	141380.961	17143.73	.000	.984
	TIP	1123154.366	1	1123154.36	8110.513	.000	.966
Gender	TPC	3.361	1	3.361	.408	.524	.001
	TIP	1439.390	1	1439.390	10.394	.001	.035
Error	TPC	2333.846	283	8.247			
	TIP	39190.21	283	138.481			
Total	TPC	144757.0	285				
	TIP	1164624.0	285				
Corrected Total	TPC	2337.207	284				
	TIP	40629.6	284				

Source: Field Data (2021)

Table 15 shows the results for the Tests of Between-Subjects Effects to substantiate the differences observed in the multivariate analysis. Before going further to report, it was important for protocols to be followed in order to avoid statistical errors in terms of Type I Error (getting a difference where indeed there is none). For that reason, Bonferroni adjusted alpha level was used (.05/2= .025) (Tabachnick & Fidell's, 2013, p. 272). This new alpha level of .025 was purposely for establishing a genuine difference. After this, the results for the dependent variables were separately considered using the new alpha level of .025. Careful examination showed that there were no statistical gender differences in teacher professional competence, F(1, 283)=.408, p=.524, partial eta squared=.001). On the other hand, there were statistical gender differences in teacher instructional practices F(1, 283)=10.394, p=.001, partial eta

squared=.035). With this, the effect sizes established were small according to Cohen (1988, p. 284-287) criteria. An inspection of the mean scores indicated that females reported slightly higher levels of teacher instructional practices (M=65.23, SD=11.06) than males (M=60.72, SD=12.33) with a mean difference of 4.51 which was a bit larger than a 2 scale points.

H_0: Gender difference does not exist in the kind of professional development teachers go through in the Adansi South District.

H_1: Gender difference exists in the kind of professional development teachers go through in the Adansi South District.

This hypothesis was tested to find the difference in teachers' professional development based on gender. Multivariate Analysis of Variance (MANOVA) was used to test this hypothesis to establish how male and female differed on TPD. Three dependent variables (planning, executing and evaluating) which were dimensions under the TPD were used. The independent variable was gender. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity, with no serious violations noted. The test of homogeneity of variance-covariance assumption was met using the Box's M Sig. value of 8.047, which was greater than .001. Levene's Test was also checked for violation of equality of variance for planning, executing and evaluating. The results showed that none of the variables violated the equality of variance assumptions, panning with a sig. value of .381, executing with a sig. value of .825 and evaluating with a sig value of .384 all of which were greater than .05. After checking for and meeting all assumptions, Table 14 below displays the results on the descriptive statistics:

Table 16- Descriptive Statistics for Teacher Professional Competence and Teacher Instructional Practices

Variable	Gender	Mean	SD	N
Planning	Male	16.1039	1.86880	154
	Female	16.3282	1.97072	131
	Total	16.2070	1.91619	285
Executing	Male	12.6039	1.73174	154
	Female	12.7252	1.68273	131
	Total	12.6596	1.70747	285
Evaluating	Male	12.2273	1.88396	154
	Female	11.9847	2.19785	131
	Total	12.1158	2.03420	285

Source: Field Data (2021)

The results from Table 16 present the descriptive results of the study variables which indicated that there were no significant differences in the mean scores of male and female teachers concerning TPD (Planning, Executing and Evaluating). The results suggested that both males and females had almost the same mean scores on planning, executing and evaluating. This implied that descriptively, males and females did not differ in terms of teacher professional development. However, the descriptive results were not enough to ascertain significant differences in mean scores of planning, executing and evaluating, hence the need to examine the MANOVA Multivariate Tests in Table 17:

Table 17-Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.017	1.625	3.000	281.000	.184	.017
	Wilks' Lambda	.983	1.625	3.000	281.000	.184	.017
	Hotelling's Trace	.017	1.625	3.000	281.000	.184	.017
	Roy's Largest Root	.017	1.625	3.000	281.000	.184	.017

Source: Field Data (2021)

Table 17 showed the results of the multivariate test to check for gender differences in the sub dimensions of the teacher professional development. The results showed there was no statistically significant difference between males and females on teacher professional development: F (3, 281) = 1.625, p= .184; Wilks' Lambda=.983; partial eta squared=.017. This implies that male and female teachers were not different in TPD in terms of planning, executing and evaluating.

Discussion

This section interpreted and compared the findings of this current study in reference to the literature and previous findings. Each finding is evaluated and their implications with respect to current theoretical positions as well as their practical applications are also examined. The findings are discussed according to the research questions and hypotheses.

Professional Development Teachers go through

The results of the study indicated that the most predominant professional development teachers went through included training programmes that helped

them to choose learning and teaching activities in a way that contributes to achieving goals; training programmes that benefited them in developing their ability to prepare the annual plan; followed by training programmes that benefited them in how to raise learners' motivation; training programmes that guided them in selecting suitable educational aids and techniques for creating effective learning activities; programmes that helped to take into account individual differences; training programmes that improved their ability to prepare objective tests; training programmes that developed their teaching of facts, concepts and principles; training programmes that benefited them in the necessity of diversity of the goals to include the three areas of conceptual and procedural knowledge and problem-solving and finally, training programmes that enabled them to acquire the skill of building or developing treatment plans based on the results of the evaluation. In all, the results gave an indication that teachers were more interested in PD that helped them in planning. This result seem to be consistent with the findings of Noonan (2019), Darling-Hammond, Hyler and Gardner (2017), Hilliard (2015) and Pareja Roblin and Margalef (2013) who also found that teachers were interested in trainings that could help them plan programmes and execute the curricula. The only differences or inconsistencies were that some specific PD programmes were specific to certain context and domains. The results for this study imply that teachers are much more concerned with the classroom and the things that could help them upgrade themselves to meet growing trends. Teachers would like to bring out the best in their students and therefore were interested in programmes that helped them in how to raise students' motivation, guided them in selecting suitable educational aids and techniques for creating effective learning activities as well as PD

programmes that improved their ability to prepare objective tests and helped them to take into account individual differences. These professional developments are supported by Bandura's (1997) social cognitive theory of learning theory which has been referenced by many scholars in the field of professional development and learning. Learning in any form, modeling (imitating) or vicariously according Bandura are various effective ways teachers could use to upgrade themselves and develop. Teachers may be interested in such PD programmes because they help them meet their students' needs.

Level of Professional Competence among Teachers

The result for this study indicated that teachers had high levels of professional competence. Some specific competence they exhibited included being highly effective in the teaching that they do in school, being more skillful in their activities in school, performing very well at many things in school as well as always accomplishing what they tried to do in school and being very talented in teaching in school. This finding is consistent with the findings of Wachidi, Rodgers and Tumanov (2020), Hakim (2015) and Voitovska (2013). These studies also found that teachers had higher levels of professional competence. Conversely, this result is in contradiction to the result of Jabborov (2020) who found that teacher professional competence was very low among some teachers. What the finding of this study means with the high level of professional competence is that teachers were very confident that they had what it takes to teach and bring out the best in their students. Juxtaposing the findings on the kind of professional development teachers went through on the level of professional competence, it may not be very surprising that teachers had high levels of professional competence. This is because, with the kind of professional

development teachers had, it would be expected that it boost their confidence in the classroom. Again, teachers might have had high levels of professional competence because most of their professional developments were focused on how to plan and execute in the classroom. This is very much supported by Bandura's Social Learning Theory and Self-Efficacy (1977) which is used to explain how teachers develop themselves to boost their competence and instructional qualities. With this high level of professional competence, it is more likely to have an impact on their instructional practices.

Instructional Practices adopted by Teachers

The study found that the most predominant instructional practice was walking around to give immediate and specific feedback to students while they were practicing a new skill, followed by setting short-term goals for students; taking the time to assess students' prior knowledge and skills before teaching a lesson; ensuring that the students' engagement is high during independent work activities; previewing reading materials to ensure that students will be able to read text with at least 93% level of accuracy; flexibly grouping students with other students by skill or objective. Conclusively, the findings indicated that teachers regularly adopted good instructional practices. This means that JHS teachers in the Adansi South District regularly adopted good instructional practices in the classroom. This finding is corroborated by the findings of Francisco and Celon (2020), Carter, Stephenson and Strnadová (2011) and van Es and Sherin (2010) who also found similar teacher instructional practices. These findings centered on teachers adapting instructional practices that were focused on helping the school children in the classroom in very simple ways. On the other hand, the instructional practices identified by Özdem Yilmaz,

Cakiroglu, Ertepinar and Erduran (2017) seemed to be very complex and operate at various levels. It is however not very surprising to have these kind of inconsistencies in results because these studies were conducted in different settings with different instruments and research methods. Teachers had good instructional practices because previous findings indicated that teachers had undergone various forms of professional development which might have led to the high level of professional competence. The effect of being competent is that teachers may be able to choose the best instructional practices. Again, the teacher instructional practices were centered on helping students in the classroom to bring out their best performances. It could also be seen that teachers were concerned about the procedures and ways to make students practice new skills and at the same time checking on how they perform. Component Display Theory proposes that instructional practices should be in a way to teach nearly any sort of learner and therefore by teachers in this current study taking the time to assess students' prior knowledge and skills before teaching a lesson, then they may be trying to reach out to every student.

Teachers' professional development predicting (a) teachers' professional competence and (b) teachers' instructional practices

This study found that teacher professional development predicted both teacher professional competence and teacher instructional practices. This study is consistent with the study of Schiefele and Schaffner (2015), Lumpe, Czerniak, Haney and Beltyukova (2012), Buczynski and Hansen (2010) and Parise and Spillane (2010). These studies also found that teacher professional development predicted teacher instructional practices. However, on the contrary, in the study of Kunter, Klusmann, Baumert, Richter, Voss and

Hachfeld (2013), it was rather teacher professional competence that predicted teacher instructional practices and quality. This result may somehow be attributed to the methodological is processes including research instruments and analysis that were used in the study. The implication for the results of this current study is that when teachers learn to upgrade themselves through professional development, it is supposed to reflect in their competency or ability to teach as well as their mode of teaching or instructional practices. This finding is again corroborated by Bandura's Social Learning Theory and Self-Efficacy (1977) which supports that teachers could boost their competence and instructional practice qualities through learning either by imitation or vicariously. This means that once teachers keep taking professional development, it is expected that whatever they learn reflects in their competence level and instructional practices. It is therefore not shocking that professional development predicted both professional competence and instructional practices.

Gender Difference in (a) Teachers' Professional Competence and (b) Teachers' Instructional Practices

The study found that males and females did not differ in terms of professional teacher competence but differed in terms of teachers instructional practices. This implies that whilst male and female teachers had the same level of professional competence, male and female teachers had different instructional practices which could mean male teachers used approaches that were different from that of the female teachers. These findings in terms of professional competence is inconsistent with the findings of Gudmundsdottir and Hatlevik (2018), Lauermann and König (2016) and Erdogan and Sahin

(2010) who found that there were significant gender differences in terms of teacher professional competence. On the other hand little is said of gender differences in terms of instructional practices as Erdogan and Sahin (2010) found gender differences in instructional practices. One of the factors that contributed to the gender differences in previous literature included the focus of the study. Some of these studies were focused on digital competence and technological competence. And for instance Erdogan and Sahin (2010) reported that there is a general perception that females were technologically weak and this could account for the differences. However, in this current study, the focus was on all teaching areas. The no difference in professional competence means that teachers in the Adansi South district have the same level of professional competence. This means that both male and female teachers were very confident in their teaching areas. This finding defies the general perception that male teachers are mostly confident in teacher some subjects than their female counter parts. This could be attributed to the fact that both male and female teachers keep learning from each other to boost their confidence. That is exactly what Bandura's Theory states that people learn by observing or imitating others as well as learning vicariously. As teachers continue to learn from each other, it raises their level of self-efficacy and therefore have the full conviction that they were very competent to teach.

On the other side is where teachers differ in instructional practices. This implies that though both male and female teachers may be very competent to teach, their mode of teaching or instructional practices may be different from each other. This means that the specific teaching strategies that guide the classroom management by male teachers may differ from that of the strategies

by female teachers. Constructivist theory state that one major aspect of the theory is learner's conscious control of his or her environment which is explained as the idea that teachers could choose their own instructional tactics in terms of content and presentation resulting from their own epertise. This seems to support the reason why there are gender differences in teacher instructional practices.

Gender Difference in Teachers' Professional Development

This study found that male and female teachers in the Adansi south district did not differ in teacher professional development. Male and female teachers did not differ on any of the dimensions of professional development which included planning, executing and evaluating. This finding lacks consistency with the findings of Lumpe, Czerniak, Haney and Beltyukova (2012) and Lamote and Engels (2010). These studies rather found significant gender differences in professional development. The implication of the results this current study is that it did not matter whether the teacher was a male or a female, the same professional development programme was given to them. This is not likely to be very surprising because in our Ghanaian context, professional development programmes are not usually organised based on gender or focused on a particular thesis. The same professional development programmes are organised for all teachers in all schools. In all teachers amy receive the same amount of professional training or development and gain the same level of professional competence but have different mode of delivery.

Summary of the Key Findings

JHS teachers in Adansi South District went through the kind of teacher professional development that was mostly concerned with planning plan.

Specifically, some of the professional development included training programmes that helped them to choose learning and teaching activities in a way that contributes to achieving goals; training programmes that benefited them in developing their ability to prepare the annual plan; training programmes that guided them in selecting suitable educational aids and techniques for creating effective learning activities; and training programmes that improved their ability to prepare objective tests.

Again, teachers had high levels of professional competence. Some specific competence they exhibited included being highly effective in the teaching that they do in school, being more skillful in their activities in school, performing very well at many things in school as well as always accomplishing what they tried to do in school and being very talented in teaching in school.

The most predominant instructional practices were walking around to give immediate and specific feedback to students while they were practicing a new skill, followed by setting short-term goals for students; taking the time to assess students' prior knowledge and skills before teaching a lesson; ensuring that the students' engagement is high during independent work activities; previewing reading materials to ensure that students will be able to read text with at least 93% level of accuracy; flexibly grouping students with other students by skill or objective. In conclusion, teachers had good instructional practices.

Teacher Professional Development predicted both teacher professional competence and teacher instructional practices.

Concerning gender differences, there were no gender differences in teacher professional competence whilst there were gender differences in teacher instructional practices.

Finally, there were no gender differences in teacher professional developments.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter deals with the summary of the study, conclusions and recommendations of the study.

Overview of the Study

Purpose of the Study

The study sought to investigate the impact of teachers' professional development on teachers' professional competence and teachers' instructional practices of JHS teachers in the Adansi South District

Methodology

The descriptive survey research design with a quantitative approach was adopted for the study. Using the census technique, 285 teachers responded to the questionnaire. A three set adapted questionnaires for teachers in terms of teacher professional development, teacher professional competence and teacher instructional practices were used for the study. The data gathered were analysed descriptively and inferentially using means and standard deviations, Multiple Linear Regression and Multivariate Analysis of Variance MANOVA.

Research Questions

Research Questions

1. What kind of professional development do teachers go through in the Adansi South District?
2. What is the level of professional competence among teachers in the Adansi South District?

3. What instructional practices are adopted by teachers in the Adansi South District?

Research Hypotheses

***$H_0 1$*: Teachers' professional development will not predict teachers' professional competence and teachers' instructional practices in the Adansi South District

***$H_1 1$*: Teachers' professional development will predict teachers' professional competence and teachers' instructional practices in the Adansi South District.

***$H_0 2$*: Gender difference does not exist in teachers' professional competence and teachers' instructional practices in the Adansi South District.

***$H_1 2$*: Gender difference exist in teachers' professional competence and teachers' instructional practices in the Adansi South District.

***$H_0 3$*: Gender difference does not exist in the kind of professional development teachers go through in the Adansi South District.

***$H_1 3$*: Gender difference exists in the kind of professional development teachers' go through in the Adansi South District.

Key Findings of the Study

1. JHS teachers in Adansi South District went through the kind of teacher professional development that was mostly concerned with planning plan. Specifically, some of the professional development included training programmes that helped them to choose learning and teaching activities in a way that contributes to achieving goals; training programmes that benefited them in developing their ability to prepare

the annual plan; training programmes that guided them in selecting suitable educational aids and techniques for creating effective learning activities and training programmes that improved their ability to prepare objective tests.

2. Teachers had high levels of professional competence. Some specific competence they exhibited included being highly effective in the teaching that they do in school, being more skillful in their activities in school, performing very well at many things in school as well as always accomplishing what they tried to do in school and being very talented in teaching in school.
3. The most predominant instructional practices were walking around to give immediate and specific feedback to students while they were practicing a new skill, followed by setting short-term goals for students; taking the time to assess students' prior knowledge and skills before teaching a lesson; ensuring that the students' engagement is high during independent work activities; previewing reading materials to ensure that students will be able to read text with at least 93% level of accuracy; flexibly grouping students with other students by skill or objective. In conclusion, teachers had good instructional practices.
4. Teacher Professional Development predicted both teacher professional competence and teacher instructional practices.
5. Concerning gender differences, there were no gender differences in teacher professional competence whilst there were gender differences in teacher instructional practices.

6. Finally, there were no gender differences in teacher professional developments.

Conclusions

Based on the findings, the following conclusions were drawn:

It can be concluded that though there may be different forms of professional development available, some were very important to them. Teachers are interested in professional development and training that sought to enhance their planning in the classroom. Teachers were concerned with planning in terms of organising the classroom, planning the appropriate test to match with appropriate learning activities. This finding gives an indication that training programmes must be organised to meet the needs of the teachers they are meant for.

With JHS teachers having high levels of professional competence, it can be concluded that teachers in the Adansi South District are very poised and confident in their ability to teach in the classroom and bring out the best in their students. With the kind of professional development that the teachers go through they were very likely to have the self-efficacy and what it takes to teach. These high levels of professional competence give the evidence that with the right professional development and training, teachers will be very confident to give out their best.

The kind of instructional practices identified by the teachers in the Adansi South District indicate that teachers are more concerned with the practices that seek to bring out the best in the students. It can be concluded that JHS teachers in the Adansi South District have their students at hearts. It may

not be out of the blue because from their kind of professional development and level of competence, it is translated into their choice of instructional practices.

From the above, concerning how professional development, professional competence and instructional practices seem to link to one another, it is no news that teacher professional development predicted both instructional practices and professional competence. The conclusion of this is that the kind of professional developments teachers have go a long way to have impact on teachers' professional competence and the kind of instructional practices teachers choose

It can also be concluded that with the right amount of professional development both male and female teachers will have the same level of confidence to teach. This is better to do away with the old perception that male teachers do better in teaching some subjects better that the female teachers. For instance, it is a general perception that females do not do better with mathematics and other technical subjects like ICT. This leads to the belief that female teachers may not be a good fit to teach some subjects. However, it can be deduced from this study that both male and female teachers have the same level of competence to teach and therefore should be given the same amount and level of training. However, it can be recognised that teachers may have the same level of ability and competence to teach, just like individual differences, every teacher would have their own methods or ways of giving instructions. Though there be laid down procedures for instructional practices, male and female teachers may have different ways of following the same procedures to give out instructions to get the same outcome.

Finally, it can be concluded that since there are no gender differences in teacher professional developments, there would not be any need to have professional developments that target only males or only females. Male and female teachers reported of going through the same kind professional developments which is helpful to put all teachers at the same level. With this, there would not be an point for one to say that some gender receive better training than others and therefore better than the other gender.

Recommendations

In view of the findings resulting from the study, the following recommendations are made:

1. It is recommended that based on the kind of professional development teachers want, organisers of continuous professional development (CPD) focus on the needs of teachers and not just any other programmes. Ghana Education Service (GES) and heads of the various schools should ensure that teachers attend regular teacher professional trainings and programmes to match up with growing trends.
2. It is again recommended that teachers try as much as possible to continue to maintain high levels of professional competence. This will help raise their self-efficacy and confidence in the classroom. Head teachers can ensure this through relevant professional development programmes. One major way that has a commendation is how importance has been given to the need for professional development with scores or points in any CPD programme organised. This means that to move forward or attain any position, one's score or points gained from

professional development programmes would count. It is recommended that this is maintained in the teaching field.

3. Also it is recommended that JHS teachers apply instructional practices that will address the needs of their students in the classroom. This will mean that teachers will have to have regular assessment needs of the students to know which instructional practices to choose. This is necessary to maintain the good instructional practices that teachers reported of.
4. Since teacher professional development is seen to have impact on professional competence and instructional practices, it is recommended that the Ministry of Education, Ghana Education Service and educational policy makers make policies to ensure that every teacher mandatorily go through professional development. If it is already in policy then effort should be made to enforce its implementation
5. It is recommended that there should not be any gender biasness in the kind of professional development given to teachers. Developers of professional development programmes should ensure that their programmes target all teachers and not any one particular gender. Head teachers should keep their teachers under regular professional competence screening to help teachers to identify their level of competence.

Suggestions for Further Research

In view of the delimited scope of this study, it is recommended that future research focuses on the following areas:

1. Future research should focus on using a larger sample from a larger context as well as using different population.
2. As this study looked at how teacher professional development predicted teacher professional competence and instructional practices, future studies could look at the mediation/moderation roles of other factors that could explain these predictions.
3. This study used a descriptive survey but further studies can use other research designs like longitudinal approach and other exploratory methods to gain explanations from other perspectives.

REFERENCES

Abonyi, U. K., Yeboah, R., & Luguterah, A. W. (2020). Exploring work environment factors influencing the application of teacher professional development in Ghanaian basic schools. *Cogent Social Sciences*, *6*(1), 1778915.

Adamu-Issah, M., Elden, L. A., Forson, M., & Schrofer, T. (2007). Achieving universal primary education in Ghana by 2015: A reality or a dream. *Division of Policy and Planning*.

Ahmed, A. K. (2013). Teacher-centered versus learner-centred teaching style. *Journal of Global Business Management*, *9*(1), 22.

Alemayehu, G. (2011). *The practice and challenges of continuous professional development in government secondary schools of Oromia Special Administrative Zone surrounding Fin fine*. (Unpublished master's thesis, Addis Ababa University, Addis Ababa).

Al-Zahrani, J. H. (2012). Natural radioactivity and heavy metals in milk consumed in Saudi Arabia and population dose rate estimates. *Life Science Journal*, *9*(2), 651-656.

Anamuah-Mensah, J. (2002). *Fifteen Years of the New Educational Reforms: The Way Forward: Keynote Address* (Vol. 2, No. 3). National Council for Tertiary Education.

Ananga, D. E., Tamanja, E. M. J., & Amos, P. (2015). Effects of teachers' participation in distance education on basic education: A case study of central region in Ghana: A study commissioned by Plan Ghana. *Unpublished manuscript*.

Angelle, F. (2018). Leadership For Student Engagement. Englewood Cliffs, New Jersey: Prentice-Hall.

Artino, A. R. (2012). Academic self-efficacy: from educational theory to instructional practice. *Perspectives on medical education*, *1*(2), 76-85.

Ashebir, M. (2014). *Practices and challenges of school-based continuous professional development in secondary schools of Kemashi Zone.* (Doctoral dissertation, Jimma University).

Asiamah, N., Mensah, H. K., & Oteng-Abayie, E. F. (2017). Do larger samples lead to more precise estimates? A simulation study. *American Journal of Educational Research*, *5*(1), 9-17.

Ayeni, J. O. (2005). Issues in teaching profession and teacher competence. *Nigerian Journal of Educational Philosophy*, *12*(1), 44-50.

Bandura, A. (1971). *Social learning theory*. General Learning Corporation,

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioural change. *Psychological Review*, *84*(2), 191.

Bandura, A. (1979). The social learning perspective: Mechanisms of aggression. Learning Corporation,

Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of social and clinical psychology*, *4*(3), 359-373.

Bandura, A. (1997). The anatomy of stages of change. *American journal of health promotion: AJHP*, *12*(1), 8-10.

Bandura, A. (2006). Guide for constructing self-efficacy scales. *Self-efficacy beliefs of adolescents*, *5*(1), 307-337.

Bandura, A., & Walters, R. H. (1963). *Social learning and personality development.* General Learning Corporation,.

Belay, S. (2016). The Contribution of Teachers' Continuous Professional Development Program to Quality of Education and Its Teacher-Related Challenging Factors at Chagni Primary Schools, Awi Zone, Ethiopia. *Online Submission*, *4*(3), 218-225.

Berger, J. M. (2010). *Measuring teaching practices: Does a self-report measure of instruction predict student achievement?* (Doctoral dissertation, University of Maryland, College Park).

Bernard, H. R. (2017). *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. Rowman & Littlefield.

Bernard, H. R., & Bernard, H. R. (2013). *Social Research Methods: Qualitative and Quantitative Approaches*. Sage Publications.

Bolam, R. (2000). Emerging policy trends: some implications for continuing professional development. *Journal of In-Service Education*, *26*(2), 267-280.

Bolam, R., & Weindling, D. (2006). *Synthesis of research and evaluation projects concerned with capacity-building through teachers' professional development*.

Buczynski, S., & Hansen, C. B. (2010). Impact of professional development on teacher practice: Uncovering connections. *Teaching and teacher education*, *26*(3), 599-607.

Caena, F. (2014). Teacher Competence Frameworks in Europe: policy-as-discourse and policy-as-practice. *European Journal of Education*, *49*(3), 311-331.

Campbell, K., Schwier, R. A., & Kenny, R. F. (2009). The critical, relational practice of instructional design in higher education: An emerging model

of change agency. Educational Technology Research and Development, 57(5), 645-663.

Carter, M., Stephenson, J., & Strnadová, I. (2011). Reported prevalence by Australian special educators of evidence-based instructional practices. *Australasian Journal of Special Education*, *35*(1), 47-60.

Center for Educational Innovation (2021). Instructional Practices. http://www.buffalo.edu/ubcei/enhance/designing/learning-activities/instructional-practices.html

Chemir, H. (2013). *Practices and challenges of the implementation of continuous professional development in secondary schools of Gurage Zone.* Unpublished master's thesis, Dilla University.

Chepkole, C. J., Koross, R., & Kiptoo-Tarus, P. (2017). Provision of in-service training needs for heads of department in secondary schools in Kenya: A study of Marakwet West Sub County. *European Journal of Education Studies*, *3*(11), 629-649.

Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of teacher professional growth. *Teaching and teacher education*, *18*(8), 947-967.

Cobbold, C., & Dare, A. (2011). Supporting the continuing professional development of teachers in sub-Saharan Africa: An integrated teacher education model. Academic Leadership: *The Online Journal*, *9*(1), 45-52.

Cobbold, C., Ampiah-Ghartey, J., Mensah, F., & Ocansey, F. (2009). Research on Education with Specific Reference to Ghana. *Revitalizing Higher Education in Sub-Saharan Africa*, *United Nations University, Tokyo*, 68-90.

Cohen, L., Manion, L., & Morrison, K. (2011). *Surveys, longitudinal, cross-sectional and trend studies.* Research Methods in Education, (7th ed.) Abingdon: Routledge, 261-4.

Coolahan, J. (2002). *Teacher education and the teaching career in an era of lifelong learning.* OECD Education Working Papers, No. 2, OECD. http://dx.doi.org/10.1787/226408628504

Creswell, J. W. (2013). Research design: *Qualitative, quantitative, and mixed methods approaches.* Sage publications.

Crossman, A. (2017). Understanding purposive sampling. Thousand Oaks,

Dampson, D. G, Antor, H., & Eshun, P., (2018). improving basic schools through continuous professional development: The case of Amia-Ba Circuit of Ajumako Enyan Essiam District. *Journal of Education and Practice*, *9*(8), 104-112.

Dampson, D. G., & Mensah, D. K. D. (2018). Professional development needs of stakeholders in education: A comparative study of basic schools in the central region of Ghana. *People: International Journal of Social Sciences*, *4*(2), 1205-1220.

Dampson, D. G., & Mensah, D. K. D. (2018). Professional development needs of stakeholders in education: A comparative study of basic schools in the central region of Ghana. *People: International Journal of Social Sciences*, *4*(2), 1205-1220.

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

Day, C., & Saches, J. (2004). *Professionalism, performativity and empowerment: discourses in the politics, policies and purposes of continuing professional development*. In: Day B & S achs J (eds). International handbook on the continuing professional development of teachers. Berkshire: McGraw-Hill Education

Desalgne, C. (2010). *Continuous Teacher professional development: The Ethiopian context*. Addis Ababa University.

Ducut, N. J. B. (2019). Teacher Professional Development. Retrieved from https://www.pressreader.com/

Epstein, R. M., & Hundert, E. M. (2002). Defining and assessing professional competence. *Jama*, *287*(2), 226-235.

Erdogan, A., & Sahin, I. (2010). Relationship between math teacher candidates' technological pedagogical and content knowledge (TPACK) and achievement levels. *Procedia-Social and Behavioral Sciences*, *2*(2), 2707-2711.

Essel, R., Badu, E., Owusu-Boateng, W., & Saah, A. A. (2009). In-service training: An essential element in the professional development of teachers. *Malaysian Journal of Distance Education 11*(2), 55□64.

Etana, H. (2009). *Teacher's perceptions and practices of continuous professional development: The case of selected primary schools in Jimma Zone*. (Unpublished master's thesis, Addis Ababa University, Addis Ababa.)

Ewur, A. (2011). *An evaluation of factors that influence children's behaviour at the kindergarten level: A case study of University of Cape Coast kindergarten* (Doctoral dissertation, University of Cape Coast).

Francisco, C. D. C., & Celon, L. C. (2020). Teachers' Instructional Practices and Its Effects on Students' Academic Performance. *Online Submission*, *6*(7), 64-71.

Frankfort-Nachmias, C., & Nachmias, D. (2007). *Study guide for research methods in the social sciences*. Macmillan.

Fraser, C., Kennedy, A., Reid, L., & Mckinney, S. (2007). Teachers' continuing professional development: Contested concepts, understandings and models. *Journal of in-service education*, *33*(2), 153-169.

Galbraith, D. D., & Fouch, S. E. (2007). Principles of adult learning application to safety training. *Professional Safety*, *52*(09).

Ghana Education Service Council. (2013). Application for appointment as headmaster or headmistress of senior high school in the Ghana Education Service. *ESC*, *73*(3), 121.

Gizaw, T. (2006). *Teaching Professionalism School level CPD – case study of hold Primary School: Proceedings of the conference on teacher education for sustainable Development in Ethiopia*. May 5-6, Ethiopian Management institute. DebreZeit College of Education: AAU.P. 76-103

Glesne, C. (2011). Prestudy tasks: Doing what is good for you. Qualitative research and educational sciences: A reader about useful strategies and tools, 1-37.

Goertzen, M. J. (2017). Introduction to Quantitative Research and Data. *Library Technology Reports*, *53*(4), 12-18.

Goodall, J., Day, C., Lindsay, G., Muijs, D., & Harris, A. (2005). *Evaluating the impact of continuing professional development (CPD)*. Department for Education and Skills.

Gosa, B. (2012). *The Practices of Teachers' Continuous Professional Development Program in Selected General Secondary School of Jimma Zone*. Unpublished master's thesis, Addis Ababa University, Addis Ababa.

Gray, J. (2005*). An Inquiry into continuous professional development*. Cambridge University Press.

Greenberg, J. (1987). A taxonomy of organizational justice theories. *Academy of Management review*, *12*(1), 9-22.

Gudmundsdottir, G. B., & Hatlevik, O. E. (2018). Newly qualified teachers' professional digital competence: implications for teacher education. *European Journal of Teacher Education*, *41*(2), 214-231.

Gudmundsdottir, G. B., & Hatlevik, O. E. (2018). Newly qualified teachers' professional digital competence: implications for teacher education. *European Journal of Teacher Education*, *41*(2), 214-231.

Haileselasse F. (2004). The status of professional development Programs in Addis Ababa Administrative Educational Bureau. Addis Ababa: unpublished. http://www.edu. Plymouth.ac. uk/resined /actionresearch/arhome.htm

Hakim, A. (2015). Contribution of competence teacher (pedagogical, personality, professional competence and social) on the performance of learning. *The International Journal of Engineering and Science*, *4*(2), 1-12.

Hamdan, A. R., Ghafar, M. N., & Ting, L. H. L. (2010). Teaching competency testing among Malaysian school teachers. *European Journal of Social Sciences*, *12*(4), 610-617.

Heather, M. (2018). 7 Effective Teaching Strategies For The Classroom. https://www.quizalize.com/blog/2018/02/23/teaching-strategies/

Hein, G. (1991). Constructivist learning theory. *Institute for Inquiry. /http://www. exploratorium. edu/ifi/resources/constructivistlearning. htmlS.*

Hilliard, A. T. (2015). Global Blended Learning Practices for Teaching and Learning, Leadership and Professional Development. *Journal of International Education Research, 11*(3), 179-188.

Hoge, D. M. (2016). The relationship between teachers' instructional practices, professional development, and student achievement. London: GTC.

Howitt, D., & Cramer, D. (2010). Chapter 21: Thematic analysis. *Introduction to research methods in psychology*. Prentice Hall

Hussin, S., & Al Abri, S. (2015). professional development needs of school principals in the context of educational reform. *International Journal of Educational Administration and Policy Studies*, *7*(4), 90-97.

Isaacs, S. (2007). ICT in education in South Africa. *Survey of ICT and Education in Africa: South Africa Country Report*, *21*, 15-54.

Jabborov, U. (2020). Modeling the Pedagogical Experience of England as a Factor of Improving the Quality of Training Future Teachers. *Архив Научных Публикаций JSPI.*

Jackson, S. L. (2009). Research Methods and Statistics: *A Critical Thinking Approach 3rd edition*. Wadsworth

Kampen, M. (2019). 5 Ways To Make Teacher Professional Development Effective. https://www.prodigygame.com/main-en/blog/teacher-professional-development/

Kanu, J. I., & Ukpabi, H. N. (2007). Quality in Teacher Production: The Key to Quality in the Universal Basic Education. In *Paper delivered on the 20th annual conference organized by the Curriculum Organization of Nigeria (CON) at Abia State University, Uturu, from 19th–22nd September*.

Kay, K., & Greenhill, V. (2011). Twenty-first century students need 21st century skills. In *Bringing schools into the 21st century* (pp. 41-65). Springer, Dordrecht.

Kelly, P. (2006). What is teacher learning? A socio-cultural perspective. *Oxford Review of Education*, *32*(4), 505-519.

Klieme, E., Lipowsky, F., Rakoczy, K., & Ratzka, N. (2006). Quality dimensions and effectiveness of mathematics teaching. *Studies on the Quality of Education of Schools*, 127-146.

Korthagen, F. A. (2004). In search of the essence of a good teacher: Towards a more holistic approach in teacher education. *Teaching and teacher education*, *20*(1), 77-97.

Koul, B. N. (2009). Workshop on Research Methodology for Distance Education: Report. Sage publications.

Kunter, M., & Baumert, J. (2006). Who is the expert? Construct and criteria validity of student and teacher ratings of instruction. *Learning Environments Research*, *9*(3), 231-251.

Kunter, M., Kleickmann, T., Klusmann, U., & Richter, D. (2013). The development of teachers' professional competence. In *Cognitive activation in the mathematics classroom and Professional Competence of Teachers* (pp. 63-77). Springer,

Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, T., & Hachfeld, A. (2013). Professional competence of teachers: effects on instructional quality and student development. *Journal of Educational Psychology*, *105*(3), 805.

Labaree, R. V. (2009). Research Guides: Organizing Your Social Sciences Research Paper: Types of Research Designs. Retrieved from http://libguides.us c.edu/c.php?g=235 034&p=1561764.

Lamote, C., & Engels, N. (2010). The development of student teachers' professional identity. *European Journal of Teacher Education*, *33*(1), 3-18.

Lauermann, F., & König, J. (2016). Teachers' professional competence and wellbeing: Understanding the links between general pedagogical knowledge, self-efficacy and burnout. *Learning and Instruction*, *45*, 9-19.

Lauermann, F., & König, J. (2016). Teachers' professional competence and wellbeing: Understanding the links between general pedagogical knowledge, self-efficacy and burnout. *Learning and Instruction*, *45*, 9-19.

Lipowsky, F., Rakoczy, K., Pauli, C., Drollinger-Vetter, B., Klieme, E., & Reusser, K. (2009). Quality of geometry instruction and its short-term impact on students' understanding of the Pythagorean Theorem. *Learning and instruction*, *19*(6), 527-537.

Lumpe, A., Czerniak, C., Haney, J., & Beltyukova, S. (2012). Beliefs about teaching science: The relationship between elementary teachers' participation in professional development and student

achievement. *International Journal of Science Education*, *34*(2), 153-166.

McKinley, J. (2015). Critical argument and writer identity: Social constructivism as a theoretical framework for EFL academic writing. *Critical Inquiry in Language Studies*, *12*(3), 184-207.

Melkie, J. (2010). *The implementation of continuous professional development in general secondary schools of South Gonder Zone*. Unpublished master's thesis, Addis Ababa University, Addis Ababa

Mensah, F. M. (2016). Preparing for discussions on race and racism: The critical voices in teacher education course. In *NARST Annual Conference* (pp. 4-23).

Ministry of Education (2010). *Education Sector Development Program IV (2010/2011-2014/2015).* Addis Ababa: FDRE Ministry of Education of Ethiopia.

Ministry of Education, Ghana (MOE), (2012). *Teacher professional development and management at the pre-service level*. Accra: MOE.

Morse, J. M., & Niehaus, L. (2009). *Principles and procedures of mixed methods design*. Oxfordshire: Routledge.

National Education Association, (2021). Teacher Professional Growth. Retrieved from https://www.nea.org/professional-excellence/professional-learning/teachers

Nhu, N. T., Loi, N. T. N., & Thao, N. T. P. (2016). Factors Affecting Secondary and High School Teachers' Professional Competence in Ethnic Minority Areas–A Case of Tay Nguyen, Vietnam. *International Journal of Education and Research*, *4*(11), 151-164.

Noonan, J. (2019). An affinity for learning: Teacher identity and powerful professional development. *Journal of Teacher Education*, *70*(5), 526-537.

Odoom, D., Opoku, E., & Ayipah, D. N. (2016). Staff development needs at the Colleges of Education in Ghana: Evidence from the Agogo College. *International Journal of Innovative Research and Development*, *5*(1), 127-137.

OECD (2009). Creating effective teaching and learning environments. First Results from TALIS. Paris: OECD Publications. http://www.oecd.org/dataoecd/17/51/43023606.pdf

Ololube, N. P. (2006). The impact of professional and non-professional teachers' ICT competencies in secondary schools in Nigeria. *Journal of Information Technology Impact*, *6*(2), 101-118.

Opfer, V. D., & Pedder, D. (2011). Conceptualizing teacher professional learning. *Review of Educational Research*, *81*(3), 376-407.

Organisation for Economic Co-operation and Development, OECD, (2009). *Creating Effective Teaching and Learning Environments: First Results from TALIS*. Paris: OECD

Osei-Owusu, A. (2020). Assessment of continuous professional development needs among teachers of twi in the senior high schools. (Unpublished manuscript), Cape Coast.

Ozdem Yilmaz, Y., Cakiroglu, J., Ertepinar, H., & Erduran, S. (2017). The pedagogy of argumentation in science education: science teachers' instructional practices. *International Journal of Science Education*, *39*(11), 1443-1464.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of educational research*, *66*(4), 543-578.

Pareja Roblin, N., & Margalef, L. (2013). Learning from dilemmas: teacher professional development through collaborative action and reflection. *Teachers and teaching*, *19*(1), 18-32.

Parise, L. M., & Spillane, J. P. (2010). Teacher learning and instructional change: How formal and on-the-job learning opportunities predict change in elementary school teachers' practice. *The elementary school journal*, *110*(3), 323-346.

Perdue, B. (2018). Technology-Focused Professional Development can Help America's Teachers Bring their Classrooms into the 21st Century. Retrieved from https://www.the74million.org/article/perdue-technology-focused-professional-development-can-help-americas-teachers-bring-their-classrooms-into-the-21st-century/

Philip, M. P., & Ramya, K. (2017). Professional competencies for effective teaching learning process. *International Journal of Trend in Research and Development (IJTRD)*, 25-29.

Punch, K. F. (2013). *Introduction to social research: Quantitative and qualitative approaches*. Thousand Oaks, California: Sage.

Rahman, F., Jumani, N. B., Akhter, Y., Chisthi, S. U. H., & Ajmal, M. (2011). Relationship between training of teachers and effectiveness teaching. *International Journal of Business and Social Science*, *2*(4).

Rahman, M. H. (2014). Professional competence, pedagogical competence and the performance of junior high school of science teachers. *Journal of education and practice*, *5*(9), 75-80.

Renzetti, C. M., Curran, D. J., & Maier, S. L. (2012). *Women, men, and society.* Pearson. pp. 78–79.

Rockinson-Szapkiw, A. J. (2012). Investigating uses and perceptions of an online collaborative workspace for the dissertation process. *Research in Learning Technology*, *20*(3).

Rothman, K. J., Gallacher, J. E., & Hatch, E. E. (2013). Why representativeness should be avoided. *International journal of epidemiology*, *42*(4), 1012-1014.

Rothmann, S & Coetzer, E. P. (2003). "The big five personality dimensions and job performance". *SA Journal of Industrial Psychology*, *29*(1), 68-74.

Rotter, J. (1954). *Social learning and clinical psychology*. Englewood Cliffs, New Jersey: Prentice-Hall.

Sagır, M. (2014). Teachers' professional development needs and the systems that meet them. *Creative Education*, *5*(16), 1497-1511.

Saha, I., & Paul, B. (2016). *Essentials of biostatistics: For undergraduate, postgraduate students of medical science, biomedical science and researchers*. Academic Publishers.

Saragih, A. H. (2008). Competencies Minimum of a Master's in Teaching. *Journal TabularasaUnimed PPS*, 5.

Schiefele, U., & Schaffner, E. (2015). Teacher interests, mastery goals, and self-efficacy as predictors of instructional practices and student motivation. *Contemporary Educational Psychology*, *42*, 159-171.

Schoolsi, J. M. M. A. (2009). Seven teacher competencies fun and professional. *Jogjakarta: PowerBooks*.

Schostak, J., Davis, M., Hanson, J., Schostak, J., Brown, T., Driscoll, P., & Jenkins, N. (2010). Effectiveness of continuing professional development project: A summary of findings. *Medical Teacher*, *32*(7), 586-592.

Shakuna, K. S., Mohamad, N., & Ali, A. B. (2016). Modelling professional performance of teachers' scales in Libyan schools. *International journal of management and applied research*, *3*(3), 120-129.

Shuttleworth, M. (2008). Descriptive Research Design. Retrieved from https://explorable.com/descriptive-research-design

Singleton, R., & Strait, B. (2010). Straits. *Approaches to Social Research* (5th ed.) New York: Oxford University Press

Skinner, B. F. (1963). *Science and human behavior*. New York: Appleton.

Tafarodi, R. W., & Swann Jr, W. B. (2001). Two-dimensional self-esteem: Theory and measurement. *Personality and individual Differences*, *31*(5), 653-673.

TALIS (2013) Results: *An International Perspective on Teaching and Learning*. TALIS, Paris: OECD Publishing. http://dx.doi.org/10.1787/9789264196261-en.

Tang, S. Y., Cheng, M. M., & Wong, A. K. (2016). The preparation of pre-service student teachers' competence to work in schools. *Journal of Education for Teaching*, *42*(2), 149-162.

Tay, A. J., & Saleh, S. (2019). Science Teachers' Instructional Practices in Malaysian and German Secondary Schools. *Journal of Education and Learning*, *8*(4), 124-135.

Toshboeva, B. (2015). Professional competence of English language teachers in Uzbekistan. New York, NY: Holt, Rinehart & Winston.

UNESCO (2015). *Global action programme on education for sustainable development information folder*. Available at: http://en.unesco.org/esd-repo/662/

Usman, Y. D. (2016). Educational Resources: An Integral Component for Effective School Administration in Nigeria. *Online Submission*, *6*(13), 27-37.

van Es, E. A., & Sherin, M. G. (2010). The influence of video clubs on teachers' thinking and practice. *Journal of mathematics teacher Education*, *13*(2), 155-176.

Virginia, A. (2019). Best Instructional Practices. Retrieved from https://www.tpsnva.org/teach/best_practices/

Voitovska, O. N. (2013). Computer diagnostics of level of professional competence formation of future physical culture teachers in the biological disciplines study. *Pedagogics, psychology, medical-biological problems of physical training and sports*, *17*(3), 11-17.

Vygotsky, L. S. (1986). *Thought and language* (revised edition). Cambridge, Mass.: MIT Press.

Wachidi, W., Rodgers, A., & Tumanov, D. Y. (2020). Professional competence understanding level of elementary school in implementing curriculum 2013. *International Journal of Educational Review*, *2*(1), 99-105.

Wajdi, M. B. N., Rahayu, S., Ulfatin, N., Wiyono, B. B., & Imron, A. (2018). The professional competency teachers mediate the influence of teacher

innovation and emotional intelligence on school security. *Journal of Social Studies Education Research*, *9*(2), 210-227.

Yeh, S. S. (2009). The cost-effectiveness of raising teacher quality. *Educational Research Review*, *4*(3), 220-232.

Yoon, K. S., Duncan, T., Lee, S. W. Y., Scarloss, B., & Shapley, K. L. (2007). Reviewing the evidence on how teacher professional development affects student achievement. issues & answers. rel 2007-no. 033. *Regional Educational Laboratory Southwest (NJ1)*.

APPENDICES

APPENDIX A

UNIVERSITY OF CAPE COAST

COLLEGE OF EDUCATION STUDIES

FACULTY OF EDUCATIONAL FOUNDATIONS

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

QUESTIONNAIRE

Dear Respondent,

The researcher is embarking on this study for an academic purpose. It would be appreciative if you could answer the questions below. There is no right or wrong answer and the interest is in your personal experience and opinion. The confidentiality of your information is guaranteed.

Instruction: For each item, please choose the answer which best describes your experiences by ticking [√]

SECTION A

Demographic Data

1. **Gender:** Male **[ ]** Female **[ ]**
2. **Educational Qualification:** Certificate A [ ], Diploma [ ], Bachelors [ ], Masters/PhD [ ]
3. **Years of Service:**
4. **Subject:**
5. **Age:**

Instruction: In the tables below for each statement mark how much you agree with a tick **[√]** in the box to the right of each statement. Strongly Disagree **[SD],** Disagree **[D], Agree [A]** and Strongly Agree **[SA].**

SECTION B

Teacher Professional Development

Strongly Disagree, Disagree, Agree, Strongly Agree

SN	Statement	SD	D	A	SA
1	Training programs benefit me in developing my ability to prepare the annual plan				
2	They benefit me in the necessity of diversity of the goals to include the three areas of conceptual and procedural knowledge and problem-solving.				
3	They guide me in selecting suitable educational aids and techniques for creating effective learning activities.				
4	They help me to choose learning and teaching activities in a way that contributes to achieving the goals.				
5	They enable me to formulate various classroom questions.				
6	Training programs benefit me in how to raise learners' motivation.				
7	Training programs develop my skill of raising classroom questions.				
8	Training programs help to take into account individual differences.				
9	They develop my teaching of facts, concepts and principles.				
10	Training programs improve my ability to prepare objective tests.				
11	They improve my ability to prepare oral tests.				
12	Training programs help in the preparation of improved essay tests that reveal learners' weaknesses.				
13	They enable to acquire the skill of building or developing treatment plans based on the results of the evaluation.				

SECTION C

Teacher Professional Competence

Strongly Disagree, Disagree Agree, Strongly Agree

SN	Statement	SD	D	A	SA
14	I am highly effective at teaching that I do in school.				
15	I am almost always able to accomplish what I try doing in school.				
16	At times, I find it difficult to achieve the things that are important to me in school.				
17	I sometimes deal poorly with challenges in school.				
18	I perform very well at many things in school.				
19	I sometimes fail to fulfil my goals in school.				
20	I am very talented in teaching in school				
21	I wish I were more skilful in my activities in school				

SECTION D

Teacher Instructional Practices

Never, Rarely, Sometimes, Often, Always

SN	Statement	N	R	S	O	A
22	I assess the level of challenge an academic task will provide to students.					
23	I take the time to assess students' prior knowledge and skills before teaching a lesson.					
24	I preview reading materials to ensure that students will be able to read text with at least 93% level of accuracy.					
25	I monitor students' understanding or the content of a skill during activities and make adjustments accordingly.					
26	I make adjustments during lessons based on students' understanding of the content or skill.					
27	I walk around to give immediate and specific feedback to students while they are practicing a new skill.					
28	I prepare practice exercises for students so that he or she knows at least 75% of the material before starting the task.					
29	For critical skills, I ensure that students' practice is continued to the point of mastery.					

30	I ensure that the students' engagement is high during independent work activities.					
31	I do more than the school system and curriculum requires to assess students					
32	I assess students to pinpoint the most important instructional needs.					
33	I set short-term goals for students.					
34	I collect data on students to monitor progress toward short-term goals.					
35	I flexibly group students with other students by skill or objective.					
36	I assess students' academic skills in the subject areas in which there are weaknesses.					
37	I define students' behaviour in specific and observable terms.					
38	I analyse what happens immediately before and after students' behaviour.					
39	I graph data about students' increase in appropriate behaviours.					

APPENDIX B

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: CES-ERB/ucc.edu/V5/21-39

Your Ref: ....

Date: 15th April, 2021

Chairman, CES-ERB
Prof. J. A. Omotosho
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Vice-Chairman, CES-ERB
Prof. K. Edjah
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Secretary, CES-ERB
Prof. Linda Dzama Forde
lforde@ucc.edu.gh
0244786680

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

The bearer, Enoch Appiah, Reg. No. EF/PPE/19/0007 is an M.Phil. / ~~Ph.D.~~ student in the Department of Education and Psychology in the College of Education Studies, University of Cape Coast, Cape Coast, Ghana. He / ~~She~~ wishes to undertake a research study on the topic:

Teachers' professional development as a predictor of their professional competence and instructional practices: A study of junior high school teachers in the Adansi-South District

The Ethical Review Board (ERB) of the College of Education Studies (CES) has assessed his/~~her~~ proposal and confirm that the proposal satisfies the College's ethical requirements for the conduct of the study.

In view of the above, the researcher has been cleared and given approval to commence his/~~her~~ study. The ERB would be grateful if you would give him/~~her~~ the necessary assistance to facilitate the conduct of the said research.

Thank you.
Yours faithfully,

Prof. Linda Dzama Forde
(Secretary, CES-ERB)

APPENDIX C

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF EDUCATIONAL FOUNDATIONS
DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Telephone: 0332091697
Email: dep@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:

Your Ref:

4th May, 2021

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

THESIS WORK
LETTER OF INTRODUCTION: MR. ENOCH APPIAH

We introduce to you Mr. Appiah, a student from the University of Cape Coast, Department of Education and Psychology. He is pursuing a Master of Philosophy Degree in Educational Psychology and he is currently at the thesis stage.

Mr. Appiah is researching on the topic: **''TEACHERS' PROFESSIONAL DEVELOPMENT AS A PREDICTOR OF THEIR PROFESSIONAL COMPETENCE AND INSTRUCTIONAL PRACTICES.''**

He has opted to collect or gather data at your institution/establishment for his Thesis work. We would be most grateful if you could provide him with the opportunity and assistance for the study. Any information provided would be treated strictly as confidential.

We sincerely appreciate your co-operation and assistance in this direction.

Thank you.

Yours faithfully,

Florence Essuon (Ms.)
Administrative Assistant
For: **Head**