UNIVERSITY OF CAPE COAST

CONTINUOUS PROFESSIONAL DEVELOPMENT AND ITS

PERCEIVED IMPACT ON TEACHER PROFESSIONAL PRACTICE: AN

EXPLORATORY- SEQUENTIAL ANALYSIS

ANASTASIA NANA AMA KUMI-KORSAH

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EXPLORATORY-SEQUENTIAL ANALYSIS

BY

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Education of the Faculty of Arts and Social Sciences Education, College of

Education Studies, University of Cape Coast, in partial fulfilment of the

requirements for award of Doctor of Philosophy Degree in Management

Education

OCTOBER 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: Mrs. Anastasia Nana Ama Kumi-korsah

**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: ..............................

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# ABSTRACT

Teacher professional development for teachers has gained prominence for its role in maintaining and enhancing teacher knowledge and skills required for teachers' professional practise. This study explored Continuous Professional Development and its perceived impact on teacher professional practise in Ghana. The study adopted a mixed methods approach utilizing an exploratory-sequential design. Using multiple sampling techniques, 1 training officer, 3 headteachers and 435 pre-tertiary teachers participated in the study. Data was collected using interview and questionnaire. Descriptive statistics (frequencies, percentages, means and standard deviation) and inferential statistics (ANOVA and MANOVA) were utilised to analyse all research questions and hypotheses. The study revealed that pre-tertiary teachers conceptualised professional development as formal CPD initiatives spearheaded by schools and governing institutions with no clear structure and organised periodically. The study also revealed that most CPD initiatives available to pre-tertiary teachers were high in teacher passivity, focused heavily on addressing issues relating to content areas and impacted teachers' professional practise in terms of their knowledge and skills more than teacher efficacy. No difference was found in CPD activities based on school category. Also, no difference was found in perceived impact of existing CPD on teacher professional practise based on teaching experience. It was recommended that pre-tertiary teachers and GES shift from the traditional model of CPD for teacher learning to more collaborative and informal systems which should be recognised as mandatory components of teachers' professional development.

**KEYWORDS**

Continuous Professional Development

CPD activities

Pre-tertiary teachers

Teacher Professional Development

Teacher Professional Practise

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**DEDICATION**

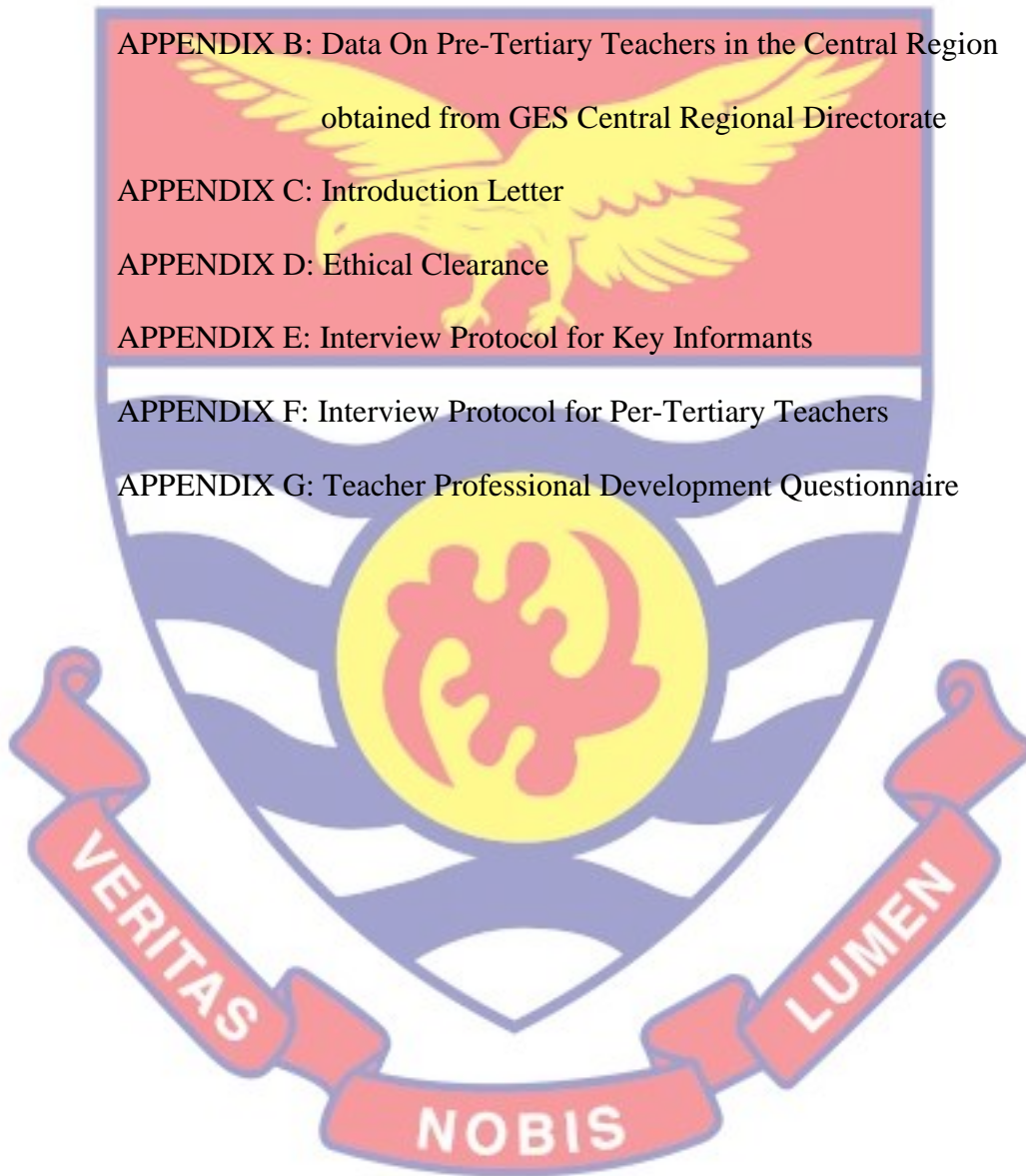This work is dedicated to Mr. Kodwo Obo Kumi-Korsah and my children

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| ACTEQ | Advisory Committee on Teacher Education and Qualifications |
|-------|-----------------------------------------------------------|
| ANOVA | Analysis of Variance. |
| APA | American Psychological Association |
| ATL | Association of Teachers and Lecturers. |
| CEM | Centre for Evaluation and Monitoring |
| CERI | Centre for Educational Research and Innovation |
| COP | Communities of Practise |
| CPD | Continuous Professional Development |
| CPTD | Continuing Professional Teacher Development |
| CTPD | Continuing Professional Teacher Development |
| DoBSSE | Department of Business and Social Sciences Education |
| GES | Ghana Education Service. |
| HOD | Head of Department |
| ICT | Information Communication Technology. |
| IEPA | Institute of Educational Planning and Administration |
| INSET | In-Service Education and Training. |
| LTMI | Learning to Teach Mathematics Through Inquiry |
| MANOVA | Multivariate Analysis of Variance |
| NTC | National Teaching Council |
| OECD | Organisation for Economic Co-operation and Development. |
| PCA | Principal Component Analysis |
| PPE | Personal Protective Equipments |
| SEM | Structural Equation Modelling |
| SHS | Senior High School. |

| | |
|---|---|
| TALIS | Teaching and Learning International Survey |
| TESOL | Teaching English to Speakers of Other Languages |
| TPD | Teacher Professional Development |
| UCC | University of Cape Coast |
| WASSCE | West African Senior School Certificate Examination |
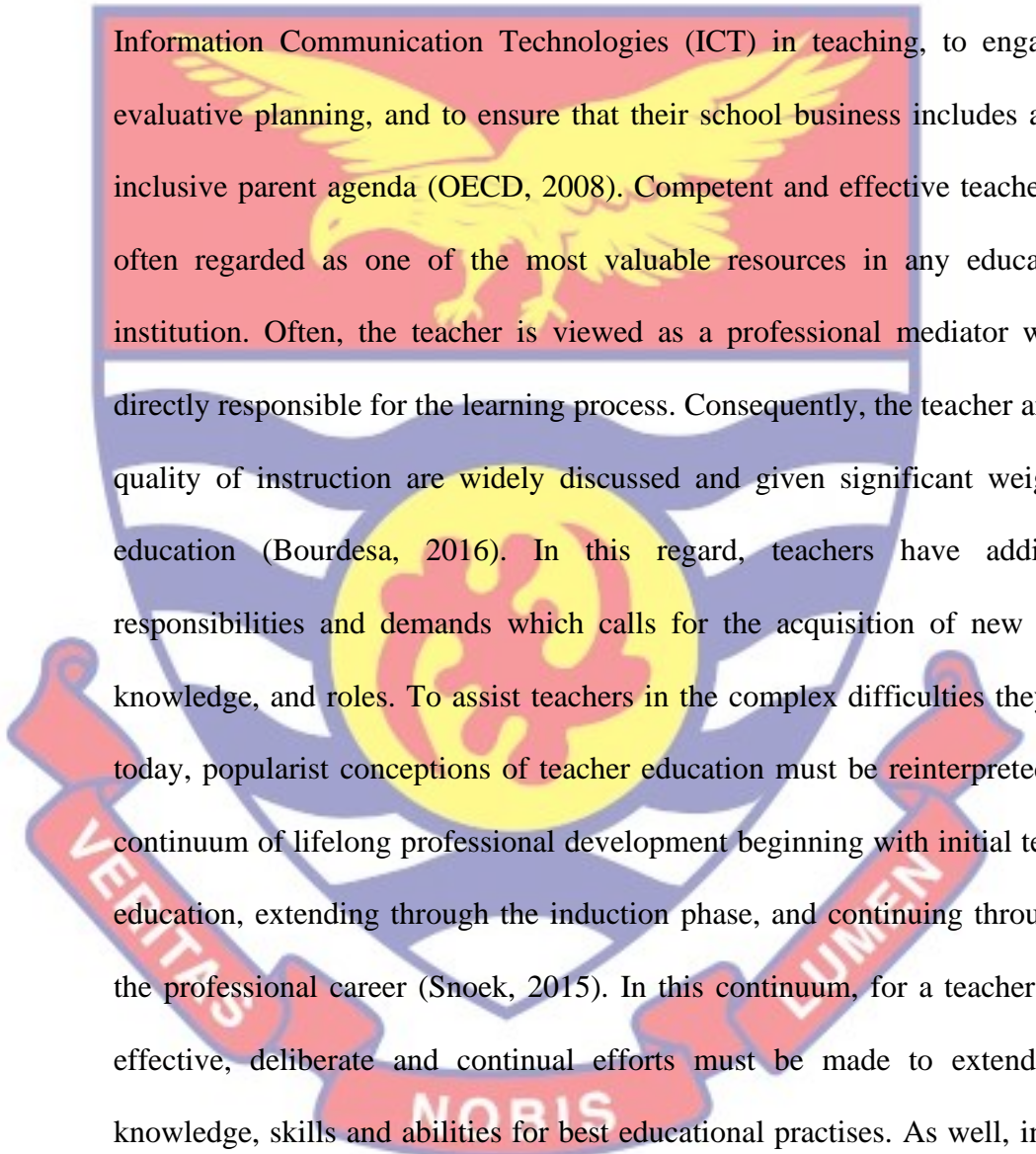
# CHAPTER ONE

# INTRODUCTION

**Background to the Study**

Worldwide challenges such as technological innovation, hyper-competition and economic crisis have necessitated a spur for change in all human endeavours. This kind of change is accentuating the need for continuous learning to enable individuals to adapt to the ever-changing globe (Laal, Laal & Aliramaei 2013; Galbraith & Fouch, 2007; Gaymer, 2006). Members of any profession can maintain, enhance, and extend their professional knowledge, abilities, and skills through an educational process called as Continuous Professional Development (CPD). The concept of CPD has gained grounds all over the world today as it has emerged and is developing as a dynamic educational process directed at improving and upgrading professional performance (Khan, 2010). The nature and role of educational institutions, as well as what is expected of teachers, has changed as the world continues to change. Today's educational institutions are expected to provide students with the knowledge and skills necessary to succeed in an uncertain and rapidly changing future (Policy Exchange, 2016; Karagiorgi & Symeou, 2005). As education is widely recognized as a powerful tool for bringing about change in the world, the role of CPD has gained a lot of attention in school reform and school improvement literature (OECD, 2008) because teacher effectiveness is believed to have a significant impact on student learning and outcomes. According to Gokmenoglu, Clark, and Kiraz (2016), fast breakthroughs in science and technology, changes in social interactions, and rapid globalization have all forced educators to re-examine the function and features of the teaching

profession. According to them, there is a renewed interest in teacher education because there appears to be a significant need for highly trained teachers, which is exacerbated by the expectations and possibilities of globalization. Teachers today are expected to teach in increasingly multicultural settings, to make adequate provisions for students with special learning needs, to utilize Information Communication Technologies (ICT) in teaching, to engage in evaluative planning, and to ensure that their school business includes an all-inclusive parent agenda (OECD, 2008). Competent and effective teachers are often regarded as one of the most valuable resources in any educational institution. Often, the teacher is viewed as a professional mediator who is directly responsible for the learning process. Consequently, the teacher and the quality of instruction are widely discussed and given significant weight in education (Bourdesa, 2016). In this regard, teachers have additional responsibilities and demands which calls for the acquisition of new skills, knowledge, and roles. To assist teachers in the complex difficulties they face today, popularist conceptions of teacher education must be reinterpreted as a continuum of lifelong professional development beginning with initial teacher education, extending through the induction phase, and continuing throughout the professional career (Snoek, 2015). In this continuum, for a teacher to be effective, deliberate and continual efforts must be made to extend their knowledge, skills and abilities for best educational practises. As well, in their subject areas, teachers are expected to be skilled as well as professional. Teachers must demonstrate a high level of knowledge and skill in teaching, assessment methods, classroom management, student management, and other

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related areas to meet the high standards and requirements of excellent education which is clearly distinct from any kind of normal instructional activities.

According to the Association of Teachers and Lecturers -ATL (2015), CPD is any activity formal or informal geared towards developing the skills, knowledge, and professional practise. According to them, quality CPD is critical for teachers' professional and personal development throughout their careers. As a result, continuing education is critical for teachers to improve their subject knowledge and their ability to teach effectively (Birman, Desimone, Porter & Garet, 2000). It is thought to play a vital role in the teaching profession by providing training that goes beyond the fundamentals of teacher education and is designed to assist graduates with knowledge to assist them in managing their changing roles due to modernization societal, intellectual, and industrial community constraints (Selevich, Selevich & Golubeva, 2015).   Teacher training must therefore imbibe all aspects of the dynamism occurring in teaching today and improve staff knowledge to help build their capacity. CPD should, in this view, provide teachers with proper training, meet their developmental requirements, and enable them to adapt to a constantly changing world and its pressures on the teaching profession.

According to Fullan and Hargreaves (2016), educational transformation is dependent on what teachers do and believe, hence the role of teachers, especially their Continuous Professional Development (CPD), has become significant in the execution of any educational reform. Well-crafted and well-delivered CPD should deliver successive benefits at every level within the educational system (ATL, 2015). It is thus imperative for every national education system to provide a comprehensive design and delivery framework

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for teacher CPD to close the gap between the nation's need for effective teacher performance in real-world classroom settings and the insufficiency often associated with teacher preparation (Foli, 2017). Essentially, through CPD, teachers should be able to learn to do things that go beyond common instructional activities to that which make them most competent and adaptive as professional teachers. Effective CPD therefore becomes requisite for insuring opportunities for teachers to gain an understanding of and to perfect the pedagogies required to teach skills, knowledge and competences relevant to the 21st century learners as well as to meet today's educational pressures and demands while providing schools with the opportunity to position itself strategically for strengthening teacher performance levels which should ultimately raise student achievement (Mizell, 2010).

More recently, teachers are recognised to have the most direct and consistent contact with students, as well as significant control over what is taught and the learning environment, this appears to necessitate the pressing demands for teachers to be competent in their classrooms. It is reasonable to presume that one of the most important advancements towards enhancing student accomplishment is to improve the teachers' knowledge, abilities, and attitudes (King & Newman, 2001) and as a result, efforts at preparing teachers to teach professionally in the 21st century should be prioritised because it remains fundamental in driving and building stronger and developed societies (Bourdesa, 2016). Teachers need adequate training and development not only to broaden their knowledge base, improve their service delivery, and to prepare them for future careers, but also to enable them to adapt to changing times and, more specifically, the changes occurring in the teaching profession, because

new times, new challenges, and conditions of uncertainty and ambiguity now necessitate alternative methods of instruction (Cobbold, 2015; Sachs, 2003). This justifies the need for teachers to be competent in their classrooms, as well as the critical need for teacher professional development. It is believed that if, pre-service education for teachers, or the initial education that qualified them for the profession, cannot provide them with the knowledge and skills required for a lifetime of teaching in schools (Foli, 2017), there is a need for well-designed in-service training programmes that foster teacher efficacy (Guskey, 2002). By concentrating on teacher growth and development, schools are more likely to ensure that learning processes contribute adequately to the achievement of educational goals and an overall improvement in the quality of learning (Browell, 2000).

It is also critical to consider that in providing CPD for teachers, both experienced and inexperienced teachers require CPD to provide them with an opportunity to grow in their fields of specialization (subject areas), which should influence their classroom practices and, ultimately, the overall quality of education (Mahmoudia & Ozkana, 2015). CPD for a wide range of teachers is essential because teaching and learning environments, for both pre-tertiary and tertiary levels are often dynamic, demanding that teachers constantly improve within their profession. Through CPD, teachers are therefore able to assess, renew, and extend their obligation as change agents to the moral purposes of teaching; acquire and develop critical knowledge, skills, and emotional intelligence required for good professional thinking, planning, and practise of teaching throughout their teaching careers (Freddy, Sharon, Susan, Désirée, Yamin-Ali, Shahiba, & Rampersad, 2009). Guskey (2000) believes that in the

absence of professional development, consistent and substantial advancements in education are practically impossible to achieve. Literature backs up this claim by providing substantial evidence of the beneficial association between CPD, teaching quality, and student academic progress (Yoon, Garet, Birman & Jacobson, 2007; Killion, 2002).  An increasing body of literature also indicate that CPD for teachers enhances their knowledge, abilities, and instructional practice, as well as students' performance (Mundry & Stiles, 2009; National Mathematics Advisory Panel, 2008; McLaughlin & Talbert, 2006; Holland, 2005; McCutchen, Abbott, Green, Beretvas, Cox, Potter, Quiroga, & Gray, 2002). Other studies which are more specific have also highlighted the importance of improving teacher quality in primary and secondary education (Shriki & Lavy, 2012; Caena, 2014; Rahman, Jumani, Akhter, Chishti & Ajmal, 2011; Ridley, 2011; Sharp, 2009; Steyn, 2008; Acheampong, 2003; Shulman, 2000). While it is clear that extant literature provides extensive evidence of the quintessential nature of CPD to the teaching profession, the relevance of which clearly falls on the premise that teachers are not fully prepared to functions as professional teachers  when they enter the classroom and that teachers can only improve their effectiveness as professionals through experience, practice, support, and more training, it is surprising that it appears CPD appears to have received very little attention in many schools.

CPD initiatives, according to current research, are largely ineffective in terms of providing appropriate support for meaningful improvements in teaching practices (Darling-Hammond, Hyler; Gardner, 2017; Daly, Hindeya & Endawoke, 2013; Pachler & Pelletier, 2010; OECD, 2008). In Ghana for instance, the Ghana Education Service (GES), has developed a framework for

implementing In-Service Education and Training (INSET) for Basic and Secondary School teachers with the purpose of building an institutionalized system for CPD for Basic and Secondary School Teachers. While the INSET appears to be the most popular CPD for pre-tertiary teachers in Ghana, a closer examination indicates that the INSET focuses mostly on programme execution, broad subjects, and supporting participants to pass promotion tests (Foli, 2017; Asare, Mereku, Anamuah-Mensah & Oduro, 2012). For excellent education to thrive, Macheng, (2016) and Lee (2011) are convinced that educational institutions must recognize the criticality of CPD for improving teacher quality and fulfilling students' evolving needs. To gain a better understanding of the state of CPD within the local context, it becomes necessary to explore what constitutes CPD for pre-tertiary teachers, what characterises existing CPD for pre-tertiary teachers, how pre-tertiary CPD needs are met, and the perceived impact of existing CPD on pre-tertiary teachers' professional practice. The study will also examine the challenges of CPD and differences in CPD in relation to school characteristics and teaching experiences.

**Statement of the Problem**

In the context of today's educational environment, a system of education that fosters reflective teaching and active engagement in educational activities is apparent. The teacher is widely considered as the most important school-based factor determining learning outcomes (Bourdesa, 2016). The role of teachers as the primary providers of knowledge as well as students' expectations of teachers in the classroom has been diluted with the inception of the internet which has increased access to limitless materials on any topic (Hargreaves, 2003). As a result, both experienced and novice teachers at all

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levels of the teaching profession must stay updated and relevant through their Continuing Professional Development which is expected to enable them to adapt to and to improve themselves in their various areas of expertise (subject-matters), which should ultimately impact their teaching and learning.

The impact of high-quality teachers on educational outcomes and student accomplishment has over the years been discussed by many academics, educators, and policy makers. Several studies have gone on to establish a link between teacher quality and student achievement (Abbate-Vaughn & Paugh, 2009; Hodge & Krumm, 2009; Vogt & Rogalla, 2009; Okoye, Momoh, Aigbomian, & Okecha, 2008; Palardy & Rumberger, 2008; Peske & Haycock, 2006; Borman & Kimball, 2005; Pedder, James, & MacBeath, 2005; Rockoff, 2004; Boyle, While, & Boyle, 2004; Mahon, 2003; Guskey, 2002; Ascher & Fruchter, 2001; Collinson & Cook, 2000). Despite such evidence, teacher preparation programmes typically fail to adequately prepare teachers for the classroom (Palardy & Rumberger, 2008; Hirsh, 2001), as a result, many schools are faced with the onerous task of meeting the professional development needs of their teachers through professional development programmes (Bayar, 2014). Schools and teachers are not making significant strides in this area because they still look the same as they were, a generation ago and are failing to create the pedagogies and practices required to meet the diverse needs of 21st-century pupils (OECD, 2018). Although CPD is widely recognized as the process of renewing teacher's skills and knowledge to significantly influence the classroom practises of teachers (Bourdesa, 2016) and literature has confirmed a positive relationship between student outcomes and teacher quality (Yoon, et al, 2007; Killion, 2002), there appears to be little agreement on how professional

development works, what happens during it, how it promotes teacher learning, and how it will improve teaching as a profession (Kennedy, 2016). Despite swelling evidence that teacher professional development enhances teachers ' knowledge, talents, and instructional practice, as well as student accomplishment (Mundry & Stiles, 2009; National Mathematics Advisory Panel, 2008; McLaughlin & Talbert, 2006; Holland, 2005; McCutchen et al, 2002), CPD is often viewed as one with a bad reputation. In most cases there is a general agreement from education reformists and improvement debaters that most CPD activities for teachers are superficial, sporadic, and of little benefit when it comes to truly improving teaching (De Monte, 2013).

While research from across the globe suggests that most CPD initiatives are ineffective in providing proper support for enabling changes in teaching practices; organized in ways that are disconnected from teachers' actual classroom practice; fails to address real challenges; a one-size-fits-all; short-term, episodic, and disconnected professional learning unlikely to positively influence and improve teaching. (Darling-Hammond, et al., 2017; Hindeya & Endawoke, 2013; Mizell 2010; Daly, Pachler, & Pelletier, 2010; Wei, Darling-Hammond, & Adamson, 2010; OECD, 2008), the situation in Africa, specifically Ghana, has received little attention. According to a report from the Association for the Development of Education in Africa, INSET in some African countries, including Nigeria, Senegal, Zambia, Mozambique, the Central African Republic, Madagascar, and Ghana, is underfunded and lacks elaborate policies and structures for effective management of INSET for teachers. It is further revealed that INSET was frequently donor-funded, on a small scale, and covering only a few locations or portions of the country in

several of the selected nations, such as Ghana and Madagascar. Furthermore, the majority of INSET programmes are centred on seminars at specific places and are often one-time events, while some may be offered on a monthly basis (Abdulai & Osman 2018). The short-term nature of the CPD efforts raises doubts about their potential to bring about desired changes in classroom practices; this would normally necessitate a much longer learning process (Ottenvanger, 2001) and the completion of subsequent CPD activities.

Continuous professional learning programmes in Ghanaian pre-tertiary classrooms that improve teacher beliefs, attitudes, and dispositions appear to have been lacking for years (Kadingdi, 2004; Ameyaw-Ekumfi, 2001). In Ghana, it appears that there are no well-defined criteria for teacher development, as well as no ongoing professional development programmes for teachers (Agbeko, 2007; Kadingdi, 2004; Ameyaw-Ekumfi, 2001). Information on CPD for pre-tertiary teachers in Ghana has mainly focused on INSET by GES, which is assumed to have adopted a cascade model of in-service training in which head teachers and circuit supervisors are trained and then expected to train local districts and schools (Kadingdi, 2004; Acheampong, 2003). This widely recognized form of professional development is seen to have concentrated on programme implementation; helping participants to pass their promotion examinations and retaining and re-skilling teachers in curriculum areas (Kadingdi, 2004). A case study for instance in the Assin South of the Central region revealed that professional development for basic schoolteachers provided through INSET was irregular and placed little emphasis on improving instructional quality (Etsey, Smith, Gyamera, Koka, de Boer, Havi & Heyneman, 2009). Considering that Ghanaian pre-tertiary education looks to be

beset by substantial obstacles, including a severe shortage of educated teachers, classroom facilities, and learning resources, as well as low reading standards and learning results. (Ananga, Tamanja & Amos, 2015; Danso-Mensah 2016; Osei Poku & Adu-Agyem, 2012; Abadzi, 2007), understanding CPD for teachers at the pre-tertiary level becomes necessary. For instance, a look at student performance at the SHS level indicates that student pass rates have been fluctuating since 2011 (MOE, 2018).
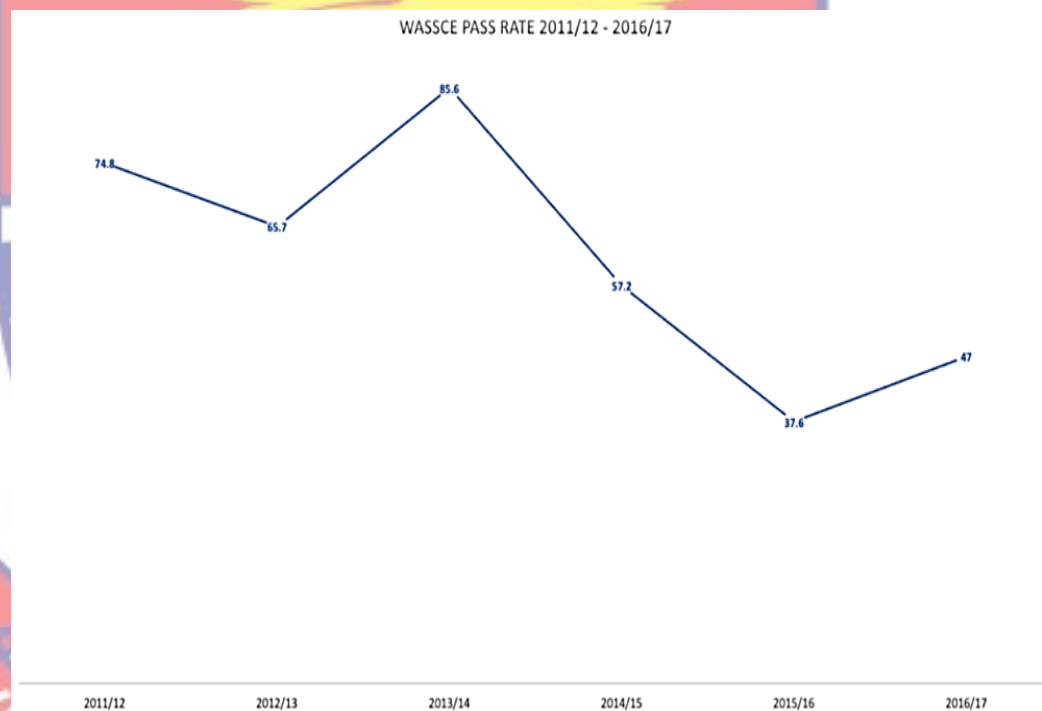


*Figure 1*: EMIS data on WASSCE pass rate
Source: MOE, 2018

The WASSCE pass rate since 2011/12 was at its highest in 2014 but declined in 2015 and was lowest in 2016. A slight upward trend is however observed in 2017. Since student achievement predominantly relies on teacher quality (Meister, 2010; Opfer & Pedder, 2011 Yoon, et al, 2007; Killion, 2002) and teaching quality remains significant for improving student learning and outcomes (Meister, 2010; Opfer & Pedder, 2011), this kind of fluctuation in

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student achievement is worrying and deserves attention. A critical way of understanding this fluctuation is to understand what teachers bring to the learning process and by that their Professional Development which is requisite for improving teacher quality. Effective Teacher Professional Development therefore becomes critical for any educational institution to remain competitive in a global marketplace. Teacher CPD is considered to be critical in any discourse on improving educational outcomes and for that matter the quality of education in Ghana because effective teaching and learning hinges on the interaction between what occurs in the classroom and how teachers are equipped and positioned to influence all teaching and learning activities in the classroom. This study therefore seeks to explore the status of CPD for pre-tertiary teachers and its perceived impact on teacher professional practise.

**Purpose of the Study**

The study explored the perspectives of pre-tertiary teachers on Continuous Professional Development and its impact on teacher professional practice. Specifically, the study sought to:

1. Examine how pre-tertiary teachers conceptualize Continuous Professional Development.

2. Examine the characteristics of existing Continuous Professional Development for pre-tertiary teachers.

3. Explore how pre-tertiary teacher's CPD needs are being met.

4. Examine the perceived impact of existing CPD on the professional practise of pre-tertiary teachers.

5. Identify the barriers to the professional development of pre-tertiary teachers.

6. Determine differences in CPD activities for pre-tertiary teachers based on school category.

7. Determine differences in the perceived impact of CPD on teachers' professional practise based on teaching experience.

**Research Questions**

1. How do pre-tertiary teachers conceptualize Continuous Professional Development?

2. What characterises existing Continuous Professional Development for pre-tertiary teacher?

3. How are pre-tertiary teachers' CPD needs being met?

4. What is the perceived impact of existing CPD on the professional practise of pre-tertiary teachers?

5. What are the barriers to the professional development of pre-tertiary teachers?

**Research Hypotheses**

1. $H_0$: There is no statistically significant difference in CPD activities for pre-tertiary teachers based on school category.

   $H_1$: There is a statistically significant difference in CPD activities for pre-tertiary teachers based on school category

2. $H_0$: There is no statistically significant difference in the perceived impact of CPD on teachers' professional practise based on teaching experience.

   $H_1$: There is a statistically significant difference in the perceived impact of CPD on teachers' professional practise based on teaching experience.

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**Significance of the Study**

CPD for teachers appears to have received little attention which necessitated this study. In this way, this study will shed some light on the current state of Continuous Professional Development in Ghana, and its perceived impact on pre-tertiary teachers' professional practice. The study should afford regulators such as the MOE, National Teaching Council (NTC), GES and all relevant stakeholders the opportunity to examine existing structures for teacher CPD to inform policy on teacher professional development in Ghana. It should provide information that will enable regulators to evaluate available programmes in terms of its capability in meeting the professional needs of teachers. It should also aid an understanding of how CPD for teachers influence their professional practise in terms of their knowledge, instructional techniques, and efficacy. This will overall be valuable in informing policy directions.

The findings of this study should also equip head teachers, circuit supervisors, and CPD initiators/organisers with specific information on target areas for CPD programmes. This should inform existing practices and provide insight that will be useful in solidifying efforts at developing teachers. This will ensure that CPD initiatives are more deliberate and effective. Overall teacher learning and ultimately teaching quality in schools should improve.

Also, researchers interested in conducting studies on similar elements of teacher professional development will find this study useful as a reference material.

**Delimitation**

Regarding coverage for this study, teaching staff of the GES were prioritized. Specifically, the study focused on teachers of public SHS's in

Ghana. Basic schoolteachers, private SHS teachers and non- teaching staff of GES were excluded from this study. Preference was given to teachers in SHS's because it holds the largest number pre-tertiary teachers which stood at 187,914 teachers in 2019 (Sasu, 2020). Also, at this level of education, teachers are confronted with diverse needs of early learners. It is also at this level that specialized learning commences, which is typically embodied in a diverse curriculum which makes provision for various aptitudes, talents, interests, and skills, of students and from which tertiary institutions tend to admit students (Adu-Agyem & Osei-Poku, 2012). Evidence from EMIS data suggests that student performance in WASSCE has been fluctuating at this level since 2011. Therefore, in exploring CPD for teachers, the secondary school level as a point of commencement for this study became necessary as teachers at this level must be adequately equipped to prepare students for the tertiary level. In other words, CPD for teachers at this level may be crucial to improve student learning and enhance the quality of education in Ghana.

Teacher professional practise for this study was explored in relation to teacher content knowledge, teacher skills and teacher efficacy. Teacher knowledge represent familiarity with subject matter, planning and preparatory activities. Teacher skills focused on classroom procedures and instruction and teacher efficacy focused professional responsibilities. Some aspects of Danielson's (2007) framework for teacher professional practise were adapted in defining teacher professional practise. Similar frameworks were not included in the study

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In terms of coverage, the study was covered the Central Region of Ghana. As one of the 16 Administrative Regions of Ghana. It is recognised for its numerous prestigious secondary schools and institutions of higher learning. In Ghana, the region is considered an educational hub, with some of the elitist Senior High Schools in the country. For this study, only public SHS's in the Central Region were covered. This category of teachers is heavily regulated by MOE and its subsidiaries which should provide a clear direction for recommendations from this study. These teachers also fall into a section of teachers who constitute the largest number of teachers in Ghana. Engaging these teachers should provide some preliminary data on the state of CPD for teachers at the pre-tertiary level in Ghana.

**Limitations**

The research instruments adopted for the study was susceptible to some errors and subjectivity. The TPD questionnaire as a research instrument is considered a self-report measure which enables respondents to provide responses that they consider to be suitable, but which may not provide the true reflection of the phenomenon under study. The interview guide also employed for the study is susceptible to biases as verbal interactions with participants could be influenced by their personality and mood. The researcher however took steps to minimize this shortcoming by providing elaborative descriptions on the variables of the study and emphasizing the importance of providing authentic response to respondents during the interviews and the administration of the TPD questionnaire.

On the part of the researcher, the prearranged and prescriptive nature of the questions designed by researchers who employ semi-structured interview

guides and questionnaires for collecting data may also give room to a situation where the researcher is likely to take cognisance of only what he/she wants to record at the expense of other relevant data that may conform to the study. The research instruments were however carefully vetted by experts and academic supervisors to ensure validity.

Data from the interview which was used to develop the questionnaire was also useful to triangulate data and make up for some inadequacies of the questionnaire. Also, for data collection, two Research Assistants (RA) from UCC's Business and Social Sciences Education Department (DoBSSE) who have undergone professional teacher training and possess post graduate qualifications were engaged to assist in data collection. These RAs were given extensive training on variables of interest for the study.

**Definition of Operational Terms**

**Continuous Professional Development (CPD)**; the systematic acquisition, maintenance, improvement, and widening of relevant information and skills with the goal of increasing a person's professional capacity in their field of practice.

**Teacher Professional Development (TPD);** all activities/programmes in educational institutions aimed at enhancing teachers' knowledge, instructional techniques, competences, and professional expertise.

**Teacher Professional Practice;** is the degree of teacher performance in relation to acceptable standards and the capacity to improve education and learning within available resources. It comprises teacher knowledge, skills (classroom practices) and efficacy in promoting teaching and learning within educational contexts.

**Research Assistants (RA):** postgraduate students who for the purposes of this study were engaged to assist in data collection.

**Pre-tertiary teachers;** teachers of the Ghana Education Service in public Senior High Schools.

**Organisation of the Study**

This study is divided into five main chapters. The preliminary part (chapter one) comprises the background to the study, the statement of the problem, purpose of the study, research questions, research hypotheses, significance of the study, delimitations of the study, limitations to the study, definition of key operational terms in the study and the organization of the study. The ensuing chapters of the study include the second chapter which reviewed existing related literature, chapter three (3) which elaborated on the methodology adopted for the study, chapter four (4) which deals with the results and discussion of the study and the concluding chapter (chapter five), which highlights the key findings, conclusions and recommendations from the study. The final chapter effectively summarizes the entire study and emphasizes the results of the study, for which numerous recommendations are made.

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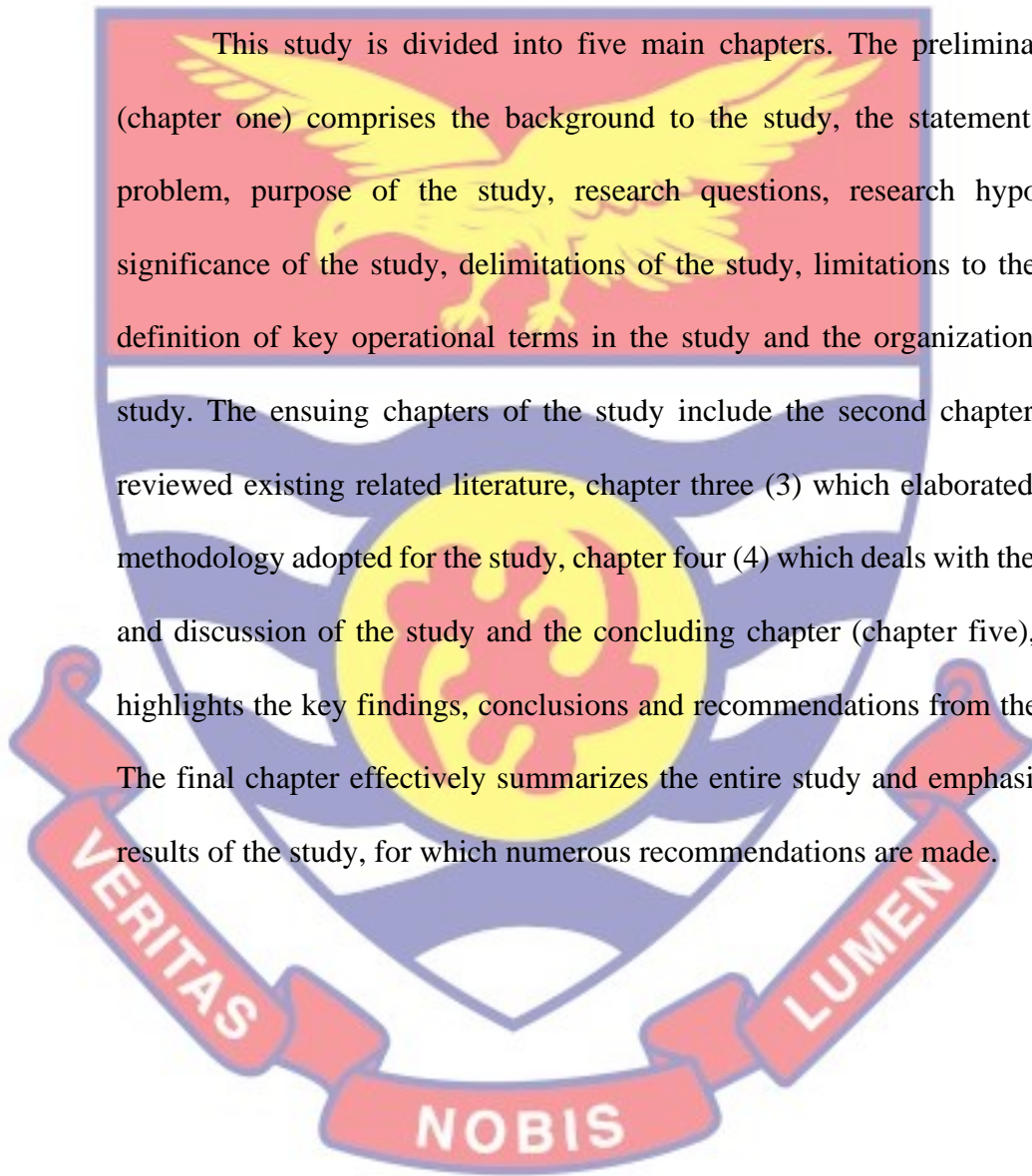
# CHAPTER TWO

# LITERATURE REVIEW

## Introduction

CPD is an important part of every teacher's career development. As a result, high-quality education necessitates trained, informed, and skilled teachers throughout their careers (Day & Sachs, 2004). Promoting excellent education in schools thus necessitates a greater emphasis on teacher CPD, which is recognised as a vital educational component for ensuring significant influence on teaching pedagogies and methods (Kennedy, 2005). This chapter reviews literature on CPD for pre-tertiary teachers. There are three sections to the review: theoretical, conceptual, and empirical. The theoretical grounding for the study examines three important theories: Andragogy, Transformative Learning Theory, and Generative Learning Theory. The conceptual review also examines Continuous Professional Development, teacher professional practice, teacher professional development, types of teacher professional development, models of Continuous Professional Development, effective Professional Development, the changing phase of CPD, Teacher Professional Development in Ghana, the impact of CPD, and the study's conceptual framework. The empirical review discussed relevant studies related to the main themes under the subheadings of: teacher perceptions of professional development activities, teachers' professional development experiences, structural features of CPD for teachers, teacher professional development needs and preferences, teacher engagement in CPD, teacher impediments to CPD, perceived benefit of CPD on teacher professional practice, disparities in CPD based on scholastic accomplishment, and differences in CPD based on academic achievement.

**Theoretical Review**

The study is pivoted around three main theories, Andragogy, the theory of Social Cognitive Learning and the theory on Transformative Learning.

**Andragogy (Malcom Shepard Knowles, 1968)**

This concept is defined as the art and science of supporting adults in learning in its most fundamental form. In 1968, Malcom Shepard Knowles proposed the concept. Previously, there had been significant research and attention on the notion of pedagogy, which concentrated mainly on educating children. Knowles noted that, in comparison to younger learners, adults learn in a variety of ways. He thought that it was critical to leverage on adult learners' distinct learning styles and skills to make learning more meaningful. The theory therefore emphasises the need for adults to be taught differently as compared with children because their learning processes are in many ways different (Birzer, 2004). For instance, adults unlike younger learners often have responsibilities and time constraints which will influence their learning process. As one of the early theories of learning, this theory sets out five main assumptions that are still relevant for adult education in modern times. These assumptions include; learners are autonomous and self-directed in their learning (self-concept); learners have accumulated life experiences (past learning experiences); learners are goal-oriented (driven by internal motivation); learners are relevancy-oriented (readiness to learn); and learners are problem-centred in their learning (practical reasons to learn).
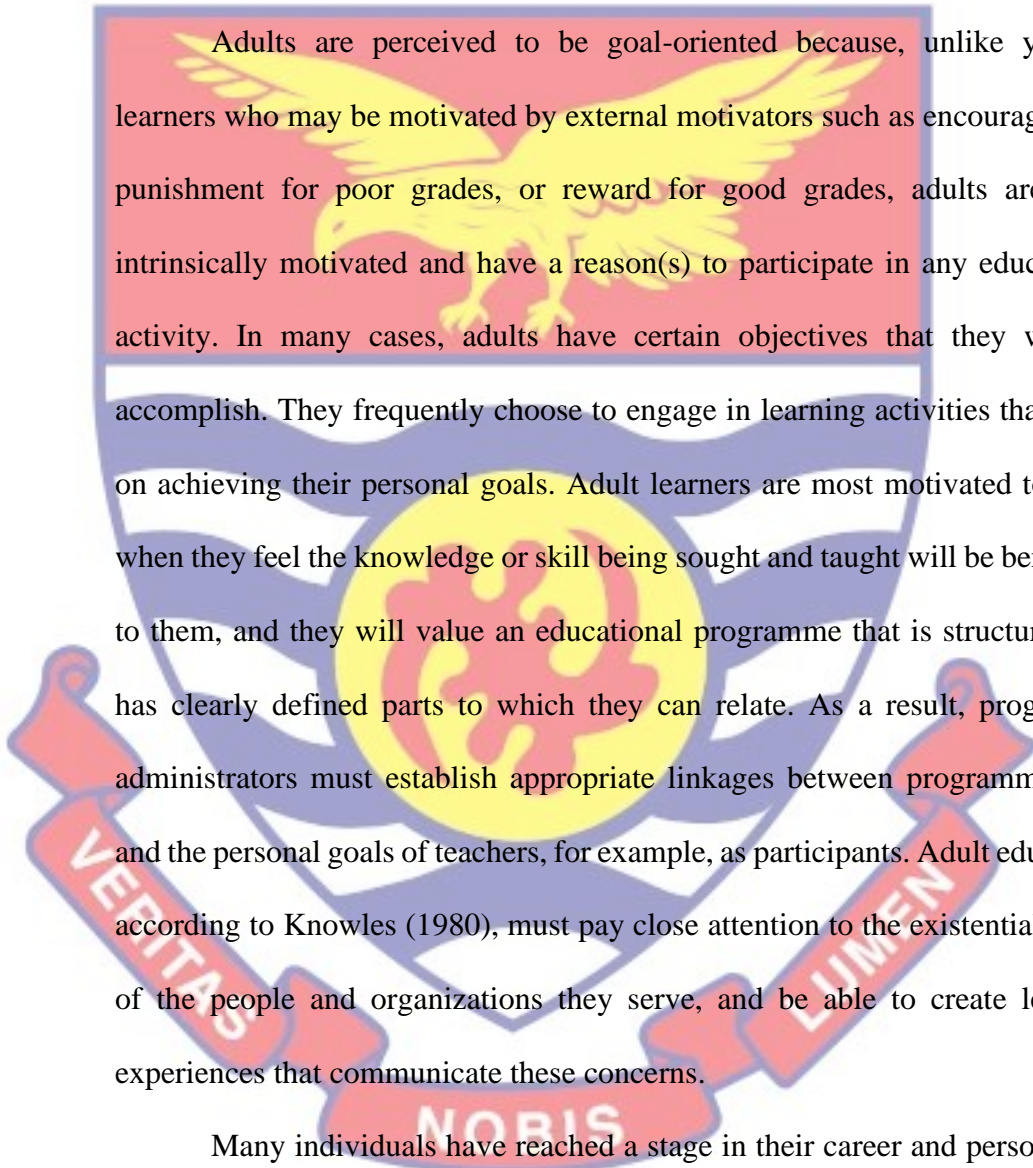
The first assumption suggests that adult learners have their own sense of direction and are independent. Adults are often in a more advanced developmental stage and often have stable self-concept compared with

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youngsters. This allows pupils to take charge of their own education. To ensure that such learners are effectively involved in the learning process, an instructor must allow them to chart their own course and work with little or no supervision. Adult learners frequently detest situations in which they believe their will is being taken away by others who wish to force their will on them (Pohland & Bova, 2000). They would prefer situations that allow them to be more responsible for their own learning. Educators for adult education programmes must therefore avoid any form of impositions in programmes for adult learners. Teachers, for instance, must be given the opportunity to learn by being involved in learning activities and having the autonomy to make decisions in the learning process where outcomes may be evaluated. The self-directing assumption is an indication that often teachers as adults know what their CPD needs are and which programmes are likely to augment their professional development. The role of educators will therefore be to facilitate the learning process and to allow teachers particularly to have control over their CPD activities.

The second assumption recommends that adults often have an accumulation of life experiences gathered over a period. Adults, as opposed to younger learners who are still gaining new experiences, have a wealth of experience to draw on while learning. These previous experiences will frequently surface during the learning process as a resource that educators can employ. Educators should recognize the wealth of experiences and information that participants bring to the classroom and use these to engage adult learners in meaningful learning activities. Teachers, for example, accumulate knowledge from their work experience which may prove useful in the design and implementation of CPD programmes. As a learner, teachers would always want

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to utilized such accumulated experience. To make CPD programmes more meaningful, facilitators must recognize such experiential knowledge by providing avenues for learners to share their wealth of experiences, such as student obstacles and lesson preparation issues to make such programmes more worthwhile.

Adults are perceived to be goal-oriented because, unlike younger learners who may be motivated by external motivators such as encouragement, punishment for poor grades, or reward for good grades, adults are often intrinsically motivated and have a reason(s) to participate in any educational activity. In many cases, adults have certain objectives that they wish to accomplish. They frequently choose to engage in learning activities that focus on achieving their personal goals. Adult learners are most motivated to study when they feel the knowledge or skill being sought and taught will be beneficial to them, and they will value an educational programme that is structured and has clearly defined parts to which they can relate. As a result, programme administrators must establish appropriate linkages between programme aims and the personal goals of teachers, for example, as participants. Adult educators, according to Knowles (1980), must pay close attention to the existential issues of the people and organizations they serve, and be able to create learning experiences that communicate these concerns.

Many individuals have reached a stage in their career and personal life where they recognize the significance of education and are eager to learn. When the goals are realistic and meaningful to them, adults are more likely to commit to learning (Lalitha, 2005). It is important for people to perceive a relationship between what they are learning and what they do in their daily lives. Adult

learners often more inclined towards practical information and experiences that are useful for their career growth or provide them with applicable skills in their professional practice. Adults require individual relevance in learning activities, one that is clearly related to their employment or associated duties. For educational programmes to be considered relevant, instructors situate programme objectives within theories and concepts that are familiar to participants. From this assumption, the onus falls on educational institutions to design teacher professional development programmes that are both relevant and realistic for improving their knowledge and abilities for classroom practice. CPD programmes must, in essence, help teachers to be successful and efficient in their professional practise while also meeting the shifting challenges of ever-demanding educational contexts.

Another important assumption of this theory is that adult learners approach the learning process with a problem-solving orientation. Such learners are more likely to be interested in learning activities that will significantly influence their work and personal life. These learners are continually on the lookout for hands-on, problem-solving learning approaches. Most adult individuals return to continuing education for specific practical reasons, such as work advancement or to specialize in a given field. As a result, learning becomes meaningful for adults when it is broadly applied in their employment. These learners will be interested in participating in learning activities that seek to improve their ability to execute a task, solve an issue, or live a more meaningful life (Harrison, 2011). Adult teachers, for example, are more willing to commit to CPD programmes that are directly connected to their classroom practise and have the potential for immediate application in the classroom. CPD

programmes that focus on challenging areas of the profession such as student misconduct, dealing with inadequate resource, and congested classrooms etc. that will help teachers to address such challenges will carry more weight with teachers than programmes directed at re-skilling them in curriculum areas that they are already familiar with. This assumption essentially challenges education managers to develop programmes which are pragmatic and will offer practical solutions to issues teachers face in their daily teaching and professional lives.

On the basis of the assumptions above, Knowles outlined four (4) principles that educators should consider in adult education. Since, adults are self-directed, he believes they should have a say in the content and process of their learning; adult learning should also focus on incorporating learner experiences; content should be relevant to their work or personal lives; and learning should be focused on solving problems rather than on memorising content. This theory claims that adult learning should be recognized as one that is distinct from how learning is typically understood, particularly for younger pupils. Maturity comes with its own set of characteristics that influence how adults are driven to study. Adult educators can build more effective and relevant programmes that fulfil the unique requirements of adults by appealing to the exclusive characteristics of adult learners.

This theory has however been criticised on the basis of lack of empirical proof (Blondy, 2007). It is argued that not all the assumptions apply to all adults, some assumptions are also applicable to children. Knowles began to see learning as a continuum of activities between activities led by the teacher and those directed by the students. His subsequent works emphasized how each situation should be evaluated on individual basis to determine the amount of

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self-direction that would be advantageous to students. However, the idea is still relevant for understanding adult education in the current era. Educators can thus use andragogical principles to improve the efficacy of their adult education programmes in fulfilling the requirements of teachers as professionals. To be effective and encourage learning among teachers, CPD as an educational process must incorporate these ideas.

**Transformative learning theory (Jack Mezirow, 1970)**

The Transformative Learning Theory is an exclusive human-contact-based learning theory for adults. According to this theory, learning is mostly a developmental process, which relies on previous interpretation to create a new or updated interpretation of meaning for individual experiences in order to direct future behaviour (Mezirow, 2000). This theory seeks to explain how our cultural norms and presuppositions create our expectations, which have a direct impact on the meaning we get from our experiences (Mezirow, 2000). The emphasizes perspective alteration through a process of updating meaning structures gained from experiences. The process through which people change their perspectives and derive new meaning is referred to as perspective transformation.

Meaning structures serve as culturally established frames of reference made up of meaning schemes and opinions. meaning schemes generally are "made up of specific facts, ideas, value judgments, and feelings that create interpretations of human experience" (Mezirow, 2000). They are concrete representations of habits and expectations that shape and influence a behaviour or a point of view, such as how one may react to total a stranger on the street or even what one might think of politicians. On a regular and recurring basis, meaning systems change. Our perspective, which is a general frame of

reference, world view, or personal paradigm frequently involves a collection of meaning schemes made up of higher-order schemata, theories, propositions, beliefs, prototypes, goal orientations, and evaluations that provide criteria for judging or evaluating right or wrong, good or bad, beautiful or ugly, true or false, appropriate or inappropriate (Mezirow, 2000).

According to Mezirow, a person's frame of reference usually has two dimensions: habits of mind and a point of view. Habits of mind are broad, abstract orienting patterns of thinking, feeling, and acting impacted by assumptions gleaned from a range of cultural, political, social, educational, and economic standards. Mental habits are those that manifest themselves in a specific manner of thinking. A specific interpretation is the product of a confluence of beliefs, value judgments, attitudes, and feelings. In most cases, an individual's points of view, meaning system or perspective is acquired without critical scrutiny from infancy through socialization and acculturation, with significant contacts such as teachers, parents, and mentors. These often represent people in charge of a group's culture and socialization in specific situations. As a result of repeated contact and socialization, their ideas are progressively transferred and established in an individual's mind over time, which is less likely to change. Essentially, they provide some sort of rationalization for a frequently irrational world, and people become reliant on them.

These perspectives are often helpful in explaining what happens in everyday life and allows individuals to reflect on their cultural and psychological beliefs. These assumptions may in some instances limit an individual's world view making it more subjective and leading to warped set of

beliefs and perceptions. In many ways they serve as a "double-edged sword," bringing significance (confirmation) to one's experiences while also distorting their reality. Functioning as perceptual filters, enables individuals to organize the meaning of their experiences. When a person has a new experience, their existing perspective filters the information to interpret and give meaning to the new experience. As this new experience is being absorbed into the existing meaning structure, the experience either supports the existing worldview or gradually expands the borders of existing structures mostly depending on the extent to which the new experience aligns with the existing frameworks.

For a fundamentally different and opposing experience, an individual's meaning perspective cannot assimilate the experience. The new experience is either rejected or the existing perspective altered to accommodate acknowledge it. The new and alerted meaning perspective becomes the new meaning structure. This development is frequently the consequence of a disorienting dilemma which emerges as a result of the dissimilar experience coupled with a critical analysis of existing meaning perspectives. This theory fundamentally emphasizes this shift in meaning structures leading to a transformed perspective.

Mezirow identified ten stages of perspective transformation: (1) a perplexing dilemma; (2) self-examination accompanied by feelings of guilt or shame; (3) a critical evaluation of assumptions; (4) recognition of one's dissatisfaction; (5) shared transformation with others who have negotiated similar change; (6) exploration of options for new roles, relationships, and actions; (7) planning of a course of action; (8) acquisition of knowledge and skills for temporarily putting one's plans into action; (9) building of competence and self-confidence in new roles and relationships, and; (10) a reintegration into

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one's life on the basis of conditions dictated by new perspective. A critical examination of this theory unravels three main recurrent themes in the process of meaning structure transformation; the significance of experience, critical reflection, and rational dialogue.

The learner's experience is frequently the starting point and subject of transformative learning. Experience is seen as a social construct that can be deconstructed and acted upon. The foundational experience lays the groundwork for critical thinking. It is then possible to cause ambiguity, and doubt regarding previously held interpretations of experience by disrupting a learner's world view. Mezirow describes the second component, critical reflection, as the defining characteristic of adult learning. He indicates that, it is only at the adult stages that one becomes aware of unquestioned assumptions, half-truths of traditional wisdom and existing power dynamics which opens them up to the realization that they may be caught up in history and reliving it.

Critical reflection thus allows an individual to question the validity of past experience-based existing assumptions and beliefs. In essence, it is at this point that people typically realize that some facts contradict what they previously believed to be true, and they begin to act in accordance with their new worldview. This is often the outcome of incorrect epistemic (nature and application of knowledge), psychological (acting incoherently from our self-concept), and sociolinguistic assumptions (mechanisms by which society and language influence our perspective).
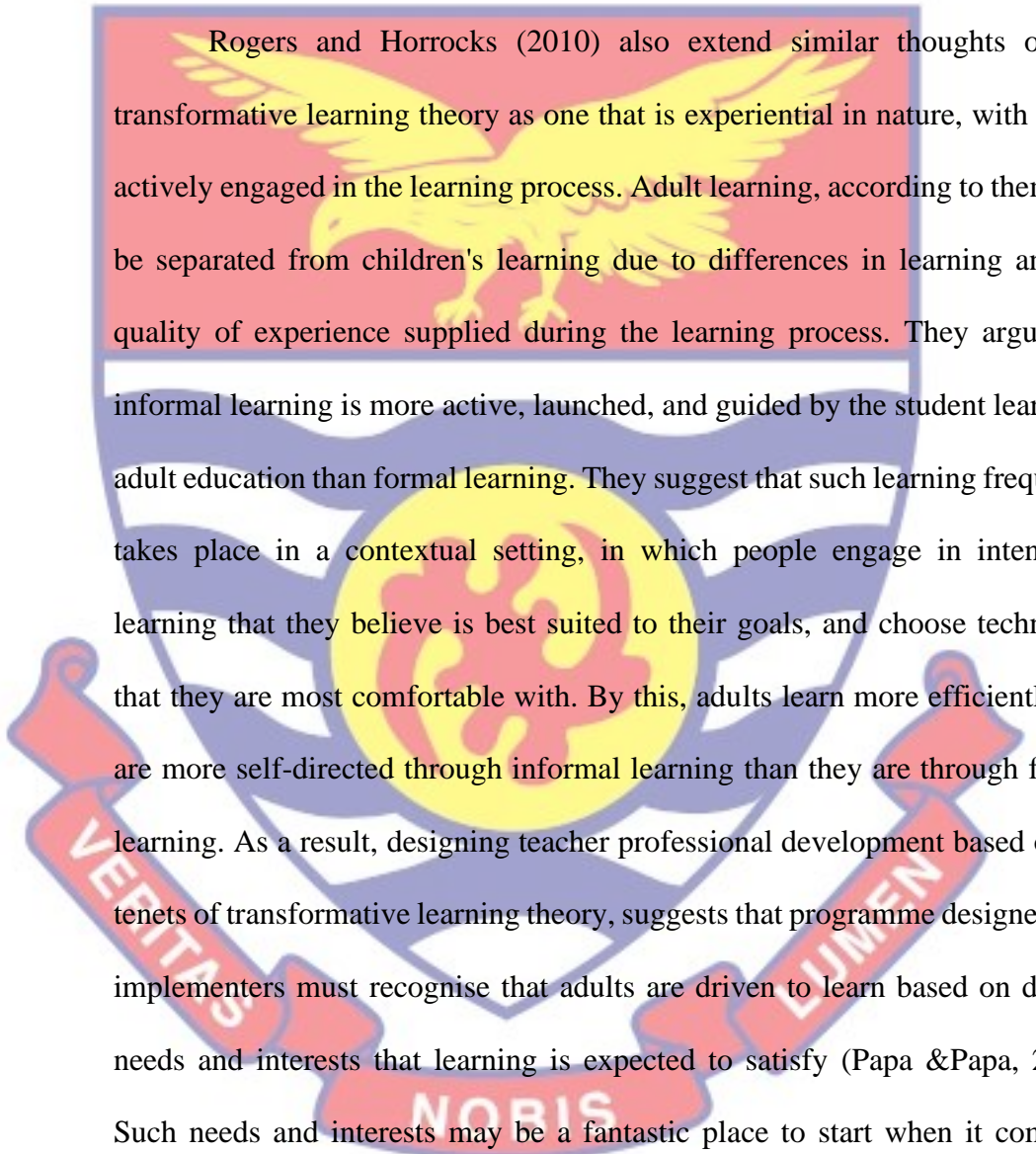
Reflection therefore becomes turn-around process by which humans alter their ideas, both literally and metaphorically. Critical reflection is thus the most important aspect of transformational learning in terms of achieving change

in one's established frame of reference (world view). Critical reflection liberates people from cultural limitations and distortions, allowing for open dialogue and, most importantly, changing meaning systems. The last theme, rational dialogue is a vital means of promoting and supporting transformation. It is employed "when we have reason to doubt the comprehensibility, veracity, appropriateness (in terms of standards), or authenticity (in terms of sentiments) of what is being conveyed or to challenge the credibility of the person making the assertion," as opposed to ordinary conversations (Mezirow 2000). Rational discourse according to this theory hinges on the following assumptions: it is rational only to the extent that it meets the conditions necessary to promote mutual understanding; it is driven by objectivity; all actions and statements are open to question and discussion; understanding is achieved by weighing evidence and assessing the insight and strength of supporting arguments; and the primary goal is to promote mutual understanding among others.

It is important to keep in mind that both critical reflection and experience occur within the realm of rational discourse. As a result, communication becomes a vehicle for critical reflection, in which people reflect on their experiences and question their assumptions and ideas. It is also where meaning structures and systems go to die.

The transformation learning theory provides a model for adult learning by specifying how personal paradigms evolve and broaden throughout adulthood. It provides meaning for adult development by emphasizing the acquisition of a better adaptive capacity to capitalize on and act on past knowledge and experiences through some critical reflection. Mezirow advocates that anything that leads to a more inclusive, differentiated (open to

multiple points of view), and integrated derivation of meaning established through logical discourse is more likely to support an adult growth. As a result, transformative learning must be viewed as both a process and an outcome of adult development, in which making meaning becomes more obvious through time rather than in predetermined stages or phases.

Rogers and Horrocks (2010) also extend similar thoughts on the transformative learning theory as one that is experiential in nature, with adults actively engaged in the learning process. Adult learning, according to them, can be separated from children's learning due to differences in learning and the quality of experience supplied during the learning process. They argue that informal learning is more active, launched, and guided by the student learner in adult education than formal learning. They suggest that such learning frequently takes place in a contextual setting, in which people engage in intentional learning that they believe is best suited to their goals, and choose techniques that they are most comfortable with. By this, adults learn more efficiently and are more self-directed through informal learning than they are through formal learning. As a result, designing teacher professional development based on the tenets of transformative learning theory, suggests that programme designers and implementers must recognise that adults are driven to learn based on desired needs and interests that learning is expected to satisfy (Papa &Papa, 2011). Such needs and interests may be a fantastic place to start when it comes to professional growth.

Adult learners' experiences must also be at the heart of professional development programmes so that they can engage in critical reflection and subsequently, reasoned dialogue in order to shift their viewpoints on well-

known events, situations, ideas and beliefs. As a result, appropriate frameworks for planning professional development activities should be based on real-world or work-related circumstances rather than theoretical issues. The transformational learning theory is therefore recognised as an essential theory for comprehending, organizing, and implementing professional development activities.

**Generative learning theory (Merlin C. Wittrock, 1974)**

In 1974, Merlin C. Wittrock developed a cognitive model of human learning known as the Generative Learning Theory. According to him, learning may be anticipated and understood in terms of what learners bring to the learning environment, how they link stimuli to memories, and what they produce from previous experiences (Wittrock, 1992). The goal of the generative learning theory is to employ the most appropriate, learner-centric teaching activities for the learner. This theory integrates the significance of learner and the intentionality of instructional activities. As a very practical version of constructivism, this theory combines a fundamental knowledge of learning processes and the creation of external stimuli related to specific instructional activities. Again, this theory proposes that understanding is closely related to what pupils create and do during teaching (Wittrock, 1992). It focuses primarily on describing the cognitive processes that take place during learning. Learning in this case, is seen as the production of new understanding that leads to the generation of knowledge (Grabowski, 2004). According to the Generative Learning Theory, a learner creates or produces new information, where "new" refers to previously unknown knowledge. As a functional model of learning it describes the processes that take place in the brain when knowledge is formed.

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Learning is thus a result of the learner's abstract and distinctive, concrete connections formed between past experiences stored in long-term memory, and the new stimuli from the instructional process. In the generation of new understanding, Wittrock's notion emphasizes the importance of linkages between the learner's current knowledge and new experiences or information (stimuli). This means that learning occurs when new information is linked and connected to existing beliefs and prior knowledge in order to build new meaning. This new meaning is then organized and stored in long-term memory for recall and retrieval later.

This theory is also concerned with the understanding and learning of the types of relationships that learners must construct between stored knowledge, memories of experience, and new information in order to comprehend new stimuli (Kish, 2008). The construction of new knowledge is prompted by the learner's active participation in the learning processes (Grabowski, 2004; Wittrock, 1992). The learner, according to Wittrock, is not a passive receiver of knowledge. To develop new understanding, the student actively engages with the subject, both physically and cognitively. Learning only occurs only when a person structures, develops, or integrates new knowledge into meaning, emphasizing that it is more than simply repeating information, duplicating a list, or acknowledging stimuli received. Based on prior knowledge, beliefs, and values, the learner who is paying attention a specific stimulus begins to construct a new model that incorporates the new information. These processes of knowledge generation are founded on Luria's second functional brain unit, sensory input and integration (Languis & Miller, 1992). The new data is received, processed, and saved. Sequences and patterns that represent the

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learner's prior knowledge and experience are then created (Wittrock, 1992). Any correlation between new information and existing knowledge is qualified by the learner's knowledge production processes. During the knowledge production process, connections and linkages are formed. Knowledge production processes, including metacognition, establishes links between and among concepts, influencing the quality of the learner's meaning.

The primary model for generative learning has four components; knowledge processes (students' preconceptions, knowledge, and perceptions); motivation processes; learning processes/attention; and generation procedures. The first component knowledge processes acknowledges that many learners enter the learning process with predetermined notions about what they need to learn and their conceptual understanding. Along with this, a student may enter the process with erroneous impressions about the instructor or the possibility for significant information gain. For this reason, an effective educator must assist the learner in developing, participating in, and generating new information, as well as to demonstrate to learners that their efforts in the learning process will most likely generate observable and beneficial results. It is critical for educators to design a system that is sensitive to participants' needs and recognizes and rewards for their efforts to learn (Wittrock, 1992). In terms of CPD, programmes must be designed in such a way that participants may gain new knowledge built on their past experiences while receiving tangible incentives for engaging in such programmes.

Motivation processes as the second component of the generative model suggests that learning processes are linked to the arousal and attention unit of the brain (Lee, Lim, & Grabowski, 2010). This functional unit makes learners
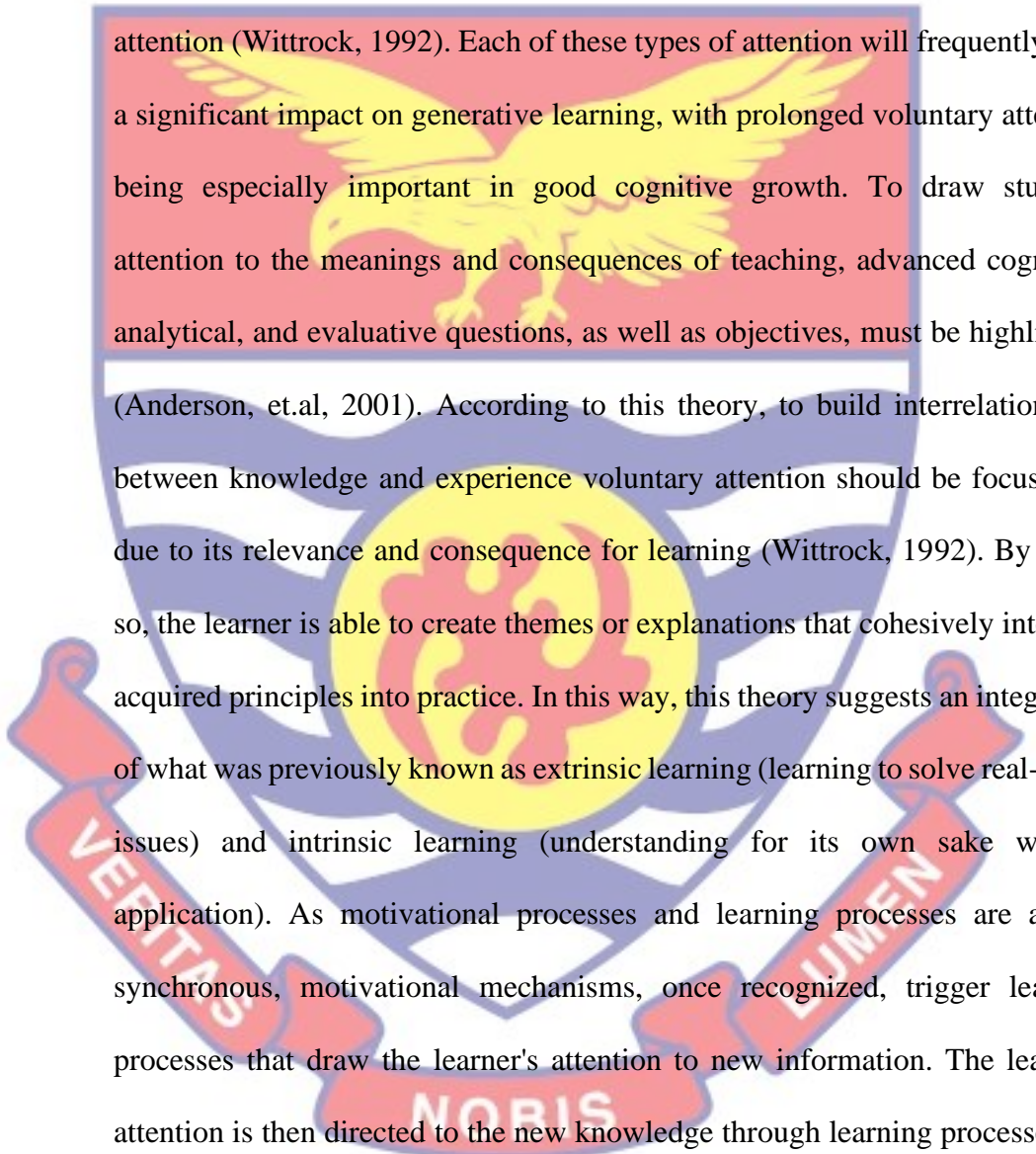
aware of the stimuli in the environment and they choose to notice or ignore them (Languis & Miller, 1992). Learners frequently create their own values (i.e., values have different meanings for different people). As a result, someone who has had positive professional development and continuing education experiences may develop more favorable attitudes towards learning.

Individuals who have had bad workplace learning experiences, on the other hand, are more likely to develop unfavorable attitudes regarding such learning activities. A highly motivated learner is one who takes responsibility for his or her own learning and actively participates in the learning process. Without appropriate learning environments and rewards, active, and participative learning cannot be readily synthesized by the educator. This is what Zimmerman (2002) refers to as self-regulation.

Educators may improve learner's self-regulation by setting clear goals for academic work and utilizing suitable instructional techniques. Another technique that may be used to assist students develop self-regulation is self-evaluation or reflective learning, in which students must analyze their own level of success in comparison to previously defined criteria and devise ways to improve upon learning. It may be necessary to have them estimate their proficiency with current and new learning ideas on a regular basis. Zimmerman emphasizes that self-regulated learning is not passive in nature. Goal setting, technique utilization, and self-evaluation are all self-regulatory processes or beliefs that can be learnt through parental, teacher, coach, and peer instruction and modeling. It is critical that learners are given appropriate structures for goal setting, reflective learning, assessment, and learning techniques throughout instruction activities relating to their continuous professional development. This

should be done properly and not presumed to be accomplished by informal suggestion at the start of a formal programme.

The concept of learning processes/attention is the third component. Short-term attention, sustained attention, voluntary attention, involuntary attention, distractibility, and selective attention are some of the several forms of attention (Wittrock, 1992). Each of these types of attention will frequently have a significant impact on generative learning, with prolonged voluntary attention being especially important in good cognitive growth. To draw students' attention to the meanings and consequences of teaching, advanced cognitive, analytical, and evaluative questions, as well as objectives, must be highlighted (Anderson, et.al, 2001). According to this theory, to build interrelationships between knowledge and experience voluntary attention should be focused on due to its relevance and consequence for learning (Wittrock, 1992). By doing so, the learner is able to create themes or explanations that cohesively integrate acquired principles into practice. In this way, this theory suggests an integration of what was previously known as extrinsic learning (learning to solve real-world issues) and intrinsic learning (understanding for its own sake without application). As motivational processes and learning processes are almost synchronous, motivational mechanisms, once recognized, trigger learning processes that draw the learner's attention to new information. The learner's attention is then directed to the new knowledge through learning processes. As a result, attention may shift during the learning process as the learner 'tunes in' or 'tunes out' of the environment's plethora of stimuli. Individual actions and preferences that govern attention to new content or information are therefore

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defined as learning processes. Professional development initiatives must therefore excite learners in a way that draws their attention to new information.

Finally, generating processes refer to the process of coding or integrating information. This relates to Luria's third functional unit of the brain, the executive planning and organizing unit, (Languis & Miller, 1992). As knowledge is structured and integrated for subsequent memory and retrieval, the learner mentally identifies the linkages between connections and relationships. The generation process focuses on the combination of preceding components, which results in understanding and application, helping the learner to make sense of the provided concepts and generating congruence between experience and knowledge. Generation happens when a learner is able to connect discrete experiences and concepts to the larger picture. It is crucial to highlight that the knowledge production and generation processes are frequently concurrent processes in which the learner draws on previous knowledge and experiences (memory) while building connections to new information. These connections, which are generated by the learner's physical and mental interactions with new material, are internally labeled as they become an integrated part of memory.

These four stages culminate in active and dynamic meaning production, which "leads to rearrangement and reconceptualization for elaborations and linkages that improve knowledge" (Wittrock, 1992,). In this way, Generative Learning Theory differs from information processing in that it focuses on the learners' development of new meaning through the four types of processes.

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**Conceptual Review**

**Continuous Professional Development**

Continuous Professional Development (CPD) is a term that has come to symbolize ongoing education and training for a wide range of occupations (Earley & Bubb, 2004). The term "continuous" has frequently been added to professional development to stress professional development as a lifetime and ever-changing activity (Curtis & Cheng, 2001). When offered formally, CPD is straightforward and easy to recognize but it is perhaps more complex to define as a lifelong process.

The breadth and interpretation of the term are the subject of theoretical and empirical dispute. Although there are many conceptualizations of CPD which makes a clear definition elusive, the common denominator is that CPD refers to activities targeted at employee development beyond their educational training. As a result, CPD may simply be defined as the systematic development, maintenance, enhancement, and expansion of relevant knowledge, skills, abilities and capabilities of employees with the purpose of improving professional competence in any specialized field (Day & Sachs, 2004). It ensures that professional capacity for performance is increased through planned actions aimed at improving competence and advancing careers.

CPD may include both informal and formal activities aimed at developing professional knowledge and experiences, which creates learning without learning being the explicit goal (Lewis, Collin &Van der Heijden, 2012). According to the OECD (2008), CPD is all organized, systematic, educational and training activities in which individuals participate to enhance

earnings and/or better employment and/or career prospects in present or other fields.

The concept of CPD is in many ways left undefined and often confused with related notions such as in-service training and on-the-job learning (Goodall, Muijs, Day, Harris & Lindsay, 2006). In-service training and on-the-job learning have a limited reach which focuses mostly on job-related growth and seeks to serve organizational goals rather than personal needs. It is usually carried out in accordance with the nature and job requirements for a specific job (Chan & Lee, 2007). CPD on the other hand, is a broad phrased activity that comprises a wide range of structured and non-systematic activities that lead to personal and professional improvement (Inid, 2007). It relevant to note that CPD is a more comprehensive approach to employee growth which covers both personal and organizational needs. It is thus more comprehensive and flexible, emphasizing the psychological demands for active and life-long learning for professionals.

Professionals are increasingly being asked to evaluate their own work and strive for improvement. CPD for professionals can only occur and yield beneficial outcomes when professionals are understood as much more than their jobs (Waters, 2005). CPD in this sense becomes a complex and diverse topic. Any activity that mirrors learning in the workplace may even be thought of as CPD. However, it frequently depends on specific professions and the kind of CPD choices available, as well as how they are employed in various settings (Collin, Van der Heijden & Lewis, 2012).

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To identify learning that can be considered as professional development, Lave (1996) identified some key principles. According to him for any learning activity to lead to professional development,  the activity must reflect the following ; (a) learning should be based on authentic experiences; (b) each person's personal history, beliefs, and dispositions must be recognized to influence professional development; and (c) an individual's learning almost always has a socio-cultural component, and it is necessary to identify and recognize the nature of these social influences on the design of learning environments.

CPD can also be self-directed by an individual employee or a professional organization. For the latter, this might involve reading professional journals to remain up to speed on new advances, as well as selecting and attending short courses that fit the professional needs of participants. CPD directed by professional organizations can also take several forms, ranging from formal educational courses to learning via regular work practices. In its most well-known form, it involves upgrading professional knowledge through official, short courses offered by occupational organizations such as physicians, attorneys, and teachers. The different forms of CPD suggest that it should be seen widely to give emotional, financial, and material support to professionals in their working environment, in addition to the intended intellectual assistance. CPD activities must focus on what, why, and how things happen for lifelong learning. It is for this reason that one of the main goals of CPD is to keep professional standards high and to guarantee that knowledge is converted into excellent practice.

**Teacher professional practise**

Teaching is seen as a highly complicated type of activity that requires specialized knowledge and expertise. This activity is worthy of the dignity and standing as any conventional profession, such as law and medicine. Professionalizing education, on the other hand, has been marked by ambiguity and controversy, much of which is dependent on what it means to be a professional and to professionalize a specific sort of occupation. According to some, advanced training is the essence of a profession; thus, the most effective way to professionalize teaching is to strengthen teachers ' knowledge and abilities through improved training and professional development.

Others argue that the attitudes of individual practitioners toward their jobs are at the heart of a profession. According to this perspective, the greatest way to professionalize education is to instil in teachers a sense of public service and high professional standards. Others are more concerned with the organizational settings in which teachers operate; in their opinion, the greatest approach to professionalize education is to enhance teachers' working conditions (Ingersoll & Gregory, 2018). The difficulties of teaching need the establishment of rules to achieve effective teaching results.

Danielson (2007) presents a framework for teacher professional practise that highlights duties for teachers that empirical research has proven to be important for supporting increased student learning and to help teachers better understand their responsibilities. This framework is useful for laying out the various areas of competence in which professional teachers must become knowledgeable. Danielson divides teaching duties into four categories: planning

and preparation, the classroom environment, instruction, and professional responsibilities.

Planning and preparation are terms used to describe how a teacher arranges the content that students should learn or how a teacher develops their teaching. It entails the teacher's capacity to exhibit subject and pedagogical expertise, understanding of students, knowledge of resources, planning of instructional outcomes, plan coherent instruction, and develop student evaluations.

The second domain is the classroom environment, which includes non-instructional interactions in the classroom. It requires cultivating a courteous and trusting environment, promoting a learning culture, controlling classroom processes, managing student behaviour, and arranging physical space, among other things.

Instruction, which is the third area, is at the heart of teaching. It is the students' participation in their own education. It encompasses communication with students, how to utilize questioning and discussion techniques, how to encourage learner participation, how to utilize assessment as part of instruction, and how to be flexible and adaptable as a teacher.

Finally, professional responsibilities which encompasses a wide range of tasks that a teacher conducts outside of the classroom. Teachers must, among other things, be able to reflect on their teaching, keep correct records, create relationships with families, participate in a professional community, grow and develop professionally, and demonstrate professionalism. Teachers who display these abilities are regarded highly by their colleagues and administrators, and they are seen as true professionals. To promote teachers' advancement within

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the teaching profession, professional development activities should ideally focus on developing these four critical areas of practice.
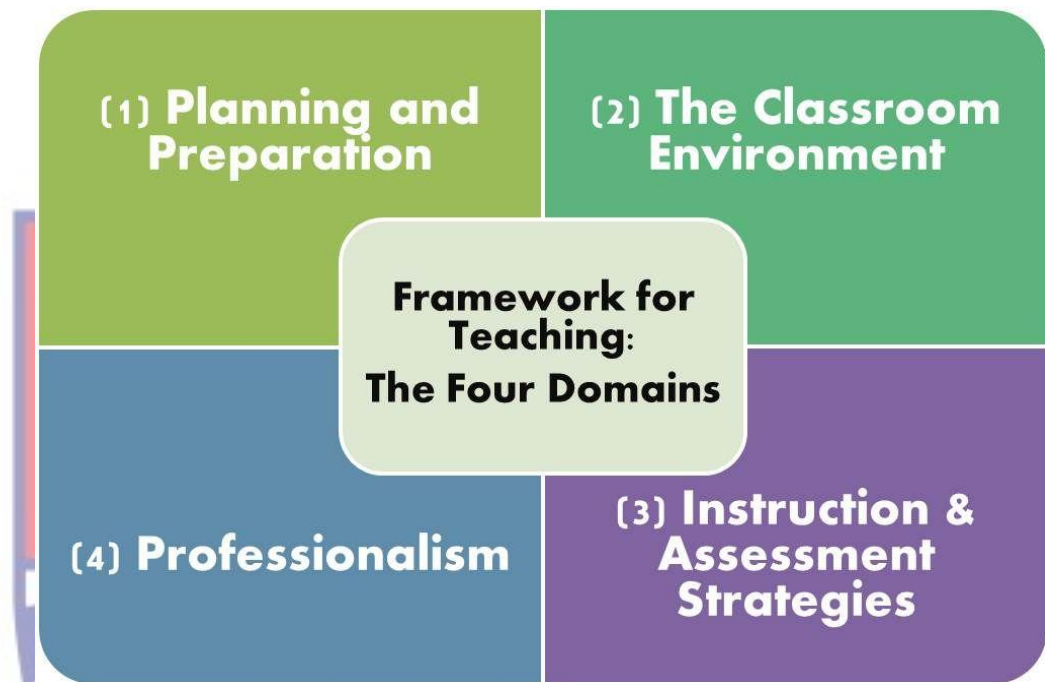


*Figure 2:* Framework for teacher professional development

Source: Danielson (2007)

**Teacher Professional Development**

Continuing Professional Development (CPD) has been used in a variety of professions, including education. CPD for teachers is sometimes misunderstood and difficult since there is no single definition for professional development for teachers because it varies according to educational traditions and circumstances. It is a nebulous concept since teaching is seen to be strongly related to the emotive component of human minds, and being a teacher implies that one is emotionally invested in the process. With education firmly founded on human views and beliefs, a teacher's life is directly tied to emotions, which implies that teaching is frequently impossible to prescribe by its very nature. What then does CPD for teachers look like?

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Darling-Hammond (2005) defines Teacher Professional Development (TPD) as the process of enhancing teachers' status through increased awareness and enhanced knowledge base. The Association of Teachers and Lecturers; ATL (2015) also defines TPD as any formal or informal activity that enables an individual or group to gain skills, knowledge, and improve professional practice. It may simply be thought of as any type of activity undertaken to promote, help, support, and improve teachers' practise in order for them to perform their duties more successfully while maintaining required standards.

According to Rogan and Grayson (2003), it fundamentally involves all activities that help teachers grow in their careers. While some may identify TPD as a lifelong pursuit of knowledge and self-reflection, others simply view it as short-term courses and seminars. Day et al. (2007) therefore proposes that TPD needs to viewed as all natural learning experiences and planned activities that are envisioned to be of direct or indirect benefit to the person, group, or school and that add to the classroom/educational organization's quality. TPD must be recognised as a continuous cycle of reflection and action in which people take control of their own learning and growth (Wilton, 2016).

The major purpose of professional development is to improve participants knowledge and skills in order to get better work results (Mundry, 2005). TPD is thus as any activity that focuses on including teachers in programmes and reflective actions in which they learn or relearn with the purpose of improving their beliefs, attitudes, values, understandings, and professional practise which should ultimately improve learning for students (Darling-Hammond, Newton, & Wei, 2013; Guskey, 2010). These procedures, actions, and activities as part of teacher professional development are intended

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to improve teachers' professional knowledge, abilities, and attitudes, therefore improving the efficacy of learning in schools (Creemers, Kyriakides & Antoniou, 2013; Neil & Morgan, 2004; Guskey, 2000). It is relevant to note that TPD in this sense, covers all forms of learning experiences, both intended and unintended, from the individual to the institutional levels in order to fulfil the basic purpose of education (Goodall, et al., 2006).

Professional development is the only way for teachers to evaluate, renew, and extend their responsibility as change agents to the moral tenacities of teaching, as well as to acquire and critically develop the knowledge, skills, and emotional intelligence required for good professional thinking, planning, and practise with children, young people, and colleagues, at all stages of their teaching careers (Day, et al, 2007).

Professional development for teachers is a lifelong practise rather than a one-time event (Sweeney, 2005). One-time conferences, seminars, and workshops; non-accredited academic and professional programmes; in-school training; action research; field trips to other schools; networking forums, in-class support, monitoring colleagues, and observation are all examples of CPD activities for teachers (Brown, Edmonds and Lee, 2001).

Classrooms, professional development courses, and seminars are all good places for teachers to study. It can happen in the middle of a quick hallway conversation with a co-worker or when counselling a difficult child. We must analyse teacher learning in a variety of settings to properly grasp it, taking into account both individual teacher-learners and the social structures in which they function (Borko, 2004). Professional development in this context includes official school activities, informal school activities, courses, private study in the

subject area or in education, classroom-based research, and so on (Mizell, 2010).

Regardless of the form of TPD, the most effective TPD is one that is personalized, relevant, sustained, supported, and collaborative (ATL, 2015). TPD is personalized when it is designed based on known needs and requirements rather than as a "one size fits all". It is relevant when it relates to specific areas of specialization. When TPD is sustained, it allows for the acquisition of new skills and ideas and gives room for acquired skills and knowledge to take root through trial and refinement, which is one of the most successful ways to integrate new ideas into professions. TPD is supported when experienced colleagues, either from inside or outside institutions, guide new entrants through activities such as coaching and mentoring. It is collaborative when professionals can work together to improve their teaching practice.

Teachers are expected to change as a result of CPD in ways that influence not only what they know professionally, but also their attitudes and beliefs about getting things done, resulting in an overall improvement in teaching and learning quality (Early & Bubb, 2004; Day & Sachs, 2004). Effective CPD is thus intended to address the unique needs of teachers (Goodall, et al., 2006; Bredeson, 2002). CPD activities must be carefully organized in order to provide appropriate support to teachers in the application of what they know and to improve teacher confidence and methodology one their specific needs have been identified. CPD activities that are organized and prepared methodically provide participants with the chance to increase their professional and personal growth by extending their knowledge, abilities, and attitudes

(Collinson, 2000). The diversity of participants in terms of training, background, and needs is likely to also benefit teachers' personal growth.

Professional development in this vein necessitates not only formally planned activities, but also informal and unplanned learning activities for teachers (Kaagan, 2004; Bredeson, 2002), which is often dependent on each participant's prior knowledge, potential and wealth of experience.

Ongoing research in many countries has revealed that both inside and outside the school, teacher professional development activities have a significant impact on teachers (Easton, 2008; McCaughtry, Martin, Kulinna, & Cothran, 2006; McLaughlin & Talbert, 2006; Carver & Katz, 2004; Desimone, Porter, Garet, Yoon, & Birman, 2002; Jonson, 2002; Moir & Gless, 2001; Boydak & Dikici, 2001; Birman, et al, 2000). It is generally argued that professional development for teachers may be one of the most effective ways to influence teaching quality (Hirsh, 2001). It is critical in teacher preparation and improvement (Birman et al., 2000). Borko (2004) reiterates this in his support for professional development as one that is indispensable in efforts to improve schools.

Professional development programmes are necessary not only for new teachers but also for veteran teachers, because in-service teacher education can be viewed as an extension of pre-service teacher education in ensuring that all teachers, new and experienced, have up-to-date knowledge and skills (Starkey et al., 2009). Senior teachers participating in professional development programmes can be viewed as a way of self-renewal (Rogers et al., 2007). There is therefore no doubt that professional development activities are essential for

both new and experienced teachers in developing and expanding their knowledge and skills.

Although learning with and from colleagues is considered effective in developing professional skills, some teachers view TPD as one-time events or short courses, often in or out of the school, with variable quality and relevance delivered by a variety of external providers (Sweeney, 2005). Beyond formal activities, which are frequently organized by districts and national bodies, a type of embedded professional development that is directly related to the work of teaching can take the form of co-teaching, reflecting on actual lessons, mentoring, or group discussions on some selected authentic artifact from practice, such as student work or instructional task (Ball & Cohen, 1999; Gearhart & Wolf, 1994; Schifter & Fosnot, 1993;). It may also involve a book club, teacher network, study group, educational online initiatives or undertaking their own inquiry/action research (Desimone, 2009; Ingvarson, Meiers, & Beavis, 2005; Greenleaf, Schoenbach, Cziko, & Mueller, 2001; Grossman, Wineburg, & Woolworth, 2001; Guskey, 2000). Borko, Jacobs, Eiteljorg, and Pittman (2008) also include learning using video materials (such as watching and analysing video samples of instructional purposes) as well as any other professionally permitted learning activities.

It is even possible in some cases that the curriculum becomes a source for professional development particularly when they are designed to be educative materials (Remillard, 2005). Participation in a growth or improvement process, such as developing or selecting new curriculum or textbooks, is another type of teacher involvement that falls within the professional development umbrella (Guskey, 2000). Again, some of the most

significant teacher learning experiences can occur in the teacher's own classroom, through self-evaluation and a critical examination of their own practise (Putnam & Borko, 2000).  Teachers learn continuously, it may either be through lessons taught, assessment carried out, curriculum review, or even reading a professional magazine of journal (Guskey, 2000). These different set of activities illustrates the dynamism of professional development for teachers. Teacher learning may thus be seen as one that is continuous and interwoven into their daily lives.

Schools have long been encouraged to view teacher professional development as a lifelong activity because initial teacher preparation may be insufficient in preparing teachers for a lifetime of practice, a lifetime that is cannot be predicted. There is the need for teachers as professional to be involved in professional development activities during the various stages of their careers to satisfy changing expectations of teaching (Day & Gu, 2009).

Moving away from the satisfaction of financial grain from participation in professional development activities, professional development opportunities or programmes may also be beneficial for teachers, because it is supposed to have a positive impact on teacher beliefs, instructional practice, and student learning. Extant literature suggests that professional development influences teachers' attitudes, beliefs and professional behaviour (Youngs, 2001; Wood & Bennett, 2000). Given this array of complexities, and interrelated learning opportunities it is important to view professional development not as a single event but as a combination of multiple learning experiences that bring about some change in a teacher and his instructional practise altogether. Despite

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significantly investments in Teacher Professional Development, there still appears to be the need for more research in this area.

**Types of Teacher Professional Development activities**

Generally, Bayar (2014) has categorised professional development activities into two main types, traditional and non-traditional activities. A key determining factor for classifying an activity as traditional or non-traditional is the length of the professional development activity (Ozer, 2018). Traditional professional development activities comprise off-site activities which consist of short workshops, conferences, seminars, lectures etc. which are considered effective for reskilling and retooling teachers in areas related to their knowledge skills and curriculum issues. Such professional development activities often take place outside of a workday or school session. Rucker (2018) indicates that although traditional professional development has its merits it is criticised for the following;

A criticism of traditional professional development is that teachers are frequently considered as passive learners. Typically, such approaches to teacher professional development are lecture-based, with workshops that do not assist participants relate content to their own settings for a better comprehension, and no opportunity for participants to actually test out new skills or strategies. Humans naturally are believed to learn through trial and error. Errors often provide the opportunity for repeated attempts to view problems from different angles. Such errors help human beings to internalize what success is likely to look like and ensures the application of new skills in relevant situations. Mostly for teachers, this will imply what they do in the classroom. In many cases, traditional professional development is considered to be an inch deep but a mile

wide. Most traditional professional development is periodic and covers a wide range of topics in a day or for half work day often during vacations when schools are not in session. For such activities, teachers participate in a variety of topics, ranging from literacy and classroom management to integrated learning and evaluation. In certain circumstances, sessions are separated from one another and from the classroom practise of teachers. The resulting effect is information overload with no coherence which typically does not make it into the teacher's teaching repertoire (Rucker, 2018).

Again, for this type of professional development, it often does involve continuous support from an instructional expert. For instance, when a workshop comes to an end, all support from experts ends with it. This implies that help is frequently unavailable when teachers need it the most, most notably in the classroom when they seek to repeat new methods and strategies learnt. In many instances, school leaders choose such professional development to address existing skills gap however what they fail to recognise is that that gap may not be resolved unless underlying concerns are addressed.

Another downside is that this type of professional development is that it does not address specific practical issues. Teachers' professional development must be tailored to suit unique problems teachers are confronted with at different times in their careers. For example, if a programme is designed for both a new and experienced teacher to provide the same information, the seasoned veterans are likely to be uninterested and may be familiar with the new skill being taught. Also, typical traditional professional development does not allow teachers to reflect on their work. Such programmes are frequently focused on the learning of skills and techniques, with little room for critical reflection

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on the teacher's existing practices. Finally, traditional professional development does not allow for the evaluation of its own impact on student learning. There is insufficient evidence to support the impact of such professional development activities on student achievement; however, studies show that the more time teachers spend on professional development (around 49 hours over the course of a school year), the greater the impact on student learning but often, such programmes are brief and infrequent (Rucker, 2018).

Traditional professional development activities are thus criticized on the grounds that it often has a short duration, tends to be less effective in helping participants to reach their desired goal, inefficient and unproductive, fails to demonstrate an observable effect on education and are nearly time wasting (Easton, 2008; Abadiano & Turney, 2004; Kelleher, 2003; Birman et al., 2000;). As a result, they have little or no effect on the skills of participants (Boyle et al., 2004). Such professional development programmes, according to Collinson (2000), are ineffectual when it comes to unique teaching and learning challenges. It is said to be one that seldom results in any increase in learning or teaching. It is regarded as stiff and one that rarely recognizes the needs of teachers. The effectiveness of professional development comes from the extent to which it is entrenched in the workplace. It is critical to connect all professional learning activities to current day-to-day practice, this is the only way teachers can grow, improve and influence student outcomes.

The non-traditional approach to professional development is built on new pedagogical strategies for teaching and utilizes collaborative relationships. It involves activities such as mentoring, coaching, peer observation, and other non-traditional professional development activities which take more time on

task and are thus considered efficacious for improving teacher knowledge, skills and professional behaviour than the traditional approach (Birman et al., 2000).

In this style of professional development, capacity to improve through collegial and collaborative work teams with both colleagues and students is highly recognized. Flexible classrooms, in which multiple teachers engage and cooperate in a classroom setting which challenges established practise is a common example. Through conversation and cooperation with peers, continuous and regular research, and profound reflection on the craft, such non-traditional professional development allows teachers to actively rediscover who they are and what they stand for. (Nieto, 2003). It helps to provide rich learning experiences for teachers which ultimately help to shape and improve students' learning. Unlike the traditional Professional Development which regards participants as passive recipients of knowledge and begins with other people's ideas, this type of professional development begins with the teacher's practise which brings the learner into the conversation and opens avenues for learning, evaluation, critique and the expansion of teachers' repertoire (Campbell, Saltmarsh, Chapman & Drew, 2013; Lieberman & Pointer Mace, 2010). For this approach to professional development, strong emphasis is placed on the teacher as the primary driver of their own learning (Koster, Dengerink, Korthagen, & Lunenberg, 2008).

Professional development is therefore defined as primarily private, unaided and experience-based learning that helps teachers survive, become competent, and develop in classrooms and schools. It also refers to informal development opportunities in schools as well as more formal 'accelerated' learning opportunities available through in-service education and training

activities generated internally and externally (Day,1999). In theory, this type of professional development permits teachers to reflect on and practise accepted methods by observing more experienced teachers.

**Formal and informal professional development**

Maciejowska, Čtrnáctová and Bernard (2015) also categorized TPD into formal and informal professional development activities. According to them, formal courses, workshops, educational conferences and seminars which deal with subject matter, pedagogy, and pedagogical content knowledge and which allow teachers to present and discuss current educational challenges are mainly formal professional development activities. Also, long-term training that incorporates all of the aforementioned activities and typically included in a certification programme falls within this category. Such formal professional development activities frequently contribute to a formal structure of lifelong learning, which may be organized and carried out by educational institutions, higher education institutions, accredited commercial companies, or non-governmental organizations, such as teacher organizations or scientific associations. In most cases participants are awarded certificates attesting to their attendance and achievement of certain learning objectives.

Informal professional development activities on the other hand include talking with peers about how to improve their teaching and reading professional literature. Participants can participate in these activities whenever it is convenient for them, and as their needs and circumstances change. They can do this by reading specialized literature (e.g., magazines, publications, websites) or debating significant topics in groups of teachers from similar disciplines, levels, or schools.

Professional development activities were further categorized into passive and active activities. According to them, conferences, seminars, and inspections of other teachers' work in schools are generally passive. It often involves presentation of ready-made solutions intended to transfer information to participants in a more passive manner. Critical reflection or follow-up talks are usually not included in such activities. Workshops, coaching, and research on the other hand were identified as more active professional development activities that require personal involvement and autonomous learning from a teacher. They usually lead to the acquisition of new abilities. Very often programmes that lead to a qualification combine aspects from both groups described.

Most teachers take part in a range of TPD activities. Extant literature suggests that for formal professional development activities, courses and workshops are most common with over 80% of teachers in OECD countries participating in such activities; the percentages are even higher for teachers in the United States of America (Darling- Hammond et al., 2009). To understand TPD within the local context, it may be necessary to explore what constitutes CPD by way of teacher conceptualization and existing structures for CPD.

**Models of TPD**

Teacher Professional Development can be structured and arranged in a variety of ways and for diverse reasons. CPD events are typically viewed as opportunities to enhance knowledge, skills, and attitudes. Professional knowledge is relevant not only in terms of the type of knowledge acquired, but also in terms of the context in which it is acquired and the manner in which it is then used. An examination of how CPD is typically planned and structured may

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reveal the rationale for the structure as well as the level of professional knowledge and expertise it seeks to address.

Eraut (1994) notes that professional learning cannot be viewed as one that is independent in how it is learnt and its use.  The nature of learning can therefore be described in terms of the context of acquisition and use of such learning. To show a link between professional knowledge and its use Eraut categorizes the nature of professional knowledge into three contexts: the academic context (learning in the university), the policy-debate context (school context), and the context of actual practise (classroom context).  According to him the academic context involves the development and debate of theories among scholars through ideas sharing at conferences, seminars and approval by peer scholars. The policy debate context involves an articulation of policy statements to intended audiences. The context of actual practise is the actual application of knowledge learnt from the two contexts. According to him the type of professional knowledge acquired may be relevant in modelling CPD but these contexts in which it is acquired and then used helps to provide a better understanding of the nature of that knowledge required. Clearly, knowledge acquisition is not limited only to these three contexts, but identifying the various contexts may be useful in understanding CPD structures. A criticism of Eraut classification however is that he fails to explicitly address the role of the informal professional., although this is also important in discussions on professional development, He does not sufficiently address the relevance of informal professional growth and reading outside of institutional environments by this categorization.

Lieberman (1995) also separated TPD into three distinct practices depending on the context. He indicated; (1) direct teaching (e.g., workshops, consultations, conferences, short courses), (2) learning in school (for example, critical friendships, action research, peer coaching and task-related planning teams, mentoring), (3) learning out of school (for example, visits to other schools, subject networks, and school-university partnerships learning communities). This classification is significant for the reason that it emphasizes the relevance of informal learning, highlighting the essence of both in- and out-of-workplace learning.

Kennedy (2005) categorizes TPD into nine models that represent various degrees of significance situated on the contexts as possible avenues for knowledge acquisition, and the types of knowledge that may be produced through each model. Kennedy identified the following as models of TPD; the training model, coaching/mentoring model, deficit model, community of practise (COP) model, standards-based models, award-giving models, action research models, transformative models and the cascade model are just a few examples.

The training model of TPD is well-known (Kelly & McDiarmid, 2002) and is perhaps the most popular professional development for teachers. This professional development strategy focuses on providing a skills-based, technocratic approach to education, with TPD expected to allow participants to refresh their abilities and improve their expertise. An expert who designs the activities and agenda for the professional development is frequently engaged to deliver CPD for teachers. The participant is portrayed as a passive recipient of new knowledge. This type of training is often provided off-site, although it may

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also take place at the participant's institution or workplace. This paradigm, however, has frequently been chastised for failing to provide links to contemporary classroom situations in which participants operate. Such training activities fail to connect with the core goals of teaching, which are at the heart of teacher professionalism (Day, et al., 2007). Despite such criticism for its rigidity, the training model is nevertheless regarded as an efficient method of imparting new knowledge (Hoban, 2004). The way this new information is utilized in practise is not something that the training approach has much of an impact on. Perhaps more importantly, the training approach enables key stakeholders to effectively regulate and constrain the professional development agenda, while also placing teachers in passive receptive roles for specialized knowledge.

The award-bearing model emphasizes completing award-bearing programmes that are almost always only recognized by institutions. This approach is based on external validation, which is seen not just as a quality assurance mark, but also as a method for validating/funding entities to exert control over CPD programmes for teachers. In today's educational context, there appears to be a greater emphasis on professional action that is seen to be both intellectual and practical. As a result, there is a greater emphasis on award-bearing courses that are customized to fit the demands of classroom practice.

The deficit model of is one designed to address perceived teacher performance issues. This method can readily be used in the context of performance management, which has been the subject of debate in many educational reforms. Performance management, according to Rhodes and Beneicke (2003), can be viewed as a means of boosting standards or a

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component of government participation to increase efficiency, effectiveness, and accountability for teachers. Nevertheless, performance management entails assuming responsibility for analysing and managing changes in teacher performance, which is overseen by someone and may include, if necessary, measures to correct obvious flaws in individual teacher performance. What is often unclear is what competent performance is and whose definition of competence it represents. While this technique aims to address perceived deficiencies in individual teachers, difficulties in teacher performance are typically attributed not only to individual teachers, but also to organizational and managerial policies (Rhodes & Beneicke, 2003). Indeed, collective accountability is overlooked in this model, which primarily focuses on censuring individual teachers for poor teaching performance in the hopes of implementing professional development to fix such flaws.

The next professional development model for teachers is the cascade model where specific teachers are chosen to attend training sessions and are subsequently expected to share the material to their peers. It is frequently used in circumstances where resources are few. This model has been criticized for paying little attention to the values of participation, cooperation, and ownership that characterize individual teacher learning (Day, et al., 2007). A major flaw in this model is that what is passed down in the cascading process is often skill and knowledge focused, but rarely emphasizes teacher values (Solomon & Tresman, 1999). The cascade model may therefore be said to promote a more technicist approach to education, where skills and knowledge take precedence over attitudes and values. This model also disregards Eraut's list of learning contexts,

suggesting that the most important aspect of the professional development is the acquisition of knowledge and, not the setting in which it is acquired.

Another model is the standards-based model which is founded on the idea of using collective entrepreneurship for the common benefit and the integration of theory into a real-world situation (Loughland, 2012). This model promotes cooperation over professional isolation and sets performance criteria for encouraging ongoing development. Educational policies that rely on this model frequently provide a reason for doing so. This model provides a standard vocabulary for teachers to use when in dialogues on their professional practice. The shift towards a more standardized teacher education for both initial and continuing phases of teaching is mostly motivated by increasing concerns for improving the ability of teachers to compete within global contexts (Beyer, 2002). The apparent rigidities in this model can be viewed as either a constructive framework for professional development or as basis for pressure to conform with standards (Draper, O'Brien & Christie 2004). While the standards-based model of CPD has been criticized for reducing teaching to a complex, context-specific political or moral endeavour, it is also concerned with developing teaching and teacher education system that can generate and empirically validate links between teacher effectiveness and student learning (Beyer, 2002). Although it is primarily concerned with a behaviourist's perspective of learning, which promotes individual teacher competency and the associated rewards, it inherently ignores collaborative and collegiate learning. Externally imposed accountability and inspection systems, like the standards-based model demonstrate a disregard for the teacher's capacity for thoughtful, critical inquiry (Smyth, 1991). Indeed, one could argue that it not only lacks

respect, but also sets clear expectations for how much teachers should take responsibility for their own professional learning and encourages them to rely on central supervision, even when assessing their own teaching capacity.

The coaching/mentoring model is another model proposed by Kennedy as a professional development model for teachers. For this model, an experienced teacher introduces a new teacher to the profession, akin to an apprenticeship. This introduction usually contains instructions for the beginner on how to acquire and apply appropriate knowledge and skills, as well as indications to the new instructor about the institution's social and cultural norms. While coaching and mentoring may appear to be the same thing, coaching focuses on skills, whereas mentoring includes therapeutic and professional ties (Rhodes & Beneicke, 2002). Mentorship is often connected with a relationship in which one partner is inexperienced and the other is more knowledgeable (Clutterbuck, 1991). This model is founded on the premise that professional development can occur outside of the classroom and can be facilitated by engaging in peer discussion. It often involves one-on-one interaction that is typically required between teachers to foster professional learning. It offers a more balanced interaction between teachers, allowing them to talk about beliefs, values, opinions, and hopes in a less hierarchical manner. This means that for this technique to function, participants must be able to successfully interact with one another (Rhodes & Beneicke, 2002). Thus, depending on its underlying philosophy, the coaching/mentoring paradigm can support either a transmission or a transformational view of professional development. By this a transmissional view is where teachers are initiated into the status quo by more experienced colleagues and a transformative view is where the relationship

provides a supportive, but challenging forum for both intellectual and affective interrogation of practice. The mentoring or coaching relationship could be collegiate (for example, peer coaching), but in most cases it is likely to be hierarchical. The quality of interpersonal interactions is nearly always critical in furthering the purpose of the coaching/mentoring model, which may be mutually supportive and challenging, or hierarchical and assessment driven. This approach is recognised to be clinical in nature and may be helpful particularly for novice/experienced teachers learning only (Smyth, 1991). Like the other models for TPD, this model has also been berated for creating a one-to-one interaction, which, given the nature of the relationship, may typically prioritize secrecy over accountability (Kennedy, 2005).

The aforementioned mutually supportive and challenging model of TPD is intrinsically tied to the Community of Practise (COP) model. The primary difference between the two is that the COP approach frequently involves two people and does not rely on confidentiality. Members of varied communities of practise must learn three important processes: building forms of mutual engagement, understanding and tuning of enterprise, and developing repertoire, styles, and discourse (Wenger, 1998).

According to Wenger, learning within COP might occur as a result of interactions within the community rather than scheduled learning events like courses. To integrate such information, members must be aware of the community's presence. Individuals' perceptions of the community and their responsibilities are frequently moulded by the collective wisdom of dominant members of the group, and the position of individuals as community members

often decide whether learning within the community is positive and proactive or a flaccid experience.

When professional activity is communal, the quantity of information available in a clinical unit cannot be measured by the sum total of individual members' knowledge, but rather by the knowledge generated by the richness of individual connections (Boreham, 2000). Boreham emphasizes the importance of community learning by recognizing individual knowledge and the synthesis of multiple information through practise as a potent venue for the creation of new knowledge. This suggests that professional learning should not be a form of responsibility or performance management in this situation. In most cases, negotiating a joint venture should result in reciprocal responsibility relationships among community members (Wenger, 1998), promoting a greater possibility for transformational practise than what a management-style accountability would enable. Although it has been suggested that communities of practise serve to uncritically maintain dominant discourses (Kennedy, 2005), under certain circumstances, this model can act as a powerful site for transformation, where the sum total of individual knowledge and experience is significantly increased through collective effort.

For the action research model, participants solve and act on real-world problems while learning through inquiry and reflection. It is as a process of observation, contemplation, planning, and action (Marquardt & Waddill 2004). It emphasizes the study of a social context in which individuals participate as researchers in order to improve the quality of activities within it (Somekh, 2006).

The quality of action can thus be defined as the participants' understanding of the situation as well as their practise within the context. Many communities of practise will engage in action research, according to proponents of the action research model (Burbank & Kauchack, 2003; Weiner, 2002). Teachers' comprehension of the relevance and sincerity of what defines professional learning is often aided by the action research (Tate, 2009). This model therefore allows teachers to cooperate and ask tough questions about their teaching approaches in order to improve teacher performance (Garret 2011). Teachers learn best from peers in similar positions, according to this model, which has a heightening effect on their learning (Dadds 2014; Revans, 2011). For this model to be effective, teachers must be taught to view research as a process rather than a product of someone else's efforts (Kennedy, 2005). It can also be viewed as a means of lowering reliance on external research findings and shifting the power balance in favour of teachers by allowing them to discover and implement relevant research findings. It is crucial to assess the extent to which this model allows teachers to raise relevant issues concerning political variables that are likely to alter the parameters of their practise (Sachs, 2003). Despite this, an action research model has been discovered to have the potential for transformational practise and professional autonomy.

The last model, the transformative model incorporates a variety of methods and scenarios, to improve and transform professional practice. It combines all the previously mentioned models. This model's defining element is the mix of actions and events that enable a transformational agenda. In this approach, it may be argued that this model cannot be clearly defined as a model in itself but rather recognizes the wide range of activities, programmes, and

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conditions that are required for transformative practice. According to Hoban (2004) a better balance between the models and transmission-focused approaches, rather than a shift toward teacher-centred, context-specific is what is required for effective professional development of teachers. Successful model integration, as a result, is a crucial component of transformational models. This model provides a solution to the constricting nature of the standards, accountability, and performance management agenda, and could be classified as a poststructuralist approach to TPD (Kennedy, 2005). However, a clear understanding of power dynamics suggests that this model is not without its own tensions, and may even rely on them, because it is often only through the recognition and consideration of opposing agendas and philosophies that a genuine debate among various stakeholders in education can take place, leading to transformative practice.

According to the extent of professional autonomy offered to teachers, Kennedy (2005) groups the nine models into three groups. The training, award-bearing, and deficiency models, in which teachers have limited control over their professional learning were grouped under the transmission category. Transitional models include standard-based, cascade, and coaching/mentoring models, in which teachers have professional autonomy, and the third category the transformative models; action research models, community of practise models, and transformative models, in which teachers have even more professional autonomy. Teachers' professional autonomy would be improved by changing from transmissive to transitional to transformative.

It is relevant to consider that these models are not comprehensive nor exclusive, but they provide some insight into key components of the different types of TPD available by allowing for more in-depth research and debate on the underlying issues related to the purpose of most TPD activities. The structure of an educational system (i.e., whether it is centralized or decentralized) may have an impact on the delivery and diversity of CPD models (Stadler, 2010). The majority of TPD models and practise   prioritize formal CPD programmes and activities. However, contemporary learning theories that emphasize the situated learning, recommend that a focus on formal TPD activities may need to refocused to more informal on-the-job learning, which is currently underrated.

**Effective Teacher Professional Development**

There have been numerous studies that have looked into the characteristics of some of the best practices in relation to teacher professional development (Garet, Porter, Desimone, Birman & Yoon, 2002). According to Desimone (2009), there is an increasing consensus on specific components of professional development that are thought to lead to improvements in teacher knowledge and practice, as well as possible change in student outcomes. According to her, these core characteristics of effective professional development are commonly utilized to evaluate the performance of any professional development program, regardless of the type of activity engaged (Desimone, 2011).

Effective professional development must be content focused. Some scholars agree that professional development must largely be viewed as opportunities to broaden the knowledge and skills of teachers (Timperley,

Wilson, Barrar, & Fung, 2007; Desimone, et. al, 2002; Garet et al., 2001) By widening their knowledge base, enhancing their teaching approach, and boosting their self-efficacy, professional learning strives to strengthen teachers' self-efficacy and dedication (Hargreaves & Goodson, 1996). Teacher professional development, should be considered as opportunities for learning, allowing teachers to learn from their own practise through self-reflection and preparation for future roles and responsibilities (Fisherman, Marx, Best & Tal, 2003).

In general, there are two main groups for content -focused professional development. Fishman et al. (2003) identify the first type to be knowledge-related teaching such as assessments, classroom organization and administration, and teaching methods. The second type relates to the subject matter itself. The knowledge component has emerged as one of the most important components of professional development programmes. Assessment for instance is crucial because it allows teachers to evaluate and measure the impact of their practise on student learning (Timperley et al., 2007). If teachers have strong evaluation skills, they should be able to enhance the efficacy of their teaching practise over time.  Whatever professional development experience teachers may have must have a strong focus on knowledge content. This is especially true if professional development programmes are designed to assist teachers to improve their thinking and teaching practise over time by updating their knowledge base while also adding new material and talents to their repertoire (Borko, 2004; Grundy & Robison, 2004).

Another feature of effective professional development is active learning. This occurs when professional development events are structured to provide teachers with a range of opportunities to actively participate in learning activities, which is considered a critical component in maintaining improvements gained in their teaching practise (Fullan & Hargreaves, 2016). The reform-type professional development which involves active participation has been identified as effective in changing teaching practise (Helmer, Bartlett, Wolgemuth & Emmett, 2011). On the other side, the traditional approach of teacher professional development has been chastised for failing to promote significant advances in teaching practise (Desimone, 2011; Kwakman, 2003; Birman, et. al, 2000). Teachers' professional development should include opportunities for teachers to become engaged learners (Harris, Cale, & Musson, 2011; Villegas-Reimers, 2003), such as incorporating and providing opportunities for them to observe and be observed during instruction; plan classroom implementation, practicing in simulated conditions and developing lesson plans; review student work; present, lead, and write journals, performing a demonstration, leading a discussion, and writing a report. These several active learning strategies are regarded to be the most efficient in altering teaching methods. Teacher professional development should also give opportunities for teachers to obtain regular feedback on their teaching practise improvements. When compared to professional development programmes such as big group presentations, training programmes, workshops, and seminars, this technique looks to be capable of substantially changing teaching practice.

Another important feature of effective professional development is collective participation. Teachers from the same department, subject, or grade level who are participating in the same professional development programme are referred to as coworkers. Participation in group professional development is more likely to provide opportunities for teachers to actively learn while also being consistent with their previous experiences. Furthermore, professional development for teachers that incorporates group participation, particularly among teachers from the same institution, is seen to be capable of sustaining the gains made in their teaching practice. This is due to the fact that they are more likely to have opportunities to discuss the concepts, skills, and difficulties they face during their professional development (Garet, et al., 2001). For example, Hargreaves (1995) promotes cooperation as a way for teachers to improve their teaching approach. He says that one benefit of collaboration is that it increases the ability to reflect, which is crucial to their professional development. When teachers participate in professional development as a group, they can more easily learn from one another's techniques. Feedback, new knowledge, and ideas come not only from individual learning, but also, to a considerable extent, from debate and contact with others (Kwakman, 2003). Collaboration may thus be significant for professional learning by providing a tool for increasing job performance (Hargreaves, 1995).

Cooperation in the classroom also improves efficiency by reducing duplication and redundancy between teachers and topics through coordination and sharing of tasks in complementary ways (Hargreaves, 1995). This should free up more time and effort for teachers to dedicate to other issues such as lesson planning. Collaboration also provides moral support to educators and

allows them to collaborate with their peers rather than coping with frustration and failure on their own. Overall, this should boost the quality of education (Hargreaves, 1995).

The duration for professional learning has also been noted as a characteristic for effective professional development. Duration refers to the number of contact hours spent on a certain professional development activity as well as the time span or length of time over which the activity is spread (Garet et al., 2001). Longer professional development sessions are regarded to give more subject-area matter concentration, more possibilities for active learning, and greater coherence with teachers' prior experiences compared with shorter ones (Birman et al., 2000). Longer professional development sessions allow for more in-depth discussion of subject matter issues, student conceptualization and misinterpretation, and instructional methods among participants. If the exercises take a longer period, teachers will have more opportunities to test out new methods and techniques in the classroom and receive feedback on their teaching (Garet et al., 2001).

Finally, for professional development to be effective, it must be coherent. Personal and institutional professional development programmes should be integrated to maximize potential for change and advancement in schools (Day, et al., 2007). Coherence in this sense has three dimensions: alignment with the teacher's professional development goals, alignment with state/district standards, curriculum frameworks and state/district assessments, and alignment with ongoing professional communication with other teachers who are similarly attuned (Desimone et al., 2002; Garet et al., 2001). Teacher professional development should provide opportunities for teachers to not only

enhance their own knowledge but also to guide their own learning. This is attainable if the professional development is firmly tied to teachers' personal goals, state and district regulations, and allows for continual contact with colleagues during the process (Kwakman, 2003).

Despite, the aforementioned characteristics of effective professional development, Wayne et. al (2008) contend that these features lack adequate specificity to guide practice. They raise a number of issues about the viability of such features as part of teacher professional development. They indicate that when compared to a 'one-time' session, they increase the cost of providing additional professional development to teachers. Again, they argue that, personalized professional development for teachers is more expensive and extending teachers' professional development for a longer period of time is likely to cause teachers to leave their classrooms more frequently, which disrupts students' learning (Wayne et al., 2008).

**Changing phase of professional development**

Teachers' professional development has traditionally been divided into two categories: traditional and non-traditional or reform-oriented (Birman, et al., 2000). Traditional professional development approaches teacher learning on the assumption that there is a knowledge and skill gap that can be filled with "one-time" events or activities such as seminars (Clarke & Hollingsworth, 2002). Traditional modes of professional development for teachers include in-district workshops or training, out-of-district workshops or training, and formal postgraduate study etc. (Desimone et al., 2002). While this technique helps teachers become more aware of their surroundings and build their skills, it has been criticized for being insufficient in stimulating learning, which might

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radically change teaching as a profession, and for being shallow and fragmented as a learning model (Boyle, et al, 2004). This is reiterated by Ball and Cohen (1999) who describe in-service workshops as "intellectually superficial, disconnected from deep issues of curriculum and learning, fragmented, and noncumulative in nature. These authors indicate that in most cases teacher learning is shallow and fragmented because there is a general perception that teaching in itself is mere commonsensical with little need for further learning. In addition, it is perceived that teachers do not require sustained learning in their professional practise (Ball & Cohen, 1999).

The reform-type emerged out of such censure as an alternative to the traditional model of teachers' professional development and is often known as the 'growth' model of professional development (Huberman & Guskey, 1995). This model is thought of as a variety of professional development activities that accompany continuous inquiry into a teacher's instructional practice. This paradigm shift from the traditional model to reform-type depicts professional development for teachers as one that has changed from replication to reflection, from learning separately to learning together, and from centralisation to decentralisation" (Hawley & Valli, 1999).

This model is recognized to work best when applied within the working context for teachers. In line with this model TPD must be regarded as a variety of some sorts of job-embedded learning in order for substantial advancements in teaching practise to occur (Sparks & Hirsh, 2000). Some type of learning is possible and will occur in the everyday intricacies of teaching, such as chats with colleagues, views inside another teacher's classroom, recommendations given during coffee breaks, and daily experiences in the classroom (Wilson &

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Berne, 1999). The school setting is regarded as one of the best venues for teachers to improve professionally because new teaching abilities can only be gained via practise (Kwakman, 2003). Depending on the philosophy behind the need for professional development, TPD activities can take a variety of forms. This study as a result, seeks to explore the different types of professional development activities looking at its impact on teacher professional practise for senior high school teachers in Ghana.

**Teacher Professional Development in Ghana**

The 2007 Educational Reform in Ghana sought to advance some skills and competencies for teachers through effective Human Resource Management and Professional Development. The World Bank (2005) reiterated the need for improvement in competencies and skills of teachers by heavily emphasizing the importance of preliminary training, induction, providing support and Continuous Professional Development for Ghanaian teachers. To successfully implement Ghana's 2007 Educational Reform and ensuring high-quality teacher education, the Ghana Education Service (GES) adopted the In-Service Training (District-type INSET, Cluster-type INSET and School-type INSET). Partnering with the Japan International Cooperation Agency (JICA), a nationwide INSET Resource book which outlines the general procedures followed in successful implementation of INSET programmes was launched in 2009. GES considered a "bottom- up," or "bottom-across INSET" approach to enhance teacher performance because it was recognized by The Educational Research and Innovation (1998) in USA as an approach which was most effective in addressing teachers' professional needs.

The bottom-up model commences with the identification of teacher and school needs and the development of customised educational courses and TPD activities that suits the specific needs identified. The bottom-across model on the other hand relied on formal activities considered as cost effective and appealing to both teachers and schools. In addition to this the INSET was expected to promote peer-learning through appraisal of similar experiences and deep reflection which emerged as from established communities of practise (membership group dedicated to the resolving some common educational problems). Akyeampong, Pryor, Lussier, and Westbrook (2013), reiterate that, just like any group of professionals there is the need for teachers to acquire a certain level of personal and professional knowledge required to enable them function as it should in their teaching career.

Also, to promote effective professional development of teachers, the Government White Paper on 2007 Education Reform outlined advancing some skills and competencies for teachers through effective Human Resource Management and Professional Development as a strategy to give new identity to teacher education in Ghana. Considering this, teacher training Universities introduced distance education and sandwich programmes as a means of upgrading and updating the competencies and skills of serving teachers to enhance teaching and learning.

Presently, teacher professional development in Ghana takes various forms: ranging from, in-service training in school, district, regional and national training, distance and on-site sandwich educational programmes in teacher training universities and discourse in communities of practice. Other

programmes such as seminars, mentoring and workshops, also exist but are often school based and initiated by school heads and departmental heads.

**Impact of Continuous Professional Development**

The word "impact" may be thought of as any changes in professional knowledge, practices, and affective responses as experienced by a single practitioner (Powell, Terrell, Furey, & Scott-Evans, 2003). The determining effect of CPD may not necessarily be limited to merely quantifiable facts. Instead, Powell et. al (2003) suggest that teacher awareness and reflection on what constitutes relevance and worth in relation to their own personal, intellectual, and professional needs and growth can be used to assess the impact of professional development on teaching practice. Teachers in general believe that professional development programmes they have attended have had a significant impact on their professional progress as teachers (Gabriel, Day & Allington, 2011).
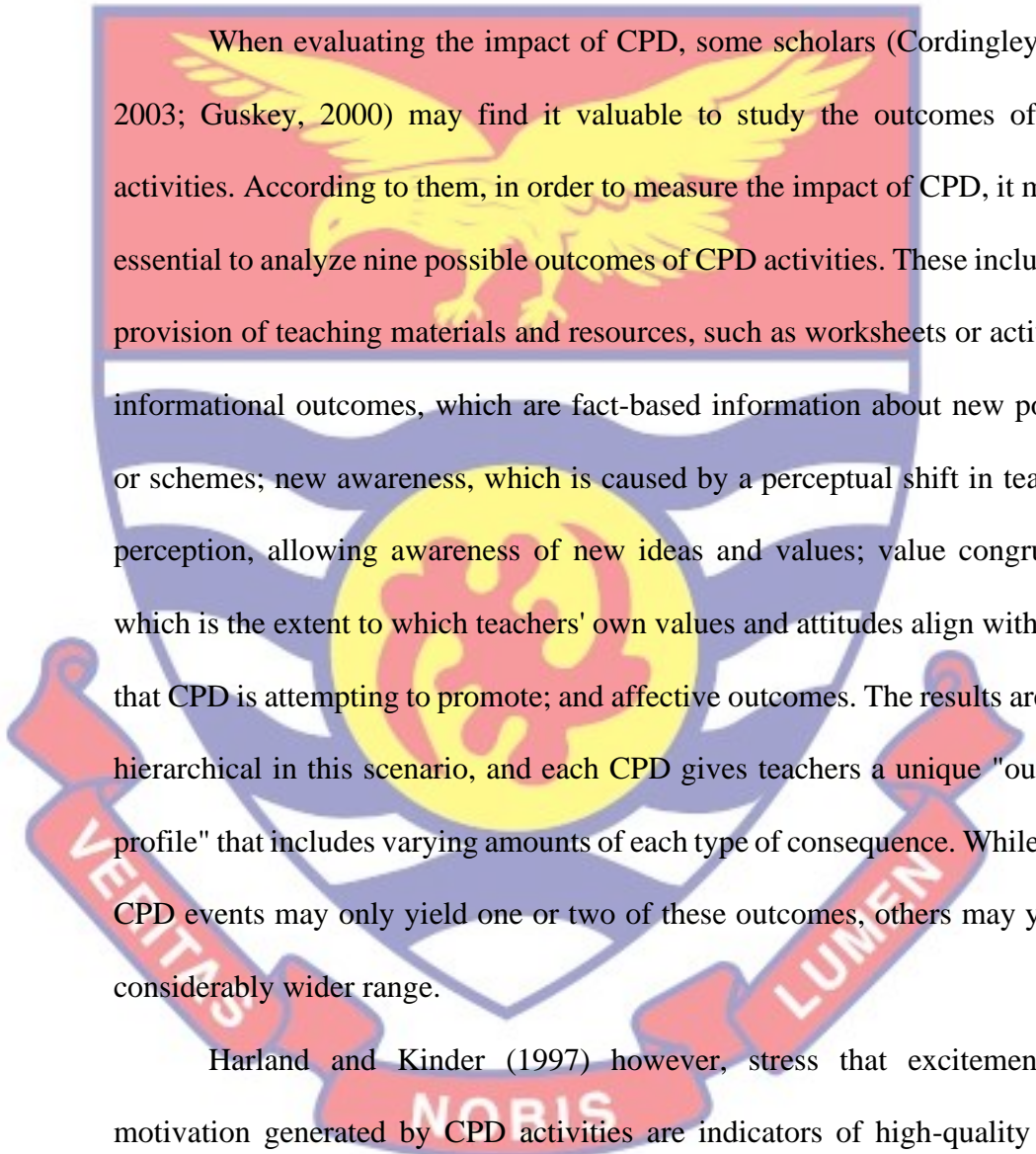
A teacher's ability to acquire and critically develop the knowledge, skills, and emotional intelligence required for good professional thinking, planning, and practise with their students and colleagues is thought to be influenced by their participation in professional development (Gabriel, et al, 2011; Buczynski & Hansen, 2010; Poskitt, 2005; Borko, 2004). Furthermore, Desimone (2009) claims that professional development affects the ability of teachers as participants to deliberate on and implement desired changes in teaching and leadership behavior in order to better educate their pupils, attaining a mutually agreed-upon balance of individual, school, and national demands.

Powell et. al (2003), again suggest that TPD has both immediate and long-term consequences on teachers. In research conducted by the latter on

teachers' perceptions of the impact of continuous professional development revealed that teachers regarded the immediate impact of professional development as having the opportunity to think more deeply about their practice. The teachers ' ability to reflect, it is claimed, has enabled them to better judge the success of their own work. In the long run, teachers believe that their professional development experiences have helped them gain more confidence in their practise (Buczynski & Hansen, 2010; Powell et al., 2003).

Most teachers, regard their professional development experience as having a positive impact on their confidence in teaching (Harris, et al, 2010). The increasing confidence of teachers is mirrored in their ability to effectively communicate their personal ideas on educational topics (Powell et al., 2003). Teachers gain a greater grasp of the subject matter they teach, and they are better equipped to create lesson structures that meet the needs of their students through reflective practise and continual evaluation of their teaching practise (Harris et al., 2011; Powell et al., 2003). Having a better understanding of the benefits of CPD can increase teachers' enthusiasm for participating in the process more (Cordingley, Bell, Evans, & Firth, 2005). This creates a link between communicating the value of CPD and participating in CPD opportunities. The development of reflective and critical practice, an inquiry-based approach to pedagogy; the development of practitioner dialogue; the development of problem-solving skills with regard to teaching practice; increased links, collaboration, and cooperation with other teachers, with modeling and sharing of best practice; opportunities for promotion; and personal satisfaction are some of the reported benefits of CPD. Teachers appreciate the opportunity to continue their education and rekindle their enthusiasm for their work and for education

in general. Teachers welcome the opportunity to learn new ways of thinking, and postgraduate courses, in particular, have been identified as fostering intellectual boundary-pushing and a more critical and introspective approach to practise (McAteer, et al., 2005; Lyle, 2003; Burchell, Dyson & Rees, 2002; Davies & Preston, 2002).

When evaluating the impact of CPD, some scholars (Cordingley et al, 2003; Guskey, 2000) may find it valuable to study the outcomes of CPD activities. According to them, in order to measure the impact of CPD, it may be essential to analyze nine possible outcomes of CPD activities. These include the provision of teaching materials and resources, such as worksheets or activities; informational outcomes, which are fact-based information about new policies or schemes; new awareness, which is caused by a perceptual shift in teachers' perception, allowing awareness of new ideas and values; value congruence, which is the extent to which teachers' own values and attitudes align with those that CPD is attempting to promote; and affective outcomes. The results are non-hierarchical in this scenario, and each CPD gives teachers a unique "outcome profile" that includes varying amounts of each type of consequence. While some CPD events may only yield one or two of these outcomes, others may yield a considerably wider range.

Harland and Kinder (1997) however, stress that excitement and motivation generated by CPD activities are indicators of high-quality CPD, which was echoed by Edmonds and Lee's (2002) conclusion that the most successful CPD resulted in higher confidence and enthusiasm. Similarly, Cordingley et al. (2003, 2005b) identified increased teacher confidence and motivation, improved self-efficacy, openness to new ideas and changing

practice, and increased enthusiasm for collaborative work with a greater willingness to be observed as key teacher-reported outcomes from collaborative CPD.

Joyce and Showers (1996), on the other hand, disagree with Harland and Kinder's (1997) findings of non-hierarchical CPD outcomes. They prefer a model of CPD results that is more linear. They identify awareness (or acknowledgment of the value of the chosen subject of CPD), concepts and organized knowledge (awareness of knowledge acquisition processes), principles and skills (acquiring the instruments needed for teaching), and application and problem solving (transferring the skills to the classroom) as the outcomes for professional development. They say that these outcomes follow a predictable path, with the completion of one requiring the completion of the next.

Guskey (2000) has also identified five levels of outcomes or impact, as well as strategies for evaluation of outcomes. The first level deals with the reactions of the participants, which he says are best studied in focus groups or interviews since they allow for more detailed explanations of outcomes, cause and effect, and other things that would be impossible to measure via a questionnaire. He characterized the second goal as participant learning, which he regarded as more difficult to quantify but that could be monitored by pre- and post-intervention surveys. In-depth case studies might be used to analyze the third outcome he suggested, organizational support and transformation. According to him, schools that are typically receptive to CPD are more likely to change. The fourth goal, which he labeled "participants' application of new knowledge and skills," can be tracked over time using scheduled classroom

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observations. He points to the cost of training observers and the requirement for multiple observations to ensure a balanced profile of behaviors as some challenges to utilizing observations. He also anticipates teacher aversion to being observed as a disadvantage. Finally, despite the difficulties of quantifying them, Guskey believes that student learning outcomes must be addressed.

Teachers tend to be keener to discuss the perceived immediate emotional and attitudinal benefits of CPD than the impact of CPD on student outcomes. Few studies on student outcomes have been conducted, with the majority of them focusing on affective and behavioral outcomes rather than academic performance or success. It is more difficult to evaluate CPD in terms of pupil outcomes often due to the fact that while focusing on student outcomes when developing a CPD programme is likely lead to significant changes in teachers' practice, utilizing test scores to measure student outcomes is problematic because a number factors affect student test scores and ultimately their performance. Beyond that, teachers do not only need to participate in CPD activities, but they also need time to integrate any changes into their practice, and the changes in practise need time to have a significant impact on student achievement. In attempting to assess the impact of CPD, the earlier discussed outcomes present the least amount of difficulties compared with student outcomes.

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**Conceptual Framework**

**Continuous Professional Development**
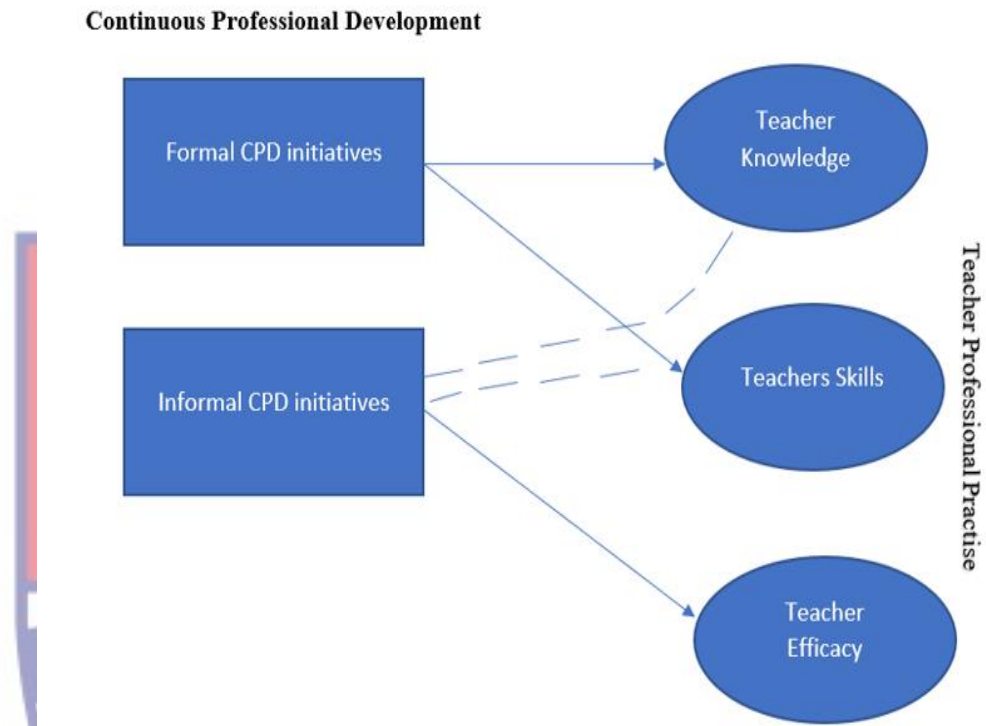


*Figure 3:* Framework for CPD and its implication for teacher professional practise

Source: Author's construct (2020)

As evidenced from literature, TPD remains an integral component of career-long learning for every teacher. To become a professional teacher therefore requires both early and continuing training (Schön, 1983). It can undoubtedly be argued that early teacher training by itself may be inadequate in providing teachers with all the necessary capabilities, skills and knowledge essential for the 21st century and throughout their careers. The above framework proposes that while continuous TPD is likely to impact teacher professional practice, different types of CPD initiatives are likely to impact diverse aspects of teachers' professional practice. It is established in literature that Continuous Professional Development has a substantial effect on the teachers' professional

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practise (Borko, 2004; Poskitt, 2005; Powell et al., 2003; Buczynski & Hansen, 2010; Gabriel et al., 2011;).

This framework extends that same analogy by proposing that CPD impacts teacher professional practice. The framework suggests that for CPD to impact teachers' professional practice, CPD must be viewed not as a single shot event, but a life-long learning made up of both formal and informal learning activities that span over a number of years in a teacher's professional life. Indeed, Ericsson et al (1993) suggest to become an expert requires ten years of 'repeated practice'. This implies that professional learning happens over an extended period to enable a degree of professionalism. In this same sense, CPD cannot be viewed as a single shot event evaluated at the end of CPD programmes but a culmination of both formal and informal activities and experiences over a period of time to significantly influence what teachers do and to change behaviour

The framework further proposes that different types of CPD are likely to impacts different domains of teachers' professional practice. From literature, professional development activities are often grouped into traditional and non-traditional activities or formal and informal activities (Maciejowska, et al., 2015; Bayar, 2014; Ozer. 2018; Birmal et. al 2000). Traditional professional development activities have been identified to focus on reskilling and retooling teachers and are often short in duration. They are also recognized to be passive forms of teacher engagement which fail to provide opportunities for teacher reflection. Similarly, formal professional development activities are those that deal with subject matter, pedagogy, pedagogical content knowledge, and allow teachers to discuss topical educational problems which contribute to a formally

structured kind of learning which may often be planned and delivered by components of an educational system. Non-traditional professional activities on the other hand are recognized for greater utilization of task time and ones that focus on collegial and collaborative work teams which provide avenues for reflection. Much in the same way, informal professional development activities which include informal discourse with peers on ways to enhance their teaching and reading professional literature are considered more active forms of CPD which allow teacher reflection.

A critical examination of these types of CPD activities suggests that they may target specific aspects of teachers' professional practice. Some researchers have criticized traditional or formal CPD activities for isolating teachers from each other, failing to emphasize deeper understanding of subject knowledge and less likely to lead to any meaningful teacher change (Fullan & Hargreaves, 2016; Darling-Hammond, 2005). The very nature of these activities suggest that they are designed to reskill and retool teachers which would imply that a reliance on such activities may be directed at improving teacher skills and knowledge as aspects of their professional practice.

Non- traditional or informal CPD activities on the other hand been identified as useful elements of teachers' professional development because teachers can learn from their interactions with other teachers (Feiman-Nemser, 2001; Garet, Porter, Andrew, & Desimone, 2001). This suggests that teacher learning may be more effective when activities require them to engage with others and integrated into their everyday work as teachers and when professional learning is active and reflective in many ways (Cochran-Smith & Lytle, 2009). By the nature of such CPD activities, it most likely will address

the relational domain of teachers' professional practise such as communicating with colleagues, teacher's professionalism and general attitude towards the profession. The framework therefore proposes that CPD activities may impact different domains of teacher professional practice. To ensure the continuous professional development of teachers would therefore require a balanced mix of traditional and non-traditional CPD activities to ensure improved outcomes in terms of teachers' professional practice. Relying on one set of CPD activities will most likely improve some aspects of teacher professional practise at the expense of others. For the purposes of this study, CPD activities were grouped into formal (traditional, passive forms) and informal activities (non-traditional, active forms). Some aspects of Danielson's framework were adapted to categorize teachers' professional practise into three domains: teacher knowledge, teacher skills and teacher efficacy.

Teacher knowledge represent familiarity with subject matter, pedagogy, pedagogical content knowledge, knowing students, awareness of available resources, knowledge of instructional outcomes, design of coherent instruction and knowledge of topical educational issues which contribute to a more formal nature for lifelong professional learning (planning and preparation). Teacher skills (classroom procedures and instruction) represent the skills that teachers are required to display within their classroom to promote teaching and learning. It involves creating a positive classroom climate, establishing a learning culture, controlling classroom procedures, regulating student behaviour, student engagement strategies, using appropriate questioning and discussion techniques, using assessment, preparing lesson plans. The last component of teacher professional practise is teacher efficacy (professional responsibilities)

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which represent teacher's general disposition towards the profession. It involves teachers' values, attitudes and show of professionalism. This framework consequently seeks to evaluate CPD as a life-long professional learning and assess its perceived impact on pre-tertiary teacher professional practice. To explore CPD for pre- teachers within this framework, the study examines pre-tertiary teachers' conceptualization of their CPD, existing structures for CPD, how well CPD needs of teachers are being met and challenges associated with pre-tertiary teachers' CPD. It goes on to examine the differences in CPD activities based on school categorization and teaching experience.  The study then assesses the perceived impact of CPD on teachers' professional practice.

**Empirical Review**

The empirical review examines literature by academics and researchers on key themes of the study. Specifically, it focuses on related literature around the following themes; teacher perceptions of professional development activities, teachers' professional development experiences, structural features of CPD for teachers, professional development needs and of teachers, participation of teachers in CPD, barriers to CPD for teachers, perceived impact of CPD on teacher professional practice, differences in CPD based on School category

**Teacher perceptions of professional development activities**

A survey by TALIS (2013) on professional development for teachers identified nine different types of professional development activities: courses/workshops, educational conferences or seminars, qualification programmes, observation visits to other schools, participation in a teacher network, individual or collaborative research on a topic, mentoring, peer observation, and coaching. These professional development activities among

other have been investigated by researchers in identifying what teachers conceptualize as CPD. A few of such studies are discussed in greater detail:

Yates (2007) sought to assess teachers' perception of their professional learning. Using a survey, 395 high school teachers were engaged and administered a questionnaire on the principles of effective PD for teachers, as identified by the Centre for Educational Research and Innovation (CERI, 1998) at the end of professional learning activities on a variety of curriculum issues and ICT in schools. These activities ranged from workshops to seminars to extended courses. The study revealed that gender, school and age of the teacher were not statistically significant in determining professional learning. The ratings however revealed that extended courses and ICT activities were significant in enhancing professional learning. Again, extended courses were revealed to be more job embedded and the need for such activities but with specific focus was emphasized.

Similarly, Ngala and Ordebero (2009) surveyed 100 teachers in remote primary schools in Kenya's Rift Valley Province to see how they felt about their professional development programmes. A questionnaire and interviews were used to collect data for the study. According to the findings of this study. The most popular professional development activities, according to the statistics, were higher education institutions, in-service courses, workshops, seminars, and conferences. Teachers in high-performing schools were also more interested in professional development activities than their counterparts in low-performing schools, according to the survey.

Kohl-Blackmon (2013) conducted a quantitative study to determine teachers' perceptions of professional development activities that lead to successful classroom integration of instructional technology. 230 teachers from two Georgia school districts were polled using a non-experimental design. Using Griffin's (2003) modified questionnaire, data was collected and analysed using descriptive statistics and standard multiple regression. It was found that, the two most effective forms of professional development activities perceived by teachers for successful classroom integration of instructional technologies were peer support or mentoring and technology personnel support or modelling. Non-credit workshops provided by consultants and schools were however rated by teachers as the least effective method of professional development for integrating instructional technology into the classroom.

Desta, Chalchisa, and Lemma (2013) used a likert-type self-report questionnaire to investigate the opportunities and obstacles of implementing Continuous Professional Development (CPD) programmes among 300 randomly selected primary school teachers from the Addis Ababa City Administration. From this study, male teachers were identified as more likely than female teachers to use self-reflection tactics to advance their careers. Peer discussions, self-assessment of one's own daily routines, and portfolio use were found to be used more frequently by teachers in the second cycle of primary education than by teachers in the first cycle. Mentoring was regarded as the most important part of teacher development. Action research and school-based workshops were also emphasised as part of teachers' professional development. Among the major problems identified from the study were a lack of knowledge and experience on theoretical underpinnings, inconsistencies in

implementation, a lack of budget to run the programme at the school level, and a lack of incentive to recognize teachers who go above and beyond to change themselves and their colleagues.

In the Sekyere East area of Ghana, Ashanti region, Atta and Mensah (2015) conducted a qualitative study to explore the perspectives of Senior High School teachers on the availability of Continuing Professional Development programmes. Open-ended questionnaires were employed in a survey to elicit responses from respondents. A total of 32 teachers from the five SHS's in the district were engaged for the study. Themes that emerged from the study revealed that teachers in the district had access to remote learning facilities and graduate courses from institutes of higher learning. In addition, Professional learning programmes for teachers include workshops, in-service training, conferences, and seminars. However, the study found that these models were basically traditional, rarely structured, and limited to a small number of teachers in the district, making them less effective in improving the quality of instructional practices and student learning outcomes.

Amoako-Gyimah (2015) investigated teachers' perceptions on professional development activities in Ghanaian primary schools for deaf children. The study used a convergent parallel mixed methods design with a survey and case studies to guide the two aspects of the parallel convergent design. The quantitative and qualitative components of the study used questionnaires and focus group discussions to collect data from a sample of 144 teachers and 30 teachers, respectively. Workshops and mentorship were found to be accessible professional development activities for teachers in schools, even if they were done on a casual basis. Collegial development in schools was

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also centred on increasing teachers' sign language skills. Teachers' professional development needs were also linked to teaching methods, skills, subject matter knowledge, sign language proficiency, and proficient use of multimedia technology. Again, the study revealed that teachers are more inclined to attend professional development activities if the topics are interesting and beneficial to the practice. Workshops and collegial growth were also recommended by the majority of teachers as preferred professional development activities. The results further revealed that teachers in schools for deaf students in Ghana's northern zone had identical professional development requirements as teachers in schools for deaf students in Ghana's southern zone, and new and old teachers' viewpoints on professional development activities were equivalent.

Mahmoudi and Ozkan (2015) conducted research into the perspectives of experienced and novice teachers on professional development activities. Utilizing a mixed methods approach English teachers administered with a questionnaire adapted from the TALIS Survey (OECD, 2010) and engaged in a focused group discussion to collect data. Data from the quantitative method was analysed using SPSS. Mean scores and frequencies were used to analyse all the quantitative responses. The qualitative data from the focus group was analysed using content analysis. It was found that, Mentoring, peer observation and coaching; reading professional literature, education conferences or seminars, and observation visits to other schools/institutions were among the activities that most teachers engage in as part of their professional development which they indicated to be beneficial in improving their teaching. The survey also found that novice teachers predominantly attended courses/workshops, participated in networking activities, read professional literature, and engaged

in informal discussions with peers on how to enhance their instructional outcomes.

Şener and Çokçalışkan (2017) sought to explore the perceptions of English language teachers' professional growth and techniques employed for becoming more professional in Muğla. In the spring semester of 2016-2017, 9 non-native English in-service teachers from diverse state schools in Western Turkey were purposefully sampled for the study using the explorative case study design. To collect data, semi-structured interviews were employed. The findings of the study indicated that, the majority of teachers were convinced of the importance of professional development and saw it as a process to become more knowledgeable and experienced. Participation in workshops, seminars, courses and webinars were the most popular activities among teachers. Almost half of the participants also expressed that reading books and magazines could contribute to their professional development. The study also revealed that self-evaluation, self-reflection, collaboration and cooperation with colleagues and action research were not perceived as professional development activities.

Kennedy (2017) performed qualitative research to examine how K-12 teachers of large suburban school systems in the United States perceived school-based and district professional development. The study purposefully selected four English teachers as participants, one elementary school teacher, two middle school teachers, and one high school teacher, using the case study design. Data gathered through one-on-one interviews and focus group interviews revealed that school-based professional development tends to contain routine, sit and get experiences that do not enable teachers to apply and create new knowledge. It was also discovered that school-based professional development lacks

differentiation, does not take into account the requirements of beginner vs senior teachers, and frequently utilizes a top-down approach in which themes and material are decided by school administrators rather than teachers. Professional development in the district was thought to be given after school and so was not job-embedded. The study found that teachers thought professional development was effective when it was not a top-down approach; they had the opportunity to choose what they learnt about; it inspired them; it was specific to the needs of their professional learning community; and it was applicable to their current practice.

The studies identified above offers a reasonable account on teachers' perception of professional development activities. However, a critical examination of these studies will reveal that the studies conducted either adopted the qualitative paradigm (Şener & Çokçalışkan, 2017; Kennedy, 2017; Atta & Mensah, 2015;) or the quantitative paradigm (Kohl Blackmon, 2013; Ngala & Odebero, 2009; Yates, 2007). Although a few studies (Mahmoudi & Ozkan 2015; Amoako-Gyimah, 2015; Desta, et al.  2013) adopted the mixed methods, there appears to be few studies in Ghana that have adopted the mixed methods approach to understanding issues related to how teachers perceive their professional learning activities. A study such as Amoako-Gyimah (2015) which adopted the mixed approach in Ghana focused on basic schools for the deaf, a similar trend for other studies outside Ghana which also focused on primary schools (Kennedy, 2017; Ngala & Ordeboro 2009; Yates, 2007) Atta and Mensah (2015) focused on the SHS level but the nature of the study makes generalization nearly impossible. This study therefore adopts the mixed

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methods to assess teachers' perceptions of professional learning activities at the pre-tertiary level; particularly the SHS level.

**Teachers' Professional Development experiences**

Professional development opportunities for teachers vary. Based on their backgrounds, teacher professional development experiences may generally be divided into three categories: experiences from courses organized by the Ministry of National Education, experiences from courses offered by the school, and experiences from individual efforts (Baran & Cagiltay, 2006). Among the plethora of studies that highlight such experiences include:

A study conducted by Yip (1998) which discovered that, in general, Singaporean teachers considered professional development to be relevant and individual professional development processes were owned by teachers. Teachers who had served longer reported stronger relevance for professional development activities and most of the teachers were convinced that there was no systematic needs assessment for them. Their personal needs were also not considered and very little direction for teacher self-assessment was provided. Furthermore, most teachers claimed that teacher participation in planning teacher learning activities was inadequate and the importance of such learning activities were not clearly articulated. Teachers also reported that resources such as time, relief manpower, and money were insufficient to support professional development. Professional development programmes were also fraught by time constraints, inappropriate schedules for professional development programmes, and a lack of appropriate programmes.

Hustler, McNamara, Jarvis, Londra, and Campbell (2003) also investigated into teachers' perceptions of their professional development programmes. Using both quantitative and qualitative methods, data was collected via a baseline questionnaire survey and in-depth interviews of employees. For the quantitative data was collected from all employees (sample size of 2500) in 250 primary, 100 secondary, and 50 special schools across England. To collect qualitative data, in-depth case studies were conducted in 22 schools (12 primary, 7 secondary, and 3 special schools). The study revealed that effective professional development, were one that were considered relevant and applicable in the classroom.  Participants were apathetic to 'one size fits all' professional development that failed to take into consideration teachers ' prior knowledge, experience, and requirements. Most teachers also relied on traditional professional development models such as conferences, courses, and in-service days but had varied views about their perceptions of professional development depending on the school setting. Financial (perceived or actual) costs, distance from training centres, and workload, particularly for senior teachers, were all identified challenges to professional advancement. According to the study, professional development opportunities, prioritized school development and national standards over individual needs. Participants believed that a balance between school/national requirements and individual needs may be required.

Barnard (2004) also conducted research in three primary schools in north-eastern Tennessee, USA, to evaluate teachers' views of professional development programmes. Data was collected through interviews with a sample of 25 teachers. The research found that teachers were satisfied with the available

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professional development and indicated that they perceived a link between their students' academic performance and available professional development.

Similarly, Komba and Nkumbi (2008) investigated perspectives of teachers on Professional Development programmes in six districts of Tanzania. A total of 186 people were sampled, and data was collected using a questionnaire, interviews, and an observation checklist. From the study, the majority of respondents indicated that teacher professional development was essential for improving their teaching in a professional, intellectual, and technical manner. On the other hand, majority of respondents were convinced that professional development activities were underfunded and failed to sufficiently motivate teachers to participate in such professional development activities. Again, the study found that teacher professional development was poorly managed and underfunded at all levels; national, regional, and district.

Another study by Saah (2009) to explore teachers' views of Professional Development activities in the Ahafo Ano North District of the Ashanti Region of Ghana adopted a survey research design and sampled 200 teachers comprising 100 males and 100 females. Questionnaire and informal interviews were utilized for data collection. The questionnaire was designed on a five-point Likert Scale for respondents to indicate their preference. The study revealed that most teachers (more than 70%) were convinced that professional development is beneficial, interesting and contributed to making them effective teachers. Again, a majority (64%) of these teachers indicated that they were in favour of getting involved in professional development activities until they retire.

Mubiana (2011) also investigated the quality of education in Zambia based on the effects of CPD on rural primary school teachers. The study used a post-test only survey design which combined qualitative and quantitative methodologies to obtain data from some of selected basic schools in the Mongu District. Using cluster sampling, data was gathered through questionnaires and interviews at ten rural elementary schools where teachers and principals were purposefully recruited. A Standards Officer, the District Resource Coordinator, and a union representative also provided relevant information pertaining to the study. The study found that teachers were heavily reliant on group meetings which were mostly ineffective and were not paying attention to upgrading themselves. The quality of education was found to be compromised, since the performance of pupils was not improving but remained stagnant.

Bangani (2012) also examined 200 teachers in South Africa's Eastern Cape Province about their views on Professional Development programmes. The study, which included questionnaires and interviews to collect data, revealed that teachers had negative perceptions that led to the belief that they were not receiving appropriate professional development. The teachers complained that professional development activities were poorly organised and poorly coordinated.

Heba, Mansour, Aldahmash, and Alshamrani, (2015) again investigated Science teachers' experiences, preferences and perspectives of successful teacher Professional Development. In the study, both quantitative and qualitative analyses were used. The former was used to examine responses to closed-ended questions, while the latter was used to assess responses to open-ended questions qualitatively. The survey was administered to male and female

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teachers in Saudi Arabia at the elementary, middle, and secondary school levels with varied teaching experiences and science specializations. From the study it was found that teachers have concerns about available CPD programmes. The narration of teachers suggested that for available CPD, they were merely passive beneficiaries of a pre-packaged curriculum that paved the way for their professional identities to emerge.

Phasha, Bipath, and Beckmann (2016) evaluated teachers' experiences with Continuous Professional Development for a Curriculum Assessment Policy Statement (CAPS). The study explored teachers' experiences of professional development in the rural areas of Limpopo, South Africa, using a qualitative research approach. The study concluded that proper planning, preparation, execution, and support for CPD are essential when a new curriculum is adopted. The respondents indicated that the time allocated for CAPS training was insufficient, the trainers were inexperienced, and teachers received little or no follow-up assistance after training. This study demonstrated a lack of support for teachers' CPD in relation to CAPS.

Garrett (2017) also investigated perspectives of teachers on the merits of professional development for teaching in inclusive classrooms. To collect qualitative data, 5 teachers (general and special education) each who taught in inclusion classes were purposively selected. Individual interviews were used to gather data for the study, which was then recorded and transcribed before being analysed and grouped into themes. The study highlighted lack of training for new teachers, a need for more planning time in their professional development schedules, and a desire to adopt co-teaching approaches.

A critical examination of these studies reveals that the research approach adopted for such studies were mainly the mixed methods (Bangani, 2012; Mubiana, 2011; Saah, 2009; Komba & Nkumbi, 2008; MCnamara, Jarvis, Londra & Campbell, 2003; Yip, 1998), however, there is little evidence of such literature in Ghana. This study explores these issues within the Ghanaian context for a better understanding of teachers' perception of CPD for a broader understanding of what constitutes CPD.

**Structural features of CPD for teachers**

Structural features of teacher learning often includes the nature of PD activity, collective participation and the duration of the PD activity (Haslam & Seremet, 2001). In many instances, teachers have recognised professional development as generally one that involves an in-service training or workshop that lasts for at least a day with little or no expectation of how teachers should apply the new knowledge or skill or how information received should be shared with their colleagues (Guskey & Yoon, 2009; Garet et al., 2001). A few of such studies that have been carried out on the structural arrangements of CPD for teachers include;

Mtetwa, Chabongora, Ndemo, and Maturure (2015) conducted a study to explain specific characteristics of mathematics teachers in ongoing CPD in Zimbabwe. These characteristics were identified during the pilot phase of a study conducted in 11 different countries to better understand the nature of mathematics teacher CPD programmes. Data was collected purposively from government officials, CPD providers, and teachers via interviews and surveys. The study found that government collaborates with other stakeholders, including non-governmental groups, to provide CPD for teachers. Again, the

study revealed that teachers pursue CPD activities on voluntary basis and outside of conventional university programme offerings, there were few provisions for mathematics teacher. The main observation of the study was that the style of CPD available to mathematics teachers in Zimbabwe is distinguished by reasonably robust institutional frameworks, however, accompanying resource and support mechanisms rendered operational features completely ineffective.

Alibakhshi and Dehvari (2015) also explored the views of Iranian English teachers on Continuing Professional Development and what their key professional development activities were. Using a phenomenological research approach, 20 English teachers were interviewed. The data was analysed using content analysis in accordance with the Randor model. The results revealed that participants considered CPD to comprise continuous learning, staying current, development of skills, learning for interest, and professional rejuvenation. Also, participants indicated that they advanced professionally through work, formal education, and participation in and presentation at continuing professional development programmes.

Ridley (2016) examined CPD for teachers in two rural basic school clusters in the north of England. A survey and a case study were employed to obtain quantitative and qualitative data. Semi-structured interviews were undertaken at two case study schools after the initial questionnaires were administered. The findings of the study revealed that teachers' CPD was predominantly driven by national government efforts in both clusters studied, and that where such activities became a national priority, there appeared to be limited opportunity for an individual or school-based approach to CPD.

Throughout the clusters, there was a clear and established link between the school development plan (SDP), performance management, and CPD. The duration of CPD cycle appeared to be defined by a one-year performance management cycle and five mandated training days, encouraging short-term courses while limiting opportunities for longer courses, such as advanced certificates and higher degrees.

Macheng (2016) investigated teacher professional development in Botswana's Junior Secondary Schools. In seven (7) randomly chosen Junior Secondary Schools in Botswana's Northern area, the study explored the existence of structures or programmes that encourage teachers' Continuing Professional Development, as well as the characteristics that impede teacher development. The study was both quantitative and qualitative. Data was gathered through survey questionnaires and interviews. Computer-assisted statistical analysis was used to analyse the quantitative data (SPSS version 20). The study employed both descriptive and inferential statistical approaches. The study revealed that in Junior Secondary Schools there was a lack of structure or initiatives to assist teacher growth and advancement.

In a similar study AL Balushi (2018) also investigated the experiences of Oman's in-service TESOL teachers regarding their CPD. Data was collected via questionnaires, training room observations, semi-structured and focus group interviews with TESOL teachers in Oman. A stratified sample of 379 participants were chosen using a mixed methods technique. Quantitative data was collected via an online questionnaire that was provided as a link to English teachers and Senior English teachers in schools around Oman. Three senior English teachers were interviewed using an interview guide and a focused group

discussion to gather data from a group of English teachers.  From the study, participants participated in a variety of CPD events (e.g., INSET courses), the majority of which were organized and provided by the Ministry of Education. These professional development activities included discussing lessons with supervisors/senior teachers mainly as part of the formal system. According to the respondents, these discussions were useful, particularly those with supervisors. Observing other teachers' lessons and taking part in workshops and seminars were also thought of to be beneficial as professional development activities. The study revealed that about two-thirds of the sample were satisfied with the professional development activities available in the schools, one third of the sample were satisfied but gave no reasons. The findings also revealed that participants had varying views on how well the various types of CPD activities/events provided to teachers meet their needs

A look at the above studies provides some insight into the structural arrangement of CPD for teachers. However, these studies were carried out in different contexts besides Ghana. Again AL Balushi (2018), Alibakhshi and Dehvari (2015) and Mtetwa, et al., (2015), for instance, focused on English and Mathematics teachers which is not representative of all teachers. This makes it nearly impossible to generalize the outcomes of their study to include all teachers. With extraordinarily little evidence on the status of CPD in Ghana, the current study examines similar issues addressed by extant literature but within the Ghanaian context and for all pre-tertiary teachers at the SHS level.

**Teachers' Professional Development needs and preferences**

Professional development that is tailored to meet the needs and requirements of teachers is considered the most effective approach for teacher

learning (Meissel, Parr & Timperley 2016). Professional development activities come in a variety of shapes and sizes. Some activities may be geared towards children with special needs or classroom management while others may focus on curriculum development and unit preparation (Garet et al., 2001; Pehmer, Groschner, & Seidel, 2015). Some literature on studies conducted on teacher professional development needs and preferences have been expanded below;

Webb (1993) investigated teacher perceptions of professional development techniques used to support the implementation of the K-6 Science and Technology Syllabus in a NSW Department of School Education area; Webb (1993) investigated teacher perceptions of professional development techniques used to support the implementation of the K-6 Science and Technology Syllabus in a NSW Department of School Education. The results of the study revealed that 97 teachers who were surveyed prefer the 'Traditional' model of in-service programmes which may not result in significant improvement in teaching outcomes. Extrinsic elements such as in-service and resources, which are not directly under the control of individual teachers, were what teachers believed to bring about significant change in teaching outcomes.

Essel, Badu, Owusu-Boateng, and Saah (2009) also investigated in-service training as a key component of teacher professional development. Questionnaires were distributed to 200 primary school teachers using the quantitative method. Data was gathered from teachers pursuing a Diploma programme spearheaded by the Ghana Teacher Education Division. From the study, more than 60% of teachers preferred receiving more training, gaining new attitudes and abilities to help them succeed in their teaching professions,

and sharing their newly acquired knowledge with their colleagues and students as part of the professional development.

Moore and Shaw (2000) also in a similar study conducted interviews with 45 ninth-grade teachers from four Ontario secondary schools about their professional development choices. According to the study, teachers valued professional development that was directly related to their work and preferred to seek out professionals outside of their workplace to meet their professional development goals, however, the study also found that they were always disappointed with the results. Teachers tended to believe in the professional development that relied on the transmission model. Teachers did not see themselves as experts, and they were hesitant to examine and enhance their practical knowledge in their schools and classrooms through action study or action research.

Nisbet (2004) also carried out a survey in Queensland, Australia, to examine the professional development needs and preferences of primary school teachers regarding the teaching and learning of mathematics. A questionnaire and an interview guide were used to collect data. The results of the study revealed that teachers were enthusiastic to participate in professional development and the preferred themes chosen for professional development (for example, using technology in Mathematics classroom) were largely consistent among teachers. Teachers also preferred classroom-based professional development and professional development that took place in their own schools. The majority of teachers also wanted professional development to take place during school hours.

The American Psychological Association (A.P.A.) (2006) also studied CPD needs of elementary school teachers throughout 49 states in the United States of America to pinpoint their needs across grade levels and years of teaching. Teachers were required to indicate by order of ranking their professional development needs in some predetermined PD areas; classroom management, instructional strategies, instructional skills, classroom diversity and communication with families and caregivers. 2,334 teachers were involved in the study. The results of the study indicated that, for all the grade levels, instructional skills were ranked the highest. For Pre-K-5 teachers, 29% of respondents indicated that professional development which focuses on classroom management was their top priority. Middle and high school teachers reported a fairer distribution in terms of their ranking for three professional development areas: classroom management, classroom diversity, and communication with families and caregiver. For middle school teachers, priority was given to areas ranging from classroom management and communication with families and caregivers to classroom diversity, which received 24% of the vote. For high school teachers, the initial rankings ranged from 21% for classroom management to 18% for communication with families and carers. 52 percent of first-year teachers identified classroom management as their preferred PD area based on the number of years they had taught. Furthermore, only a few first-year teachers prioritized classroom diversity and communication with families and caregivers. Teachers with two or more years of teaching experience ranked instructional skills highest. Classroom management was ranked highest by 28% of teachers with two to five years of experience. 26% of teachers with six to ten years of experience also ranked

classroom management highest. Classroom diversity was ranked highest by 24% of teachers with ten years or more of teaching experience. 22% of teachers also indicated communication with family and caregivers as their top priority PD area.

Seezink and Poell (2010) also investigated CPD for teachers in competency-based schools for vocational education. The study employed a case study in one vocational education school which involved 12 teachers who were purposively sampled to participate in an innovation project which sought to develop a new competence-based programme for pupils. Concept mapping, cued interviews (based on video recordings), semi-structured interviews, and a combined feedback session were used to collect data. In-depth content analysis revealed that at the individual teacher level, no distinct, crystallized action theories about competence-based vocational education emerged. The study also revealed that individual teachers struggle with aligning their daily teaching repertoire with new ideas about competence-based education.

Another study by Heba, Mansour, Aldahmash, and Alshamrani, (2015) also investigated the Professional Development requirements of practicing teachers in Saudi Arabia's primary, middle, and secondary schools. Gender, school location, and area of specialty were used to categorize science teachers. A questionnaire was the primary tool utilized. The instrument's validity and reliability were thoroughly validated using applicable test techniques. The results of the study revealed that science teachers need subject matter expertise, management and delivery of scientific education, integration of multi-media technologies, and informal science learning as part of their professional learning. It was also found that science teachers' opinions regarding their

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professional development requirements are still important for their professional growth.

Gül (2010) also investigated the professional development requirements of English language teachers at an Istanbul public institution. The population for the study comprised 92 teachers who taught preparatory classes. The survey found that participants had good attitudes about professional growth. The most common form of professional development activity was identified to be sharing experiences with co-workers. A major barrier hindering respondents from participating in professional development events was indicated to be "inconvenient date/time." It was also discovered that the PD area with the greatest demand was innovative ideas and techniques of teaching English language. Writing was identified to be the most difficult skill to teach and assess and most participants indicated that they preferred professional development events to be optional courses held at their own institutions. For the most preferred speaker type, respondents indicated the use of a trainer or expert from an outside institution. The study also revealed that teachers preferred courses lasting up to 60 minutes and held once a month on weekday mornings. The regression analysis revealed that only years of teaching experience was significant in predicting teachers ' professional development requirements. Years of teaching experience were inversely correlated with teacher needs, implying that as teachers gained experience, their desire for professional development declined.

Wan (2011) similarly explored perspectives of Hong Kong teachers on their CPD   focusing on CPD activities and teacher skills. The study was conducted at three Hong Kong elementary schools. This study used a mixed

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methods approach to obtain data from teachers via a self-developed survey questionnaire, focus groups and individual interviews with teachers. The results of the study indicated that teachers valued higher academic studies and only marginally preferred published output for their CPD. Higher academic studies and peer-to-peer observation were identified as the most effective CPD activities for teachers, whilst publishing was given very little recognition as a CPD activity. Using the Principal Component Analysis (PCA) four CPD areas were identified as teacher's perceived CPD needs: school development, teaching and learning, student development, and professional relationships and services. The study revealed that teachers had the greatest need for CPD in the field of 'student development.' Some facilitating variables under this domain were identified to be school factors, personal variables, financial issues, time, CPD provider, family, social factors, and governmental influences. Some inhibiting variables were identified to be time related issues, heavy work schedules, financial issues, CPD providers, school-related variables and personal factors. The school variables proved to have a significant impact on CPD. It was identified as the most relevant factor influencing teachers' preference, engagement, and perceptions of the efficacy of CPD programmes.

Nyarigoti (2013) also conducted a study to explore the perspectives of English teachers in Kenya about their CPD in terms of what they recognise as their CPD needs, barriers and proposals for improvement. The study took into account, the viewpoints of English teachers using a qualitative ethnographic case study method. Observation, focus groups, individual interviews, and document analysis were used to collect data. Data was collected from twelve English teachers, two head teachers, and five specialists who were involved in

the development and delivery of teacher CPD programmes. Documents such as meeting minutes, workshop reports, job descriptions, school annual reports, teaching materials, and a variety of other written items that confirmed relationships between education policies and teachers' practices were evaluated by comparing policies with practice. Despite legislation encouraging school-based models, the survey discovered that CPD remained traditional, consisting of one-time seminars and courses on pre-selected topics with little follow-up. Existing CPD programmes were mostly externally organized and focused on a single area of professional development, with other demands and interests being ignored. Inadequate school-level supervision hampered attempts to introduce or improve school-based CPD.

AL-Qahtani (2015) similarly investigated the views of English teachers regarding teacher professional development in another study. The descriptive survey approach was used in the study to analyze the demands of English teachers for their Professional Development. During the academic year 2014-2015, a sample of 40 EFL teachers were selected from both female and male English teachers working in AL-Quwayiyah, Saudi Arabia, using the Simple Random Sampling Technique. Two key data collection devices were employed to meet the study's objectives: a questionnaire and a semi-structured interview. The study found that TPD is both required and effective with the introduction of new English textbooks. TPD improves the learning, achievement, and quality of teaching which results in improved student achievement and performance. The study also revealed that teachers consider any professional development activity valuable provided that it is tailored to their needs and is available for an extended period of time. From the study, teachers' professional development is

intended to provide curricular advice, as well as instruction on classroom discipline and management. The study also found that English teachers required training in structuring exams and quizzes, and the use of technology in the classroom.

Kosgei (2015) also conducted similar research on staff development and training requirements for English teachers in Kericho County. The goal of the study was to determine the staff development and training programmes English teachers preferred to participate in. The study relied on the Needs Assessment Theory. A total of 25 schools, 50 English teachers, 25 department heads, and 25 head teachers participated in the study, which used both qualitative and quantitative research techniques. The study employed a survey research methodology, and 25 schools were selected using a Simple Random Sampling technique, with two English teachers from each participating school being selected at random. Data was collected from 50 English teachers using questionnaires. Descriptive statistics were used to analyse the data. The analysis discovered a gap between the training demands of English teachers and what was available through existing staff development and training programmes. The majority of the teachers fell short of the required skills under investigation, indicating a need for further in-service training. Before implementing any training programmes, the research suggests extensive needs assessment to clearly define training needs of teachers.

Yahya, Ismail, Salleh, and Abdullah (2015) in a study also sought to assess CPD for science teacher by examining the type of in-service training available and its execution. The study sought to examine the type of in-service training Malaysian science teachers receive. Data was gathered using interviews

and documentary analysis using a descriptive qualitative research approach. The objectives were to find out about the several types of in-service trainings offered, the impact of those trainings, and the actual professional development needs of science teachers. The study revealed that there is a disconnect between the completed in-service training courses and the actual demands of the teachers which results in a loss of time, money, and other resources, as well as a negative perception of school-based in-service training as irrelevant and of little value. The study however revealed that science teachers preferred certain courses that they believed had a positive impact on improving their pedagogical skills, ICT knowledge, and understanding of new guidelines. The study also found that to reach out to millennial students in a more innovative and appealing manner, there is the growing need for instructional courses to be ICT-based.

An examination of all the above studies provides an indication that CPD is often externally organized, leaves no room for meeting the needs of individual teachers, what is provided as training is often  disconnected from the actual needs of teachers  (Kosgei, 2015; Al-Qahtani, 2015; Nyarigoti, 2013; Seezink & Poell, 2010;Yahaya, et al., 2010) and teachers recognise professional development to be relevant where it relates directly to their practise (A.P.A, 2006; Nisbet,2004; Moore & Shaw, 2000). While such literature provides a great deal of information on the CPD needs of teachers, most of these studies appear to be more qualitatively inclined (Nyarigoti, 2013; Seezink & Poell, 2010; Yahaya, et al., 2010; Moore &Shaw, 2004).  Although some of the studies employed the mixed methods, these studies provide a limited view of what the needs of teachers are by focusing on specific areas of specialization, English and Science (Al-Qahtani, 2015; Kosgei, 2015; Nyarigoti, 2013; Gul, 2010;

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Heba, et al., 2015) and have mainly been carried out outside the Ghanaian context. A study conducted in Ghana (Essel, Badu, Owusu-Boateng & Saah, 2009) examined CPD for teachers in both primary and secondary schools but appeared to be silent on the study area. The study also indicated that teachers required more training to enhance their professionalism but failed to identify the specific areas of need. Most of these studies again appear to have focused more on primary schools (Al-Qahtani, 2015; Gul, 2010; Essel, Badu, Owusu-Boateng & Saah, 2009; APA, 2006; Nisbet, 2004) It is also evident that virtually all of these studies merely identified the needs and preferences of teachers without providing any substantiation for how these needs are being met. This research explores the extent to which pre-tertiary teachers' needs are being met and will identify if any, specific areas of CPD needs in secondary schools in Ghana.

**Teacher participation in CPD**

Professional development courses are pursued by teachers for a variety of reasons. Literature suggests that these include; development of teaching skills (Anderson, 2008), their 'will to learn' (Van Eekelen, Vermunt, & Boshuizen, 2006), and career-related goals (Ng, 2010). Some studies conducted on teacher participation in CPD include;

Kwakman (2003), who conducted an empirical study into the determinants of participation of teachers' professional development activities in Netherlands. Data was collected from 620 teachers in Amsterdam's inner-city schools using a survey research approach. In her study, three variables were used to investigate teacher participation in CPD activities; personal factors (i.e. professional attitudes, appraisal of feasibility, appraisal of meaningfulness, emotional exhaustion, loss of personal accomplishment), task factors (i.e. work

pressure, emotional demands, job variety, autonomy, participation), and work environment factors (i.e. management support, collegial support, intentional learning support). Personal variables appeared to be more relevant than task and work environment factors in determining teachers' participation in professional development activities.

Caper, Jones, Meade, Parson, Van Dyke, and Xu (2010) also examined factors which influence teacher participation in professional development programmes in a suburban area in Toronto, Canada. A survey research design was adopted and a total of 845 teachers were sampled for the study. Findings from the study indicated that, a critical factor determining teacher participation in professional development activities is whether or not such activities are supported. It was found that teachers are more likely to participate in professional development activities that support their motivation and commit them to a learning process. The results also indicated that, teachers are also interested in job-related professional development activities, and consider professional development activities to be relevant when they directly address their specific needs and challenges, or when they find a link between that learning experience and their daily work. Teacher learning becomes tangible in these situations because it is effortlessly interwoven into each school day. Again, teachers are motivated to participate in professional development activities when there is an instructional focus that emphasizes subject area expertise and pedagogy as well as student learning goals. Finally, the study discovered that teachers are interested in collaborative professional development programmes that include activities such as problem solving, sharing and discussions, simultaneous role play, visual representations,

application, and reflection that engage them physically, cognitively, and emotionally.

Wan and Lam (2010) also conducted a small-scale case study in Hong Kong to investigate primary teachers' perceptions of the factors that influence their participation in CPD. A mixed methods approach was employed for this study. To collect data, a self-developed survey questionnaire based on the CPD framework provided by the Advisory Committee on Teacher Education and Qualifications (ACTEQ, 2003) and focus group interviews with two groups of teachers were employed. The study was conducted in two primary schools to find out what factors influence teachers' participation in ongoing professional development. The viewpoints of teachers regarding enabling and limiting factors affecting CPD were discussed. Among the enabling variables were the school factor, personal component, financial factor, time, CPD provider, family factor, interaction with others, and government factor. The constraints were indicated to be time, heavy workload, financial difficulty, CPD provider, school component, personal factors. By school A and school B, the overall response rate to the enabling variables was 44.9 percent, while the response rate to the obstructing factors was 50 percent. The similarity of response may be attributed to the presence of both enabling and constraining factors in both schools.

In the East Akim Municipality, Anhwere (2013) also explored factors that influence teacher motivation for CPD via distance education. The sample included 160 people, 77 men and 63 women, divided as follows: 120 from the University of Education, Winneba, with 70 men and 50 women, and 40 from the University of Cape Coast, with 27 men and 13 women. The sample was chosen using a stratified random sampling technique and a descriptive survey

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design employed. The primary data collection instrument was a questionnaire, and data was analysed using frequencies and percentages. The study revealed that participants were highly motivated to engage in CPD for reasons such as improving knowledge, which led to promotion and, as a result, increased income, improved status, and respect. The findings also indicated that, the ability to continue with household responsibilities, securing existing employment, a lack of access to paid study leave, and the relative flexibility in learning schedules were some of the most important considerations for participants' decision to pursue distance education. Individuals also faced some hindrances in pursuing their goals, including financial challenges, balancing education and work, and other family and social responsibilities.

De Vries, Van de Grift, and Jansen (2013) also examined the connection between teachers' perspectives on teaching and learning and their participation in CPD. The survey data of 260 Dutch secondary school teachers was evaluated using Structured Equation Modelling (SEM). From the study, it emerged that, teachers' engagement in CPD is positively related to their perspectives on teaching and learning which implied that teachers were more willing to participate in CPD when they are student-oriented. No link was established between teachers who were subject-oriented and their perspectives about CPD.

Another study was conducted by Hindeya and Endawoke (2013) to determine the current state of Continuous Professional Development (CPD) and variables which influence teacher participation in CPD. Teachers, principals, and supervisors were chosen at random, and data was acquired through interviews, focus groups, open-ended questionnaires, and casual talks. Utilizing qualitative data analysis techniques, major themes emerged. The current state

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of CPD was found to be ineffective, and all stakeholders were sceptical of its efficacy. Teachers who took part in CPD did not get the most out of it. This was linked to various problems, many of which were not in sync with the goals of their CPD. An emphasis on generic contents of training materials, a lack of ownership, differences in provision, variances in expertise among teachers, supervisors, and administrators, and conceptual issues with CPD were among the challenges highlighted as hinderances to the successful implementation of existing CPD implementation.

In Kenya's Trans Nzoia West District, David and Bwisa (2013) similarly explored factors that influence teacher participation in Professional Development activities. Teachers from the 57 district schools constituted the population for the study. A total of 760 teachers from the district schools were sampled. A questionnaire and a semi-structured interview guide were used to collect data for the study. The researcher used descriptive statistics to analyse the data. The study revealed that, the most teachers did not participate in available professional development activities. Factors such as time, finances, inadequate/lack of school support, irrelevance of professional development activities, heavy workload, monotony of content, and a lack of monetary value for PD activities were all cited as reasons for low participation. Age also came up as a factor which influenced teachers' participation in such activities as the research revealed that older teachers were the ones more likely to absent themselves from PD activities compared to younger teachers. Furthermore, the research revealed that male teachers are more involved in professional development activities compared with their female counterparts.

Similarly, in Turkey, Osmaniye District, Bayar (2013) also explored factors that influence participation of teachers in PD activities. Adopting a survey design, the researcher employed a multi-stage sampling technique. Thirty of the 66 schools in the district were selected. A total of 600 teachers were involved in the study. Age, teachers' attitudes toward professional development, time, finances, and colleague influences all had a significant impact on teacher participation in PD activities. The results further revealed that gender, gender, teaching experience, school culture, or teachers ' self-efficacy were not contributing factors to teacher participation in PD activities

Adams (2016) examined perspectives of mathematics teachers in secondary schools about factors that influence their participation in CPD. Using a case study design, the study utilized a variety of data collection instruments including questionnaire, face-to-face in-depth interviews, and focus group discussions to collect data. Eighty-three (83) secondary school mathematics teachers from the Kabwe district of Central Zambia participated in the study. Teacher participation in CPD was found to be influenced by a number of factors, including high workload, perceptions of CPD, relevance of CPD to teaching needs, and a lack of motivation.

Abdulai and Osman (2018) also explored what influences Basic School Social Studies teachers to participate in CPD activities as well as the link between teacher characteristics and CPD participation. The mixed-methods approach was used to purposively sample 185 respondents. A questionnaire and a semi-structured interview were used to collect data on factors that support teacher participation in CPD as well as the link between teacher characteristics and teacher participation in CPD. Themes emerged from participant's responses

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which were coded, categorised and analysed. The quantitative data was analysed using frequencies and percentages. Most respondents identified consultation, quality content, planning, and delivery as essential factors for the success of CPD activities. The results also indicated a linear relationship between CPD participation and factors such as teaching experience and teacher certification.

A critical examination of the above studies provides an indication that the quantitative and mixed methods (Abdulai & Osman, 2018; Adams, 2016; De Vries, et al., 2013; Bayar, 2013; Anhwere, 2013; Wan & Lam, 2010; Kwakman, 2003) have mostly been adopted to provide an understanding of issues related to teacher participation in CPD. However, there appears to little research to explore the intensity of participation in professional development activities by pre-tertiary teachers. Many people believe that the degree to which teachers engage in professional development activities is determined by the type of support they receive or the types of challenges they are confronted with (Mahmoudi, & Özkana, 2015; Avalos, 2011; Jurasaite-O'Keefe & Rex, 2010). This study explores such to provide a more in-depth understanding of issues surrounding pre-tertiary teachers' participation in CPD using the mixed methods.

**Barriers to CPD for teachers**

Studies have shown that numerous challenges in relation to efforts to effectively implement professional development programmes. For professional development to be implemented successfully, time, a collaborative effort, extended commitment, and resources may be required (Maria & García, 2016). In the absence of such, barriers become visible. Some cited barriers include;

lack of accessibility, lack of motivation, time constraints, poor marketing and advertisement, financial constraints (Geldenhuys & Oosthuizen, 2015). Other factors such as age, shortage of staff, lack of support from staff and managers, unavailability of programmes, heavy work schedule, family commitments, unsafe working environment and lack of continuity have also been identified as barriers. (Drage, 2010; Fernandez-Manzanal et al., 2015). The following discourse provides insight on research into some challenges of CPD for teachers:

Kokebe (2013) investigated the techniques and challenges of school-based Continuous Professional Development for teachers in elementary schools in Metekel Zone, Benishangul Gumuz Regional State. Utilizing a descriptive survey design data was collected using both quantitative and qualitative methodologies. Sampling techniques employed include purposive and simple random sampling. From a total population of 540 people, 160 teachers, 85 department heads, 17 principals, 17 facilitators for school based CPD, 17 vice principals, three supervisory experts, and one zone expert selected. Data was collected via a questionnaire, focus group discussions, interviews, and document analysis. Teachers' professional development activities, such as mentoring, portfolio development, conducting action research, facilitating group discussions and peer observations, and evaluating the overall successes and failures of the implementation processes, were found to be inadequately implemented. The results also indicated that teachers were not receiving adequate support from school officials, professional development focal persons, head teachers, and zone supervisors. The key barriers identified were a lack of training manuals, the irrelevance and lack of clarity of current training manuals,

a lack of qualified facilitators, a lack of support for teacher advancement, and insufficient budget and school system allocation.

Another study by Lerato and Dipane (2014) explored the challenges of Continuing Professional Teacher Development (CTPD) in inclusive schools in Lesotho. The study was based on the assumption that many inclusive school teachers lack the necessary knowledge and skills to teach in inclusive schools, and that in the vast majority of schools, there is likely little understanding of disability, pedagogy, and a lack of desire to deal with the additional challenges of teaching a diverse learner population. Individual face-to-face interviews and focus group interviews were used to collect data from 10 primary school teachers and one Special Education Unit (SEU) assistant inspector for the study, in line with the chosen qualitative method. Themes and sub-themes emerged from the processing and analysis of data collected. The SEU inspector and individual school teachers all experienced challenges with CPTD. Some of the challenges mentioned were a heavy workload; they also felt pushed to adopt inclusive education while their ideas were ignored.

Geldenhuys and Osthuizen (2015) also looked into the factors that influence teachers' engagement in CPD in South Africa. In this qualitative interpretive study, data from primary school teachers was acquired through interviews. The research yielded four main themes: inadequate knowledge provided by CPD programmes; teachers' unwillingness to participate in CPD activities; challenges preventing teachers from successfully participating in CPD events; and insufficient commitment of school management to teachers' CPD. From the study, teachers who participate in the conception,

administration, and evaluation of CPD programmes become more productive teachers.

Another study by Gemeda and Tynjälä (2015) similarly investigated potential and actual barriers to teachers' professional progress in Ethiopian schools using a qualitative case study design. Through interviews and focus group discussions, data was acquired from 37 randomly selected individuals. The study identified three major issues in teacher development: 1) teaching, professional development, and mentoring concepts and concerns, 2) management and leadership, and 3) working conditions for teachers.

Macheng (2016) also investigated CPD for teachers in Botswana's Junior Secondary Schools in a similar study. In seven randomly chosen Junior Secondary Schools in the Northern Region of Botswana, the study examined the presence of institutions or programmes that encourage CPD for teachers, as well as elements that inhibit teacher advancement. Questionnaires and interviews were utilized to collect data for the study, which employed a mixed method. Two hundred and forty (240) teachers from thirty-three (33) schools were enlisted as respondents, and fourteen (14) were chosen for the interviews. The results indicated that, there are few procedures in junior secondary schools that support teacher professional development, The only framework available was a staff development committee. Some barriers that were highlighted include tight school schedules, lack of funds, lack of teacher ownership, lack of support from school administration, lack of acceptable incentive for professional growth, and lack of participation by teachers in CPD programmes.

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Another study by Berehe, Legesse, and Tadesse (2018) which explored techniques and challenges of school-based CPD for government secondary school teachers in Arbaminch Municipal Administration's GamoGofa Zone. The study was descriptive as well as explanatory in nature. A questionnaire, interviews, and document analysis were used to collect data for this study. Sampling techniques utilized for the study were the purposive and simple random sampling technique. Out of a total of 286 participants, 103 teachers, 14 school administrators, 3 city education office TPD specialists, and three cluster supervisors were engaged in the study. Data acquired through closed-ended questionnaire was statistically analysed using frequencies, percentages, mean scores, and standard deviation, whilst data collected through interviews and document analysis was qualitatively analysed. The results of the study indicated that, teachers' participation in CPD activities such as action research, classroom management, mentoring, coaching, involvement in induction, and portfolio building was poorly implemented. It was also found that school administrators, cluster supervisors, and municipal education office specialists were providing minimal assistance to teachers. major challenges identified included a lack of willingness to participate in CPD activities, lack of trained CPD coordinators in schools, inadequacy of support provided for teacher growth, insufficient budget allocation, lack of motivation, lack of systematic follow up, lack of feedback and poor evaluation of overall successes and failures of CPD activities, and lack of time. From the findings, CPD was not implemented successfully due to a lack of stakeholder support and follow-up actions, among other concerns.

Tulu (2019) similarly explored techniques and constraints in CPD for school-based teachers of Hawassa City Administration secondary schools. The study employed both quantitative and qualitative methods using a descriptive survey design. The sampling techniques adopted was the simple random and purposive sampling techniques. 101 teachers (31 females and 70 males), four departmental heads, four administrators, and four facilitators of ongoing professional development were engaged for in the study. Data was gathered through questionnaires, interviews, and document analysis. The data collected via the questionnaire was analysed using percentages, means, and standard deviation, whereas the data collected via interviews and open-ended questions was analysed qualitatively. The results of the document analysis backed up the quantitative analysis. It was found that, teachers received insufficient support from school administrators, professional development facilitators, senior teachers serving as mentors, and City Education Office experts. Challenges identified included lack of teacher motivation/interest, insufficient training, lack of skills in conducting action research, lack of adequate resources in conducting CPD, lack of trained facilitators, insufficient budget allocation, lack of peer coaching and peer evaluation, and high workload for those who participate in CPD activities.

In the Gauteng Province, Gomba (2019) also in a study outlined challenges of teachers in their CPD. This was qualitative research which was based on the diffusion of innovation theory. Data was gathered through interviews and document analysis. Two school administrators, ten educators, two union representatives, and two district officials were all sampled purposively. A thematic analysis was used to analyse the data. Conclusions and

recommendations were generated based on the evidence that was evaluated. The results of the study indicated that schools provide little assistance and monitoring for CPD activities. Teachers were also unsatisfied with existing CPD because it did not include a monitoring incentive, such as the Integrated Quality Management System. From the study it was concluded that with the right monitoring and support, educators can be encouraged to participate in CPD programmes, and professional development can become a reality.

An examination of existing studies on the barriers to CPD for teachers provides a snapshot on some challenges that influence participation and implementation of CPD. Researchers have mainly adopted the qualitative (Gomba & Kedibone, 2019; Geldenhuys & Osthuizen, 2015; Gemeda & Tynjälä, 2015; Lerato & Dipane, 2014) and mixed methods (Tulu 2019; Berehe, et al., 2018; Macheng 2016; Kokebe 2013) to study such challenges. CPD like many other interventions, may be characterised by challenges and therefore to investigate issues surrounding CPD will require a look at such challenges. This study explores similar issues as identified by extant literature using the mixed methods for a better understanding of the status of CPD for pre-tertiary teachers.

**Impact of CPD on teacher professional practise**

Professional development generally improves teachers' ability to think about and implement important changes in their classrooms (Desimone, 2009). Participation in professional development has been shown to influence teachers' ability to acquire and enhance knowledge and skills (Poskitt, 2005). As a consequence, Professional Development is linked to leadership behaviour which enables teachers to better educate students allowing them to achieve a good balance between individual, school, and national demands. Several studies

have been conducted to assess the impact of CPD on teachers' professional practise and how participation in CPD is likely to influence elements such as teachers' knowledge, disposition and classroom practise s. A few of such studies include;

A study by Powell, et al., (2003) to assess the impact of CPD on individual, classroom, and organizational levels for primary and secondary school teachers. perspectives of principals were also gathered for the purposes of this study. Data was collected using questionnaires and interviews with teachers enrolled in MA and BA Education programmes at the School of Education of Anglia Polytechnic University. From the study, approved CPD tends to boost teachers' professional knowledge, confidence, ability to articulate practise at higher cognitive levels, classroom management, professional discourse and reflection. Teachers believed that CPD had a significant impact on students' long-term achievement, but also highlighted the difficulty of gathering evidence to support this conclusion. At the corporate level, the impact of new learning through CPD appeared to be less significant.

Harris, Cale and Musson (2010) also explored the impact of a professional development programme on the perceptions of primary school teachers toward physical education. Primary school teachers from five English local education authorities supplied data for the study through pre-course audits and course evaluations immediately after the program. Focus groups and individual interviews were used to collect data up to 18 months after the program. From the study, respondents indicated that the curriculum had a positive impact on the teachers' perception of physical education (in terms of their confidence, knowledge, and enthusiasm for the topic) and, as a result,

improved their practise (particularly in terms of content ideas and inclusion). Some programme flaws identified also included insufficient attention to specific pedagogical concerns (such as medium to long term planning and assessment) and a lack of follow up. It was concluded that, the programme had a positive impact on teachers' perceptions of physical education, but its impact was limited to some range of factors.

Postholm (2012) similarly investigated teachers' professional development, concentrating on teachers' professional development after completing their basic teacher training. The review was organized within a constructivist paradigm. From this perspective knowledge is viewed as improved meaning and understanding through social interaction. The social environment is thought to play an important role in how a person learns and develops. 31 articles were reviewed for this research. To ensure breadth and depth of coverage, a selection of review studies and research on further education in connection to teachers' learning was included. The texts were examined using open and axial coding, leading to the creation of main and sub-categories. The review revealed that individual and organizational characteristics influence teacher learning. Collaboration among teachers was also identified to be beneficial to their professional development, in such a manner that teachers themselves are even capable of leading such learning activities themselves. It was also found that a healthy school culture with a pleasant environment and awareness of teacher learning, as well as collaboration with external resource individuals, may also have an impact on teacher professional development. It was concluded that classroom learning is the best place for teachers to grow.

Ravhuhali, Kutame, and Mutshaeni (2015), also examined teachers' perceptions of the impact of CPD on quality teaching and learning the research employed a mixed method approach, which included both quantitative and qualitative research methods. Closed-ended self-administered questionnaires and an interview schedule were used to collect data. Two hundred teachers were chosen using a simple random sampling procedure to complete the surveys, and 10 teachers participated in face-to-face semi-structured interviews. Evidence from the study suggest that teachers value professional development as one good for expanding their pedagogical and topic knowledge, teaching skills, and strategies for boosting student learning. The study also revealed that teachers participate in professional development events in order to obtain some cash incentives.

In Ethiopia, Sintayehu (2016) also evaluated the impact of CPD programmes for teachers on the quality of education and some challenges associated with such programmes. In this study, the descriptive survey design was adopted. A simple random sampling technique was used to select 76 teachers. A closed-ended questionnaire was used to collect data for the study. A one-sample t-test was used to analyse the data. The study revealed that despite teachers' limited participation in CPD activities, CPD had a significant impact on student success, classroom practices, and teachers' professional competence. Furthermore, the study found that teachers' convictions, dedication, competence, cooperativeness, sense of duty, and motivation all had a significant impact on their CPD practices.

Getnet and Prasadh (2018) also examined teacher participation in CPD and how it affects teaching and learning. A mixed method approach was used to collect both quantitative and qualitative data. Six hundred and twenty-four elementary schoolteachers were chosen at random to provide quantitative data. Qualitative data was provided by teachers, school administrators, supervisors, and education officers. A questionnaire, an interview, and a focus group discussion were used to gather information. The quantitative data was analysed using the means, independent sample T-test, and one-way ANOVA. The qualitative data was analysed, and the quantitative data was triangulated. The study found that, to a limited extent, teachers participated in collaborative and school based CPD activities, including study groups and informal talk. It was discovered that their participation in action research and off-campus lectures was infrequent. Active learning and ongoing evaluation approaches were also more extensively stressed by the respondents as part of their CPD opportunities. From the results, the importance of active learning and continual assessment was not given the same weight as topic knowledge. A unique finding from the study was the impact of CPD was found to be low. Despite the fact that school based CPD was prioritized and teachers were given opportunities to participate in collaborative work, group activities, and informal discussions, no significant increase in teaching or student learning outcomes was observed.

Neuman and Cunningham (2006) also evaluated the impact of professional development on teacher knowledge as well as effective early language and literacy practices. Participants were randomized to one of three groups from 291 locations in four cities (177 centres and 114 home-based): Group 1 received a 3-credit course in early language and literacy, Group 2

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received a course plus ongoing coaching, and Group 3 received no instruction. There were no significant differences in teacher knowledge across groups, according to the analysis of covariance. Despite this, teachers who received both coursework and coaching showed statistically substantial improvements in language and literacy practices, with large effect sizes for both centres and home-based providers. On its own, professional development was identified to have limited impact on enhancing quality procedures. Coaching and coursework could be a good way to invest in the quality of early childhood education.

Yoo (2016) similarly conducted a study with 148 K-12 teachers and school educators (Male=22; Female=126) to determine the impact of an online professional development learning experience on teachers' self-efficacy. The Teachers' Self-Efficacy Scale (TSES) by Tschannen- Moran and Woolfolk Hoy (2001) was administered twice over a five-week period. In addition, all participants' descriptive self-analysis of their own score improvement was assessed to see how teachers perceived a change in their self-efficacy. Both quantitative and qualitative methodologies were used to analyse the data. The study revealed that, teachers' efficacy increased as a result of their online professional development experience. Participants' efficacy shift was self-analysed, and this provided reasonable explanations for the contradictory findings on the effect of experience on teacher efficacy.

In another study, Gore, Lloyd, Smith, Bowea, Hywel, and Lubansa (2017) also investigated the impact of a pedagogy-based, collaborative PD strategy on teaching quality. Regardless of school type (primary/secondary), school location (urban/rural), or years of teaching experience, a cluster randomized controlled experiment including eight teachers from 24 randomly

selected schools revealed significant beneficial impacts of CPD on teaching quality (d = 0.4). The effects were still there six months later. To demonstrate the mechanisms behind the intervention's success, qualitative data was used. It found that methods for assisting teachers in their learning proved to have a positive impact on teaching quality and teacher morale.

Calleja (2018) also explored teacher engagement in CPD, motivational variables, and programme efficacy. It examined the motivations of a small group of Maltese secondary school mathematics teachers to participate in a CPD programme aimed at assisting them in Learning to Teach Mathematics through Inquiry (LTMI) by examining teachers' perceptions of programme effectiveness. Using a qualitative method, data gathered on opinions, experiences, and descriptions of LTMI features which teachers considered were beneficial to their professional development was analysed using thematic analysis. Teachers' ambition to learn about teaching, their opinions about the benefits of inquiry, and the need to improve classroom practices were shown to be intrinsic characteristics that encouraged teacher involvement. The study also found that the most effective aspects of their CPD experience for teachers were learning as part of a community, active learning, and immersion in practice-based understandings.

These studies help to provide some indication of the impact of CPD on teacher professional practice. Extant literature however lacks proof of the perceived impact of Professional Development on elements of teachers' professional practise. This study seeks explores similar issues from the teachers' perspectives on the perceived impact of CPD as a lifelong process on their

professional practise further examines the impact of CPD on different elements of teacher professional practise (knowledge, skills, and efficacy).

**Differences in CPD based on school category**

CPD participation is frequently influenced by a variety of circumstances. The following studies show some disparities in involvement based on school variables:

Seferoglu (2001) conducted a study to examine elementary school teachers' perceptions of professional development. The study explored teachers' opinions of teacher development methods in Turkey, especially the availability of professional development opportunities, in-service activities, and the effectiveness of staff development opportunities. Data was collected from all public elementary school teachers in the Turkish province of Ankara via a survey. A representative sample of 500 respondents from 52 schools was chosen for the study. According to survey responses, most schoolteachers have only engaged in in-service training programmes once or twice in their professional life. The findings also indicated that rural schoolteachers had less access to in-service training programmes than urban schoolteachers. Most of the respondents agreed that teachers require a chance to enhance their teaching abilities and expertise.

In another study by the OECD-TALIS (2008), which provides quantitative, policy-relevant information on the teaching and learning environment in schools in 23 countries with a focus on lower secondary education, CPD participation was examined in relation to teacher and school characteristics. The characteristics of the teachers and schools were selected in line with what policy goals in each country. The study revealed that there was

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no statistically significant difference in the duration of professional development activities between male and female academics in participating nations. Teachers who were younger on average obtained more professional development. This means that more experienced teachers received fewer days of professional development than those who are new to the profession. Teachers in private schools received one day less professional development than their counterparts in public schools. The change, however, was not statistically significant.

Similarly, OECD-TALIS (2013) collected quantitative, policy-relevant data on the teaching and learning environment in 23 countries, still focusing on lower secondary education. According to the findings of this study, teachers in public schools received one day more professional development than their colleagues at private schools, a difference that was not statistically significant. This was similar to a study by the US Department of Education (1997), which found that public school teachers were more likely to participate in professional development activities. From the findings of TALIS teachers at public schools were more likely to participate in professional development than those in rural areas.

In order to statistically evaluate the important aspects of reform-based professional development and their link to teachers' self-efficacy for inclusion, Lee (2013) examined Professional Development and Teacher Self-Efficacy for inclusion. In one East Tennessee school system, 385 primary school teachers were engaged in a web-based survey. For this study, 79 primary school teachers from 14 elementary schools in the district were engaged. According to the research, there was no statistically significant relationship between teacher self-

efficacy for inclusion and the amount of professional development completed in the school year. Respondents believed that diversity was not prominently emphasized during professional development programmes. Teachers with 11+ years of overall teaching experience had considerably higher self-efficacy for inclusion than those with 1-10 years. In addition, there was no statistically significant difference in self-efficacy scores between teachers who had to complete one or two special education courses for first certification and teachers who had to complete more than two special education courses.

Amanulla and Aruna (2014) also investigated the impact of teacher efficacy on the professional development of higher secondary school teachers in Kerala, India. A stratified random selection technique was used to select 350 teachers for the study. The Teacher Efficacy Scale and a professional development questionnaire for upper secondary school teachers were used to collect data. The t-test was used to examine the significance of the differences in means for teacher efficacy and professional development ratings based on gender, school management style, and experience. According to the data, there were substantial disparities in professional development mean scores between male and female teachers, government and private school teachers, and more experienced and less experienced teachers. Teacher efficacy also differed dramatically between public and private schools. The efficacy of male and female teachers, as well as those with more and less experience was not significantly different. It was also discovered that teacher efficacy has little impact on teacher professional development. It was determined that there is no substantial difference between the groups in terms of professional development.

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Badri, Alnuaimi, Mohaidat, Yang, and Al Rashedi (2016) also explored secondary school teachers' perspectives of professional development requirements, its impacts, as well as the constraints in Abu Dhabi. The study shed some light on how teacher perceptions differ in terms of independent variables such as instructor age and gender, as well as the type of institution. The largest significant difference in perceived need for professional development activities was seen between public and private schools. Male teachers almost always outperform female teachers when it comes to the perceived impact of such activities. The study had a consistent finding. Furthermore, all events in which public schools participated received higher perceived effect ratings. Female teachers participating in professional development activities indicated substantially higher scores for barriers (five out of seven) to their professional development activities.

These studies highlight some differences in participation across school characteristics which is important in understanding some factors external to the teacher that may account for variances in teacher participation in CPD. This study explores similar issues to better comprehend the status of CPD in Ghana.

**Chapter Summary**

The chapter began with a chapter introduction which was followed by a conceptual review which highlighted; the definition and descriptions of Continuous Professional Development, Teacher Professional Practise, Teacher Professional Development, types of teacher professional development, models of Continuous Professional Development, effective Professional Development, the changing phase of CPD, Teacher Professional Development in Ghana, impact of CPD, and the conceptual framework. This was then followed by the

theoretical review where three main theories; Andragogy, Transformative Learning Theory and the Generative Learning Theory were reviewed as theoretical foundations for the study. The chapter ended with the empirical review which discussed studies by researchers on relevant themes of interest to the study. The empirical review was organized around the themes of; teacher perceptions of professional development activities, teachers' professional development experiences, structural features of CPD for teachers, professional development needs and preferences of teachers, teacher participation in CPD, barriers to CPD for teachers, perceived impact of CPD on teacher professional practise, differences in CPD based on school category.
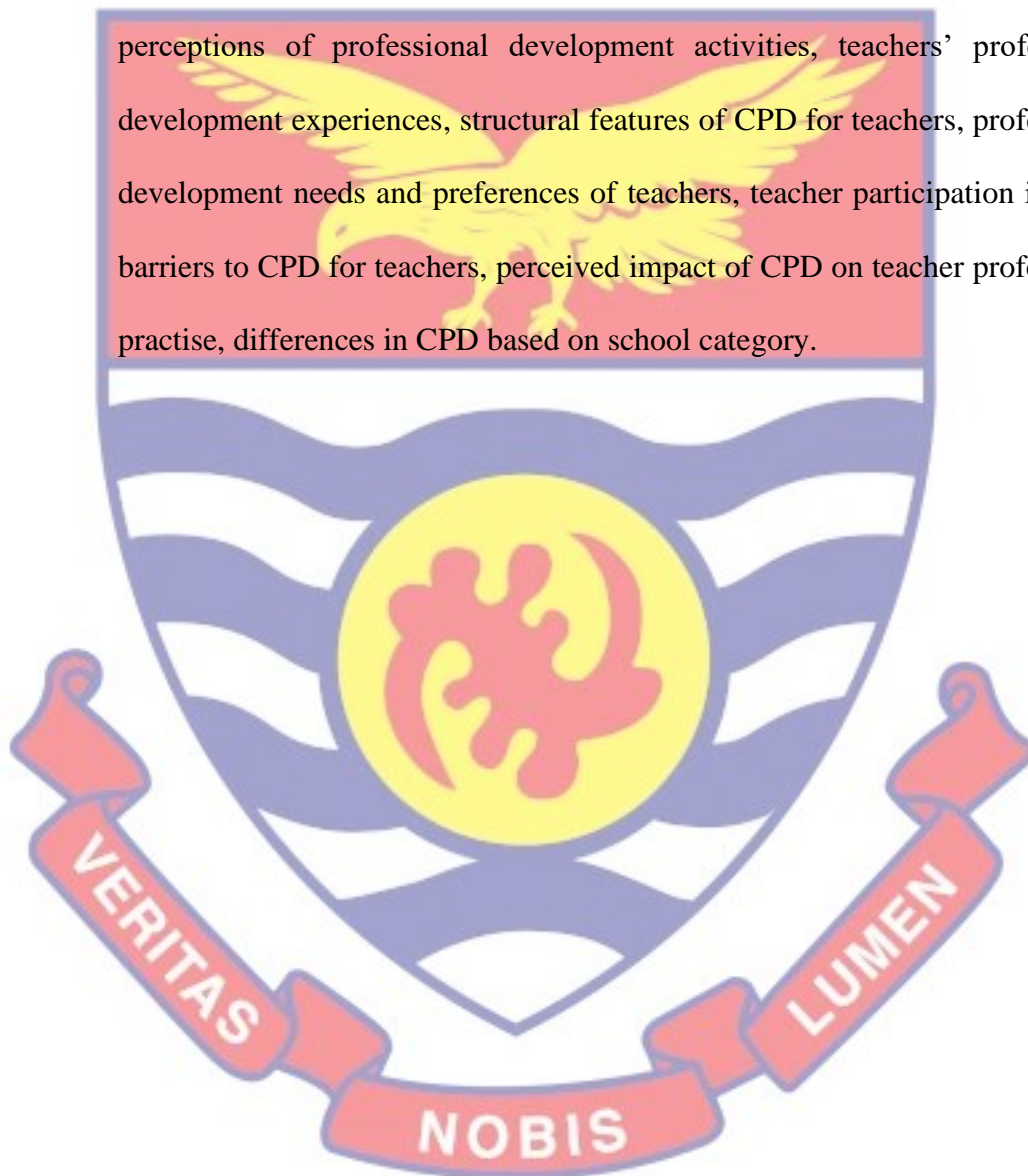
## CHAPTER THREE

## RESEARCH METHODS

### Introduction

This section outlines the data collection methods and approaches that were utilized for the purposes of gathering data for the study. It mostly focuses on providing descriptions of the researcher methodology adopted for the study. The chapter describes the research paradigm, research design, population, sample and sampling procedures, research instruments, validity and reliability of research instruments, ethical issues, data collection procedures, and methods of data analysis

### Research Paradigm

Research paradigms are models, viewpoints, or conceptual frameworks for integrating thoughts, beliefs, attitudes, and activities into a coherent whole that will eventually influence the choice of research design (Basit, 2010). The positivist paradigm and the interpretative paradigm are the two most common research paradigms in educational research.

The positivist paradigm, also known as the normative paradigm, takes on a more traditional approach to educational research and is similar to natural sciences in many ways. This paradigm is rooted in the belief that truth can only be seen or discovered by observing, experimenting on, or interrogating a large number of subjects, resulting in statistically analysed findings that can be generalized (Basit et al., 2010). The method is mostly quantitative, with a focus on behaviour measurement, prediction of patterns, and explanation of a known reality (Anderson, 2001). To understand a phenomenon and reality, it becomes

necessary to measure and support this measurement with statistical evidence (Hammersley, 2013).

In the pursuit of knowledge, the interpretative paradigm on the other hand, takes a more qualitative approach in search of the truth. It embraces value and viewpoint which follows the constructivist idea that reality is socially constructed and so has a diverse set of connections which can only be understood as a relativist ontology where a single phenomenon can have multiple interpretations rather than truth that can be determined through a measurement process (Creswell, 2007). Essentially, from an interpretivism standpoint, researchers tend to gain a deeper understanding of a phenomenon and its complexities in their specific context rather than attempting to generalize (Hammersley, 2013; Creswell, 2007).

Bearing in mind that these two paradigms are unique in defining the truth, pitting these two against each other or relying heavily on one perspective cannot be empirically valid and is typically unproductive (Creswell & Plano Clark, 2011; Teddlie &Tashakkori, 2009). In most cases an overreliance on one perspective tends to accentuate some features of a study while neglecting other useful features. The concern here is that any area of social science or educational research could be polluted or, worse, trivialized by relying on a single paradigmatic view (Shulman, 2000). Therefore, selecting a research approach should be based on the nature of research and research objectives, and there is no reasonable justification for research to be either quantitative or qualitative unless the issue under study demands it (Saunders, Lewis & Thorndike, 2009). Hence in exploring CPD and its perceived impact on teacher professional practice, a blend of normative (positivist) and constructivist (interpretivist)

paradigms is apposite for providing a holistic understanding of the research phenomenon.

The combination of these two paradigms is rooted in the pragmatic inquiry perspective which argues that both positivist (quantitative) and interpretivist (qualitative) paradigms should be combined to better comprehend a phenomenon (Howe, 1988). The pragmatists suggest that the world should be viewed not as a single unit but a multiplicity of units and by extension the use of multiple approaches to collect and analyse data (Hall, 2013; Pearce, 2012; Biesta, 2010; Tashakkori, & Teddlie, 2010; Morgan, 2007; Johnson, & Onwuegbuzie, 2004). Pragmatists believe that "ideas are not 'out there' waiting to be discovered, but rather instruments – such as forks, knives, and microchips – that people employ to deal with the world in which they find themselves" (Snarey, & Olson, 2003, p. 92). Individuals by this view do not generate ideas; instead, ideas for them are social constructs are created by groups of people. Furthermore, human carriers and the environment have a significant impact on ideas, resulting in the use of a variety of sources of information to collect data (Cohen, Manion, & Morrison, 2007; Morgan, 2007). This study therefore lends itself to the mixed methods approach to comprehend the phenomena under investigation and in pursuit of the pragmatic paradigm. Utilizing the mixed methods should provide deeper insights into CPD for pre-tertiary teachers and its perceived impact on teacher professional practice.

**Research Design**

This study adopted a mixed methods approach, with the goal of combining the insights produced by quantitative and qualitative approaches of the study. It provides a deeper understanding by mixing numerical patterns from

quantitative data with detailed descriptions from qualitative data, providing many perspectives from which the issues of interest were investigated rather than relying on a single viewpoint. The exploratory-sequential mixed methods design was adopted given the intents of the study (see figure 4). This is a three-phase design in which qualitative data is gathered and analysed first, and then themes are used to guide the development of a quantitative instrument to further explore the issue under investigation (Creswell & Plano Clark 2011; Teddlie & Tashakkori 2008; Onwuegbuzie, Bustamante, & Nelson 2010). As a result, the analysis of data using this approach involves three stages of analysis: the primary qualitative phase, the secondary quantitative phase, and the integration phase, which connects the two strands of data and expands the qualitative exploratory results (Creswell & Plano Clark 2011).
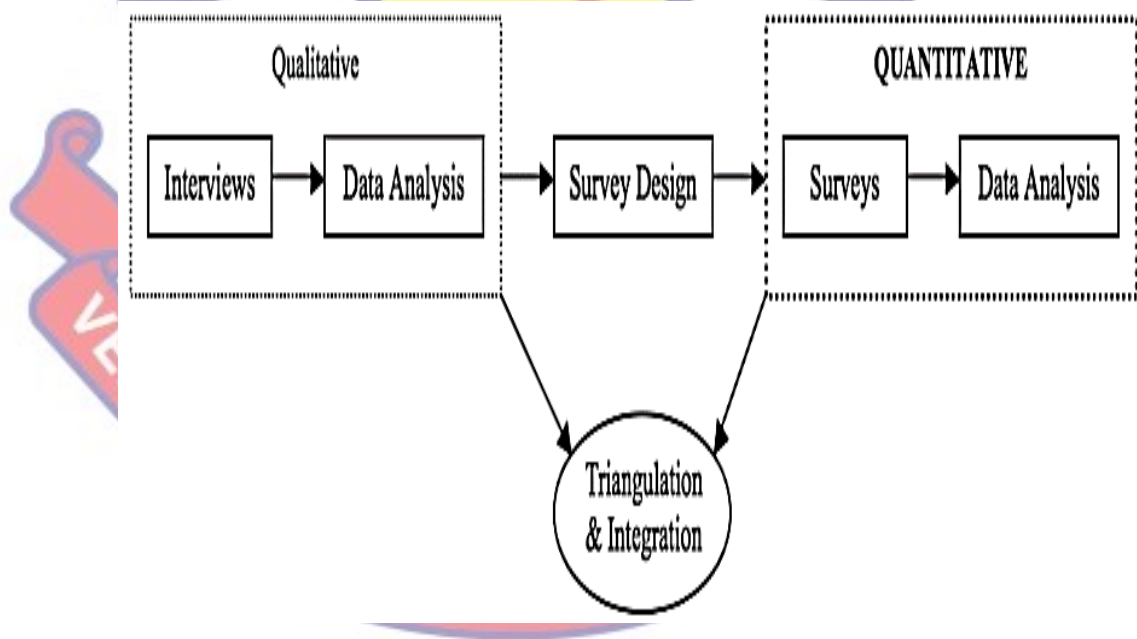


*Figure 4:* Diagrammatic representation of exploratory-sequential mixed methods

**Study Area**

The study was delimited to the Central Region of Ghana. This region is one of Ghana's 16 Administrative regions. It is bounded to the north by the Ashanti and Eastern regions, to the west by the Western region, to the east by the Greater Accra region, and to the south by the Gulf of Guinea. It spans approximately 9,826 square kilometres and covers about 4.1% of the nation's land area. The region was first to be contacted by the Europeans and is recognised as one of UNESCO's World Heritage Sites. This region was selected for its well-known and many prestigious educational institutions. It is considered an educational powerhouse, with some of the best schools in the country. This region was identified to be a great location for gathering information on CPD for teachers because this region has for many years been considered the anchor of Ghana's educational system, with some of the best second cycle schools in Ghana.

**Population**

The population for this study comprised all SHS pre-tertiary teachers, heads of SHSs and CPD regulators within the Central Region of Ghana. Priority was given to the teaching staff of GES because the researcher agrees with Boudersa (2016) who believes that education is a powerful agency in any society which remains indispensable for delivering positive transformation in the life of people in a nation in relation to their social, political, economic, and cultural life. Teachers have the singular mandate of shaping the whole education process and are important agents of change making them indispensable as respondents for the study (Van Der Heijden, Beijaard, Geldens & Popeijus, 2018; Vandeyar, 2017). CPD regulators represent the office designated for CPD

for pre-tertiary teachers of GES within the Central region. Priority was given to this office because they are directly responsible for all CPD activities for teachers within the region and provided valuable insights for the purpose of this study. Heads of SHSs are school leaders who serve as representatives for the governing institution. In their respective schools they expected to coordinate professional development activities for pre-tertiary teachers. This category is also directly involved in all CPD activities for pre-tertiary teachers in their respective schools. Engaging them provided useful information on the current state of CPD for pre-tertiary teachers. The total e population comprised an estimated 8,884 pre-tertiary teachers from 67 public secondary schools (refer to appendix B) and one GES training officer in the Central Region of Ghana. The accessible population comprised all teachers in the some selected 57 SHSs engaged for this study

**Sample and Sampling Procedures**

For the qualitative aspect of the study, a training officer from GES, three headteachers from each school option (GES School Selection Registry - refer to appendix A) and twelve (12) pre-tertiary teachers were selected for the study using multiple sampling techniques. The training officer for GES and three headteachers from each school category (Category A, B and C) were selected using the criterion sampling technique as information rich cases. The sample size of 12 pre-tertiary teachers was determined based on the assertion by Guest, Bunce, and Johnson (2006) who recommend that saturation in homogenous groups often occurs around 12 participants. The quota sampling technique was then used to categorise pre-tertiary teachers into their school options, Category

A, B and C). Four pre-tertiary teachers were then conveniently selected from each school option to participate in an interview.

For the quantitative aspect of the study, secondary data obtained from the Ghana Education Service (GES, Central Regional Directorate) on the number of teachers within the region provided an estimated number of about 8,884 pre-tertiary teachers in public SHSs in the Central Region. The minimum sample size was determined using a formula proposed by Galero-Tejero (2011): n = N/(1+N[$e^2$ ] ).

Where n is the sample size, N is the population size, and e is the level of precision.

Therefore, n = N/(1+N[$e^2$ ] ) and based on the estimated population for the study, and level of precision (sampling error)  of 0.05 the sample size may be calculated as

n = 8884/ (1+ 8884[$0.05^2$]) = 8884/ (1 + 22.21)

= 8884/23.21 = 382.7660

= 383

To ensure external validity, make provisions for unreturned questionnaires, and to ensure that the minimum representative sample was obtained, the sample size was increased from 383 to 400 respondents.

Using multiple sampling techniques, individual respondents were selected from the target population. The proportionate stratified random sampling technique was used to select public schools in the Central Region. The sample for public schools in the Central Region was derived from the School Selection Registry developed by GES (refer to Appendix A) which contains a list of all SHSs in the 16 regions of Ghana categorised into school options

(Category A, B and C) for the placement of qualified BECE candidates into Second Cycle Institutions (GES School Registry, 2019). Category A – C comprise all public SHSs grouped under the regions of Ghana. For the selection of participating schools in the Central region, the population for the schools, according to the registry, was 67 public SHSs. Category A comprised 6 schools, Category B comprised 21 schools and Category C comprised 40 schools. Using the school population of 67, the minimum sample size was calculated using the formula proposed by Galero-Tejero (2011):  $n = N/ (1+N [e^2])$.

Where n is the sample size, N is the population size, and e is the level of precision.  Therefore,

$n = N/ (1+N [e^2])$ and based on the estimated population for the study, and level of precision (sampling error) of 0.05 the sample size may be calculated as

$n = 67/ (1+ 67[0.05^2]) = 67/ (1 + 0.17)$

$= 67/1.17 = 57.39$

In line with this, 57 schools were engaged for the study. For Category A, the number of schools was selected as NoSs = (6/67[57]) = 5.10. The same method was applied to select schools in Category B and C.  Five schools were selected for Category A, 18 schools for Category B and 34 schools for Category C (refer to Table 1).

Data on the number of pre-tertiary teachers in public SHSs in the Central Region obtained from GES, Central Regional Directorate provided statistics on the number of teachers in each school option (Refer to appendix B). The proportionate stratified random sampling technique was then employed to determine individual respondents in each school category. To ensure external

validity and to make provisions for unreturned questionnaires, the sample size was increased to 400 respondents. For schools in Category A, teachers were estimated at 1,064 (refer to Appendix B). Individual respondents for this stratum were calculated as

Nn = 1064/8884[400]

Nn = 47.906

Nn = 48

Forty-four (48) respondents were therefore sampled for Category A schools. For school Category B and Category C, 139 respondents and 213 respondents were sampled for the study (refer to Table 2). In each school option, the number of individual respondents were spread across the sample size for the school option. For instance, in Category A, 48 respondents were spread across five schools as summarized in Table 1. 10 individual respondents (48/5=9.6) were engaged in each of the 5 schools within school Category A. The same method was applied in Category B and C schools (139/21=6.61) and Option 3 (213/40=5.325)

**Table 1: Sampling Table for Public Schools**

| School | NoP | NoSs |
|---|---|---|
| Category A | 6 | 5 |
| Category B | 21 | 18 |
| Category C | 40 | 34 |
| Total | 67 (Sp) | 57 (Ss) |

Source: Author's construct

**Table 2: Sampling for Pre-Tertiary Teachers**

| School Option | Nt | Nn |
|---|---|---|
| Category A | 1,064 | 48 |
| Category B | 3,080 | 139 |
| Category C | 4,740 | 213 |
| Total | 8,884 | 400 |

Source: Author's construct (*N-sample size; Nt- number of teachers in select school; Nn-sample size for respondents*)

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**Data Collection Instruments**

The instruments utilized for the collection of data were the questionnaire and semi-structured interview guide. These instruments were chosen on the premise of the mixed methods approach and research design adopted for the study. Initial qualitative data was collected using interviews which was used to drive the development of the TPD questionnaire. data triangulation from this approach offered a more comprehensive view of the research problem.

**Semi- structured interview guide**

The first instrument employed for the study is the semi-structured interview guide which was used to gather data on the perspectives of pre-tertiary teachers about their CPD and its impact on teacher professional practice. Two interview guides were developed on all research questions for key informants (one training Officer and three head teachers) and pre-tertiary teachers. The interview protocol for key informants contained 11 open ended questions which probed into structural features of existing CPD, teacher professional needs, impact of CPD on teachers' professional practise and barriers to teacher professional development. The interview protocol for pre-tertiary teachers contained 15 open ended questions which delved into teacher conceptualization of CPD, structural features of existing CPD, teacher professional needs, impact of CPD on teachers' professional practise and barriers to teacher professional development. The interview guide was employed in a one-on-one interview which was conducted for the participants of the study. The purpose of the interview was to provide rich and detailed accounts regarding individual experiences and existing structures for pre-tertiary teachers in relation to their professional development and to provide basis for the development of the

questionnaire. The use of this instrument provided initial data which drove the development of the second research instrument and helped to establish consistency of the findings from the quantitative aspects of the research.

**TPD questionnaire**

A Teacher Professional Development (TPD) questionnaire was the second research tool employed to gather statistically quantifiable data on the research questions and hypothesis. Generally, questionnaires have been identified to be particularly useful where respondents can comprehend and provide answer to items on the research instrument (McMillan & Schumacher, 2001).  The questionnaire is also useful for collecting quick information on opinions, attitudes, behaviours and preferences from a large number of respondents. The TPD questionnaire was thus utilized to collect data on variables of interest for the study from a larger sample (pre-tertiary teachers) in line with the research design adopted for the study. After having analysed the qualitative data, the TPD questionnaire was developed to determine whether the qualitative findings were statistically generalizable. The TPD questionnaire was divided into six main sections. Section A, focused on the background information of pre-tertiary teachers, specifically it was related to five main items; school category, gender, age range, educational level and teaching experience. The section B comprised an ordered set of responses and open-ended questions on teacher conceptualization of CPD and existing structures for teacher professional development from which respondents were required to choose by ticking or indicating responses. Section C focused on teacher professional development needs which comprised ordered responses and items on a five (5) point Likert scale ranging from very high to not at all. The scale

was coded as follow very high= 4, high = 3, somewhat = 2, low = 1 and not at = 0. Sections D, E, and F comprised items on, nature of CPD activities, impact of teacher professional development and barriers to teacher professional development on a five (5) point Likert scale ranging from strongly agree to strongly disagree. The scale was also coded as: neutral = 0; strongly disagree = 1; disagree = 2, agree = 3; strongly agree = 4. The use of this tool was to ensure the neutrality of the research approach and findings from the qualitative strand.

**Validity and Reliability of Instruments**

The research instruments were pilot tested in three public secondary schools in the Western Region. These schools were selected because their characteristics mirror the public schools selected for the purposes of this study. The subsequent paragraph provides a narration on how validity and reliability was established for the research instruments.

**Trustworthiness for qualitative data**

Qualitative research has often been criticised as one that lacks scientific flavour and transparency in data collection and analytical procedures in such a manner that its findings may become merely a recollection of personal opinions of participants which are often subject to biases (Noble & Smith, 2015). Overcoming such biases therefore becomes important and for qualitative research to overcome such biases, emphasis must be placed on the quality of processes and procedures that cannot be measured by scientific approaches (Denzin & Lincoln, 2005). Validity in research is the extent to which a measure adequately represents the underlying construct that it is supposed to measure (Drost, 2011). Valid research in this sense must establish what exists and a valid research tool must be capable of measuring what it is supposed to measure.

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Reliability is the degree to which measurements are repeatable when such measurements are used on different occasions, under different conditions and with different instruments that measure the same construct or skill (Drost, 2011).

In qualitative research, many researchers have often avoided the terms validity and reliability and relied on terms such as trustworthiness, truth, value, credibility, applicability, consistency and confirmability, when referring to this criterion for evaluating the scientific merit of qualitative research (Rolfe 2006; Long & Johnson, 2004). Trustworthiness in qualitative research therefore implies translating the idea of soundness into research which is equivalent to validity and reliability in quantitative research (Marshall & Rossman, 2011). To establish trustworthiness for this study, Lincoln and Guba (2000) recommend the following strategies: credibility, data triangulation, peer debriefing, transferability, dependability and confirmability.

To ensure credibility for the study, an initial interview was carried out for one headteacher and two teachers in the Western region. Initial member checking was carried out and the feedback was used to structure the actual guide utilized for data collection. For member checking, the interview transcripts were returned to all participants for verification and emerging themes and concepts were also verified to determine whether they adequately reflected the phenomena under investigation. Data triangulation was also carried out through the use of different methods and perspectives to help produce more comprehensive findings (Kuper, Lingard, & Levinson, 2008; Cohen et al., 2007; Johnson & Turner, 2003; Morse, Barrett, Olson, & Spiers, 2002; Breakwell, Hammond, & Fife-Schaw, 2000). For this study, the use of the questionnaire

which was developed from the qualitative findings was useful for data triangulation. Also, peer debriefing was carried to for the purpose of establishing credibility for the instrument. The researcher engaged colleague researchers to evaluate and examine transcripts, emerging themes and final categories from transcripts, and findings from the study to reduce any biases on the part of the researcher. Thick description of participants' accounts was also used to support the finding. This was to help reduce any biases on the part of the researcher which could render the findings of the study subjective and provide adequate justification for how the research findings will be applicable in similar contexts or circumstances. For dependability, an inquiry audit involving academic supervisors and experts who reviewed and examined the research process vis-a-vis the instrument to ensure consistency in findings for repeated measures was undertaken. Finally, for confirmability, meticulous record keeping was adopted to demonstrate a clear audit trail which highlighted every step of data collection and subsequent analysis to ensure that data interpretation was dependable and transparent.

**Validity and reliability for quantitative data**

The reliability of an instrument is determined by its ability to ensure consistency in results over an extended period of time and to provide precise description of the total population under study in a manner that allows the reproduction of the study using a similar methodology (Joppe, 2000). When a measure produces the same results under consistent conditions, it is said to be highly reliable (O'Neill, 2003). To establish reliability, the Cronbach's Alpha values were determined from the pilot study conducted in the Western Region. A reliability coefficient of 0.785 was obtained which affirms the view of

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DeVellis (1991) that a reliability coefficient of 0.70 or more is suitable for establishing the reliability of an instrument.

Validity for an instrument determines the accuracy of research results. It is the researcher's ability to precisely obtain participant's view of the world and to portray it accurately (Wolcott, 1990). To ascertain validity for the instrument, the TPD questionnaire was subjected to meticulous scrutiny by the academic supervisors of the researcher and some experts in the field of research. The content validity of the instrument was determined by the supervisor who examined the research questions in relation to items in the instrument to ensure accuracy in measurements. A comparison with similar instruments catered for the construct validity. Inputs and recommendations by the supervisor and experts were acknowledged and necessary corrections effected prior to and post the pilot study.

**Data Collection Procedures**

To provide the researcher with the opportunity of admittance to the sample and to collect data that would reflect the broad views and features of the population, an extensive data collection procedure became relevant. Prior to actual data collection, copies of an introductory letter were sought and obtained from the University of Cape Coast, Department of Business and Social Sciences Education (DoBSSE). The letter was subsequently disseminated to all heads of participating SHSs and the GES. The letter introduced the researcher and sought permission to engage and interact with the teaching staff of participating SHSs.

One-on-one interviews were conducted for one training officer, three head teachers and 12 teachers at their convenience on different days. The researcher scheduled a meeting with the training officer and head teachers to

establish rapport for the interview. The date for the interview was decided on and interviews conducted at participants' convenience. For the teachers, an introductory meeting with teachers of participating SHSs was scheduled to introduce the researcher and clarify the purpose of the research to teachers. The researcher by this introduction sought to establish some rapport with teachers which was crucial during actual data collection. One-on-one interviews were conducted for 12 pre-tertiary teachers at their convenience on different days as was determined by the participants. The participants were involved in an interactive dialogue which lasted between 20- 30 minutes for every participant. The one-on-one interviews permitted the researcher to explore the views and experiences of respondents which provided in-depth information that was useful to drive the development of the questionnaire which was subsequently administered to a larger sample. To adhere to all COVID 19 safety protocols, all interviews were carried out in a spacious airy environment with the researcher and interviewee about 1-2 metres apart. Some Personal Protective Equipment (PPEs) were worn to ensure the safety of the interviewees and the researcher.

To administer the questionnaire, the researcher and respondents collectively agreed on specific dates and times for the questionnaires to be made available. The questionnaire was administered on the decided dates and thoroughly explained to respondents. To adhere to all COVID 19 safety protocols, respondents were given the opportunity to answer the questionnaires at their convenience within 14 days and returned through a liaison who served as a school representative for purposes of this study. The liaison had been thoroughly briefed on the intent of the study and how the questionnaire was to

be duly completed. The questionnaire was returned to the researcher upon successful completion.

**Ethical Considerations**

In research, strict adherence to ethical standards is critical. Researchers have obligations both to their participants and to their profession to ensure that they adhere to ethical standards (Ary, Jacobs & Razavieh, 2002). To ensure this, due diligence and to follow a detailed research protocol that ensures that the rights of research participants are protected and safeguarded ethical clearance was sought and obtained from the University of Cape Coast's Institutional Review Board (IRB). To maintain confidentiality, anonymity and non-traceability the researcher adopted anonymous names or alphabets for the participants and schools. In consonance with the principle of voluntary consent, a confidentiality agreement was designed and administered with the research instruments to provide assurance to all respondents that discretion, anonymity, and confidentiality was upheld as part of the research process. As a form of contractual assurance participants of the study were required to append their signature on the agreement form. Every effort was made by the researcher to ensure that all participants were treated with respect and dignity. Participants were also not compelled or pressured in any way to participate in the study (Bryman, 2008). The researcher consciously avoided any form of deception to cajole participants to engage in the study. Finally, data collected for the study was in no way altered to suit the researcher's preference in relation to the objectives of the study.

**Data Processing and Analysis**

The Exploratory-Sequential Design utilized for the study permitted the researcher to prioritize both the qualitative and quantitative strands of the study and allowed for independent analysis of both strands. The researcher then merged the results in side-by-side comparison during the final interpretation of the results.

Conducting the interviews, transcribing and translating brought the researcher closer to the data. The researcher became conversant with the experiences and perspectives of teachers and aware of some similarities and differences in their accounts. The recorded data from the one-on-one interview was transcribed and analysed. Themes were manually developed because it allowed the researcher to probe further into the data and to become familiar with the emerging themes. The thematic analysis approach as recommended by Braun and Clarke (2006) was utilized in the analysis of the data. The approach has six phases namely, getting acquainted with the data, generating preliminary codes, identifying themes, reviewing themes, defining themes and lastly producing the write up from the data. The themes and subthemes were the product of thorough review of transcripts from recorded interviews and field notes. Key themes identified during transcription and field notes were assembled under each research question. These key themes were classified as analytical categories in relation to each research question and narratives employed to analyse the trends and patterns identified in the data.

Using the Statistical Product and Service Solution (SPSS) the data collected from the questionnaire was cleaned, edited, coded, and analysed. Preliminary data on respondents' demographics was analysed using frequencies

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and percentages. For all the research questions frequencies, percentages, means and standard deviations were obtained and thoroughly discussed Data was analysed using both descriptive and inferential statistics. The data analysis procedure is summarized in Table 3.

**Table 3: Summary of Data Analysis**

| Research Question/Hypotheses | Type of Data | Statistical Tool |
|---|---|---|
| 1. How do pre-tertiary teachers conceptualize Continuous Professional Development? | Qualitative/quantitative | Thematic analysis/, Frequencies, Percentages |
| 2. What characterises existing Continuous Professional Development for pre-tertiary teacher. | Qualitative/quantitative | Thematic analysis/ frequencies, percentages, Standard deviations |
| 3. How are pre-tertiary teachers' CPD needs being met? | | Thematic analysis Means, Standard deviation |
| 4. What is the perceived impact of existing CPD on the professional practise of pre-tertiary teachers? | Qualitative/quantitative | Thematic analysis, Means and Standard deviation |
| 5. What are the barriers to the professional development of pre-tertiary teachers? | Qualitative/quantitative | Thematic analysis/ means, standard deviation |
| 6. H0: There is no statistically significant difference in CPD activities for pre-tertiary teachers based on school category. | Qualitative/quantitative | One-Way ANOVA |
| 7. H0: There is no statistically significant difference in the perceived impact of CPD on teachers' professional practise based on teaching experience. | Quantitative | MANOVA |
| | Quantitative | |

Source: Field data, 2020

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**Chapter Summary**

This chapter began with a summary on the methods adopted for the study. This was followed with a description of the paradigm view of the study. Subsequently, an exposition on the research design, population, sample and sampling procedure, research instruments, validity and reliability of instruments, ethical considerations, and procedure for data collection was provided. Chapter three ended with a description of the processes for data analysis. Overall, the chapter provided an account of the methodology adopted for the study.

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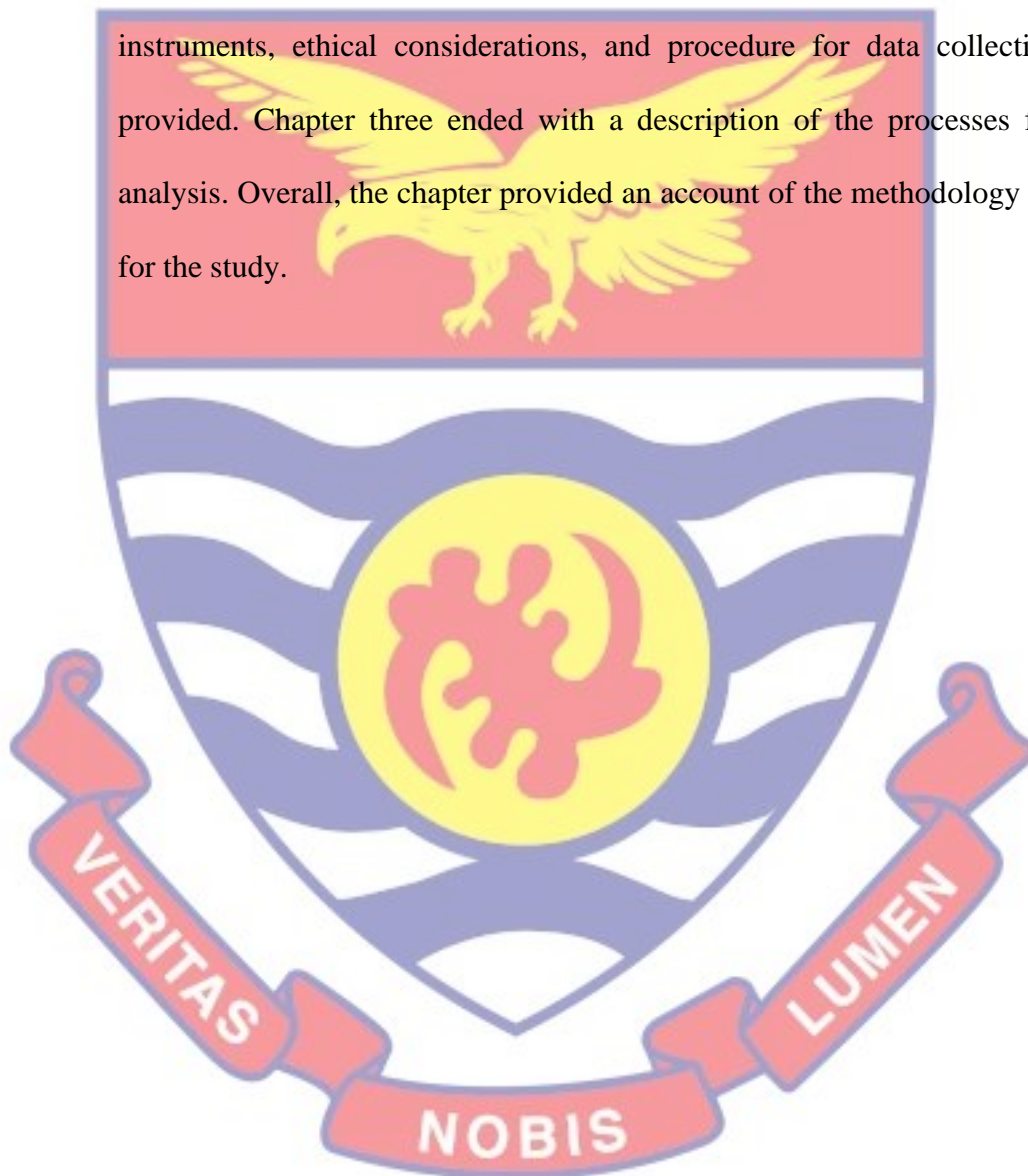
## CHAPTER FOUR

## RESULTS AND DISCUSSION

**Introduction**

The study examined Continuous Professional Development for pre-tertiary teachers and its perceived impact on teachers' professional practise in Ghana. Both quantitative and qualitative analytical methods were employed in answering the research questions and hypotheses The Exploratory-Sequential Mixed Method Design was utilized for purposes of development and expansion of data from the study. The data is ordered in the same sequence as the research questions and hypotheses. Data from the mixed methods was presented separately and merged at the discussion stage. Data presentation was sequential with the qualitative results presented first, followed by the quantitative results to buttress the qualitative findings. This procedure was carried out in line with the prescribed method for presentation of results as per the chosen design (Creswell & Plano Clark 2011).

It must be noted that three categories of respondents provided data for the qualitative strands of the study: a GES training office, head teachers and teachers. Participants in these three categories did not all respond to the same questions although the line of questioning was intended to provide analogous data as per the intent of the study. For instance, only teachers provided responses on their experiences in CPD initiatives. Also, the training officer was not engaged with respect to how teacher CPD needs were in coherence with existing CPD initiatives, only the head teachers and pre-tertiary teachers provided responses in relation to this.

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In all, one GES training officer, three head teachers and 435 teachers took part in the study. The criterion sampling technique was used to select the GES training Officer and head teachers as information rich cases. Twelve teachers were conveniently selected using the quota sampling technique where participants were engaged in an interactive discussion using interviews. For actual dissemination of the questionnaires 500 questionnaires were administered to ensure that the minimum representative sample was obtained. Preliminary data collection activities revealed that due to the COVID 19 pandemic, administering the initial 400 questionnaires may be inadequate to ensure minimum representativeness. The researcher therefore to steps to ensure that the minimum representative sample was obtained by increasing the number of questionnaires to 500. The questionnaire was then thoroughly explained to respondents who were permitted to answer the questionnaire at their convenience within two weeks in adherence to all COVID 19 safety protocols. Four hundred and sixty-two questionnaires were duly filled and returned. However, upon careful examination and scrutiny, the data screening resulted in a response rate of 76% which implies that 435 questionnaires were thoroughly completed in line with demands of the study.

For the qualitative data strands, thematic analysis was utilized to identify repeating patterns or themes. The researcher began the thematic analysis by familiarizing with the data. Preliminary codes were then assigned to the interview data and patterns identified across the different interviews. The patterns were organised into broad themes and a report was subsequently produced for all the research questions.

For the quantitative data, respondents were required to fill out questionnaires. Data derived were analysed using descriptive and inferential statistics. All research questions were analysed using percentages, frequencies, means and standard deviations. ANOVA and MANOVA were then employed to analyse the research hypotheses 1 and 2 respectively Discussions and interpretations were carried out taking into account the concepts, theories and empirical studies as discussed in the review of related literature. The chapter presents the main results from the study.

**Profile of Interview Participants**

The demographic features of respondents such as educational level, gender, age, teaching experience and teaching rank were provided by the respondents and discussed in ensuing sections. These characteristics provide some preliminary data on teachers which was utilized in testing the research hypotheses for the study. The demographics were analysed using percentages and frequencies. Table 4 provides a summary on the profile of interview participants.

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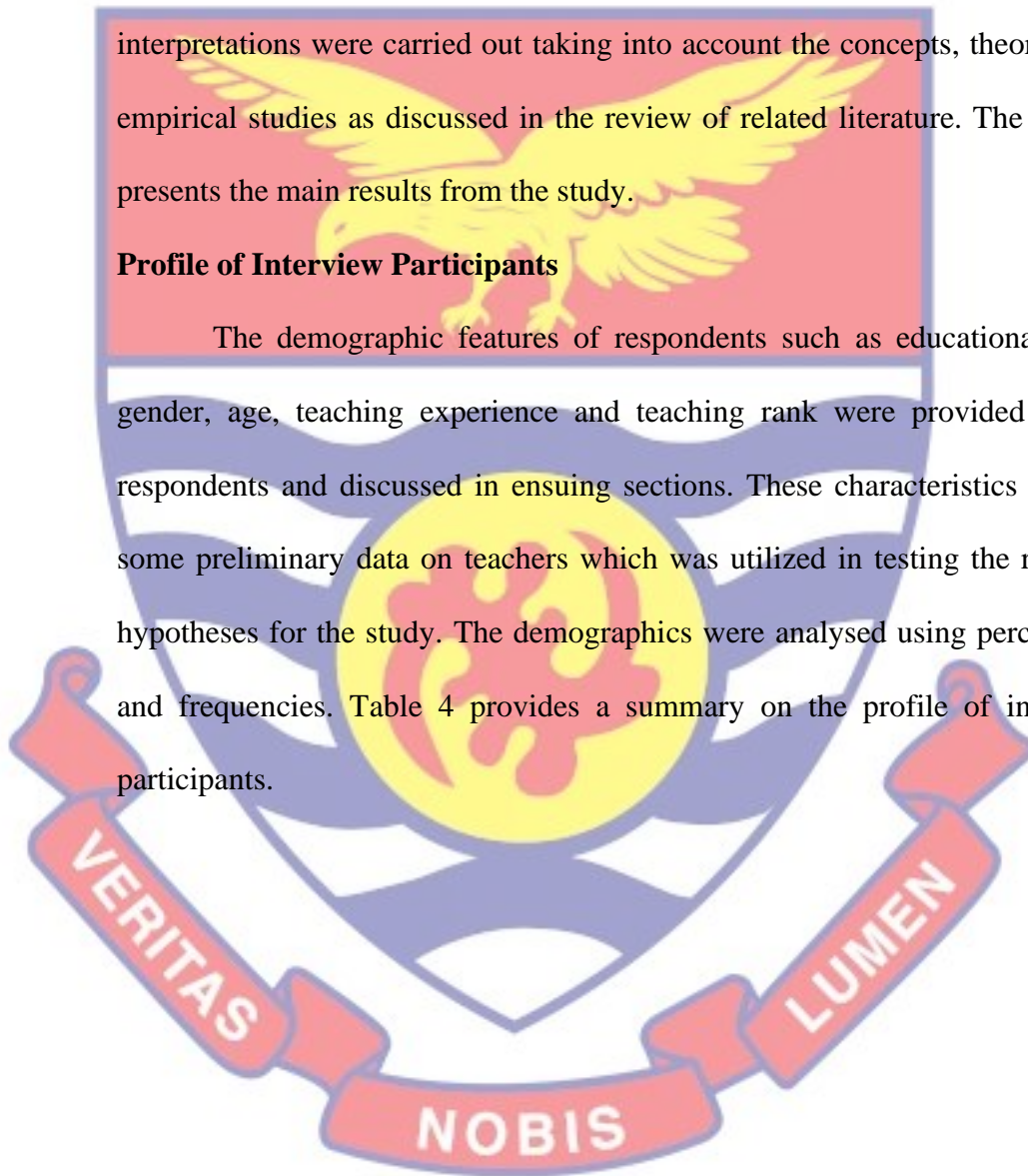
**Table 4: Profile of Participants**

| Participants | Variables | Subscales | Frequency (%) |
|---|---|---|---|
| *Training office* | N/A | N/A | 1 |
| *Head teachers* | Age (years) | 43& above | 3 |
| | Gender | Male | 2 |
| | | Female | 1 |
| | Teaching experience | 20 years & beyond | 3 |
| | Educational qualification | Master's Degree | 3 |
| | Teaching rank | Assistant Director II | 3 |
| *Pre-tertiary teachers* | Age (years) | 27-42 | 10(83.3) |
| | | 43 & above | 2(16.7) |
| | Gender | Male | 11(91.7) |
| | | Female | 1(8.3) |
| | Teaching experience | 2-5 years | 1(8.3) |
| | | 6 -10 years | 5(41.7) |
| | | 10-15 years | 2(16.7) |
| | | 15-20 years | 4((33.3) |
| | Educational qualification | Bachelor's Degree | 6(50) |
| | | Master's Degree | 6(50) |
| | Teaching rank | Principal | 4((33.3) |
| | | superintendent | 8(66.7) |
| | | Assistant Director II | |

Source: Field data (2020)

The qualitative aspect of the study, engaged 16 participants from whom data was collected. 1 GES training Officer, 3 head teachers and 12 teachers were engaged for the study. The training officer is the designated officer in charge of CPD for pre-tertiary teachers in the Central Region. 3 head teachers were purposively selected from each school category. Each head teacher possessed a Master's degree and teaching experience that spanned over 20 years. All the

head teachers were 43 years and over and fell within the Assistant Director II teaching rank. This suggests that only experienced and older teachers are likely to serve as head teachers. This reiterates the relevance of selecting head teachers as information rich cases as they have gained adequate experience in the teaching profession from their years of service which was 20 years, and over.

This better positions them to provide information on the professional development of teachers. Their length of service is sufficient time for them to be regarded as "experts" or as "knowledgeable" in matters relating to the teaching profession. For the teachers, majority (83.3%) fell within the age bracket of 27-42 years. Few teachers (16.7%) were however 43 years and older. This suggest that teachers engaged in the study were relatively young adults. The participants for the interview were also predominantly males (91.7%), only one female participated in the interview. The same number of participants who participated in the interview each possessed bachelor's and master's degrees (6 pre-tertiary teachers each) and majority of the participants fell within the Assistant Director II rank (n=8, 66.7%). With regard to teaching experience, close to half of the number of participants had been engaged in the teaching profession for between 6-10 years. In line with ethical guidelines pseudonyms such as TO, AH1, BH2, CH3, AP1, BP2, CP3 were assigned to participants to conceal their identity.

**Demography of Respondents**

This part presents and discusses the background data of respondents for the quantitative strand of the study. Four background characteristics of the respondents were deemed relevant to address the research questions and hypotheses. These included sex, age, highest academic qualification, and the

number of years respondents had served as professional teachers. The results as per the background characteristics of the respondents are presented in the tables below

**Sex Distribution of Teachers**

Table 5. presents the distribution of pre-tertiary teachers based on sex.

**Table 5: Distribution of Respondents Based on Sex**

| Sex | Frequency (No) | Percentage (%) |
|---|---|---|
| Male | 358 | 82.3 |
| Female | 77 | 17.7 |
| Total | 435 | 100.0 |

Source: Field survey (2020)

Table 5 shows that 358 (82.3%) pre-tertiary teachers are males constituting a majority of the respondents and 77(17.7%) pre-tertiary teachers are females. This finding suggests that the majority of teachers who were engaged in the study were males. The dominance of male pre-tertiary teachers in second cycle educational institutions is not a unique phenomenon in the Ghanaian context. Female teachers in secondary education in Ghana was reported at 25.32 % of the overall number of teachers in 2019 (World Bank, 2021) suggesting that female teachers at the SHS level may be fewer than their male counterparts.

**Age Range of Respondents**

Table 6 represents the distribution of pre-tertiary teachers based on the age range of teachers.

**Table 6: Distribution of Respondents Based on Age**

| Age Range | Frequency (No) | Percentage (%) |
|---|---|---|
| 26 years and below | 69 | 15.9 |
| 27 – 42 years | 258 | 59.3 |
| 43 years and above | 108 | 24.8 |
| Total | 435 | 100.0 |

Source: Field survey (2020)

From Table 6, 258 (59.3%) of the pre-tertiary teachers fell within the age range of 27-42 years. Inversely, 69 (15.9%) of the pre-tertiary teachers were between the ages of 26 years and below. This result suggests that most pre-tertiary teachers fall into the Generation Y (1981-1996) age classification according to Howe and Strauss (1991). Also known as Millennials, this generation is influenced by computers and a greater acceptance for more meaningful and innovative work (Andert, 2011). People who belong to this generation are committed to their personal learning and development which remains their first priority in the workplace. For this generation, to attract and retain them, it is important for employers to recognize what their interests and motivations are to keep them satisfied in the workplace (Guha, 2010).

**Highest Education Level of Respondents**

Table 7 represents the distribution of pre-tertiary teachers based on their highest education level.

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**Table 7: Highest Educational Level of Respondents**

| Highest Education Level | Frequency (No) | Percent (%) |
|---|---|---|
| Diploma | 4 | .9 |
| Bachelor's Degree | 307 | 70.6 |
| Masters | 122 | 28.0 |
| PhD | 2 | .5 |
| Total | 435 | 100 |

Source: Field survey (2020)

From table 7, 307 (70.6%) respondents possessed a bachelor's degree while 2 (0.5%) possessed a PhD. This provides indication that a greater number of teachers possess a bachelor's degree. The bachelor's degree is the minimum requirement for admission into the teaching profession particularly at the secondary school level. According to the Ministry of Education, the minimum teaching qualification for professional teachers in the second cycle institutions is a Degree in Education (B.Ed.) with specialisation in appropriate subjects or a Bachelor's degree in a specialized field (BA/BSC) along with Post-graduate Diploma in Education (PGDE) or its equivalent (MoE, 2012). This suggests that most of the pre-tertiary teachers are trained and possess the minimum entry requirement required to teach at the SHS level.

**Teaching Experience of Respondents**

Table 8 represents the distribution of pre-tertiary teachers based on their teaching experience.

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**Table 8: Teaching Experience of Respondents**

| Teaching Experience | Frequency (No) | Percentage (%) |
|---|---|---|
| 2 – 5 years | 121 | 27.8 |
| 6 – 10 years | 83 | 19.1 |
| 11 – 15 years | 103 | 23.7 |
| 16 – 20 years | 74 | 17.0 |
| 20 years and above | 54 | 12.4 |
| Total | 435 | 100.0 |

Source: Field survey (2020)

A close observation of table 8 reveals that 121 (27.8%) of the respondents' teaching experience spanned between 2-5 years. Conversely, 54 (12.4%) of the respondents' teaching experience spanned 20 years and over. This implies that most of the pre-tertiary teachers have adequate experience in the teaching profession. Experienced teachers are believed to confer benefits to their colleagues, their students, and to the school as a whole (Kini, & Podolsky, 2016). Such experienced teachers are most suitable for providing information in relation to teachers' professional development.

**School Category of Respondents**

Table 9 represents the distribution of pre-tertiary teachers based on school category.

**Table 9: School Category of Respondents**

| School Category | Frequency (No) | Percentage (%) |
|---|---|---|
| Category A | 50 | 11.5 |
| Category B | 144 | 33.1 |
| Category C | 241 | 55.4 |
| Total | 435 | 100.0 |

Source: Field survey (2020)

From table 9, 241 (55.4%) respondents fell within Category C Senior High Schools. On the other hand, 50 (11.5%) respondents were teachers from Category a Senior High Schools. This finding suggests that most of the pre-tertiary teachers engaged in this study teach in Category C Senior High Schools. This is largely attributable to the number of schools that fall into category C (GES School Registry, 2017). In this category, there are relatively more schools compared to schools in categories A and B. This accounts for the highest number of teachers that fell within Category C. The subsequent section discusses the main results.

**Presentation of Main results**

This section presents the main results and discussions in relation to research questions and hypotheses for the study.

**Research Question One**

**How pre-tertiary teachers conceptualize Continuous Professional Development**

CPD is widely recognized as ongoing formal and informal process of developing, maintaining, and documenting the professional skills, knowledge and experience of employees. It is simply any formal or informal training beyond initial training that seeks to improve skills, knowledge and experience of employees. Existing literature suggests that in Ghana CPD at the pre-tertiary level appears to be synonymous with INSET, with surprisingly little evidence on any further CPD activities for pre-tertiary teachers. With CPD as a kind of lifelong learning designed to assist various professions in acquiring appropriate skills and knowledge relevant for improving job performance, this study moves away from the traditional evaluation of CPD as single shot events to explore CPD holistically to involve all CPD initiatives.  In most situations, schools

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participate in systemic reform activities that include the simultaneous implementation of various CPD projects, therefore, making inferences about CPD by isolating the impacts of a single programme or activity is almost impossible (Guskey, 2002). This research question therefore sought to examine how teachers conceptualize their professional development in holistic manner to include both formal and informal initiatives. Only teachers were engaged for this research question. Data was collected both qualitatively and quantitatively. Thematic analysis, frequencies and percentages were employed to analyse the qualitative and quantitative data respectively.

For the qualitative aspect, teachers' conceptualization of CPD was examined by exploring what they believed existed as CPD and what counted as CPD for teachers. To understand teachers' conceptualization of CPD, participants were asked to indicate the types of CPD available, what personally counts as CPD and what generally counts as CPD. Two dominant themes emerged around these questions; CPD initiatives available and what teachers recognise as CPD

**CPD initiatives available**

This theme was organised around responses by participants on what they believed existed as CPD. This examination of available CPD was to cover a broad spectrum of both formal and informal activities directed at improving competencies of teachers. Participants were asked to identify CPD initiatives available for pre-tertiary teachers as part of their professional work. Participants indicated that there were several CPD initiatives available to them as teachers. Further studies was identified as a one of the most predominant CPD initiatives available to them. Participants also indicated seminars among others as part of

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CPD initiatives available to teachers. Some participants also indicated peer-peer discussions as a component of their professional development. According to one participant:

> *For our continuous professional development, we engage in a number of activities. Sometimes workshops and seminars are organised for us. Most of us have also completed our master programmes, many are still considering going to school and we do a lot of personal research from the internet and recommended textbooks which helps a lot when we go to class (AP4).*

Other participants intimated that:

> *We have workshops, INSET and we further our studies, I am almost done with my masters so yeah, we are engaging in professional development (BP4)*
>
> *We have a lot, we have workshop, seminars, in-service training, further studies (CP1)*
>
> *Well, we have school-initiated workshop where we go and come back to share and we try to further our studies as well and we have departmental discussions which is very prominent here because that is where we discuss important things like how to teach to go about our teaching (BP1)*

Some responses by participants about available professional development initiatives are summarized in Table 10.

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**Table 10: Participants Responses on Available CPD**

| Participants | CPD Initiatives |
| --- | --- |
| AP1 | *Here in our school, we have workshops to help the teachers in the various subject areas with challenges that they may have. There are also workshops that are sometimes organized by GES, one or two people go and come back to share what they learnt. We are also furthering our studies and yes sometimes seminars too* |
| AP2 | *Well for the CPD we try to further our studies, many of us have started our master's degree and we are almost finished. We also go to workshops but sometimes that one you must pay yourself, so we go but it's not often. In school too we organize seminars which are quite useful.* |
| CP2 | *We have in-service training and at least every term we have some departmental workshops or seminars that we discuss issues that will improve our practise and sometimes we do personal research cos there are a lot of things changing today* |
| CP4 | *Here we have workshops yeah, and sometimes you research some topics on the internet too. The internet is very useful for getting information that helps us a great deal in our teaching. Sometimes too when we don't understand something or have difficulties we discuss with colleagues and they help us to overcome those challenges. GES also organizes "INSET" yeah* |
| BP2 | *We go to school to further studies our studies and we also have workshops* |
| BP3 | *I think we have workshops and seminars but that one is not often, so we have that once in a while. We are also thinking of going back to school, and in fact a few of my colleagues are even on their master's programme. So that is what is there* |

Source: Field data (2020)

**What Pre-tertiary Teachers Recognise as CPD**

A fundamental assumption about CPD is that often individual professionals lead and design their own CPD programme. Most professionals therefore decide on and engage in CPD initiatives which they consider to be beneficial in ensuring opportunities for growth in their professions. To understand how teachers, conceptualize CPD, they were asked to indicate what they believed counted as CPD. This theme emerged from the personal orientation of teachers about CPD and what they generally believed was appropriate as CPD. Further studies, workshops and seminars were emphasized by participants as what they believed counts as CPD from a personal standpoint. According to some participants:

> For me I believe what counts as CPD is the workshops because we are able to learn a lot from such workshops (CP4).

> For me I think what counts is the further studies, that helps you to learn and increases your chances of getting promoted too.  Seminars mostly focus on what we do in the classroom or in the school and does not count in terms of your rank so I think going to school counts (CP3).

> Well further studies help a lot because you learn new things and sometimes too when we have discussions with our colleagues, we can learn something, so sometimes when the departments bring us together for discussions it's really good for us (CP2).

> Here in teaching, further studies is what is important. Experience doesn't count, your ability to upgrade yourself is what counts for promotion (BP3).

*I think what counts for me is further studies and workshop, you can easily get promoted with your masters and sometimes they can ask about workshops in our promotion so I think these two count for me (AP2).*

Some participants however went on to indicate peer-peer discussions and mentorship as useful in their professional development. A participant noted that;

*I think workshops are helpful and sometimes too we can learn from senior colleagues here in the school. That helps us to know what we should do and what we should not in relation to teaching. Sometimes too we discuss issues in the staff common room about our subject areas, I teach maths so sometimes if students are struggling or I don't understand something then they help me a lot and I learn a lot. Sometimes too I think the INSERT is very good. when they come back, we learn new things (AP3).*

A participant was convinced that all experiences that provided learning were what he recognised as CPD, he indicated that:

*For me I think all experiences that provide learning counts as CPD, whether it is seminar, workshop or anything else, I think if I learn something that will help me to become a better teacher then that is CPD for me (AP1)*

To further explore teachers' conceptualization of CPD, the teachers were again asked to indicate what they believed was recognised by their colleagues as CPD. Further studies, workshops and seminars were predominant in participant responses. Most of the participants indicated further studies and workshops, only a few participants indicated seminars. Table 11 highlights some participants responses on what teachers generally recognize as CPD.

**Table 11: Participants Responses on What Generally Counts as CPD**

| Participants | What Generally Counts as CPD |
|---|---|
| AP1 | Like I said the departmental workshops, workshops by GES and Further studies. |
| BP2 | It is further studies and workshops. |
| AP4 | Ooh that one it is seminars and workshops. |
| CP1 | That one I think its seminars. |
| CP2 | I think there it is the departmental workshop that my colleagues recognize. |
| CP4 | I think it is the workshops but that one is not organized often. Once in a while GES organizes workshops and we get to go to some of these workshops. |
| AP3 | I think workshops, further studies and seminars. |
| BP4 | Well, I think the workshops because that is what people normally focus on and the INSET too. |

Source: Field data (2020)

For the purposes of triangulation, frequencies and percentages were employed to examine how teachers conceptualize their professional development by requiring respondents to indicate what they believed constitutes CPD. Respondents were required to tick which CPD initiatives was considered to be part of their CPD experience as professional teachers. Initiatives that respondents failed to tick were considered as ones that teachers do not recognise as part of their professional development. Frequencies and percentages were employed to analyse the data. Table 12 presents results from the analysis of data

provided by the respondents on what activities constitutes CPD for pre-tertiary teachers.

**Table 12: Components of CPD for Pre-Tertiary Teachers**

| CPD Activities | Yes | No | |
|---|---|---|---|
| | Freq (%) | Freq (%) | Total |
| Seminars | 317 (72.9%) | 118 (27.1%) | 435 (100%) |
| Workshops | 385 (88.5%) | 50 (11.5%) | 435 (100%) |
| Academic Programmes (e.g., Diploma/Degree/Masters) | 335 (77.0%) | 100 (23.0%) | 435 (100%) |
| Observation visits to other schools | 68 (15.6%) | 367 (84.4) | 435 (100%) |
| Peer-peer discussions | 124 (28.5) | 311 (71.5) | 435 (100%) |
| Individual/Collaborative research | 103 (23.7%) | 332 (76.3%) | 435 (100%) |
| Mentor-mentee relationship | 88 (20.2%) | 347 (79.8%) | 435 (100%) |
| Peer observation | 78 (17.9%) | 357 (82.1%) | 435 (100%) |
| Informal dialogue to improve teaching | 75 (17.2%) | 360 (82.7%) | 435 (100%) |

Source: Field survey (2020)

Table 12 reveals that the majority of teachers, 385 (88.5%) recognized workshops as predominantly what constitutes their CPD. This is followed by further studies (335, 77.0%) and seminars (317, 72.9%) as what constitutes their professional development. Similarly, the majority 360 (82.7%) of the respondents affirmed that informal dialogue to improve teaching was not recognised as part of teachers 'professional development. This is followed by

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observational visits to other schools (367, 84.4%) and peer observation (357, 82.1%) which pre-tertiary teachers do not recognize as part of the professional development. This suggests that workshops, further studies, and seminars are what is widely recognized as professional development by pre-tertiary teachers. Informal dialogue to improve teaching, observational visits to other schools and peer observation are not recognised by pre-tertiary teachers as essential components of their professional development.

**Data Integration**

Evidence from the initial qualitative strand discovered that teachers' conceptualisation of what constitutes CPD is predominantly workshops, further studies and seminars. Only a few participants considered mentorship and peer-to peer discussions as a relevant aspect of their professional development. This finding suggests a more traditional view by teachers about their CPD (Birman, et al., 2000).

The quantitative aspect reaffirmed this result by providing further indication of how pre-tertiary teachers recognize workshops, further studies and seminars as major components of their professional development but place little emphasis on informal dialogue to improve teaching, observational visits to other schools and peer observation as critical components of their professional development. These findings are consistent with extant literature on teachers' CPD that have identified traditional or formal CPD strategies such as short-term developmental courses, INSET, workshops, conferences and formal education as professional development for teachers (AL Balushi, 2018; Alibakhshi & Dehvari, 2015; Atta & Mensah, 2015; Ngala & Ordebero, 2009; Yates 2007; Hustler, McNamara, Jarvis, Londra & Campbell, 2003). Hustler et al. (2003),

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for instance, revealed in a study that most teachers recognise the traditional models of professional development such as conferences, academic courses and in-service training. Another study by Alibakhshi and Dehvari (2015) revealed that key professional development activities for teachers comprised formal academic courses as well as presentations at CPD events. Yates (2007) also found that teachers recognised lengthier courses to be more relevant to their work and endorsed long term activities such as further studies.

It is relevant to consider that such a traditional conceptualization of teacher professional development is worrying because it is unfitting for bringing about any real change in teachers and their professional work and must not be accentuated by pre-tertiary teachers. Heba, Mansour, Aldahmash, and Alshamrani, (2015) note that often what teachers describe as CPD points out the passive nature of predetermined CPD programmes which creates a path for how they view their professional identity. It is however relevant to reiterate that learning activities that involve presentations and memorization of new information are less likely to result in a change the practices of teachers (Birman et al., 2000; Desimone et al., 2002; Garet, Porter, Desimone, et al., 2002; Loucks-Horsley, Hewson, Love, & Stiles, 1998; Wayne et al., 2008).The risk of emphasizing such formal CPD activities as key aspects of teacher professional development is that in many schools, teachers are often isolated from each other and fixated on what Fullan (2016) calls "the daily press" of getting through their daily routines and maintaining state standards which keeps teachers absorbed in daily routines unless they are stimulated to identify, discover or try new routines that could be suitable and consistent replacements to what they know.

Traditional learning programmes such as workshops and seminars which Ball & Cohen (1999) describes as "style shows," are unlikely to result in any meaningful change in the practise s of the teacher. Research suggests that for many teachers, their initial training was carried out adopting models of learning that concentrate heavily on rote memorization which does not emphasize in-depth comprehension and analysis of subject matter (Darling-Hammond, 2005). This may influence what and how they believe they must learn beyond their initial training.

Teachers' conceptualization of their CPD as per the results of this study may therefore mostly be attributed to initial training. It becomes necessary for teachers to shift from the traditional view of CPD to more creative and innovative ways of learning that will ensure not only personal growth but more likely improved school and student outcomes. Shifting to a more balanced approach of teacher learning which does not recognize teachers as passive recipients of knowledge is critical to ensure teacher success and effectiveness. This requires a breakdown of existing ways of viewing CPD to facilitate collaborative and teamwork and provide ample time which should enable teachers to plan and participate in a wide range of activities that will ensure teacher learning and improvement. When it comes to what teachers must consider as learning for their professional and personal growth, teachers in this instance must alter their thinking about how and what to learn. Feiman-Nemser (2001) proposes that through teacher interaction by way of formal and informal activities some learning can occur. This suggests that teacher learning may be more effective when activities require them to engage with practise materials integrated into the daily work as teachers and when the pedagogics of

professional development is active and requires teachers to learn in ways that reflect how they should teach.

This requires a change in the ways in which they spend their time and collaborate. Some effective strategies such as partnerships, teams, informal support systems and collaborative have been identified as ways to get teachers to break out of their routine. Teachers can learn and develop competencies through non-traditional means relating to their own practise such as individual research or action research through journaling, writing essays, classroom research, and oral inquiry procedures (Cochran-Smith & Lytle, 2009). These activities are recognised as efficacious elements in ensuring teacher learning and development and are credited as part of a broad-based change effort to improving teacher learning because teachers require time to create, absorb, ponder, and put new information into practise (Garet, et al., 2001).
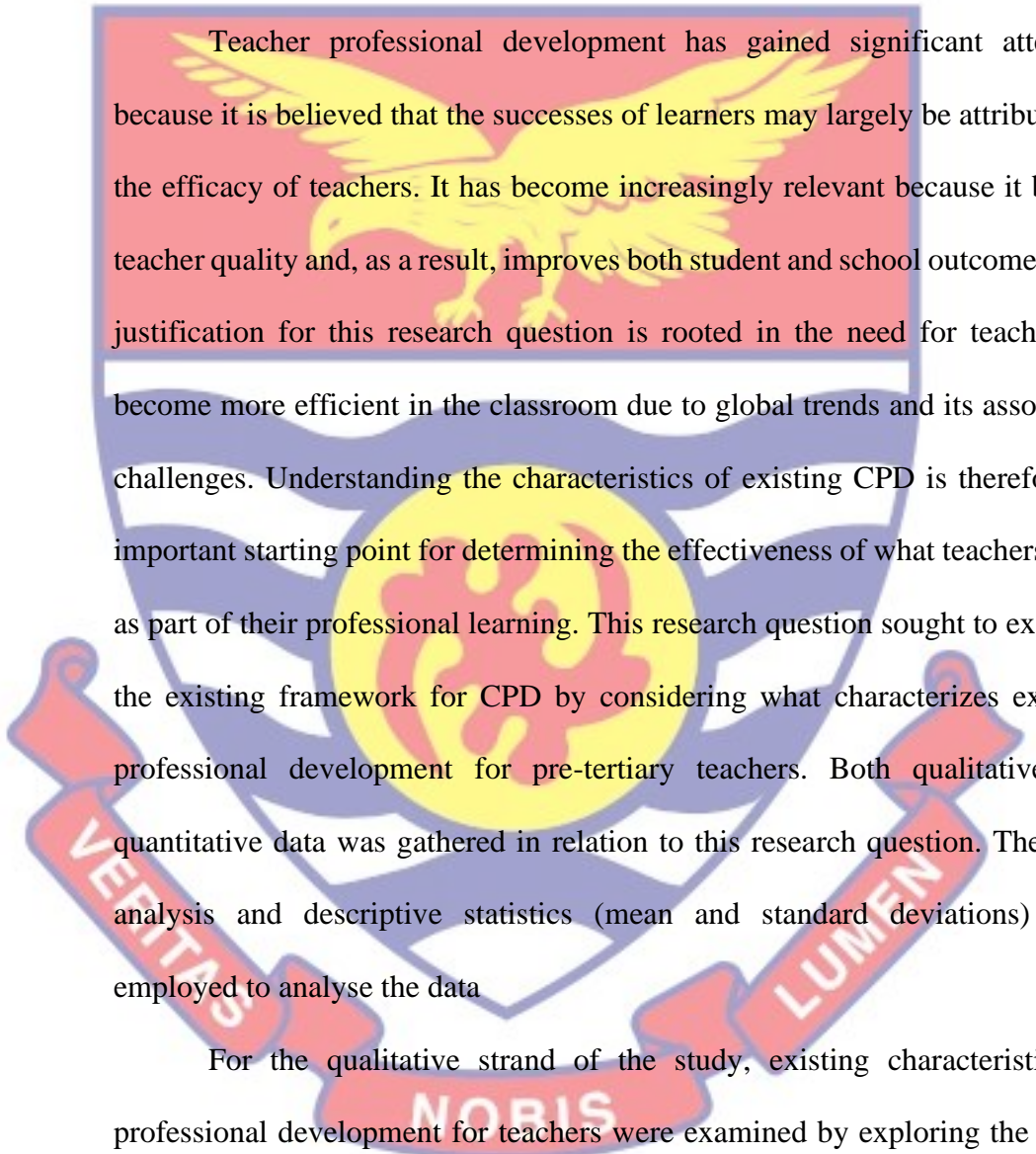
Informal strategies such as professional development plan, study groups, invention teams, coaching and mentoring, observational visits and online learning may be adopted together with formal strategies to help improve teacher professional practise and ensure opportunities for improving their competencies on the job which should bring about real change in the classroom. As a result, all activities that teachers will adopt as part of their professional development will be continuous and exhaustive rather than brief and sporadic.

It may be also important to consider that teachers' conceptualization of professional development as per the findings may be attributable to formal prescriptions by governing institutions about what teacher professional development must be. This may skew teachers' thinking and appreciation for CPD activities towards such formal models of professional development. The

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subsequent research question will therefore attempt to examine what characterizes existing CPD for pre-tertiary teachers to understand the existing framework for the pre-tertiary teachers' CPD.

**Research Question Two**

**Characteristics of existing CPD for pre-tertiary teachers.**

Teacher professional development has gained significant attention because it is believed that the successes of learners may largely be attributed to the efficacy of teachers. It has become increasingly relevant because it boosts teacher quality and, as a result, improves both student and school outcomes. The justification for this research question is rooted in the need for teachers to become more efficient in the classroom due to global trends and its associated challenges. Understanding the characteristics of existing CPD is therefore an important starting point for determining the effectiveness of what teachers have as part of their professional learning. This research question sought to examine the existing framework for CPD by considering what characterizes existing professional development for pre-tertiary teachers. Both qualitative and quantitative data was gathered in relation to this research question. Thematic analysis and descriptive statistics (mean and standard deviations) were employed to analyse the data

For the qualitative strand of the study, existing characteristics of professional development for teachers were examined by exploring the forms of CPD, importance of CPD to pre-tertiary teachers and teacher involvement in CPD. Based on the shared views of the participants, three main themes emerged; structure of CPD initiatives (who provides CPD, design and frequency of CPD

initiatives and nature and focus of CPD initiatives), relevance of CPD and participation in CPD

**Structure of CPD initiatives**

To fully grasp the full range of CPD available to teachers, it became necessary to examine CPD for pre-tertiary teachers by looking into the structure of CPD for pre-tertiary teachers. Participants were therefore asked to identify the types of CPD available, who provides CPD, design and frequency of activities and the nature and focus of CPD activities teachers engaged in. This theme was organized around the shared views of participants (pre-tertiary teachers, headteachers and the training officer) concerning these issues. Regarding available CPD, for the most part, what a governing institution or employer approves for its employees as CPD may often become a guide for how employees should think about and engage in their professional development. Participants were engaged on how pre-tertiary teachers view their CPD through the eyes of their employers, the Ghana Education Service. All Participants indicated that further studies, workshops, seminars and INSET were the main activities that counted as CPD from the employer's perspective. As representatives of the governing institution or employer of pre-tertiary teachers, the training officer and head teachers as were also engaged as key informants to provide information on what GES prescribes as professional development for teachers.

The training office is the designated officer in charge of CPD for pre-tertiary teachers in the Central Region. According to him, a combination of learning activities comprised professional development for teachers. He expressed that:

*We have from the very beginning relied on the University of Education and Cape Coast University, the department of Institute of Education Planning and Administration (IEPA) to have had some form of career build up for our teachers…… these come in the form of workshops, seminars and a full time one year top up to their academic qualification. We focus much on workshops and we encourage teachers to take up to educational programmes at higher levels because the workshops sometimes because of duration doesn't give the teacher the in depth understanding of the concepts we want to imbibe in them. So, our focus mainly as GES is focused on workshops and seminars.*

The head teachers who are school leaders serve as representatives of the governing institution. In their respective schools, they expected to coordinate professional activities for pre-tertiary teachers. The head teachers also indicated that workshops, seminars and further studies were the main CPD initiatives recognized as components of teacher professional development. Table 13 highlights the responses of headteachers regarding available CPD.

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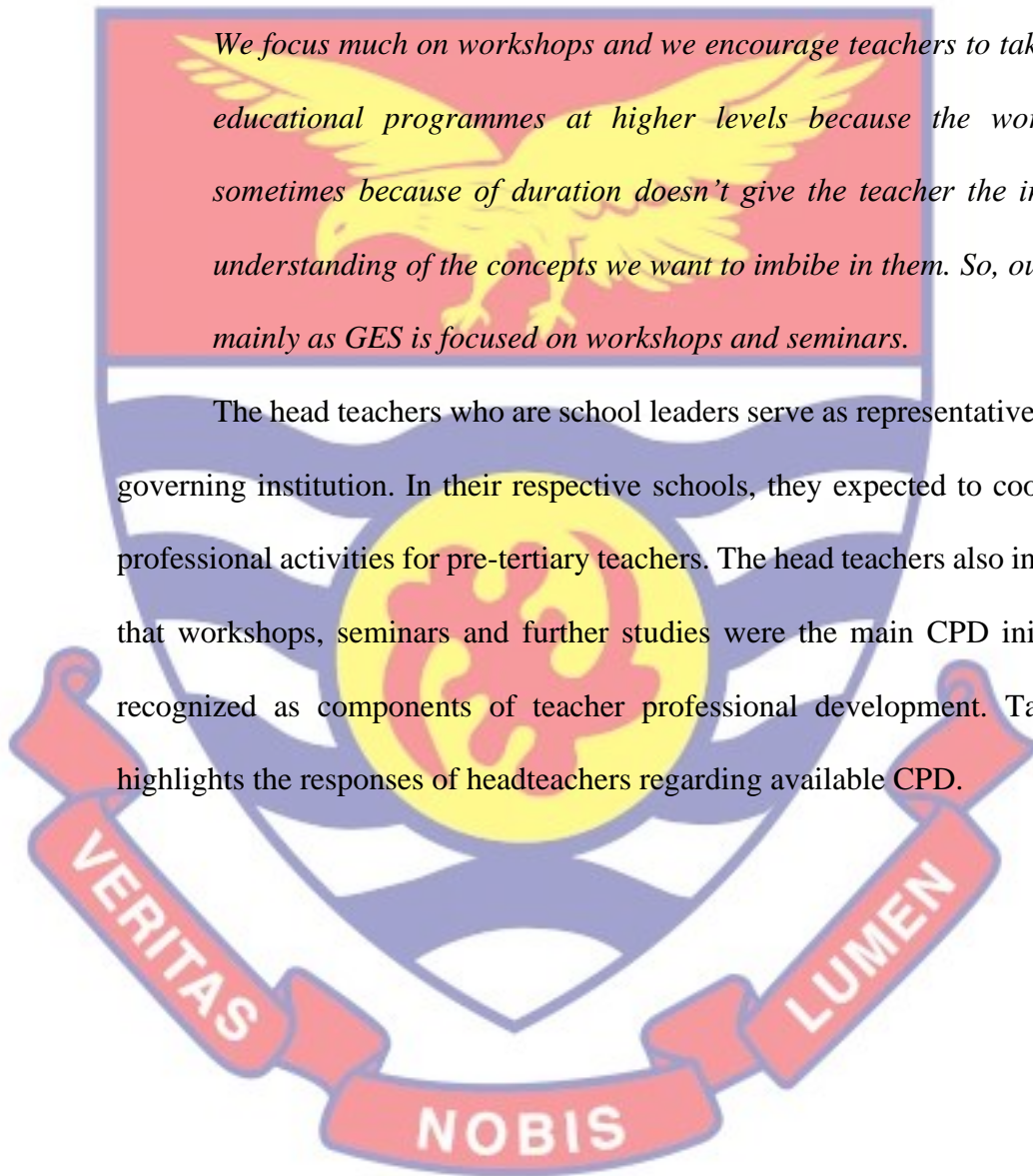
**Table 13: Responses of Head teachers on Available CPD**

| Participants | Head Teachers' Responses on Available CPD |
|---|---|
| CHT | *We have in-service training and programmes organized by GES especially for those about to be promoted and sometimes we organize programmes in the school for fresh postings (CHT)* |
| AHT | *we have workshops, seminars, further studies, continuous personal research of the individual by reading articles, periodicals, books, research on the net always and looking out for new information relating to the subject that the person is teaching (AHT)* |
| BHT | *Here in our school, we do peer-peer teaching and the teachers who are new have to observe the more experienced ones. Sometimes too we have resource persons who come in to help train our teachers. IEPA in the University, you know them? they also organise workshops which some of our teachers attend. Yes, and some go on further studies through sandwich programmes. We also have situations where teachers learn from their senior colleagues and sometimes on a departmental level, they teach among themselves (BHT)* |

Source: Field data (2020)

The key informants emphasized workshops, seminars and further studies as the main CPD initiatives prescribed and recognized in the professional development of pre-tertiary teachers. One head teacher, however,

indicated that among the initiatives, personal research was a component of professional development for teachers.

**Who provides CPD for pre-tertiary teachers?**

Professional development will most likely be more accessible and encourage teacher participation where it receives sustained support from schools. Participants were asked to indicate who was responsible for providing CPD for pre-tertiary teachers. All teachers indicated that the school drives their CPD initiatives. According to them, the school was responsible for all issues relating to their CPD initiatives.  The head teachers through the Head of Departments (HOD's) ensure that teachers are engaged in activities that ensure their professional growth. Some participants indicated that in their schools it was a requirement for HOD's to organise a learning activity for teachers at least termly. According to a participant, "*teachers are required to be present during any organised session where we have to discuss topical issue" (AP4).*  This often ensures that all teachers participate in professional development activities each term. A few participants however indicated that in addition to school support, they are encouraged to find ways to improve student outcomes which motivate them to identify out of school workshops they can attend. In this case, they become personally responsible for funding their own efforts at improving themselves professionally. Participants indicated that:

> *It is the school that is responsible but because they are not frequent, we take it upon ourselves, we pay ourselves so we can participate in some workshops, otherwise we will just be there (CP4).*

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*The school, HOD's. GES does not fund post graduate studies so if you want to go, you pay yourself. So, for some of the initiatives we take it ourselves (AP3)*

A few participants indicated that external bodies such as Parent Teacher Associations (PTA's), Teacher Unions and Old Students Associations play a supporting role in making available CPD initiatives for teachers. A participant noted that;

*GES once in a while but the school most of the time will have programmes for the teachers. Some of the teachers also go themselves, for instance I knew I had to further my studies, so I went but GES does not fund post graduate programmes. And here too, we are fortunate, the old girls help a lot, some organise people to come and give us training. It's very interactive (AP4).*

Regarding who drives CPD initiatives, the head teachers as key informants also revealed that;

*Well for that on I think it's all relevant stake holders, the PTA and old boys sometimes sponsor some of our programmes, the school will also sometimes help but because of funding we are unable to do that often. And of course, the teachers sometimes go to further their studies (AHT).*

*Well, the school is responsible for the teacher's development, so we take charge of most of the programmes but sometimes depending on the activity, the teachers fund it themselves (CHT).*

*The head is the one who is in charge of ensuring teachers receive training in fact it is the school. The HOD's provide us with the information we need so we can help our people (BHT).*

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The training officer's response also affirmed teachers' responses on who drives CPD. The officer indicated that GES takes the lead in providing professional development for teachers and carries out this mandate by collaborating with interest groups to ensure that they can provide some CPD sessions for pre-tertiary teachers. According to him,

> *The lead is GES in collaboration with some interest groups because there are times where we have to write proposals to some interest groups soliciting for their financial support in making sure we are able to ...*

Overall, participants' shared responses revealed that the school on behalf of the governing institution oversees and drives CPD activities for pre-tertiary teachers. A few participants also indicated that in some cases teachers sponsored their own professional development depending on the type of professional development activity. Interest groups such as PTA and old students' association also provide support in making available CPD initiatives to pre-tertiary teachers.

**Design and frequency of CPD initiatives**

The design and frequency of CPD activities for teachers are important in determining how effective such activities will be in ensuring improvement in the professional practise of teachers. Participants shared their views about how such CPD activities were organised. A few participants indicated that CPD initiatives were organised annually. A participant was quick to add that although it was organised yearly, they had not participated in any CPD initiative in years. Some participants noted that

*It is organised annually, when I came to the school first, I think for the first two years we did something, but I have not been to any for five years now (CP2).*

*It is organised yearly, but I have not gone in a while (AP2).*

Other participants indicated that such initiatives were provided termly of even quarterly. Most participants however indicated that there was no structure for how such initiatives were organised and provided to pre-tertiary teachers. According to them, it was organised randomly and had no structure. Some participants indicated that;

*As for the programmes they are not frequent at all, sometimes they organise, sometimes they don't. 5 years now I haven't been to any workshop, so peer-peer and personal research is what I do. They need to work at it, it's not helpful at all (CP4).*

*There is no structure, sometimes it's termly or sometimes we hear of a lot in a month, sometimes its yearly. I think it depends on the organizers and when they believe we should have a programme (AP3).*

Head teachers also had this to say about how CPD activities are organised for pre-tertiary teachers. Table 14. Provides a summary of some responses from head teachers

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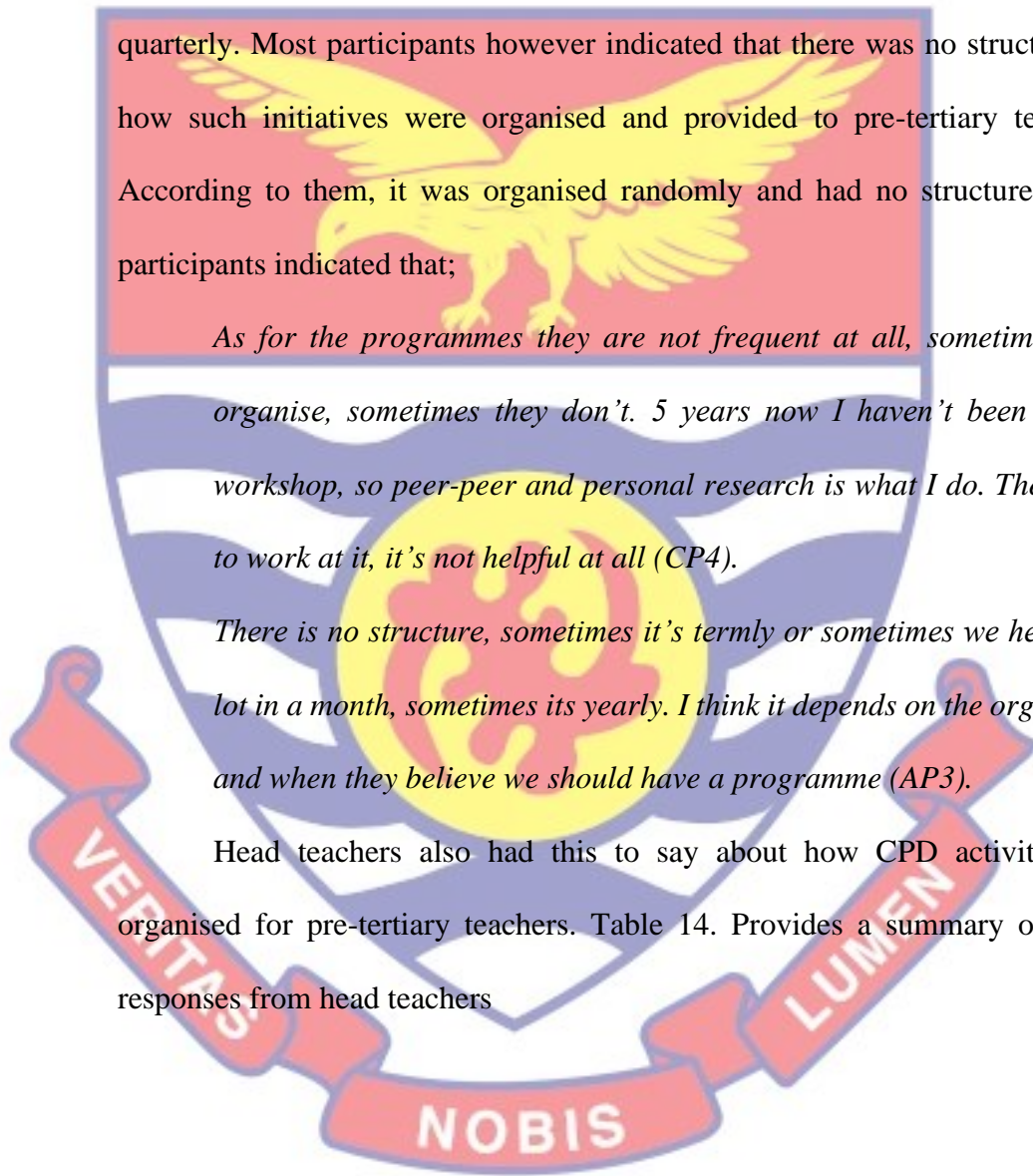
**Table 14: Headteachers' Response on how CPD is organised for Pre-tertiary Teachers**

| Head teachers | Responses |
|---|---|
| BHT | *I think it is quarterly, every term or now semester* |
| CHT | *Ok I believe there is no structure. As and when GES can they organize it so it depends on the facilitators, it is often random but for In-service training on departmental level may be weekly/monthly.* |
| AHT | *I believe that it is organized as and when the need arises* |

Source: Field data (2020)

Again, the training officer indicated that professional development programmes were organized quarterly for pre-tertiary teachers. He indicated that:

*Because of our academic calendar we always want to tailor the trainings to be within the school session so until when we were using the termly thing it was termly but now that it has moved to into semester, we say we do it within the semester. So, lets say quarterly because the semester spans between 3-4 months.*

Altogether, participants shared views revealed that CPD initiatives are organized randomly for pre-tertiary teachers. While a few participants intimated that it was organized quarterly, it appears such programmes have not been frequent so there is no clear structure for how it is organized. Participants went

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further to share their views on how frequently they participated in CPD initiatives. According to them, as far as they were concerned, CPD activities organised for them were not organized as regularly as it should be. Participants noted that:

*The programmes they organise are not frequent at all. I have not been to a workshop in about five years (CP2)*

*I can't even remember the last time I went to any workshop or something like that so it is the school that mostly organises some learning activity for us to engage in (BP3).*

The training officer confirmed this assertion by pre-tertiary teachers in his submission by indicating that

*So new restrictions have come up as the teacher development to our GES having to come up with training sessions that is organised occasionally to help sharpen the skills of our teachers. Because of financial constraints we are sometimes unable to roll it out within the period that we are supposed to.*

**Nature and focus of CPD activities**

To further explore the existing structure for professional activities for pre-tertiary teachers, participants were engaged on the nature and focus of CPD activities. Most of the participants suggested that most CPD activities they engaged in were mostly lectures which featured experts in relevant fields who led discussions on relevant topics. Participants also noted that they often observed demonstrations by speakers which they were expected to replicate in classroom situations. A participant expressed that;

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*Yeah, for most of the programmes I have attended we observe the expert who walks us through some new topics. It's quite educative (CP1)*

Only a few participants indicated that a few times they were actively engaged in programmes which required them to work on specific activities which was expected to be retaught to their colleagues or to replicate in the classroom. According to a participant.

*In our department sometimes we work on some selected topics and devised some strategies to help teach students, then we present to the entire department. It was an idea by one of the heads (AP3).*

Moving on to the focus of CPD activities pre-tertiary teachers engage in, participants indicated that the focus has mainly been to address issues in their subject areas, assessment of students, teaching methodology and technology usage in teaching. The focus of CPD activities on the subject area of pre-tertiary teachers was predominant in participants' responses. Most participants indicated that the focus of CPD activities has usually been to address issues related to their subject area.

*Most of the activities we have engaged in usually focus on helping us with topics in our field and how to assess students. Sometimes too we are taught some issues on school leadership (CP1)*

*The focus is often on subject areas for teachers, we also do think pair share, and learn different teaching methodologies, sometimes too we deal with assessment issues (AP4)*

*We are usually taught how to use technology in our teaching content area and how to teach some difficult topic. Sometimes too we use YouTube to understand some difficult topics on our own (CP2)*

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*The focus is on our subject areas, we learn new methods of teaching and how to engage students better (BP1)*

*We focus more on our subject areas and sometimes we discuss among ourselves what is relevant for teaching. We learn new things from departmental discussions. (BP2)*

*The focus is mostly on lectures and discussions during departmental meetings, we also have a lot of discussions on how to teach business subjects (BP3).*

The training officer and headteachers also indicated that for the focus of CPD activities;

*We've had support to adapt to in the use of technology for teaching and again we have also trained teachers on the use of the syllabus and sometimes we have teachers recruited into the SHS with virtually no professional qualification except for the academic qualification in teaching the subject so we realized that it was very important. We occasionally offer some form of training to grow these teachers to also develop the professional touch so we advise errm they go to take one year top up in education at the University of Education and Cape Coast University as well.*

*But the point is, all these well said and done, practically when you come to the classroom or you go for inspection you still find deficiencies in the strength of teacher's delivery so as a directorate, we sometimes will consider offering some form of training that has to do with demonstrating the best practices in the classroom to our teachers to*

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*develop their capacity and skills in making sure they are able to handle their individual delivery (TO).*

*The focus has mainly been on how teachers teach, I mean the teaching methodology because most teachers seem to have issues in relation to that. Also, sometimes the ethics of the profession is explained to teachers to help them know what is expected of them and how they should even behave as teachers (CHT)*

*We often have group activities and presentations on relevant topics in the subject areas to help improve teaching. This is very helpful because the various subject areas have their own designated times for identifying issues and adopting strategies that will help them solve any problems they have. We also sometimes bring in experts or go for workshops where teachers learn a lot on different issues. Sometimes they deal with teacher methodology or assessment. Sometimes too they deal with the professionalism it really depends on what the workshop is for (AHT)* .

From the narration, participants' responses clearly indicate that the structure for existing CPD for pre-tertiary teachers has mainly been workshops, seminars and further studies which were recognised as CPD for teachers. GES and schools were also reported to be responsible for providing the overall direction for all CPD activities. Again, participants had varied views about the design for CPD activities. While some participants indicated that it was organised annually, others indicated that it was organised termly or every quarter. This suggests that CPD initiatives were organised randomly. This was expressed in their responses that CPD initiatives were infrequent, and that they participated as often as it was organised. Participants went further to indicate

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that most CPD activities they engaged in were lectures and presentations which mostly feature experts who lead discussions in relevant topics and in some cases demonstrations of specific activities which they were required to replicate or reteach to their colleagues. Responses from participants also highlighted that the focus of CPD activities has been to address issues relating to the teaching profession such as subject areas, assessment, leadership, teaching methodology, use of technology and syllabus interpretation. Issues relating to subject areas were however emphasized as the focus for most CPD activities.

**Participation in CPD**

Teacher engagement in CPD activities is recognised as essential for improving teacher quality. To gain insights into what characterizes existing CPD for teachers, their involvement in CPD activities was examined to determine pre-tertiary teachers access to professional development activities and how often pre-tertiary teachers participated in existing initiatives. Participants provided responses regarding the sufficiency and appropriateness of access to CPD initiatives and how often they participated in CPD initiatives.

The availability of CPD initiatives and flexibility that comes with engaging in such initiatives will most likely determine teachers' participation in CPD. Participants were engaged on the availability and accessibility of CPD initiatives. Most participants indicated that CPD initiatives where insufficient and far below their expectations. A participant noted that

*Not adequate, yearly is inadequate. We at least get to go to some workshops so there is some access but it is not sufficient (CP1)*

Some participants went on to insist that information concerning CPD initiatives did not reach them on time. According to them, information

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concerning some CPD programmes reached them only after it had been completed making it difficult for them to attend. They lamented that:

*Information does not reach us on time, no. most of the time for some of the workshops we hear about them, and our school will always make arrangements for us to go but the issue is that we don't get some of the information on time and when you miss it, it takes a while before you hear about another one (CP4).*

*No, I don't think so because the programmes are not organized and sometimes, we don't even hear about it (BP2)*

A participant was however indifferent and said "*I think somehow it is available*" *(BP3).*

Similarly, all participants went ahead to indicate that their participation in CPD activities was dependent on how often GES made available such activities. Participants indicated that their participation was not as frequent because the programmes were not organized as often as it should be. According to some participants, it had been years since a programme was organised for them to attend. They expressed that

*It's been years since I attended any programme, if I can recall it may be 4 years ago. The truth is they do not organize programmes as often as they should, so we go when they organize it (AP2).*

*As often as possible. The last one I attended was 2 years ago (BP2).*

Generally, in relation to pre-tertiary teachers' participation in CPD, responses from participants revealed that there was insufficient access to CPD initiatives because such initiatives were inadequate. Participants also revealed that they participated in such activities as often as it was available.

**Relevance of CPD Initiatives**

The relevance of CPD initiatives to pre-tertiary teachers may often be dependent on how well it is tailored to the job or job embedded, in this case, how CPD activities influence teachers' classroom activities. To ensure that CPD is job embedded, it will require CPD to be linked to teachers' performance reviews and to ensure that teachers' experiences in relation to their professional development will be positive in ensuring proper growth. Participants were asked to indicate how existing CPD is linked to their performance review and to narrate what their experiences were in relation to CPD they had engaged in. From the discussion most participants revealed that existing CPD was not linked to their performance reviews. They indicated that their promotion was based on their ability to pass examinations that were conducted by the governing institution. According to them, further studies was mostly the only CPD activity that was relevant in some instances for promotional purpose but also indicated that it was rarely funded by the governing institution.  Some participants lamented that:

> No, I don't believe they do that, our promotion depends on how you pass examinations. They don't look at the workshops, previously they can ask how many you have attended during promotion interviews but that is not what they use in determining whether you should be promoted (CP1).
>
> No, I don't think so, we write exams you know and then after passing the examinations, so as for what we do like going for workshops that one I'm not sure it counts, but if you go to school yeah that one, I think you can be promoted, like getting your masters (AP2).

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*Just recently GES introduced promotional exams so that is what is used in upgrading so as for training I'm not sure it is important in promotions (BP3).*

*We've heard that they want to do something like that, but it has not been implemented. For our promotion we write exams, before it was interview but now it is just exams. When you pass you can move on to the next level. So, for the workshops we attend it doesn't count. As for further studies it is required at a certain level so if you want to be head for instance you must make sure you have your masters (AP1).*

A few participants however indicated that sometimes their CPD was linked to their promotion but were also convinced that further studies was the only CPD initiative recognized for promotional purposes. A participant said:

*Yes, I think it is used for our appraisal, yes, it is linked because we fill forms that have areas that require you to indicate answers for CPD activities you have engaged in. further studies is what really helps when you want to be promoted but even that they will not pay for you (AP3).*

Other participants said:

*Yes, I think it is linked in appraisals and promotions because to get to some senior positions you must have your master's degree, so yeah (CP3)*

*Yes, I think it is linked to performance because here it is not just promotion based on experience, you must further your studies. If you fail to do that you won't progress (BP1).*

Further discussions with participants on their experiences regarding existing CPD revealed that existing programmes were particularly useful to pre-tertiary teachers. All participants indicated that it was beneficial as they had learnt new skills that could be applied to their jobs. Participants indicated that;

> *Well, I think we have been going to programmes that have been very helpful. I have learnt new skills on how to teach and manage students in the classroom. In fact, for most of the programmes I went to, my expectations were met because the facilitators were good and we really learnt something (AP2)*
>
> *For the programmes I think it's good because we learn new things that help to improve upon our delivery. For instance, one workshop I went for instance introduce us to new ways of using technology to teach and the presentation was wonderful, I really learnt a lot (BP1).*
>
> *For most of the programmes we attend, we were taken through difficult topics to teach, so I think they were extremely useful (CP1)*
>
> *I believe the programmes we have now have been very good, I have gained a lot from participating in workshops and some departmental seminars in this school. It has sharpened my skills in handling students and even engaging students in the classroom. Sometimes I even try new things by inviting colleagues' teachers to my class to give the student a different touch, so I think the programmes they really help (AP1)*

A few participants however went further to express that although these programmes were useful, sometimes what was taught could not be implemented due to lack of resources, were repetitive and too theoretical. they indicated that:

*I think the programmes are very relevant because we try to learn new things are every time. sometimes some of what we are taught cannot be implemented because we do not have the resources in our schools to support it but all in all it is very helpful. The only thing is that sometimes the timing is not good for us at all (BP3)*
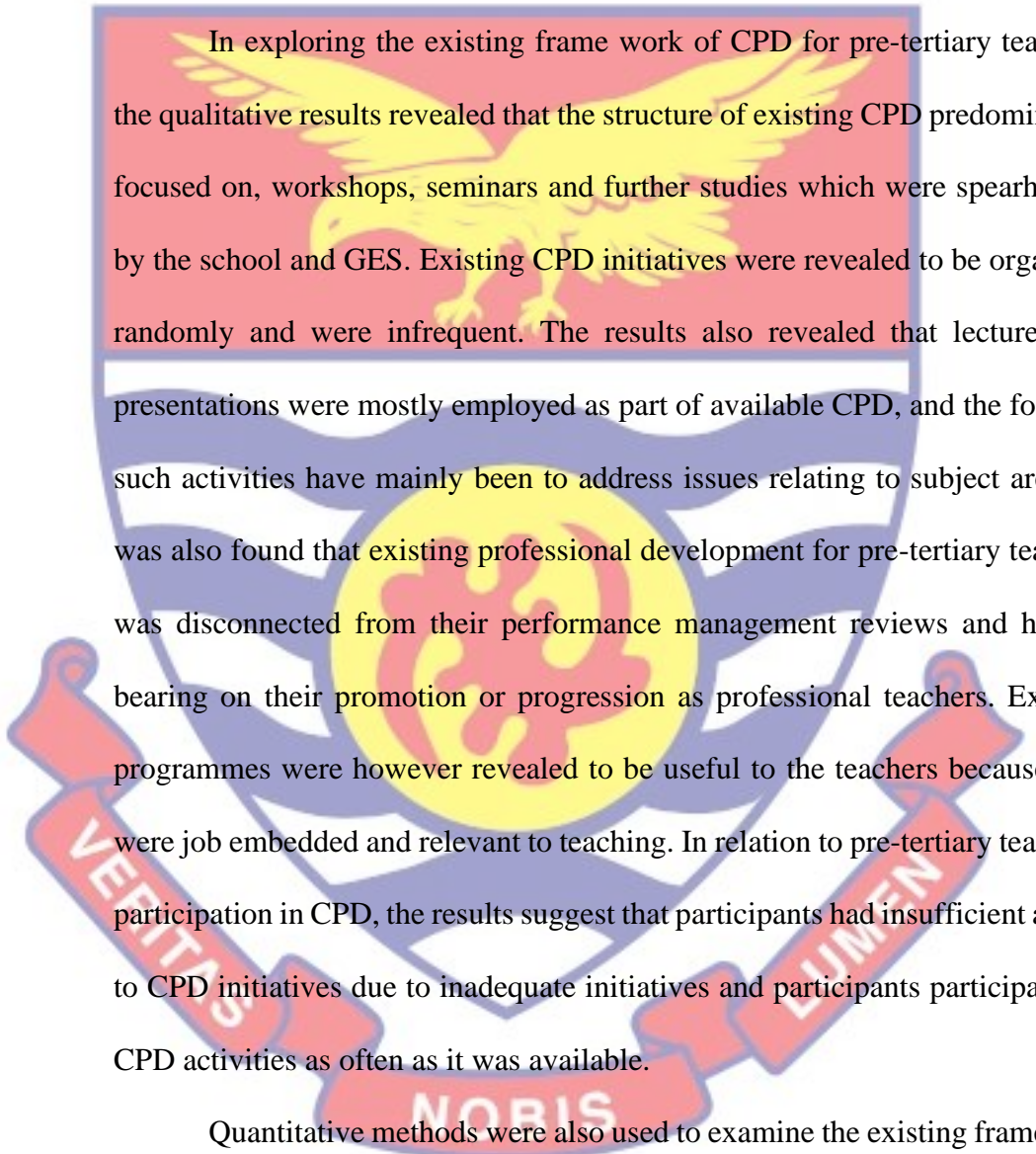
*Well for the programmes we have I think they are not bad at all but sometimes what we are taught are no longer relevant especially to teachers in this school. In other schools it may have been new but here it isn't because the school makes arrangements for the teachers to learn new things and the old girls help a lot in this way. For instance, there was this facilitator who came thinking that this was the first time we were having such a workshop he didn't know we have attended so many so what he was doing many were just looking we have already learnt what he was saying, he became discouraged. Other schools it was a new thing to them. Whenever is not a new thing its relevance is lost (AP4).*

*Most of the programmes are very good so I find it very relevant but the problem has always been that it is more theoretical than practical. Most of the things we discuss sometimes cannot be implemented. Sometimes even resources were unavailable to use for the training itself talk about eventually implementing it. That is really a problem for us (CP2).*

Altogether, participants' responses revealed that professional development for pre-tertiary teachers was disconnected from their performance management reviews and had no bearing on their promotion or progression as professional teachers. They indicated that further studies appear to be the only professional development activity that is given any consideration when it comes

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to their promotion to senior ranks. Promotion was mostly based on a qualifying exam. Participants also indicated that existing programmes were useful to them as they learnt new skills which were relevant to their job. They indicated that there were however situations where the content of the programmes was repetitive or too theoretical.

In exploring the existing frame work of CPD for pre-tertiary teachers, the qualitative results revealed that the structure of existing CPD predominantly focused on, workshops, seminars and further studies which were spearheaded by the school and GES. Existing CPD initiatives were revealed to be organised randomly and were infrequent. The results also revealed that lectures and presentations were mostly employed as part of available CPD, and the focus of such activities have mainly been to address issues relating to subject areas. It was also found that existing professional development for pre-tertiary teachers was disconnected from their performance management reviews and had no bearing on their promotion or progression as professional teachers. Existing programmes were however revealed to be useful to the teachers because they were job embedded and relevant to teaching. In relation to pre-tertiary teachers' participation in CPD, the results suggest that participants had insufficient access to CPD initiatives due to inadequate initiatives and participants participated in CPD activities as often as it was available.

Quantitative methods were also used to examine the existing framework for the professional development of pre-tertiary teachers. Respondents provided responses on how CPD was organised, most recent participation in CPD and nature of CPD activities teachers have participated in. The results are presented

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in figures 5 and 6 and table 15. Figure 5 provides a pictorial representation of how CPD activities are organised for pre-tertiary teachers.
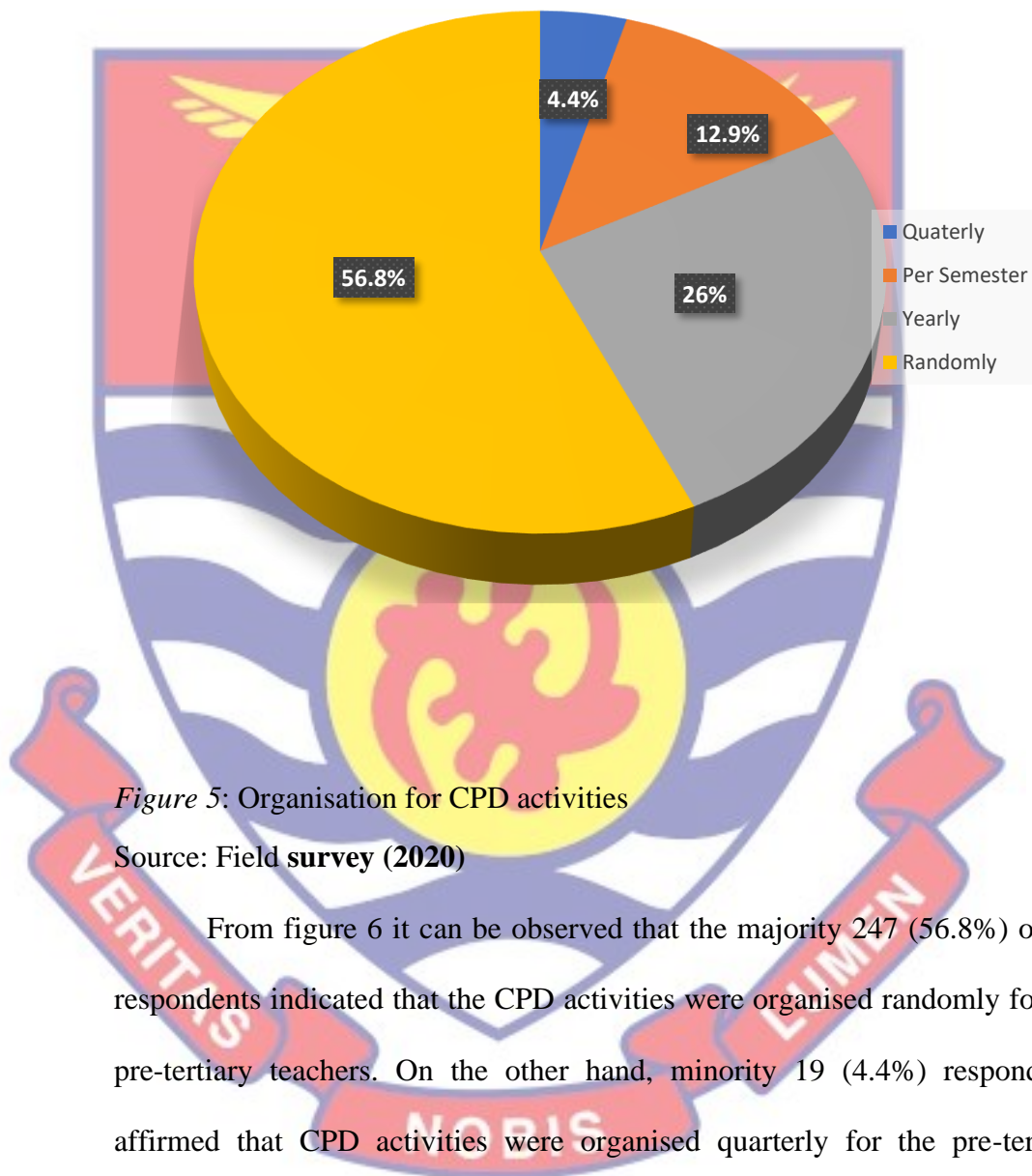


*Figure 5*: Organisation for CPD activities

Source: Field **survey (2020)**

From figure 6 it can be observed that the majority 247 (56.8%) of the respondents indicated that the CPD activities were organised randomly for the pre-tertiary teachers. On the other hand, minority 19 (4.4%) respondents affirmed that CPD activities were organised quarterly for the pre-tertiary teachers. This suggests that majority of the pre-tertiary teachers confirmed that the CPD activities were organised at random and followed no structure in terms of its organisation for pre-tertiary teachers. Figure 7 highlights pre-tertiary teachers most recent participation in CPD activities
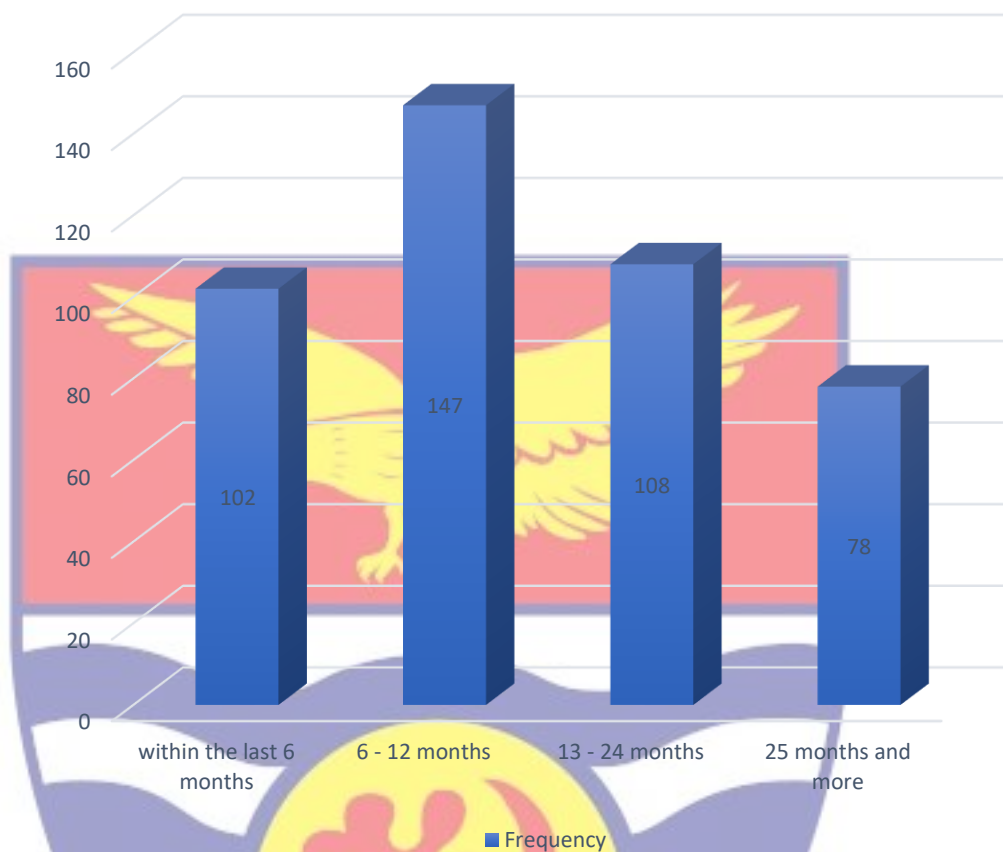
*Figure 6*: Pre-tertiary teachers most recent participation in CPD activity

Source: Field survey (2020)

Figure 7 reveals that most 147 (33.8%) respondents had participated in CPD activities in the last 6 - 12 months. A few 78 (17.9%) of the respondents in the minority however indicated that the last time they participated in any CPD activity was 24 months and over. This implies that pre-tertiary teachers participate in some CPD activities annually. A few respondents however indicated that they were not involved in CPD activities 2 years and over.

To examine the existing framework for CPD for teachers, another question was posed to ascertain the nature of CPD activities teachers participate in. To understand, the nature of CPD activities, means and standard deviations were utilized to analyse the data measured on a five-point Likert-type scale

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(Strongly Agree-5, Agree-4, Uncertain-3, Disagree-2, Strongly Disagree-1), with a mid-point of 3 as the baseline for comparison. By inference, the mean scores determined the level of passivity. Passivity, in this case, refers to the level of teacher engagement in the CPD sessions. Items or statements on each subscale that scored a mean value of less than 2 accurately implied CPD activities that suggestively were low in terms of the level of teacher passivity. Conversely, those items that obtained mean values of above 2 implied CPD activities that were high in teacher passivity. Table 15 provides a summary of the results.

**Table 15: Nature of CPD Activities**

| Statement | Mean | SD |
|---|---|---|
| Most CPD activities I have participated involved listening and observation of speakers | 3.01 | .96 |
| Most CPD activities I have engaged in required active participation and hands-on activities | 2.95 | .89 |
| CPD activities I participated in required that I observe and learn to reteach my colleagues | 2.78 | .89 |
| I often engage in other CPD activities such peer-to-peer observation and mentor-mentee relationships | 2.65 | .99 |
| Grand Mean/Average Standard Deviation | 2.85 | .93 |

Source: Field survey (2020)

It can be observed for table 15 that the grand mean of 2.85 which is above 2 is an indication of respondents' agreement to that the nature of CPD activities teachers participated as ones that are high in teacher passivity. The average standard deviation score (SD = 0.93) also implies that the responses of the respondents were uniform. The highest mean value recorded was (M = 3.01, SD = 0.96), which is in relation to the statement that most CPD activities pre-tertiary teachers have participated involved listening and observation of speakers. This finding suggests that a majority of the respondents agreed that

CPD activities pre-tertiary teachers have participated were high in terms of teacher passivity.

From Table 15, the lowest mean value recorded was (M = 2.65, SD = 0.99), which relates to the statement that teachers often engage in other CPD activities such as peer-to-peer observation and mentor-mentee relationships. This implies that few respondents agreed that they often engage in other CPD activities such as peer-to-peer observation and mentor-mentee relationships. This suggests that few CPD activities were low in terms of teacher passivity.

Evidence for the quantitative results indicate that there is no real structure for CPD activities because they are organised randomly. Respondents also revealed that they participate in some CPD activity annually. Again, the results revealed that most CPD initiatives that pre-tertiary teacher engage in are high in teacher passivity.

**Data Integration**

The qualitative strands of the study revealed that regarding what characterizes existing CPD for pre-tertiary teachers, the structure of existing CPD predominantly focused on, workshops, seminars, and further studies. This finding is consistent with the earlier findings concerning teacher conceptualization of their professional development which suggests that rather than viewing CPD as an ongoing, collaborative, and on-site practical experience, the governing institution considers teacher professional development as an isolated venture of off-site workshop or training sessions that is disconnected and from their performance management reviews and for that matter their daily teaching practices. These findings are fairly consistent in literature (Alibakhshi & Dehvari, 2015; Yates, 2007; Ngala & Odebero, 2009;

Atta & Mensah, 2015; Amoako-Gyimah, 2015; Şener & Çokçalışkan, 2017) which have identified formal CPD initiatives such as workshops, INSET, further studies and seminars as prominent professional development activities for teachers.

Şener and Çokçalışkan (2017), for instance, revealed in a study that attending courses, workshops, seminars, and webinars were the most used CPD strategies adopted by teachers. Atta and Mensah (2015) also found in a study that professional development activities for teachers were mostly conferences, in-service training, workshops, and seminars. Ngala and Ordebero (2009) in a study also discovered staff development programmes for teachers included taking academic courses, in-service training and participating in workshops, seminars, and conferences. By inference, it is possible to say that reliance on formal CPD strategies implies that informal CPD strategies are most likely rarely prioritized. Other researchers (Berehe, et al., 2018; Tulu, 2019) have affirmed this assertion. Berehe, Legesse & Tadesse (2018) for instance, in as study found that as informal CPD strategies such as portfolio development, coaching, action research and mentoring were inadequately implemented. Similarly, Tulu (2019) in his study found that teacher participation in professional development activities such as peer observations mentoring, action research, portfolio development and group discussions was inadequate. The adoption of structured and formal CPD initiatives is often rooted in a traditional approach to professional development which assumes that is gap or shortfall in teachers' knowledge and skills which can be improved through ''one-shot'' events or activities such as seminars or workshops (Clarke & Hollingsworth,

2002). Mostly, such workshops may be in-district, out-district or formal academic programmes (Desimone et al., 2002).

It is however important to consider that while this model to helps to foster teachers' awareness and deepen the knowledge and skills of teachers, it has been heavily critiqued on the grounds that, such approaches to teacher learning are inadequate and unconducive for fostering meaningful changes or fundamentally altering teaching as a practice. It is believed to be shallow and fragmented as a learning model. Ball and Cohen (1999) re-echo this in their assertion that formal CPD initiatives such as workshops are "intellectually superficial, disconnected from deep issues of curriculum and learning, fragmented, and noncumulative in nature. Kohl-Blackmon (2013) reiterates the apparent insufficiency of formal CPD strategies for teacher growth in his study that discovered that teachers recognize peer support, mentoring and IT personnel support and modelling as useful forms of professional development activities which allows for successful classroom integration. Workshops made available by districts, schools or consultants were however identified to be unproductive for successful classroom integration. A growing alternative to this traditional model is the reform-type that focuses on the use of a different professional development strategies for continuous inquiry into a teacher's instructional practice.

Numerous studies on effective professional development activities establish that the reform-type is more effective in altering teaching practices (Helmer, Bartlett, Wolgemuth & Emmett, 2011). It is important that CPD for teachers be treated as multiple forms of job-situated learning to ensure meaningful changes occur within teaching practices. Professional development

in line with this requires not only formally planned activities but also requires the informal and spontaneous teacher learning through interaction with each other. Undeniably, some kind of learning will most likely occur in the everyday intricacies of teaching such as in discussions with colleagues, peer-peer classroom observations, tips shared during coffee breaks swapped and daily experiences in the classroom. Such opportunities for teacher learning should equally be emphasized as part of CPD for teachers to ensure continued improvements in teaching outcomes. CPD in this sense must be recognised as an on-going and long-term process for teachers.

The qualitative strand also established that there is no clear structure for pre-tertiary teachers' professional development and available initiatives appear to be infrequent and organised at random. In relation to teachers' participation in CPD, participants had insufficient access to CPD initiatives due to inadequate initiatives and participants participated in such activities as often as it was available. The quantitative results corroborate this finding by providing statistical evidence to buttress the lack of structure for CPD activities. Similarly, other studies (Atta & Mensah, 2015; Macheng, 2016; Bangani, 2012) report lack of proper structure for CPD for teachers.

Bangani (2012), for example, in a study discovered that CPD for teachers was not appropriate and was poorly organised. Macheng (2016) also in a study reported the lack of structure for CPD programmes to facilitate teacher development and growth. Lack of structural arrangements has been a major criticism against traditional models of CPD that have relied on the use of formal strategies. Another inherent risk in the use of such models have been its inability to support and encourage teacher participation.

Teachers also indicated that they participate as often as such professional development activities were available, which is not surprising to find. What this implies is that teachers' participation in CPD may be as irregular as the randomness of CPD initiatives. It is relevant to recognise teacher participation in CPD initiatives will often depend on the regularity of CPD initiatives and how it is organised. Without proper structure for such initiatives, it is likely that such initiatives may fail to achieve its intended results.

Again, the study revealed that CPD for teachers was primarily overseen by schools and the governing institution. Very few teachers believed that CPD was also a personal initiative. This finding is well established in literature (Mtetwa, Chabongora, Ndemo & Maturure, 2015; Ridley, 2016; AL Balushi, 2018; Kennedy, 2017). For instance, Ridley (2016) revealed in a study that teachers' CPD was primarily driven by national programmes which became national concerns with limited opportunity for school-based or individual approach to CPD. Mtetwa, et. al., (2015) also found in their study that the government provides CPD for teachers in collaboration with stakeholders including non-governmental organizations. This suggests that government in partnership with schools and its relevant stakeholders have mainly been recognised as primary providers of CPD initiatives for teachers.

Teachers in this case may often view CPD as a vertical approach which is usually supervised by school management with head teachers deciding what happens in relation to their CPD. In this way, teachers consider CPD in terms of management goals rather than for the individuals concerned. There is however a growing awareness about the relevance of structuring CPD to fit the needs of employees to make it more about their personal development as well

as organisational needs.  teachers must be given the opportunity to play active roles in their CPD. Teachers in general, may have very little choice in deciding to attend courses or workshops that are run for them or as may be prescribed by the governing institution. This limits teachers' choice in deciding or determining what to learn. This falls in line with the results from the qualitative strand that also revealed that existing CPD initiatives relied on the use of lectures and presentations. Similarly, the findings of Moore and Shaw (2000) revealed that professional development for teachers often relied on experts from outside their workplace to meet their demands. The quantitative results also corroborated this finding by providing statistical evidence to affirm that most CPD initiatives pre-tertiary teachers engage in were high in teacher passivity. The adoption of such approaches to teacher learning fails to recognize teachers in the learning process as active and is more passive in nature.

It is critical to view teachers as active participants rather than passive recipients of knowledge. Teachers can become active participants by incorporating and providing opportunities to observe and in turn to be observed whilst teaching; to lead classroom application exercises, such as practicing through simulations, demonstrations, leading discussions or writing reports, articles or books. This requires informal CPD initiatives which should enable teachers to identify what works for them and to learn what they believe to be relevant in improving both teaching and learning outcomes.  Al Balushi (2018) reinforces the importance of informal CPD activities in his study that found that teacher participation in range of professional development events such as observing other teachers' lessons, discussing their lessons with supervisors and

senior teachers mainly as part of the formal system found such discussions useful, particularly those with supervisors.

In this manner, professional development for teachers should allow them to not only generate their own knowledge but also to lead their own learning. Through activities such as collaborative work, peer to peer discussions, observational visits, and mentorship, teachers should be able to obtain regular feedback on their teaching practice. These diverse forms of active learning strategies are thought to be the most effective in improving teaching practices. Undoubtedly these strategies compared to professional development programmes organized in the forms of workshops, conferences, seminars, group presentations and training programmes are recognised as having the ability to profoundly alter the teaching practise (Guskey, 2000).

Furthermore, the qualitative results revealed that existing CPD initiatives have focused on addressing issues relating to subject areas of pre-tertiary teachers. This finding is consistent with other researchers (Amoako-Gyimah, 2015; Ngala & Odebero, 2009) who have established that professional development activities for teachers have mostly focused on mastery of  wider content areas of teachers' subjects. While subject matter is a key feature in professional practise of teaching, it is also relevant to consider that the work of a teacher requires more than just knowledge of the subject matter, a teacher in the educational sense is not only an expert in a subject matter but also an advisor, mediator, demonstrator, coordinator, model, observer, stimulant, negotiator and most certainly must be able to engage and associate with learners.

Professional development must look at empowering teachers to be more than subject specialists. Again, it is relevant to consider that heavily focusing on the subject matter will leave other relevant professional needs of teachers unmet. Further to this, the qualitative strand revealed that existing CPD was disconnected from pre-tertiary teacher's performance management reviews with extraordinarily little linkages to teacher professional growth. This suggests that existing CPD has no bearing on their promotion or progression of pre-tertiary teachers as professional teachers. Yip (1998) also reiterates this finding in his assertion that mostly professional development for teachers have often failed to provide sufficient guidance for teacher self-assessment. McMillan et al. (2014) however stress that mostly teachers choose to engage in CPD for their career advancement needs. Ng, (2010) also notes that one of the reasons why teachers participate in professional learning include career-related purposes. CPD initiatives for teachers must be designed to fit into teachers' professional progression to enhance its relevance to teachers.

Within the discourse of continuously revising professional knowledge, skills and teaching requirements to meet the changes occurring within the teaching profession and emphasizing such as part of professional development, it is important to acknowledge that CPD must be consistent and aligned with teachers' current professional needs. To fully grasp the extent to which existing CPD meets the professional needs of pre-tertiary teachers, the subsequent research question attempts to examine how well pre-tertiary teachers' professional needs are being met.

**Research Question Three**

**How pre-tertiary teachers' CPD needs are being met**

Whichever form TPD takes, evidence suggests that successful professional development for teachers is one that is personalised and relevant to teachers (ATL, 2015). CPD for teachers is personalised when it is designed based on recognised needs rather than adopting a 'one size fits all' approach. This research question sought to determine how the professional needs of pre-tertiary teachers were being satisfied. Both qualitative and quantitative data were gathered in relation to this research question. The data was analysed using thematic analysis and descriptive statistics (means and standard deviation).

Participants were engaged to provide responses on their demand for CPD, nature of needs assessment and how existing CPD met their professional needs for the qualitative strand. Three main themes emerged from the shared responses of participants; the nature of demand for CPD initiatives, preliminary assessments concerning CPD needs (school-based and ministry-based assessment) and coherence and adequacy of CPD initiatives.

**Nature of demand for CPD initiatives**

Professional development has over the years appeared to have shifted from the experience of teachers passively receiving knowledge and skills to learning where teachers are expected to be active participants in their learning process. Discussions with participants revealed that all pre-tertiary teachers desired more opportunities in relation to their professional development. All participants were convinced that available CPD initiatives were inadequate and failed to provide them with relevant opportunities for growth. Table 16

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highlights some of the responses of participants in relation to their demand for CPD.

**Table 16: Participants Responses on Demand for CPD**

| Participant | Participant Responses |
|---|---|
| BP3 | *I wish I had more opportunities to learn and even opportunity for further studies. What happens is that sometimes the quota system is used to limit how many people can go to school, particularly when there is funding* |
| AP3 | *Yes, our demand is very high, if they make it available like they should we will go.* |
| CP3 | *Of course, we need more opportunities to improve ourselves, unless they always want us to go to school. So, it means we are dealing with further studies where you have to enrol yourself* |
| BP2 | *Want more at my dear, at least we should have such programmes twice a year, that will really help us in our teaching.* |
| CP2 | *We want more, with resources needed to implement knowledge learnt. Most of the time these programmes offer nothing that we can implement because resources are not available so that one should be checked* |
| BP4 | *I want more because new things are coming up. I need so much. GES can do better* |
| AP1 | *I want more because in science change is fast and the knowledge that may be relevant today becomes obsolete tomorrow so we need more programmes* |
| BP1 | *We want more to be organized. Especially by GES* |
| CP1 | *We need more CPD initiatives, at least twice a year would be useful. it is not adequate at all so they should organise more programmes or help us to learn new things* |

Source: Field data (2020)

Regarding pre-tertiary teachers' demand for CPD initiatives, the head teachers also indicated that for their respective schools;

> *I think the teachers require more training. Further studies for instance are high in demand but others no (CHT).*

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*The demand is high here as for the teachers they are always eager to attend even every month they would want to go (AHT)*

*Oh, as for our teachers they are always demanding for more programmes. The training is something they really ask for. It is just that funding really makes it difficult for us (BHT)*

The training officer was also asked to comment on pre-tertiary teachers demand for CPD initiatives. He indicated that;

*For some time now I have realized teachers are asking for trainings and I think it is because they have come to know that now that it's not about what you are getting but the training that will make someone feel that you have upgraded yourself to the level that qualifies you to the next level.*

Participants' shared responses revealed that pre-tertiary teachers have a high demand for CPD initiatives. They were particularly concerned about the lack of structure for CPD activities. From their viewpoint, there is the need for a kind of structure that allows pre-tertiary teachers to participate in CPD initiatives at least, twice a year. Opportunities for such learning were virtually non-existent.

**Preliminary assessment of CPD needs**

Changes in the teaching profession such as curricular modifications, re-deployment, redesign of managerial roles or approaches to teaching require the identification of skills, knowledge, or practical gaps to ensure that provisions made for CPD activities will meet the professional needs of teachers. Assessment of teachers' needs may be critical in determining what gaps exist

and how such gaps should be addressed Two main sub themes emerged from this category: School based assessment and Ministry based assessment.

**School-based assessment**

Most of the participant teachers indicated that needs assessment was carried out for most school-based CPD initiatives. According to them headteachers and Heads of Departments (HODs) identified problem areas for teachers through formal and informal discussions. CPD initiatives are then developed to suit the nature of problems or challenges that were identified. Some participants had this to say;

*Yes, our heads of department often through discussions or some challenges that may be common for all of us identify our areas we are deficient in and organise some workshops and programmes to boost our performance. It is often very helpful because we really appreciate the effort and what is taught too (CP4).*

*Yes, through discussions teachers are able to identify areas of need but it is often informal discussions with the teachers. Sometimes too when the students complain about something that one is discussed and then we have a workshop or some training on it or even a fellow colleague who is good will give a presentation on it (CP2).*

*Sometimes there is needs assessment, heads go around to listen to students' evaluation of teachers and after work with the heads of department to provide us with some workshop or seminar that will help us (BP1).*

*Oh yes, we sometimes do a personal evaluation and then we discuss it during departmental meeting and then presentations will be done on*

*that. Sometimes also for instance if students have challenges with accounting, then we discuss the trends we've noticed from their assessments then we get someone to help us, like a presentation on some topics or even among us to help with the challenge identified. Other departments also do the same thing (BP3).*

The head teachers also had this to say about needs assessment for pre-tertiary teachers in relation to the professional development. Table 17. highlights head teachers' responses.

**Table 17: Head teachers Responses on Needs Assessment**

| Participants | Participant's Responses |
|---|---|
| AHT | *Well often it depends on the organizers they sometimes ask us about what teachers need but here in the school what we do is that the teachers in their various departments look at issues that they believe is critical and then they work on it. Sometimes they call on experts or some good one to help their colleagues* |
| BHT | *Yes, we do needs assessment for the teachers. Sometimes we call on the heads of department and try to find out what teachers are struggling with, then we organize some seminars or presentations for them. So yes, we do that* |
| CHT | *Yes, we notice where teachers need improvement and tailor programmes to suit it. The departmental heads are tasked with such issues, and they organise some workshops and other programmes among themselves* |

Source: Field data (2020)

**Ministry- based assessment**

Most of the participants were sceptical about needs assessment carried out by the governing institution before rolling out some CPD initiatives. Participants indicated that they believed that the governing body had a way of determining what they required as part of their professional development. As far as they knew, the focus for CPD activities was determined by the Ministry without their input. Some participants indicated that:

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*No, mostly for the one we go by GES, they decide what they want us to learn or maybe they have a way of determining it but for departmental ones we are allowed to make suggestions (CP1)*

*I think so, GES has a way of carrying out its assessment it, I'm not sure how they do it but I think so yeah (CP3)*

*Yes, HOD's go around to listen to teachers about what teachers should do. As for GES I'm not sure maybe (BP4)*

*I don't know but for GES they know somehow. They decide all the time but in schools I think there is. Here we do some discussions before (BP2)*

The training officer however was specific in his response concerning CPD needs assessment for pre-tertiary teachers. He expressed:

*Certainly yes, yes, because until you do that you wouldn't know, that is why we even conduct or we take the appraisals serious. It is within this appraisal session that we are able to tell a teacher's deficiency and then again before even the appraisal, the  headmasters in the schools are not supposed to sit in their offices, they are to form roles of being supervisors and so as you go along supervising there is the tendency of identifying some weaknesses. And the results that come up is also another way of knowing what is not going well in the school. So put all this together, we are able to tell that something is not well, a teacher has weakness in a particular field and so there is the need for us to help the teacher build his or her capacity in that area.*

**Coherence and adequacy of CPD Initiatives**

Coherence has been identified as best practise in teacher professional development. Coherence of CPD initiatives suggests that individual and institutional approaches to professional need to be harmonized to ensure professional growth of teachers. To examine the coherence between CPD needs of pre-tertiary teachers and institutional provisions, participants were asked to provide responses to what they believed their CPD needs which were matched with the focus of CPD activities as identified earlier. Participants were also engaged on their perceptions about how existing CPD was adequate in meeting their professional needs. Table 18 provides a summary of some responses by participants on the focus of existing CPD and adequacy of teachers' CPD needs.
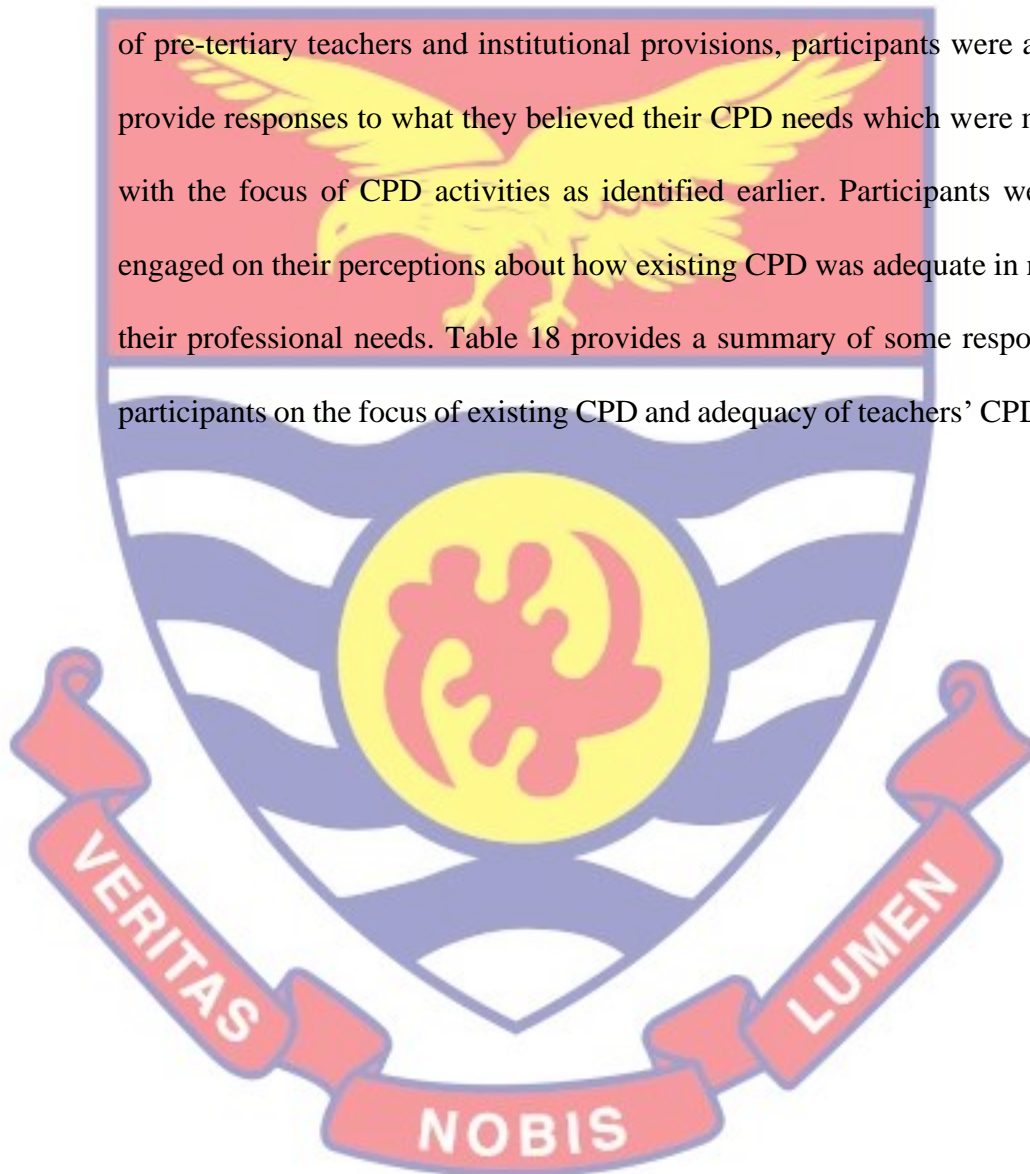
**Table 18: Participants' Responses on Focus, CPD Needs and Adequacy of Existing CPD**

| Participants | Institutional focus for CPD | Pre-tertiary CPD needs | Adequacy of institutional effort |
|---|---|---|---|
| CP1 | • Subject areas<br>• Assessment<br>• Leadership | • Difficulty teaching some topics<br>• Improvising for teaching without TLM | *I think it is adequate for the content areas but for the other important areas no* |
| AP1 | • New trends in subject area | • *Skills in engaging students to enable them to become practical in their learning* | *Yes, I think it is adequate* |
| BP1 | • Subject area | • *Meeting the current trends* | *Yes, I think it is enough, but they should try to provide current trends in the teaching profession* |
| AP3 | • Subject area<br>• Teaching methodology<br>• Assessment | • *Self-development professionalism* | *Yes, I think it is adequate but there are other areas they can focus on* |
| BP3 | • Subject area | • Improvise to teach<br>• How to get students to learn<br>• Student engagement strategies | No. even the ones we have there is lack of resources after training |
| BP4 | • Subject area | • *Using technology to make teaching more relevant to students*<br>• *Student counselling*<br>• *Skills for handling students* | *Yes, I think its ok* |
| CP2 | • Use of technology in teaching content areas<br>• How to teach difficult topics<br>• Using YouTube to understand difficult topics | • Counselling students<br>• Assessment<br>• How to teach students to improve | *No, it is not adequate, we need more training* |

Table : Cont.

| | | | |
|---|---|---|---|
| *CP4* | • Content area | • New trends in teaching | *To a greater extent a change occurs when you actually take part in workshops. So, in some way yes* |
| *AP1* | • Subject area | • Professional teaching training<br>• Handling students in classroom | *Yes, when we are organising it ourself or the department but GES, not quite* |
| *CP3* | • Classroom setting issues<br>• Counselling<br>• Extracurricular activities | • *Some topics have outrun their usefulness, but it is still taught, we need current trends* | *No, it has not been adequate at all, we should get more* |

Source: Field data (2020)

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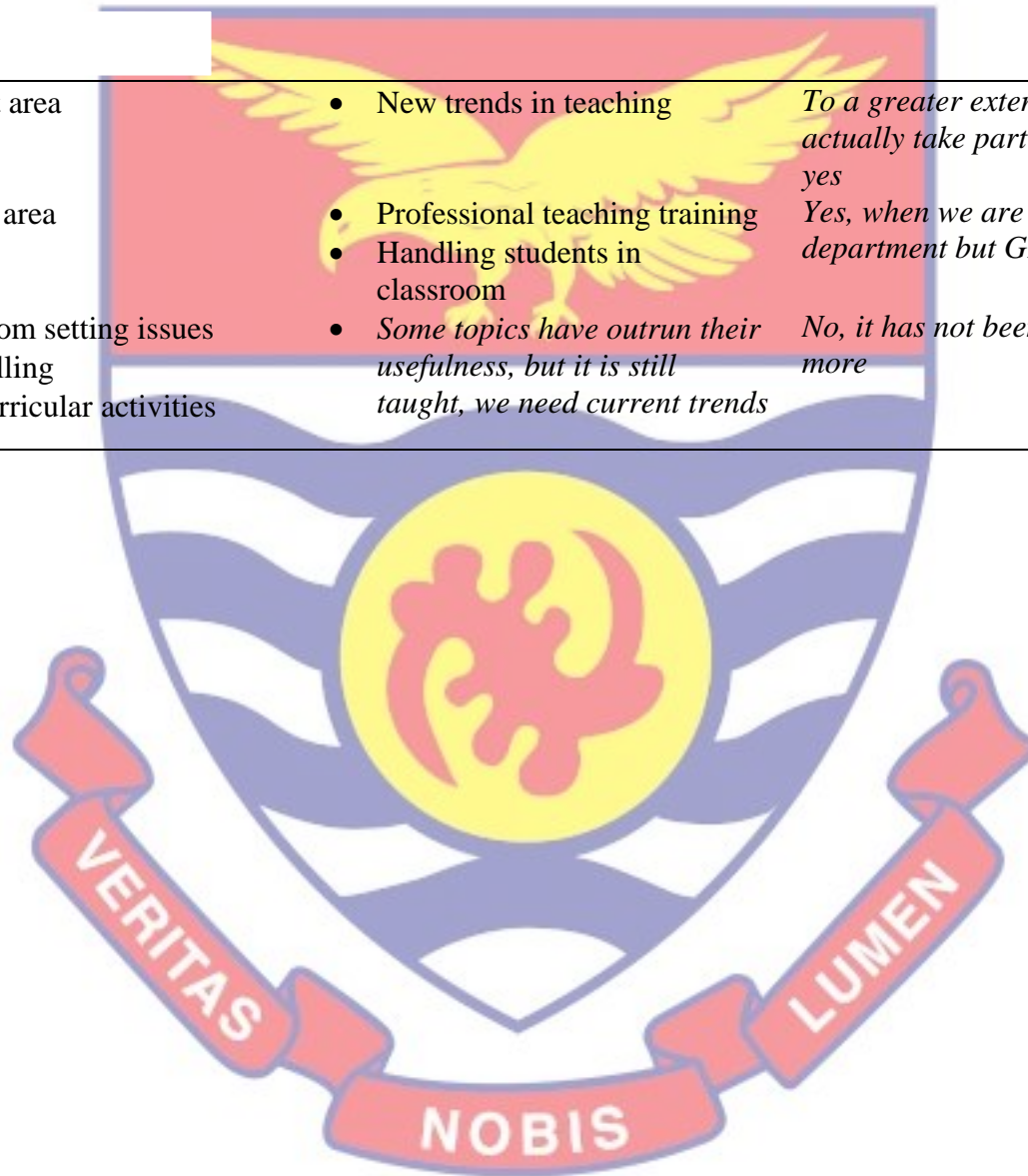
A closer examination of participants' responses revealed that all participants indicated that the focus of CPD initiatives by the governing institution has predominately been the content areas of participants which run contrary to what participants believed their CPD to be. Participants indicated other areas such as current trends in teaching, student engagement strategies, using technology in teaching and handling student behaviour were CPD areas which they believed were equally relevant and areas where their professional development should be tailored towards. One participant expressed that:

> Some topics have outrun their usefulness, but it is still taught, I don't even know why they insist on teaching the same things. we need current trends; things are changing around the world but here we are stuck with old ways of teaching and learning (CP3).

For the adequacy of efforts by the governing institution at meeting teacher professional needs, most participants indicated that such efforts were inadequate. They believed more could be done to provide them with professional development opportunities that were relevant.

Regarding the adequacy of existing CPD initiatives, all the headteachers were in agreement that available professional development activities were not really adequate. They expressed that:

> Not really, I think there is more room for improvement, I will rate it at about 65% (CHT).

> Well, I think somehow it is adequate because GES tries to organize some workshops and the school also does so yeah (AHT).

> As for training it never ends, we always want to acquire new skills. To a large extent I think they are trying but there is more they can do (BHT).

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In relation to the coherence of CPD initiatives, headteachers were also engaged on the focus for most CPD activities and what they believed teachers needs as part of their professional development. Table 19 summarizes the responses of headteachers.

**Table 19: Head teachers' Responses on Focus of CPD Activities and Teacher CPD Needs**

| Head teacher | Focus Of Existing CPD | Teacher CPD Needs |
|---|---|---|
| AHT | Teaching methodology and assessment and professionalism | *Well i think usually teachers complain more about their subject areas but i think other issues like using technology to teach and how to get students to learn too may be really helpful* |
| BHT | *Mostly they are taught how to do scheme of work, methodology to use in the classroom and some classroom strategies.* | *I think they are diverse; teachers really need training in areas like the subject matter, assessment, lesson planning and other relevant areas of the profession.* |
| CHT | Teaching methodology and the ethics of the profession | *Well, my teachers are constantly complaining about student misbehaviour so if they could learn some strategies on how to handle them, I'm sure it will be useful. Mostly the few are in subject areas and the teaching methodology. And yes, technology is also really important but because we don't have the resources, we do not emphasize it much* |

Source: Field data (2020)

The training officer also revealed that existing professional development initiatives were inadequate and stressed the need for CPD initiatives to be more specific to content areas of teachers. He stated that;

*No. I wouldn't say so, I think we need more training because like I am saying, we need specific training for specific teachers, err if you sum us all and give us training sometimes you wouldn't be able to address our individual deficiencies or weaknesses so I am thinking that moving forward we should be able to if its mathematics lets groom mathematics teachers with methods of teaching so that at the end of the day we can be assured that all our mathematics teachers have all the techniques to teach rather than to sum us all to teach us a new technology in teaching generally. So, for me I think identifying this we still need more training because what we have might just not be enough for us to think that the teacher is ok. The teaching profession must have continuous career training.*

From the narration, the shared responses of participants revealed that all participants indicated that the focus of CPD initiatives by the governing institution has predominately been the content areas and other professional development areas which conflicted with what participants believed their professional development needs to be. Participants indicated other areas such as current trends in teaching, student engagement strategies, using technology in teaching and handling student behaviour as some professional development areas which were equally relevant for their professional development. With regard to the adequacy of existing PD activities in meeting teachers' professional needs, all participants were in consensus about its inadequacy. They believed more could be done to provide teachers with professional development opportunities that were relevant.

Quantitative methods were utilized to further examine how pre-tertiary teachers CPD needs are being met. To understand how existing CPD addressed the needs of pre-tertiary teachers, respondents were asked to indicate what their needs were and to indicate whether they believed existing CPD had catered for their needs. The professional needs of teachers were developed in line with the Teaching and Learning International Survey - TALIS Report (2018). Regarding what respondents recognised as their professional needs, respondents were required to indicate what they considered to be part of their professional development. Data was analysed using frequencies and percentages. Table 20 presents the results of the analysis.

**Table 20: CPD Areas that Reflects Professional Needs for Teachers**

| CPD Areas | Recognised Freq (%) | Not Recognise Freq (%) | Total |
|---|---|---|---|
| Teaching children with special needs | 177 (40.7%) | 258 (59.2%) | 435 (100%) |
| ICT teaching skills | 247 (56.8%) | 188 (43.2%) | 435 (100%) |
| Student discipline and behavioural problems | 237 (54.5%) | 198 (45.5%) | 435 (100%) |
| Instructional practices | 167 (38.4%) | 268 (61.6%) | 435 (100%) |
| Subject matter (content area) | 247 (56.8%) | 188 (43.2%) | 435 (100%) |
| Student counselling | 203 (46.7%) | 232 (53.3%) | 435 (100%) |
| Assessment | 199 (45.7%) | 236 (54.3%) | 435 (100%) |
| Teaching in multi-cultural setting | 109 (25.1%) | 326 (74.9%) | 435 (100%) |
| Classroom management | 194 (44.6%) | 241 (55.4%) | 435 (100%) |
| Interpretation of syllabus and examination | 150 (34.5%) | 285 (65.5%) | 435 (100%) |
| Teaching methodology | 236 (54.3%) | 199 (45.7%) | 435 (100%) |
| Professional ethics | 186 (42.8%) | 249 (57.2%) | 435 (100%) |
| Principles of education | 115 (26.4%) | 320 (73.6%) | 435 (100%) |
| Lesson plan preparation | 177 (40.7%) | 258 (59.3%) | 435 (100%) |
| Current trends in subject area | 225 (51.7%) | 210 (48.2%) | 435 (100%) |

Source: Field survey (2020)

From Table 20, the majority 326 (74.9%) of the respondents indicated that teaching in multi-cultural setting was not recognised as their professional need. Also, more than half 320 (73.6%) of the respondents confirmed that

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principles of education are not recognised as a professional need. Again, most of the responses indicated that interpretation of syllabus and examination (N = 285, 65.5%), instructional practices (N = 268, 61.6%), teaching children with special needs (N = 258, 59.3%), lesson plan preparation (N = 258, 59.3%), professional ethics (N = 249, 57.2%), classroom management (N = 241, 55.4%), assessment (N = 236, 54.3%) and student counselling (N = 232, 53.3%) was not recognised as their professional needs.

However, the majority of the respondents acknowledged that ICT teaching skills (N = 247, 56.8%), subject matter (N = 247, 56.8%), student discipline and behavioural problems (N = 237, 54.5%), teaching methodology (N = 236, 54.3%) and current trends in subject area (N = 225, 51.7%) reflect their professional needs. This suggests that pre-tertiary teachers recognised that their professional needs in relation to ICT teaching skills, subject matter issues, student discipline and behavioural problems, teaching methodology and current trends in the subject matter were areas that required more attention and needed to be prioritised as far as their professional development was concerned.

Additionally, to understand the how well respondents' professional needs were being met through existing CPD initiatives, respondents were asked to rate how high or low they considered existing programmes to have addressed their professional needs. Means and standard deviations were utilized to analyse the data which was measured on a five-point Likert- type scale with a mid-point of 3 as the baseline for comparison. By inference, a mean value above 3 accurately implied that items or statements were considered to be high in terms of the extent to which existing CPD had addressed pre-tertiary teachers' professional needs. On the other hand, those items that scored means below 3

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were considered to be low in terms of the extent to which existing programmes had addressed teachers' professional needs. Table 21 presents the analysis of the results.

**Table 21: Extent to which Pre-Tertiary Teachers' Professional Needs have been addressed**

| CPD Needs | Mean | SD |
|---|---|---|
| Teaching special needs children | 2.47 | .70 |
| ICT teaching skills | 3.02 | 1.25 |
| Student discipline and behavioural problems | 3.02 | 1.24 |
| Instructional practices | 3.33 | 1.21 |
| Subject matter (content area) | 3.60 | 1.21 |
| Student counselling | 3.20 | 1.18 |
| Assessment | 3.26 | 1.31 |
| Teaching in multicultural setting | 2.71 | 1.22 |
| Classroom management | 3.45 | 1.22 |
| Interpretation of syllabus and examination | 3.22 | 1.25 |
| Teaching methodology | 3.52 | 1.18 |
| Professional ethics | 3.36 | 1.21 |
| Principles of education | 3.17 | 1.26 |
| Lesson plan preparation | 3.50 | 1.23 |
| Current trends in subject area | 3.18 | 1.22 |
| Learning strategies | 3.29 | 1.22 |
| Grand Mean/Average Standard Deviation | 3.21 | 1.19 |

Source: Field survey (2020)

From Table 21, for the grand mean of 3.21 which is above 3.00 indicates that existing programmes were adequate in addressing pre-tertiary teachers' professional needs. The average standard deviation score (SD = 1.19) however implies that the responses of the respondents were heterogeneous and not in one direction.

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The highest mean value recorded was (M = 3.60, SD = 1.21), which highlighted the CPD need relating to subject matter (content area). This finding suggests that most respondents pointed out that the existing CPD programmes have been adequate in addressing teachers' professional needs in relation to their subject matter.

From Table 21, the lowest mean values recorded were (M = 2.47, SD = .70), and (M = 2.71, SD = 1.22) which represented teachers professional needs in relation to teaching special needs children and teaching in multicultural setting. This result suggests that the respondents acknowledged that the existing CPD initiatives were inadequate in addressing issues relating to teaching special needs children and teaching in multicultural settings.

**Data Integration**

Evidence from the qualitative strand revealed that pre-tertiary teachers had a high demand for CPD initiatives because existing CPD initiatives were believed to be inadequate and failed to provide any real opportunities for growth. Regarding needs assessment, the study also revealed that participants believed that needs assessment was carried out at the school level but were sceptical about ministry-based needs assessment.

The training officer was however resolute that needs assessment was conducted before the implementation of CPD initiatives. The views about needs assessment for pre-tertiary teachers in relation to their professional development appear to be conflicting and the scepticism on the part of pre-tertiary teachers could be an indication that the ministry may often determine the focus of CPD activities without taking into consideration the actual needs of teachers. This conflicting view is highlighted in a study by AL Balushi (2018) which revealed

that teachers had a conflicting view about the how existing CPD activities were considered to meet teacher professional needs. Yip (1998) however clearly indicated in his study that teachers believed that there was no systematic needs assessment process in schools and as a result their personal needs and professional needs were not sufficiently provided for. A situation where the focus of CPD initiatives is fixed and determined by the governing body is fairly common in literature on Professional Development for teachers.

A study by Kennedy (2017) revealed that for teachers, their professional development often lacks differentiation and employs the top-down approach where key areas and training focus are determined by school leaders and not teachers. In this instance, professional development was believed school- based and was not job embedded. Hustler, et al. (2003) also revealed that teacher respondents were unenthusiastic about 'one size fits all' activities which failed to take into consideration teachers' existing knowledge, experience and needs emphasizing school development and national needs over individual needs. Without proper efforts to identify actual professional needs, there will exist some disparity between what teachers receive as part of their CPD and what they believe they need. As a result, evidence from the qualitative strand that revealed that the focus of existing CPD activities was incongruent with the pre-tertiary teachers' professional needs in such a manner that it was inadequate in meeting their professional needs was not surprising.

The quantitative results corroborated the  variation  in what teachers believed they needed as part of their professional development and what was actually provided by suggesting that pre-tertiary teachers recognised that professional needs in relation to ICT teaching skills, subject matter issues,

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student discipline and behavioural problems, teaching methodology and current trends in the subject matter were areas in which their professional needs were unmet and required more attention as far as their professional development was concerned. Amoako-Gyimah (2015) reiterates this in his study that revealed teachers' professional development needs often revolve around issues relating to teaching strategies, skills, knowledge of subject matter and multimedia technology usage. The quantitative results also went further to reveal that existing CPD initiatives were adequate in addressing issues relating particularly to the subject matter of pre-tertiary teachers but were inadequate in addressing issues relating to teaching special needs children and teaching in multicultural settings.

This apparent disparity between the pre-tertiary teachers' CPD needs and the focus of available CPD has been underscored by several researchers (Kennedy, 2017; Yahya, et al., 2015; EL-Deghaidy, et al., 2015; Kosgei, 2015; Nyarigoti, 2013; Ngala & Ordebero, 2009; Essel, et al., 2009; Hustler, et al., 2003; Yip, 1998;). It is relevant for CPD providers to take cognizance of the fact that teachers' professional needs are more varied and will often stretch beyond subject areas. The study provides evidence to the fact that pre-tertiary teachers' professional needs such as issues relating to current trends in teaching, student engagement strategies, using technology in teaching, student counselling and handling student behaviour are equally critical for their professional development. Focusing heavily on issues relating to their subject matter will most likely restrict learning opportunities that focuses on other areas of their professional need which is unlikely to ensure any real improvement in the professional practise of teachers. The coherence between teacher

professional needs and state provisions is critical to ensuring successful professional development for teachers.

To maximize the chances of change and development in schools, it is essential for individual and institutional professional development approaches to be synchronized (Day, et al., 2007).  Extant literature suggests that for CPD to be effective it is expected to deal with particular professional needs of teachers (Goodall et al., 2006; Bredeson, 2002). The best results for CPD will more likely be obtained when activities are structured and planned systematically to present participants with the opportunity to enhance not only their professional growth but also their personal growth by broadening their knowledge, skills and attitudes holistically. Professional development for teachers must provide avenues that enable teachers to create their own knowledge and steer their learning activities while in constant communication with their colleagues within the professional development process. This can be done when the professional needs and personal development goals of teachers can be identified and sufficiently provided for through, state and district standards and goals.

To make this a reality, it will be relevant to take into consideration the need for CPD activities to be structured in a way that ensures that all the professional needs of teachers can be addressed. To truly improve the professional practise of teachers, professional development must cover all aspects of the teaching profession and not be solely attentive to the content areas of teachers. It should be structured not as a top-down approach with predetermined topics relating to specific areas (in this case focused solely on content areas) and prescribed by state/governing institutions. Teachers must be

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given the permitted to choose their learning activities with emphasis on the needs of their professional learning community which should be applicable to their current practise and inspiring them as professional teachers.

**Research Question Four**

**Perceived impact of existing CPD on teacher professional practise**

CPD is recognized as a tool for improving teacher motivation, confidence and commitment to teaching. Effective professional development is believed to be critical in improving teacher effectiveness. Both qualitative and quantitative data was gathered in relation to this research question. Thematic analysis and descriptive statistics (mean and standard deviation) were employed for data analysis.

This research question was examined qualitatively by exploring the participants' responses on the perceived impact of CPD on the professional practise of pre-tertiary teachers. Participants were required to provide responses on how they believed existing CPD initiatives had influenced their overall professional practice. Three broad themes emerged in relation to teachers' professional practise: teacher knowledge, skills and efficacy. The shared views of the participants highlighted these three key areas of teachers' professional practise.

The discussion revealed that all participants were convinced that CPD was beneficial and had impacted their professional practice. A few participants were however sceptical regarding the impact of existing CPD on teacher professional practice. A participant said, "*I think it is beneficial somehow*", another indicated that "*not really in totality*". Although they were not in complete consensus, their responses appeared to be more positive. In relation to

how they believed existing CPD had impacted their knowledge, most participants indicated that existing CPD had improved their content knowledge. Participants indicated that, professional development activities they had participated in had helped to improve their subject knowledge and had exposed them to new delivery methods in their area of specialisation. Some participants indicated that;

> It has helped to improve my content area; some topics have been made less difficult to teach (CP1)
>
> It has helped to give me new ways of structuring/packaging content to make subject more appealing to students, yeah (BP1)
>
> Oh, we've learnt some new ways of teaching in my subject area, I didn't know some things before but now I do and I find it very interesting. (BP4).

Again, most participants indicated that their teaching skills had improved from their participation in existing CPD. Participants indicated that their teaching delivery and methodologies had improved from participating in their professional development activities so far. One participant noted "*yeah it has improved my skills in assessment of students. Assessing students through varied means*" (AP1). Another participant indicated "*it has improved my teaching delivery; I have been able to engage my student more*" (AP4).

A few participants were convinced that existing CPD had impacted their efficacy towards the teaching profession. Participants indicated that through CPD they had improved their interpersonal interactions in and out of school and improved their classroom interactions as well. Participants also indicated that their confidence and enthusiasm about teaching had improved from their

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participation in CPD. One participant expressed that "*oh it has improved confidence from participation and it has increased my passion for teaching*" *(CP4)*. Table 22 provides a summary of participants' responses on the perceived impact of CPD on teacher professional practice.

**Table 22: Perceived Impact of CPD on the Professional Practise of Pre-Tertiary Teachers**

| Participants | Impact on Knowledge | Impact on Skills | Impact on Efficacy |
|---|---|---|---|
| CP1 | • Content area: topics have been made less difficult to teach. | *My methodology has improved* | • Communication has improved especially out of school |
| AP2 | *I have learnt current trends in my subject area that have helped in teaching students with these updated trends* | *I am able to undertake preparation of lesson notes / scheme of work too better* | *Yeah and mentorship too* |
| BP1 | *Yeah, it has taught me new ways of structuring/packaging content to make subject more appealing to students.* | *It has also helped with new ways of delivery and new ways of engaging students* | - |
| CP3 | - | *It has exposed me to new trends in assessment and new methodology too* | - |
| CP4 | *Oh, It has broadened my knowledge* | *Yeah, I am also able to teach better in class now* | • Improved confidence from participation and improved my passion for teaching |
| BP2 | • Broadened my knowledge base | *It has broadened my skills and has helped improve my delivery* | - |
| AP1 | - | *It has helped me to improve my skills in assessment of students. Assessing students through varied means.* | It has helped me increase my team work and I am being more professional. |

Source: Field data (2020)

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From the participants' responses, existing CPD initiatives had improved their knowledge, skills and the efficacy of pre-tertiary teachers. Participants were mostly convinced that it had improved their knowledge and skills more than their efficacy.

Head teachers also indicated that existing CPD had been beneficial in broadening teacher knowledge in areas like assessment, maintaining discipline and generally how to improve teaching and learning outcomes. They said;

*Oh yes it really does. I think it has broadened their knowledge and what they do in the classroom. It has also helped them to improve their teaching and learning improves generally. I think it has really helped our teachers, but the truth is that I think more teachers are more concerned with students passing their exams and their promotion (CHT).*

*Yes. The few available have been so helpful. I think we've learnt a lot that teachers appreciate but Implementation is often a problem, but we learnt a lot (AHT).*

*Yes, I believe it is very helpful for the teacher in teaching because they learn a lot from such programmes. I know at least in the areas of assessment, delivery in class, maintaining discipline and improving student behaviour our teachers here have all attended programmes that help they to be very efficient in such areas. At least these ones I'm sure most of my teachers are good at so yes, it has really helped their teaching delivery (BHT).*

The training officer also revealed that most teachers had benefited a great deal from existing programmes which has improved their delivery. He indicated that;

*Oh yes because our programmes are organized to address some issues teachers have, I think they have benefitted a great deal. Except that I think we should think of like I was saying making programmes more content focuses like if science or mathematics training them specifically rather than generally. But our programmes have helped to address many issues teachers have. Issue s in relation to teaching methodology, their subject areas, assessment and even how to use technology to teach.*

To further explore the perceived impact of existing CPD initiatives on the professional practise of teachers, quantitative methods were employed to determine the perceived impact of CPD on teacher professional practise (teacher skills, knowledge, and efficacy). Pre-tertiary teachers were requested to answer several statements by indicating their level of agreement or disagreement to address the research question. The mean score scale was developed as; 1.00-1.49 = Strongly Disagree; 1.50-2.49 = Disagree; 2.50-3.49 = Uncertain; 3.50-4.49 = Agree; 4.50-5.00 = Strongly Agree. Table 23 shows the results from the data analysis on the perceived impact of CPD on pre-tertiary teachers' skills.

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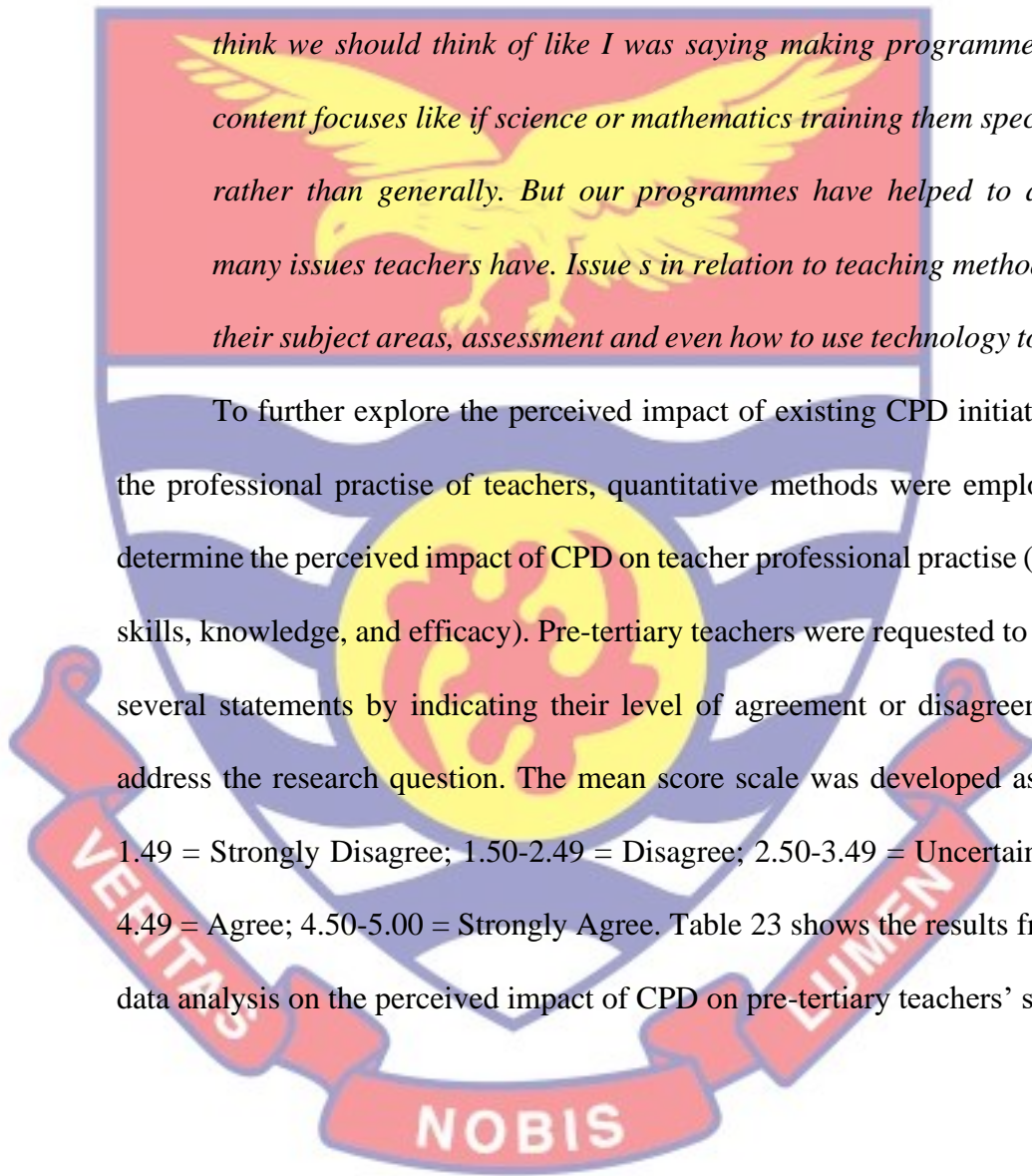
**Table 23: Perceived Impact on Teachers' Skills**

| Statement | Mean | SD |
|---|---|---|
| I can resolve classroom conflicts on my own because of my CPD | 3.93 | 1.01 |
| I am able to handle classroom situations better after going through CPD | 4.00 | .85 |
| My delivery in the classroom has improved tremendously from participating in CPD | 4.16 | .78 |
| I can manage my instructional time better after some CPD sessions | 4.22 | .84 |
| I work better with other teachers knowing what I know now from being part of CPD activities | 4.00 | .76 |
| I am able to engage my students better after some CPD sessions | 4.11 | .74 |
| I discipline my students appropriately using strategies I have learnt from participating in CPD | 3.86 | .87 |
| I have become more creative with my subject matter after being exposed to CPD | 4.11 | .81 |
| Available CPD has enabled me to teach at a steady pace | 3.81 | .87 |
| I am able to deal with classroom issues more effectively after my CPD | 3.97 | .80 |
| CPD activities have helped me to communicate better with my students | 4.06 | .86 |
| Average Mean/Average Standard Deviation | 4.02 | .84 |

Source: Field survey (2020)

From Table 23, the average mean of 4.02 compared to the cut-off point of 3.50-4.49 for agreement to most of the items, shows that the respondents agreed that available CPD had a positive impact on teacher's skills. The average standard deviation score (SD = .84) indicated that responses from pre-tertiary teachers to items on this specific subscale were homogeneous.

An observation of Table 23 shows that the highest mean value was recorded on the statement that pre-tertiary teachers can manage their instructional time better after some CPD sessions (M = 4.22, SD = .84). This suggests that the pre-tertiary teachers agreed about how existing CPD activities had enabled them to manage their instructional time. The lowest mean value

was recorded on the statement that available CPD has enabled pre-tertiary teachers to teach at a steady pace (M = 3.81, SD = .87). This result implies that pre-tertiary teachers also agreed that available CPD activities have enabled them to teach at a steady pace. Table 24 provides further information on the perceived impact of CPD on the professional practise of teachers by highlighting the perceived impact of CPD on teachers' knowledge.

**Table 24: Perceived Impact on Teachers' Knowledge**

| Statement | Mean | SD |
|---|---|---|
| Through existing CPD I have come to appreciate the goals of learning in my subject area | 3.98 | .85 |
| Through available CPD, I appreciate concepts in my area of expertise better | 3.99 | .79 |
| I understand better how to get my students to learn after participating in CPD | 3.97 | .78 |
| I understand how to use varied assessment techniques to get the best out of my students as a result of some CPD activities I have participated in | 4.09 | 1.62 |
| Through existing CPD, I understand how to structure my lessons to ensure student learning | 4.07 | .85 |
| CPD has helped me to know how to apply different teaching methods in the classroom | 4.15 | .71 |
| Available CPD have helped me to understand theories and concept in my subject area better | 3.96 | .76 |
| I understand how to structure my learning objectives from available CPD | 3.97 | .74 |
| Available CPD has helped me appreciate individual differences in the classroom | 4.04 | 1.18 |
| CPD has helped me know when to apply different teaching methods | 4.06 | .75 |
| Available CPD has helped me to understand how to maintain clear directions in my lessons | 3.93 | .80 |
| Average Mean/Average Standard Deviation | 4.01 | .89 |

Source: Field survey (2020)

In Table 24, the average mean of 4.01 compared to the cut-off point of 3.50-4.49 for agreement to most of the items, shows that the respondents agreed that available CPD had a positive impact on teachers' knowledge. The average

standard deviation score (SD = .89) also indicated that pre-tertiary teachers' responses to the items on this specific subscale were uniform.

Table 24 also indicates that the highest mean value (M = 4.15, SD = .71), was recorded on the statement, CPD has helped me to know how to apply different teaching methods in the classroom. This result suggests the respondents confirmed that existing CPD initiatives have provided avenues to enable them to apply appropriate teaching methodologies in the classroom.

Also, the lowest mean value recorded was (M = 3.93, SD = .80) and this was in relation to the statement that available CPD has helped me to understand how to maintain clear directions in my lessons. This suggests that respondents believed that available CPD had provided them with knowledge that has enabled them to improve their delivery by maintaining clear directions in their lessons. Table 25 highlights results on the perceived impact of existing CPD on teachers' efficacy.

**Table 25: Perceived Impact on Teachers' Efficacy**

| Statement | Mean | SD |
|---|---|---|
| Available CPD has made me enthusiastic about teaching | 3.84 | .91 |
| I have become more confident about what I teach after engaging in CPD | 3.97 | .94 |
| Through CPD I have become more dedicated to my profession | 3.85 | .96 |
| Available CPD has helped me to become more reflective of my teaching | 3.96 | .84 |
| I have a positive outlook on teaching after engaging in CPD | 3.97 | .78 |
| Through available CPD, I have been motivated to do more in the classroom | 3.93 | .88 |
| Engaging in CPD has helped me to become more committed to getting work done | 3.96 | .89 |
| Through available CPD, I am able to conduct myself in a professional manner at all times | 3.99 | .97 |
| Average Mean/Average Standard Deviation | 3.93 | .90 |

Source: Field survey, 2020.

From Table 25, the average mean of 3.93 compared to the cut-off point of 3.50-4.49 for agreement to most of the items, shows that the respondents agreed that pre-tertiary teachers perceived that CPD had positive impact on their efficacy. The average standard deviation score (SD = .90) also indicated that pre-tertiary teachers' responses to the items on this specific subscale were uniform.

From Table 2, the highest mean value (M = 3.99, SD = .97), was recorded in relation to the statement that, *through available CPD I am able to conduct myself in a professional manner at all times*. This result implies that the respondents agreed that through available CPD initiatives respondents believe that their professionalism in relation to teaching had improved.

Also, the lowest mean value recorded (M = 3.84, SD = .91) was in relation to the statement that available CPD has made me enthusiastic about teaching. This suggests that the respondents acknowledged that available CPD had stirred up in them feelings of excitement and enjoyment about the teaching profession. To further examine the perceived impact of CPD on professional practise of pre-tertiary teachers, the three elements of teacher professional practise were ranked based on the highest mean value obtained. Table 26. presents the results for this analysis.

**Table 26: Ranking of Elements of Teacher Professional Practice**

| Elements of Teacher Professional Practise | Mean | SD | Rank |
|---|---|---|---|
| Teacher Skills | 4.02 | .84 | 1st |
| Teacher Knowledge | 4.01 | .89 | 2nd |
| Teacher Efficacy | 3.93 | .90 | 3rd |

Source: Field survey (2020)

A look at table 26 reveals the highest mean values for all the elements of teacher professional practice. In order of ranking, the mean value for teacher skills (M= 4.02) is ranked highest. This mean value was closely followed by teachers' knowledge (M= 4.01). Teachers' efficacy (M= 3.93) was ranked third in relation to how pre-tertiary teachers perceived the impact of CPD on their professional practice. This finding suggests that the respondents were in high agreement about how existing CPD had impacted their professional practise in relation to the elements of teacher skills and knowledge. Their agreement for the element of teacher efficacy was however lower compared to teachers' skills and knowledge.

**Data Integration**

Independently, the qualitative strand of the study revealed that all pre-tertiary teachers believed that existing CPD initiatives were beneficial and had impacted their knowledge, skills and efficacy. Participants' responses were however tilted more towards the impact of available CPD on their knowledge and skills than on teachers' efficacy. The quantitative strand validates this finding by providing statistical evidence that pre-tertiary teachers agreed that existing CPD had impacted their professional practise particularly their skills and knowledge more than teacher efficacy Evidence from both strands therefore suggest that teachers perceive that existing CPD has a positive impact on teachers' professional practice. This finding is well grounded in literature (Prasadh, 2018; Calleja, 2018; Gore, et. al., 2017; Sintayehu, 2016; Getnet & Yoo, 2016; Ravhuhali, et al., 2015; Postholm, 2012; Harris, et al., 2010; Neuman & Cunningham, 2006; Powell, et al., 2003).

Powell, et. al., (2003) for instance, revealed in a study that schoolteachers perceived considerable improvements from recognised CPD in professional areas such as articulating practise at higher cognitive levels, teacher reflection and knowledge, confidence, enhancing classroom management and professional discourse. Examining the impact of CPD on the professional practise of teachers in terms of how existing CPD impacts teacher's knowledge and skills, Harris, et al., (2010) also affirm the findings of this study in their study which revealed that teachers had positive perceptions regarding the effect of PD on teachers in terms of their subject matter and classroom practices. Ravhuhali, et al. (2015) in another study recognizes that impact of CPD in terms of its benefits in enhancing the quality of teaching and learning by expanding teaching skills, student learning strategies and teacher pedagogical content knowledge.

From the study, further analysis revealed that teachers' knowledge and skills are perceived to be impacted more than teachers' efficacy. This implies that existing CPD may have focused primarily on reskilling and providing teachers with professional knowledge. Teacher efficacy appears to have received little attention which validates the conjecture that teacher efficacy has not be prioritised in most professional development activities for teachers. Lee (2013) notes in a study that the correlation between teacher efficacy and amount of professional development received was not statistically significant. According to his study, respondents' perceptions suggested that teacher efficacy was not accentuated during professional development activities. Amanulla and Aruna (2014) similarly found no significant effect for professional development in relation to teacher efficacy.

The relevance of this element of teachers' professional practise cannot however not be overemphasized. Bolam (2002) reiterates the cruciality for the teacher efficacy as part of teacher professional development by recommending that PD activities must highlight leadership behaviour to enable teachers to educate their students more effectively. Prioritizing teacher efficacy as part of teacher professional development is vital to drive teachers' goals and behaviour at work which will undoubtedly influence important improvements in the teaching profession. Professional development must seek to enhance teacher efficacy to improve their self-knowledge and consciously endorse appropriate teaching values which teachers may have to recognize as personal values. Higher levels of efficacy beliefs have been linked to superior efforts and performance by teachers (Tschannen-Moran et al, 1998).

Existing CPD must move away from traditional professional development initiatives which often have little impact on teachers towards more useful professional development which emphasizes meaningful change in the professional practise of teachers. Teacher efficacy and educational reform efforts necessitate effective teacher professional development aimed at improving teachers' abilities to teach and support all students in the classroom, differentiate instruction, and participate in professional collaboration, all of which should enable teachers to cope with the challenges of teaching in a healthy manner. When teachers believe in themselves, it not only ensures their wellbeing but may very well be transferred into their classroom practices to ensure improved academic outcomes. CPD is important to the extent that its positive impact can influence teachers to make informed decisions and implement effective changes in their professional practise (Desimone, 2009). It

may be worthy to consider that the missing link in improving teaching and learning may be prioritizing efforts at improving teacher efficacy as part of teacher professional development.

**Research Question Five**

**Barriers to Teacher Professional Development**

Identifying and anticipating barriers to teacher professional development becomes necessary to ensure effective implementation of CPD initiatives. This research question explored the barriers to pre-tertiary teachers' professional development. Both qualitative and quantitative data were gathered in relation to this research question. Thematic analysis and descriptive statistics (mean and standard deviation) were employed for data analysis.

To understand the barriers to pre-tertiary teachers' professional development, participants were asked to provide responses on some barriers they encounter in relation to their professional development for the qualitative aspect of the study. Two main themes emerged from the discussion as significant barriers to the professional development of pre tertiary teachers: structural barriers and financial barriers. Structural barriers included factors relating to time, availability of resources and other related barriers while financial barriers included all issues relating to funding required for participation in CPD. The themes are discussed below.

**Structural barriers**

All participants identified barriers to their professional development. According to the participants' structural barriers such as poor timing for CPD initiatives, unavailability of resources and other related barriers were challenges they faced in the professional development. With regards to poor timing for

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CPD initiatives, most participants indicated that the scheduled times for CPD initiatives were often inconvenient. Some of the CPD programmes were organised at times when classes were in session or when school was on break. This meant that they had to either leave the classroom to attend or they had to forego their vacation. This, in their opinion was not appropriate and often discouraged them from taking part in professional development activities. The duration of CPD initiatives was another issue of concern in relation to timing of CPD initiatives. A participant noted the duration for programmes was often short and numerous learning activities were often crammed into a few days.

Another structural barrier identified was unavailability of resources. A few participants expressed their frustration about the lack of resources required for the successful implementation of knowledge acquired from programmes they attended. According to them, such programmes were organised without providing adequate resources needed for the implementation of what they learnt. Unavailability of resource persons or experts was another barrier that was indicated by a few participants.  According to them, there is the lack of specialized persons who could provide new knowledge to teachers or help them to adopt practices that could improve their teaching outcomes.

Other related barriers such as poor information dissemination, absence of needs assessment, and infrequent initiatives were identified by pre-tertiary teachers as some barriers to their professional development. According to a participant, *information about CPD programmes did not get to them on time, they only found out about the programme after the programme had been completed.* Few participants also indicated that the absence of needs assessment before organising programmes often made such programmes irrelevant. Such

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programmes were more "*academic than practical*" as far as they were concerned. Infrequent CPD initiatives and the need for CPD initiatives to be continuous were also barriers pre-tertiary teachers indicated. Only a few participants lamented on how the governing institution had preference for specific formal CPD activities such a workshop and seminars. According to participants this discourages them from participating in CPD initiatives such as further studies. Some participants lamented about this structural barrier, they said;

> *Most of the programmes they organise is short and the activities that we do are too much, we have to do so much, numerous things in a few days. There is also no equipment to work with when we return from such programmes, so for us in the sciences for instance, it is more academic than practical. Yeah err, sometimes too they organise the programmes on weekends, unbelievable so sometimes there is no time to attend. Some of us are parents and we have other engagements, why weekends. they must look at things like that (CP4).*

> *Further studies are not funded by GES. Even when you want to fund it, it is illegal and teachers end up opting for courses they do not need on sandwich bases (AP1).*

**Financial barriers**

Most of the participants indicated financial constraints as a major hindrance to their professional development. According to participants, state, or school CPD programmes were infrequent which often drives them to look to out of school workshops for their professional development. According to a participant:

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*We have to fund the workshops outside school ones but what do I get if I even go. It's not like it matters to GES. If I go, the truth is that it is for my own benefit. but the money isn't there. Maybe if they will make some provisions for such things, it will reduce our burden (CP3).*

Such out-of-school programmes required teachers to pay for participation. Participants indicated that there was no funding for such situations and participants were required to fund any of such workshops they decided to attend that were not mandated by the employer. Table 27 provides a summary of the barriers identified by pre-tertiary teachers as constraints to their professional development.

**Table 27: Participants' Responses on Barriers to Teacher's Professional Development**

| Participants | Structural Barriers | Financial Barriers |
|---|---|---|
| CP1 | *Programmes are organized when teachers are on break/holidays/weekends. It becomes very inconvenient.* | *School sponsors but often depends on the head. They sometimes refuse to sponsor* |
| BP4 | *Further studies are not encouraged because of the fear that some teachers will leave after their studies* | *Sometimes we have to pay for some workshops* |
| AP1 | <ul><li>Timing does not allow us to participate</li><li>Absence of needs assessment.</li><li>Organized but sometimes it is not relevant.</li><li>Further studies are not funded. Even when you want to fund it is illegal and teachers opt for courses.</li><li>They do not need on sandwich bases.</li></ul> | *Lack of funding is affecting quality because most of the good ones are organized outside campus.* |
| BP1 | *The timing for some of the programmes are bad. It is sometimes during school hours or even weekends. How do they expect us to go* | *Finances is a big issue. We are not able to attend because you have to pay.* |

Table: Cont

| BP3 | *The timing for most programmes is not good and even for further studies you can't have regular studies, you can only use sandwich* | *The funding is always problem, nobody is willing to pay for our programmes and it is not easy for teachers* |
|---|---|---|
| AP2 | *I think most of the time there is difficulty getting resource persons* | - |
| AP4 | • Need for CPD to be continuous<br>• unavailability of resources<br>• Willingness of resource persons and individual learners to implement and adopt practices for daily use | - |

The head teachers indicated some barriers to professional development as lack of funding and poor timing for CPD activities. They indicated that funding to support such programmes were inadequate and teachers struggled with finding replacements for their classes because they had to bear the financial burden of getting replacements.  Table 28 highlights the responses of the head teachers on such barriers.

**Table 28: Head teachers' Responses on Barriers to Teachers' Professional Development**

| Head teacher | Responses |
|---|---|
| CHT | *Finances have been a major problem, that is the funding. Organizing such programmes are expensive and GES does not organize it frequently, so we have to attempt to do something by ourselves and it's not easy sometimes. So, we often fall on our associations of even the heads of department to try to organize discussions with them.*<br><br>*Sometimes the old students too help. Another thing that discourages some teachers from pursuing their further studies is that teachers are made to pay for their replacements and this is a source of major complain. Some teachers are reluctant to go for further studies because they have to pay for their replacements. The financial burden becomes too much*<br><br>*The timing is also sometimes a big issue because most of these programmes require teachers to leave the classroom for that period and that can be a problem sometimes because it is often outside the jurisdiction of the school and teachers complain that there is no sponsorship from the school* |

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Table: Cont

| AHT | *WELL, OUR MAJOR PROBLEM HAS BEEN WHO TO SPONSOR THE PROGRAMMES. GES PROGRAMMES ARE NOT OFTEN SO SOMETIMES THE TEACHERS GO OUT BUT THEY EXPECT THAT WE SPONSOR AND THE SCHOOL BUDGET DOES NOT CATER FOR SUCH THING. EVEN FOR FURTHER STUDIES, THEY MAKE SUCH REQUEST BUT WE HAVE TO REFUSE AND THIS REALLY DISCOURAGES THAT TEACHER SOMETIMES* |
|-----|------|
| BHT | *Ok so for now the biggest issue is that it is impossible to implement most of the thing's teachers learn. Most of the time teachers learn beautiful things for workshops which they should practise but the resources are not available to help them to implement it. Sometimes even the school environment alone will not support such great ideas so that is really a challenge.* <br><br> *But another thing is also the funds for such programmes. Because we organize it ourselves it is a problem because the funds are not available. The old students sometimes support but it is not adequate.* |

Source: Field data (2020)

The training officer also identified some barriers to professional development for teachers. He said:

*It has always been the funding and the behaviour of some teachers towards, you see I was telling you previously the teacher felt that it is a worry and once he has acquired his diploma or degree he thinks he's taught for 100 years, why should that one week or two weeks be of importance to him, so those were some of the challenges and basically you'll have a nice plan on the timetable that you want to roll out but unfortunately if you don't have the means to push it err, it restrains because if the teachers are not going to be given anything at all at least the training resource materials they must be provided, sometimes we organize trainings and if for nothing at all you should be able to project it, get some leaflets for them too so these things are what sometimes will not make us to be able to train the way we wish.*

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From the shared responses of participants, the barriers to teachers' professional development emanates from two broad areas: structural and financial barriers. Structural barriers were barriers to teachers' professional development related to issues such as inconvenient timing of CPD initiatives, short duration of CPD, unavailability of resources, poor information dissemination, behaviour of teachers, absence of needs assessment, and infrequent CPD initiatives. Financial barriers were mainly attributed to lack of funding on the part of the governing institution, schools and pre-tertiary teachers for professional development activities.

To further examine the barriers to teachers' professional development, quantitative methods were employed. Participants indicated their agreement or otherwise to items developed from participant responses in the qualitative strand. The data was measured on a five-point Likert-type scale (Strongly Agree-5, Agree-4, Uncertain-3, Disagree-2, Strongly Disagree-1), with a mid-point of 3 as the baseline for comparison. Means and standard deviations were utilized for data analysis. By inference, a items or statements that scored a mean value above 3 accurately implied barriers to teachers' professional development. Conversely, items or statements that scored a mean value of less than 3 implied that respondents did not consider such statements as barriers to their professional development. The results from the analysis are highlighted in Table 29.

**Table 29: Barriers to Pre-Tertiary Teachers' Professional Development**

| Statement | Mean | SD |
|---|---|---|
| My school can barely afford to provide CPD | 3.45 | 1.23 |
| There is no encouragement from my school to participate in CPD | 2.82 | 1.25 |
| It is inconvenient when I have to leave the classroom to participate in CPD activities | 3.14 | 1.28 |
| I am unable to participate in some CPD activities because it is often organized outside the school | 2.94 | 1.32 |
| I find some CPD activities unnecessary because it is difficult to implement what is learnt | 3.01 | 1.31 |
| The timing for some CPD activities makes it difficult for me to attend | 3.34 | 1.27 |
| CPD activities are mostly not continuous so we benefit every once in a while | 3.61 | 1.16 |
| The content of some CPD activities is often not relevant because there is no needs assessment | 3.11 | 1.23 |
| Some organized CPD activities often provide repetitive ... current trends | 3.20 | 1.28 |
| The duration for CPD is often too short for any meaningful learning | 3.25 | 1.28 |
| There is poor information dissemination about CPD initiatives | 3.17 | 1.29 |
| My professional needs are being met through available CPD | 2.83 | 1.28 |
| I do not have sufficient and appropriate access to CPD initiatives | 3.14 | 1.21 |
| I am unable to participate in CPD activities due to monetary constraints | 3.23 | 1.25 |
| Available CPD has not adequately covered all my training needs | 3.46 | 1.13 |
| I am not satisfied with available CPD initiatives | 3.06 | 1.31 |
| Existing CPD initiatives are not beneficial to me | 2.40 | 1.19 |
| I have not participated in any CPD activity in the last 2 years and beyond | 2.34 | 1.33 |
| Grand Mean/Average Standard Deviation | 3.08 | 1.26 |

Source: Field survey (2020)

From Table 29, the grand mean of 3.08 which is above 3.00 indicates that respondents were in consensus about the barriers to their professional development. The average standard deviation score (SD = 1.26) suggests that the responses of the respondents were heterogeneous. That is to suggest that respondents had diverse views regarding barriers to their professional development.

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Form Table 29, it can be observed that the inability of schools to provide funding for teachers' CPD (M= 3.45, SD = 1.23) was considered a significant barrier to their professional development. This is likely so because without proper funding, teachers are unlikely to have access to professional development. Similarly, it can be observed that the timing of CPD activities (M = 3.34, SD = 1.27) was another barrier that was identified by the respondents. Short duration for CPD programmes that yield no meaningful learning (M= 3.25, SD= 1.28), inconvenient times that required teachers to leave the classroom (M = 3.1, SD = 1.28) and the scheduled days which made it difficult for pre-tertiary teachers to attend CPD programmes (M = 3.34, SD = 1.27) were also recognised as barriers to professional development of pre-tertiary teachers. Respondents again identified their inability to implement knowledge acquired from CPD activities (M= 3.01, SD = 1.31), as a major concern in their professional development. This could potentially discourage teachers from participating in subsequent initiatives. In addition, lack of continuity of CPD activities (M = 3.61, SD = 1.16) was identified as barrier to CPD participation because pre-tertiary teachers believed they only benefitted once in a while from such initiatives Respondents also indicated that the absence of needs assessment which often resulted in irrelevant content (M = 3.11, SD = 1.23) for some CPD activities and CPD programmes that involved repetitive knowledge that lacks current trends (M = 3.20, SD = 1.28) was a barrier to their professional development. Other barriers to teachers' professional development that were identified included; poor dissemination of information about CPD initiatives (M= 3.17, SD= 1.29), insufficient access to CPD initiatives (M=3.14, SD= 1.21) monetary constraints (M= 3.23, SD= 1.25), poor linkages between CPD and

teacher needs (M= 3.46, SD= 1.13) and dissatisfaction with available CPD (M=3.06, SD=1.31)

The highest mean value recorded was in relation to the lack of continuity of CPD initiatives which benefits teachers once a while (SD = 3.46, SD = 1.13). This result implies that the majority of the pre-tertiary teachers agreed that CPD activities are mostly not continuous, so they seldom benefit from such activities.

The lowest mean value recorded was on the statement relating to structure of CPD activities which suggested that the last CPD activity pre-tertiary teachers participated in was 2 years and beyond (M = 2.34, SD = 1.33). By inference, the respondents disagreed with this assertion.

**Data Integration**

Independently evidence from the qualitative analysis revealed that barriers to pre-tertiary teachers' professional development emanated from two broad areas; structural and financial barriers. Structural barriers were barriers that emanate for issues such as inconvenient timing of CPD initiatives, short duration of CPD, behaviour of teachers towards programmes, unavailability of resources, poor information dissemination, absence of needs assessment, and infrequent initiatives. Financial barriers were mainly due to lack of funding from school and monetary constraints on the part of participants. Results from the quantitative data corroborate these findings with evidence that suggest that the barriers to teachers' professional development include issues relating to inappropriate timing of CPD, short duration for CPD initiatives, monetary constraints, lack of relevant content, lack of continuity for CPD activities, poor dissemination of information about CPD and poor linkages between CPD and teacher needs. Pre-tertiary teachers were however particularly concerned about

the lack of continuity for CPD activities. The findings of this study are clearly established in literature as barriers to teachers' professional development (Tulu, 2019; Gomba & Kedibone, 2019; Berehe, et al., 2018; Geldenhuys & Osthuizen, 2015; Gemeda & Tynjälä, 2015; Lerato & Dipane, 2014; Desta, et al, 2013; Kokebe, 2013; Komba & Nkumbi, 2008). Komba & Nkumbi (2008) in a study highlighted similar barriers. According to them, professional development activities were poorly coordinated and rarely budgeted for at all levels: national, regional and district.

Berehe, et al., (2018) associated the inability of teachers to take part in CPD activities to the inadequate qualified CPD coordinator in schools, insufficient school, insufficient budget allocation, low morale, lack of follow ups and feedback and inadequate time allocations.  Desta, et al., (2013) also found that budgetary constraints to roll out programmes at school level and lack of monetary incentive as some constraints to professional development. Macheng (2016) notes from his study that rigid school schedules, lack of teacher ownership for CPD, inadequate funding, inadequate school support, lack of acceptable rewards to encourage professional growth and insufficient teacher input in CPD initiatives as major barriers to teacher professional development.

It is abundant in literature that time and money have traditionally been considered significant barriers to teachers' professional development which clearly validates the results of this study. The issue of funding appears to be prominent in the teacher professional development even today because teachers are either required to fund their own professional development activities or schools struggle to finance professional development for teachers. Such

constraints may possibly reduce teacher affection towards their professional development and discourage lifelong learning.

It is relevant to recognize that because professional development requires a lot of planning and support. Costs of professional development such as finding substitutes to replace teachers participating in CPD during school day, traveling expenses, accommodation expenses and even arrangements necessary to ensure the success of particularly formal CPD activities must be anticipated and catered for. Other expenses including securing conference rooms and employing consultants to facilitate the conferences have a cost factor. Without relevant funding, it is nearly impossible for effective PD activities for teachers. Teachers will most likely be unwilling to hold themselves in readiness for their professional learning or even attend organised sessions as part of their CPD.

Closely related to limited funding for professional development is the issues of timing. The shortcomings for many of such programmes have often been the duration, its infrequency of nature and inconvenient timing for such programmes which was identified by this study. Mastering a new skill or applying new knowledge can take 50 or more hours of focused professional learning, which necessitates not only time but also rigor (Mizell, 2010). Such intensity appears to be missing for most professional development. In most cases, the time set aside for professional learning (usually a few days permitted by regulatory bodies or the school) is just sufficient to encourage any real learning. Phasha, et al., (2016) noted that this is particularly true for teachers' professional development in a study that revealed that the poor time allocation

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for training, poorly qualified trainers and little or no assistance following training for teachers.

Kokebe (2013) also indicated that there is often lack of training manuals for organised CPD activities and relevant content as well as trained facilitators for CPD initiatives. Geldenhuys and Osthuizen (2015) also, on their part, found inadequacy of knowledge presented by CPD programmes and the insufficiency of school management contributions to CPD initiatives as barriers to teachers' professional development which fuel teachers' reluctance to participate in CPD activities. Gomba (2019) similarly revealed in a study that there is little support and school monitoring regarding CPD for teachers. Bangani (2012) sums it all up in his study which revealed that professional development activities for teachers were simply poorly organised and poorly coordinated. Collaboration, support, proper timing, long-term commitment, and resources are all critical for the successful implementation of professional development activities.  In the absence of such measures, these aforementioned barriers often become evident. The need for CPD providers to recognise such barriers and advance efforts at overcoming such barriers are essential to ensure that professional development can yield beneficial outcomes.

**Research Hypothesis One**

$H_0$: There is no statistically significant difference in CPD activities for pre-tertiary teachers based on school category.

$H_1$: There is a statistically significant difference in CPD activities for pre-tertiary teachers based on school category.

This research hypothesis sought to ascertain the statistically significant difference in CPD activities for teachers based on school category. One-Way Analysis of Variance (ANOVA) was used to test this research hypothesis. This statistical technique was utilized to examine whether any differences exist in the nature of CPD activities for pre-tertiary teachers based on participants' school category (Category A, B and C). The result of this analysis is presented in Table 30.

**Table 30: Differences in CPD activities based on School Category**

|  | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | .235 | 2 | .117 | .440 | .644 |
| Within Groups | 115.214 | 432 | .267 |  |  |
| Total | 115.448 | 434 |  |  |  |

Source: Field survey (2020)                    *Significance level .05

It can be observed form Table 30 that there is no statistically significant difference in the CPD activities of pre-tertiary teachers based on school category (F = .440; df = 2, 432; $\rho$ = .644 > .05). This suggests that, teachers, irrespective of their school category, were involved in the same PD activities. This finding is coherent with the findings of a study by TALIS (2008) which examined teacher participation in CPD across school characteristics. According TALIS (2008), there was no statistically significant difference between teacher participation in CPD for private school teachers and public-school teachers. Amanulla and Aruna (2014) also found no statistically significant differences between government and private school teachers in their involvement in CPD activities. These finding are however contrary to other research findings (Badri

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et al., 2016; Ngala & Ordebero, 2009; Seferoglu, 2001; Department of Education, 1997) A study by the Department of Education (1997) found that that public school teachers were more likely to take part in professional development activities. Seferoglu (2001) also had a similar conflicting view in his study which identified differences in participation in CPD by pre-tertiary teachers in rural schools who appeared to have little access to in-service training than pre-tertiary teachers in urban schools. Ngala & Ordebero (2009) also in a study concluded that compared to average performing schools, teachers from high performing schools took more interest in professional development activities. Another study by Badri, et al., (2016) which explored teachers' perceptions of professional development needs relative to type of schools revealed that the perceived need for teacher PD activities in public schools was higher than those in private schools. It is possible that inconsistency in literature may be due to differences in school environments. Perhaps the findings of the current study may also be attributable to the role of GES, which is the governing institution responsible for the pre-tertiary teachers' professional development. The earlier findings of this study (research question 1& 2) which suggest an overreliance on formal CPD initiatives particularly workshops which often come as a one-size fits all, standardized, formal in nature and which requires all teachers regardless of their practising school to participate may account for the lack of differences in CPD activities based on school category. This implies that the adoption of the traditional model of professional development by GES is predominant and recognised across all pre-tertiary institutions. Schools therefore have the same measure regarding what is provided or recognized as developmental activities for pre-tertiary teachers.  It also relevant to consider

that what conflicting literature indicates regarding the findings of the current study may equally be true. A critical examination of participants' responses from the qualitative strand reveals that in terms of CPD activities, while some participants indicated that they were engaged in workshops and other activities such as mentorship and peer-to-peer discussions, others only indicated workshops. While workshops and seminars were identified across all school categories, some schools may be engaged in other CPD activities. It is important to consider the possibility that schools may find innovative ways of ensuring teacher learning and growth, however, it is still valid to conclude that all efforts by the governing institution towards teacher professional development have been homogenous. The drawback to this however is that the overreliance of GES on formal CPD activities which is unlikely to support and promote any real change in the teaching profession.

**Research Hypothesis Two**

$H_0$: There is no statistically significant difference in the perceived impact of CPD on teachers' professional practise based on teaching experience.

$H_1$: There is a statistically significant difference in the perceived impact of CPD on teachers' professional practise based on their teaching experience.

This research hypothesis sought to test the statistically significant difference in the perceived impact of CPD on teachers' professional practise (teacher skill, knowledge and efficacy) based on the teaching experience of pre-tertiary teachers. The Multivariate Analysis of Variance (MANOVA) was utilized to test this research hypothesis. This statistical tool was utilized to determine whether any differences exist in perceptions of teachers about the impact of existing CPD on teacher professional practise (teacher knowledge,

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skills and teacher efficacy) based on the teaching experience (2-5years, 6-10 years, 11-15 years, 16-20 years and 20 years & beyond) of teachers. The test of homogeneity of variance-covariance matrices based on Box's M test was conducted, M = 105.327, F (24, 302025.39) = 4.316, p = .000. Consequently, the assumption of the equality of homogeneity of variance-covariance matrices was violated. Pillai's Trace was therefore used in testing for statistical significance. Table 31 presents the results.

**Table 31: Difference in the Perceived Impact of CPD on Teachers' Professional Practise based on Teaching Experience**

| Effect | | Value | F | Hypothesis df | Error df | Sig. | Partial Eta Squared ($\eta_p^2$) |
|---|---|---|---|---|---|---|---|
| Teaching Experience | Pillai's Trace | .024 | .857 | 12.000 | 1290.00 | .591 | .008 |
| | Wilks' Lambda | .976 | .856 | 12.000 | 1132.00 | .592 | .008 |
| | Hotelling's Trace | .024 | .855 | 12.000 | 1280.00 | .593 | .008 |
| | Roy's Largest Root | .018 | 1.885 | 4.000 | 430.00 | .112 | .017 |

Source: Field survey (2020)                    Significant at .05 level

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From the results of the analysis, it can be observed that there is no statistically significant difference in the perceived impact of CPD on teachers' professional practise based on their teaching experience, F (12, 1290) = .857, $p$ = .591; Pillai's Trace = .024, $\eta_p^2$ = .008. This finding implies that the perceived impact of CPD on the professional practise was not sensitive to teacher experience. The implication drawn from this finding is that long serving teachers perceptions regarding the impact of existing CPD on teachers' knowledge, teachers' skills and teachers' efficacy is synonymous with what new pre-tertiary teachers perceive about existing CPD. This finding suggests that regardless of teaching experience, all teachers expressed the same views about the perceived impact of existing CPD on teacher professional practice. By implication all pre-tertiary teachers believe that existing CPD has impacted their knowledge and skills more than teacher efficacy (an implication drawn from research question 4). This suggests no difference in pre-tertiary teachers' beliefs about how existing CPD improves teacher efficacy based on their teaching experience. This result is however inconsistent with the conclusions of Lee (2013) who found that teacher efficacy for teachers with 11+ experience was statistically higher than for those with one to ten years of teaching experience in relation to the amount of CPD they received.

**Chapter Summary**

This chapter highlighted discussions of results and findings for the study. Research question one sought to explore how pre-tertiary teachers conceptualize their Continuous Professional Development. The results indicated that pre-tertiary teachers conceptualised professional development to

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constitute formal CPD activities. Informal CPD activities were not prioritized as aspects of teachers' professional development.

Research question two investigated what characterizes existing CPD for pre-tertiary teachers. The results revealed that existing CPD for teachers is characterised by formal CPD initiatives which had no clear structure, were disconnected from their performance management reviews and organised periodically. It was also found that CPD initiatives were spearheaded by schools and the governing institution which mainly adopted lectures and presentations as the main mode of delivery and focused heavily on addressing issues relating to teachers' content areas.

Research question three examined how well pre-tertiary teachers' CPD needs were being met. It was revealed that pre-tertiary teachers had a high demand for CPD initiatives and possessed conflicting views about needs assessment for pre-tertiary teachers in relation to their professional development. From the results, existing CPD for pre-tertiary teachers was considered to be relevant because it was job embedded but the focus of existing CPD activities was incongruent with the professional needs of pre-tertiary teachers in matters relating to ICT teaching skills, subject matter issues, student discipline and behavioural problems, teaching methodology and current trends in the subject matter. It was also found that existing CPD initiatives were adequate in addressing pre-tertiary teachers' professional needs in relation to the subject matter. but were inadequate in addressing issues related to teaching special needs children and teaching in multicultural classrooms.

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The fourth research question sought to examine the perceived impact of existing CPD on the professional practise of pre-tertiary teachers. The results revealed that pre-tertiary teachers believed that existing CPD initiatives were beneficial and impacted teachers' professional practice. Particularly, pre-tertiary teachers believed that existing CPD had impacted their skills and knowledge more than teacher efficacy.

The last research question examined the barriers to the teachers' professional development. The results indicated that the barriers to professional development for teachers emanated from structural and financial barriers.

Research hypothesis one analysed the differences in CPD activities for pre-tertiary teachers based on school category. The results indicated no statistically significant difference in CPD activities of pre-tertiary teachers based on school category.

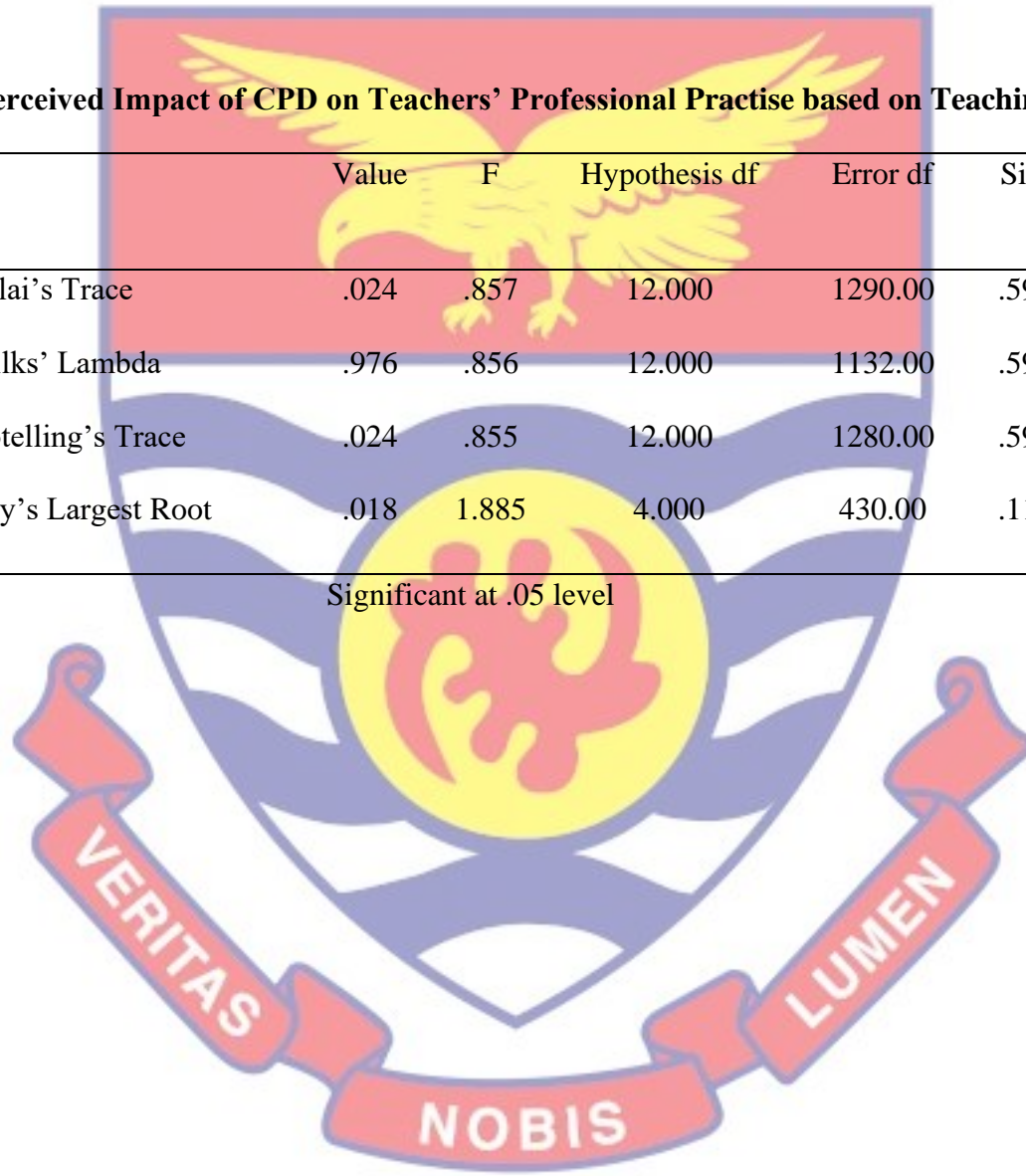The last research hypothesis analysed the difference in the perceived impact of CPD on teachers' professional practise based on teaching experience. The results revealed that there was no statistically significant difference in the perceived impact of CPD on pre-tertiary teachers' professional practise based on teaching experience.

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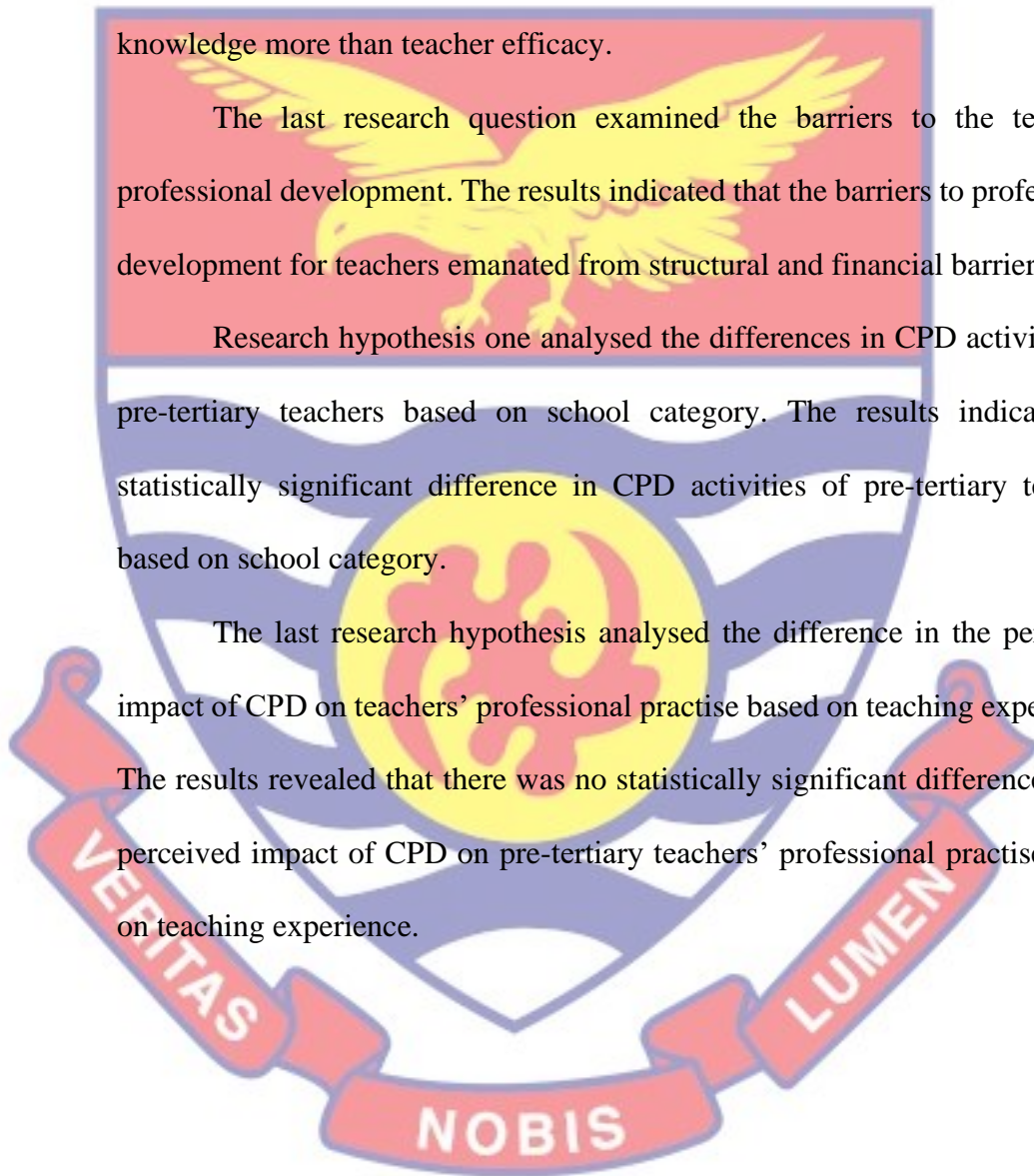
# CHAPTER FIVE

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

**Overview**

This chapter provides finality to the entire study. It summarizes the research process and key findings. Conclusions are drawn and recommendations made in line with findings of this study. The chapter ended with suggestions for further research. The summary of the research process is as follows:

**Summary of the Research Process**

This study explored Continuous Professional Development and its perceived impact on the professional practise of pre-tertiary teachers in Ghana. The study sought to examine pre-tertiary teacher's conceptualisation of CPD, the existing framework for professional development and the perceived impact of CPD on teachers' professional practice. The study adopted a mixed methods approach utilizing an Exploratory-Sequential Design. In all one training officer, three headteachers and 435 pre-tertiary teachers were engaged in the study. Data was gathered through interviews and questionnaires. Participants in the qualitative strands were engaged in an interactive discussion using a semi-structured interview guide. Consequently, the questionnaire was employed to collect data from respondents which was filled and duly returned in adherence to COVID 19 safety protocols. For the analysis, descriptive statistic (frequencies, percentages, means and standard deviation) were employed to analyse all research questions. ANOVA and MANOVA were used to test the research hypotheses. The study explored the professional development of pre-

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tertiary teachers by addressing and testing the following research questions and hypotheses respectively:

1. How do pre-tertiary teachers conceptualize Continuous Professional Development?

2. What characterises existing Continuous Professional Development for pre-tertiary teacher?

3. How are pre-tertiary teachers' CPD needs being met?

4. What is the perceived impact of existing CPD on the professional practise of pre-tertiary teachers?

5. What are the barriers to the professional development of pre-tertiary teachers?

6. Is there a no statistically significant difference in CPD activities for pre-tertiary teachers based on their school category?

7. Is there a statistically significant difference in the perceived impact of CPD on teachers' professional practise based on teaching experience.

**Summary of Key Findings**

1. Pre-tertiary teachers. conceptualised their professional development to constitute formal CPD initiatives such as workshops, seminars and further studies. Little emphasis was placed on informal CPD activities such as observational visits to other schools, peer-peer discussions and mentorship as critical components of teachers' professional development.

2. The study revealed that existing CPD for pre-tertiary teachers is characterised by formal CPD initiatives such as workshops, seminars and further studies which had no clear structure and was organised at

random. It was also found that CPD initiatives were spearheaded by schools and the governing institution which mainly adopted lectures and presentations as the main mode of delivery. Most CPD initiatives available to pre-tertiary teachers were identified to be high in teacher passivity which focused heavily on addressing issues relating to content areas. It was also revealed that existing CPD was disconnected from their teachers' performance management reviews.

3. The study revealed that pre-tertiary teachers had a high demand for CPD initiatives and possessed conflicting views about needs assessment for pre-tertiary teachers in relation to their professional development. Pre-tertiary teachers also found existing CPD to be relevant because it was job embedded but the focus of existing CPD activities was incongruent with the professional needs of pre-tertiary teachers in matters relating to ICT teaching skills, subject matter issues, student discipline and behavioural problems, teaching methodology and current trends in the subject matter. Existing CPD initiatives were also found to be adequate in meeting the professional needs of pre-tertiary teachers particularly in addressing issues related to the subject matter of teachers but was inadequate for addressing issues related to teaching children with special needs and teaching in multicultural settings.

4. Evidence from the study revealed that pre-tertiary teachers believed that existing CPD initiatives were beneficial and impacted teachers' professional practise regarding their knowledge, skills and efficacy. Particularly, pre-tertiary teachers believed that existing CPD had impacted their skills and knowledge more than teacher efficacy.

5. The study revealed that barriers to pre-tertiary teachers' professional development emanated from two broad areas; structural barriers and financial barriers. Structural barriers stemmed from issues such as inconvenient timing of CPD initiatives, short duration of CPD, behaviour of teachers towards programmes, unavailability of resources, poor information dissemination, absence of needs assessment, and infrequent initiatives. The financial barriers were related to lack of funding on the part of the school and monetary constraints on the part of participants.

6. The ANOVA results revealed no difference in the CPD activities pre-tertiary teachers are engaged in based on their school category. There was no statistically significant difference in the CPD activities of pre-tertiary teachers based on their school category.

7. The MANOVA results revealed no difference in how teachers perceived the impact of existing CPD initiatives on their professional practice, particularly on their knowledge, skills and efficacy. From the study there was no statistically significant difference in the perceived impact of CPD on teacher professional practise based on teaching experience.

**Conclusions**

From the study it is evident that pre-tertiary teachers conceptualise their professional development as one that is rooted in formal CPD activities. This type of CPD initiatives stifle opportunities for teachers to learn and develop through reflective teaching which can only be achieved through informal CPD activities such as teacher research, classroom studies, observational visits, peer-to-peer discussion, and mentorship opportunities. Teachers in this sense do not

recognise that their professional development is continuous. They fail to recognize their CPD as one that involves multiplicity of learning experiences which help to improve their professional growth. Pre-tertiary teachers do not consider their professional development to be one that is embedded in their own personal learning experiences which has been identified to be more beneficial than structured one-size fits all learning activities.

The study has brought to light that the Ghana Education Service has operationalised a traditional approach to the professional development of pre-tertiary teachers that is characterised by sporadic formal CPD activities with no structure and one that fails to encourage teacher interactivity in relation to their professional practise. Existing CPD activities for teachers have been inadequate in incorporating informal CPD activities and have fundamentally considered teachers as passive recipients of knowledge with little or no room for teacher growth and development through reflective practise. Such a traditional model to teachers' professional development is unlikely to foster learning that will significantly alter the professional practise of pre-tertiary teachers to accommodate the changing needs of the learners within national and global contexts.

The findings of the study revealed that existing professional development initiatives for pre-tertiary teachers provide sufficient support to pre-tertiary teachers in their respective content areas but have failed to address other critical areas of the teaching profession. This has led to increased demands by pre-tertiary teachers for intensified efforts in relation to their professional development. Needs assessment to target specific professional needs of teachers

is also sparse resulting in some disharmony between what teachers believe they need and what existing CPD initiatives make available to them.

Evidence from this study indicated that available efforts at improving pre-tertiary teachers through their professional development are inadequate in emphasising teacher values, attitudes, and professional behaviour. Professional development for pre-tertiary teachers have primarily focused on improving teachers' content knowledge and teaching skills

It is also evident from the study that pre-tertiary teachers struggle with challenges relating to the structure of available CPD activities and monetary constraints that may present difficulties to pre-tertiary teachers as far as participation in professional development activities is concerned. Considering that existing structures for the professional development of pre-tertiary teachers may already frail, these barriers pose real challenges to teacher learning. These barriers will suppress efforts aimed at the professional growth of teachers which will marginalize any attempt at bringing about any real change in the professional practise of teachers.

The study revealed that existing CPD initiatives are homogenous irrespective of the practising school of pre-tertiary teachers. Schools as regulators of existing CPD therefore heavily rely on existing CPD models which have been identified as traditional in nature with little room for ensuring meaningful change in teaching. Schools most likely rely on formal CPD activities in line with what is prescribed by the Ghana Education Service which is inappropriate in addressing the diverse needs and interests of teachers and providing opportunities to foster changes required to improve the professional practise of teachers both locally and within global contexts.

Finally, it is evident from the study that teachers, regardless of their teaching experience, have parallel perceptions regarding the impact of existing CPD on teachers' professional practice. This is indicative of the relative extended utilisation of the traditional model of CPD which predominantly focuses on improving teachers' knowledge and skills. This has not changed over the years. What exists for more experienced teachers in relation to their professional development is still prevalent in recent times. Both experienced and new teachers rely heavily on formal CPD which gives very little room for teachers to improve in the area of their teaching values

## Recommendations

1. The NTC in its mandate must encourage and support teachers to develop a more collaborative approach towards their professional learning. Teachers must rethink their professional development by moving away from their traditional conception of CPD to a more balanced and creative approach that emphasizes collaborative and informal structures. Teachers must be properly educated on the need for the professional development to be continuous and exhaustive rather than being brief and sporadic. Through proper training mechanisms they must be encouraged to modify their orientation about their professional development.

2. The Ministry of Education through the NTC and GES must engage in major reforms regarding the professional development of teachers. The existing structures are ineffective in providing support for the professional growth of teachers making it imperative for steps to be taken to develop and codify an appropriate understanding of what constitutes professional development for pre-tertiary teachers. An

effective professional development system in this instance must shift from the traditional model for teacher learning to more collaborative and informal systems. The reform-type of professional development may suffice as an alternative to the existing traditional model because it relies on a variety of professional development activities (both formal and informal) and has been identified to be a more effective system for enhancing teachers' professional growth.

It is imperative that in the development of an effective professional development system for teachers, the Ministry must establish standards and metrics of quality to define minimum competencies which should serve as benchmarks for determining teachers' growth. It is equally important for the system to be linked to teachers' appraisal systems to ensure that it stays relevant to teachers. School leadership must also be included in all reforms and strengthened to provide ongoing support for the implementation of new structures. Also, to ensure the feasibility of implementation, any system developed must be customized and contextualized to fit local contexts.

3. As part of reforms to PD systems for pre-tertiary teachers, preliminary assessment of the professional needs of pre-tertiary teachers must be thoroughly conducted to by the CPD regulators in Ghana to ascertain professional areas in which teachers appear to be deficient. Areas such as student discipline and student behavioural problems, teaching methodology and current trends in the subject matter as identified from this study has to be prioritised in development of such systems. This

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should ensure that the professional development mechanisms for teachers yield meaningful outcomes.

4. NTC, GES and schools must structure Professional development initiatives for pre-tertiary teachers to include initiatives that will help to promote teacher values, attitudes and behaviours which may be achieved through both formal and informal strategies directed at encouraging mentorship, coaching, teacher collaboration, peer-peer instruction, observational visits and all efforts that nurture effective and active teacher learning communities. This should help improve teacher efficacy as part of the professional development for teachers.

5. Professional development is not an easy endeavour, it requires careful planning and adequate funding to ensure its efficiency. The Ministry of Education must take adequate steps in ensuring the professional development for teachers is adequately budgeted for in national budgets. In addition to this, GES and schools must find creative ways of raising funds towards activities that will support the professional development of teachers. Again, all arrangements in relation to the structure of such programmes particularly for formal initiatives must be anticipated and catered for ahead of time to minimise the structural constraints associated with the professional development of teachers. Overcoming the barriers to professional development must be recognised as an essential investment which yields substantial benefits to both teachers and students.

6. The theoretical perspectives underpinning the strength of professional development for teachers as professionals is that they must take

responsibility for their own learning and development. To exercise their own professional autonomy, it is relevant for the Ministry of education through the NTC, GES and schools to institutionalise informal CPD strategies which are more personalised approaches to teacher learning as part every teacher's professional development. For teacher professional growth, they must be required to engage in activities such as coaching, mentoring, observational visits, collaborative research, peer observation, invention teams and informal dialogue to improve teaching. Such activities should be integrated into their daily work as teachers to ensure that the pedagogy of professional development is active and promotes a reflective practise. Formal policies must also be developed by the NTC towards the adoption of informal CPD initiatives as a mandatory component of teacher professional development. This should overall prepare teachers to embrace change and become better equipped to handle the challenges of the 21st century and meet the needs of all students within local and global contexts

**Suggestions for Further Studies**

1. Professional development for pre-tertiary teachers was investigated at the SHS level, other researchers may explore similar issues at the basic levels of education for a total appreciation of professional development for teachers at the pre-tertiary level.

2. Professional development for pre-tertiary teachers may be investigated within specific subject areas to identify peculiarities that may exist in different disciplines.

3. The study was delimited to the Central Region. The scope of the study may also be broadened to include other administrative regions in Ghana for a wider assessment of CPD for teachers across the nation.

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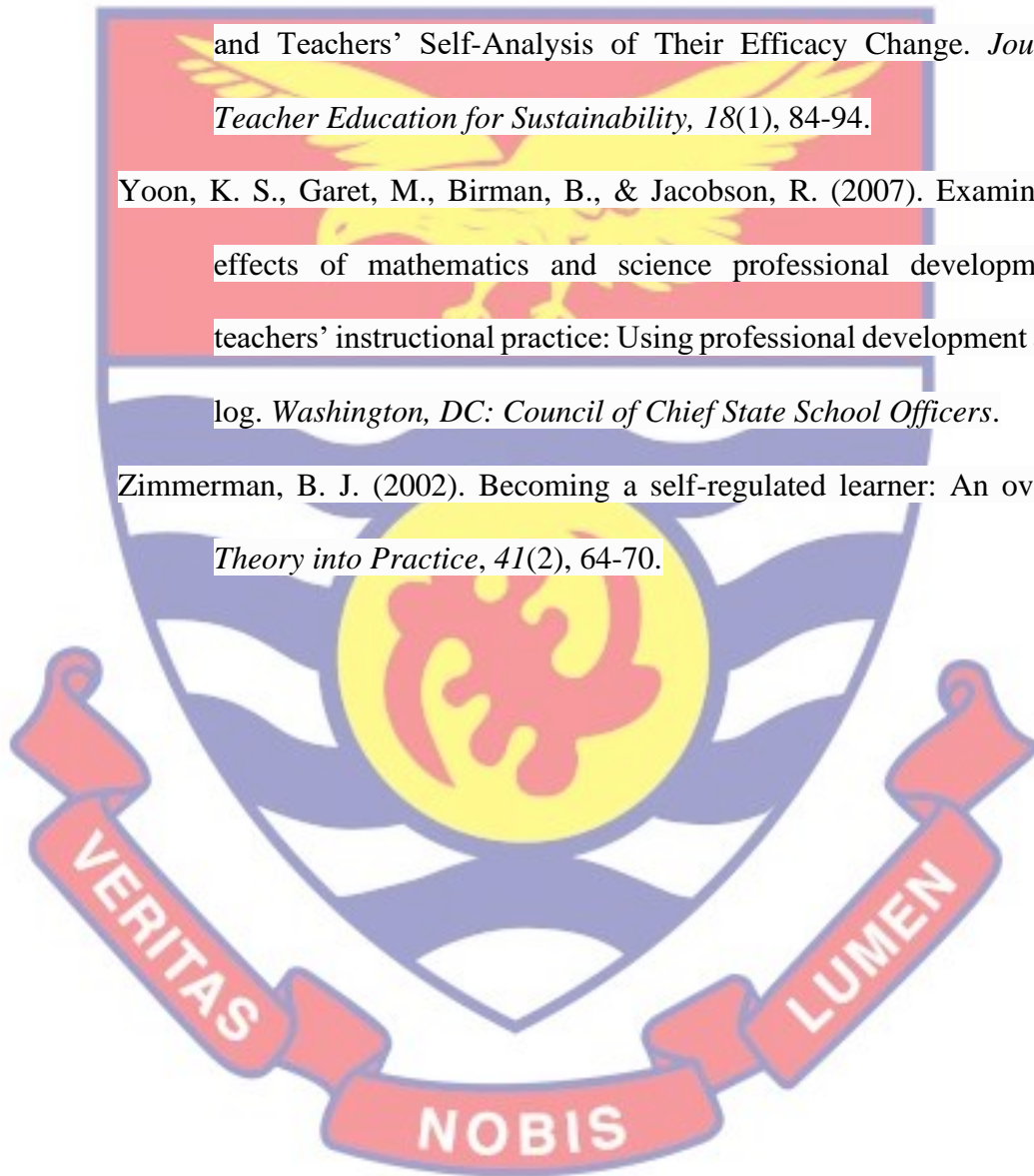
**APPENDIXES**

**APPENDIX A**

**CSSPS**

<u>COMPUTERIZED SCHOOL SELECTION AND PLACEMENT SYSTEM (CSSPS)</u>
<u>GUIDELINES FOR SELECTION OF SCHOOLS FOR PLACEMENT (2019)</u>

As part of measures to ensure a smooth placement of qualified BECE candidates for 2019, the Ghana Education Service (GES) has put in place the following arrangements for the information of parents/guardians/candidates and the general public.

A. **Grouping of Schools**

All second cycle institutions have been grouped into **CATEGORIES** as follows:
   a. Public Senior High Schools: Four groups namely Categories A, B, C and D
   b. Public Technical/Vocational Institutions (Category E )
   c. Private Schools -Senior High/Technical Vocational Institutions (Categories F & G)

The table below presents second cycle institutions that have facilities for special education for the Physically Challenged and Visually-Impaired Candidates.

| S/N | NAME OF SCHOOL | LOCATION | DISTRICT | REGION | SUBJECT |
|---|---|---|---|---|---|
| a | Okuapeman Senior High School | Akropong | Akuapem North | Eastern | Visually/Hearing Impaired |
| b | Mampong Akuapem Senior High/Technical School | Mampong Akuapem | Akuapem North | Eastern | Hearing Impaired |
| c | Ghana National College | Cape Coast | Cape Coast Metro | Central | Visually Impaired |
| d | Adidome Senior High School | Adidome | Central Tongu | Volta | Visually Impaired |
| e | Mawuli School | Ho | Ho Municipal | Volta | Visually Impaired |
| f | Wenchi Meth. Senior High | Wenchi | Wenchi Municipal | Brong/Ahafo | Visually Impaired |
| g | Sirigu Senior High School | Sirigu | Kasena-Nankana West | Upper East | Visually Impaired |
| h | St. John's Integrated Senior High/Technical School | Tono | Kasena-Nankana Munic | Upper East | Hearing Impaired |
| i | Wa Senior High School | Wa | Wa Municipal | Upper West | Visually Impaired |

B. **Before Selection of Schools and Programmes**

Before making any selection of schools and programmes offered in these schools, parents are advised to note that all schools selected (1st to 5th) are considered in placement of candidates.

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C. **Conditions for selection of schools**

Candidates with guidance and assistance from parents/guardians and school authorities:

a. Must choose five (5) schools (1st - 5th choice).

b. Must select programmes and accommodation in each school of choice.

c. Candidates must list choices 1- 4 in order of preference

d. Candidate's 5th Choice must be from Category D

e. May select four(4) choices from Category C and One(1) from Category D

f. Cannot select more than two (2) schools from Category B

g. Cannot choose more than one (1) School from Category A

h. Candidates who desire to pursue purely Technical Programmes may select all 1st - 4th Schools from Technical/ Vocational Category, Category E and must still select the 5th Choice from Category D

- **PRIVATE SHS and PRIVATE TVET SCHOOLS are not BENEFICIARIES of FREE SHS**

    Candidates who desire to pursue courses in private schools should make their own arrangements with the Private SHS and PRIVATE TVET.

NOTE: Regardless of the categories chosen, candidates must arrange their choices in order of preference.

## CATEGORY A

| S/N | REGION | DISTRICT | SCHOOL CODE | SCHOOL NAME | LOCATION | GENDER | AGRIC 101 | BUS 201 | TECH 301 | HOM. ECONS 401 | VIS. ARTS 402 | GEN. ARTS 501 | GEN. SCI 502 | NO. OF PROGS | STATUS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CENTRAL | Cape Coast Metro | 0030102 | Adisadel College | Cape Coast | Boys | | X | | | X | X | X | 4 | Day/Boarding |
| | CENTRAL | Cape Coast Metro | 0030103 | Holy Child School, Cape Coast | Cape Coast | Girls | | X | | X | X | X | X | 5 | Day/Boarding |
| | CENTRAL | Cape Coast Metro | 0030104 | Mfantsipim School | Cape Coast | Boys | | | X | | X | X | X | 4 | Day/Boarding |
| | CENTRAL | Cape Coast Metro | 0030101 | St. Augustine's College, Cape Coast | Cape Coast | Boys | X | X | | | | X | X | 4 | Day/Boarding |
| | CENTRAL | Cape Coast Metro | 0030107 | Wesley Girls Senior High, Cape Coast | Cape Coast | Girls | | X | | X | X | X | X | 5 | Day/Boarding |
| | CENTRAL | Mfantsiman Municipal | 0030301 | Mfantsiman Girls Senior High | Saltpond | Girls | X | X | | X | X | X | X | 6 | Day/Boarding |

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# CATEGORY B

| S/N | REGION | DISTRICT | SCHOOL CODE | SCHOOL NAME | LOCATION | GENDER | AGRIC 101 | BUS 201 | TECH 301 | HOM. ECONS 401 | VIS. ARTS 402 | GEN. ARTS 501 | GEN. SCI 502 | NO. OF PROGS | STATUS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CENTRAL | Abura/Asebu/ Kwamankese | 0030401 | Aggrey Mem. A.M.E.Zion Snr. High | Cape Coast | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Agona East | 0030905 | Swedru Senior High | Swedru | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Agona East | 0030903 | Nsaba Presby Senior High | Nsaba | Mixed | | X | | X | | X | X | 4 | Day/Boarding |
| CENTRAL | Agona West Municipal | 0030906 | Siddiq Senior High Sch. | Agona Nyakrom | Mixed | | X | | X | X | X | X | 5 | Day |
| CENTRAL | Agona West Municipal | 0030901 | Nyakrom Senior High Tech | Nyakrom | Mixed | | X | X | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Asikuma/Odoben/ Brakwa | 0030801 | Breman Asikuma Senior High | Breman Asikuma | Mixed | X | X | | X | | X | X | 5 | Day/Boarding |
| CENTRAL | Assin South | 0031205 | Adankwaman Senior High | Assin Darmang | Mixed | X | X | | X | X | X | | 5 | Day/Boarding |
| CENTRAL | Awutu/Senya | 0030613 | Awutu Winton Senior High | Awutu | Mixed | X | X | | X | | X | X | 5 | Day |
| CENTRAL | Cape Coast Metro | 0030106 | Ghana National College | Cape Coast | Mixed | | X | | X | X | X | X | 5 | Day/Boarding |
| CENTRAL | Cape Coast Metro | 0030109 | Academy of Christ the King, Cape Coast | Cape Coast | Mixed | | X | | X | X | X | X | 5 | Day |
| CENTRAL | Cape Coast Metro | 0030105 | University Practice Senior High | Cape Coast | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Effutu Municipal | 0030601 | Winneba Senior High | Winneba | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Ekumfi | 0030302 | Ekumfi T. I. Ahmadiyya Snr. High | Esakyir | Mixed | X | X | X | X | | X | X | 6 | Day/Boarding |
| CENTRAL | Gomoa West | 0030501 | Apam Senior High | Apam | Mixed | | X | | X | X | X | X | 5 | Day/Boarding |
| CENTRAL | Gomoa West | 0030504 | Mozano Senior High | Mozano | Mixed | X | X | | X | | X | X | 5 | Day/Boarding |
| CENTRAL | Komenda/Edina/Eg uafo/Abirem | 0030201 | Edinaman Senior High | Elmina | Mixed | | X | | X | X | X | X | 5 | Day/Boarding |
| CENTRAL | Mfantsiman Municipal | 0030304 | Methodist High School,Saltpond | Saltpond | Mixed | | X | | X | X | X | X | 5 | Day/Boarding |
| CENTRAL | Twifo Ati-Morkwa | 0031101 | Twifo Praso Senior High | Twifo Praso | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Twifo Hemang Lower Denkyira | 0031104 | Twifo Hemang Senior High/Tech | Heman | Mixed | | X | X | X | | X | | 4 | Day/Boarding |
| CENTRAL | Upper Denkyira East Municipal | 0031001 | Boa-Amponsem Senior High | Dunkwa-On-Offin | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Upper Denkyira West | 0031003 | Diaso Senior High | Diaso | Mixed | X | X | | X | | X | | 4 | Day/Boarding |

NOBIS

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## CATEGORY C

| S/N | REGION | DISTRICT | SCHOOL CODE | SCHOOL NAME | LOCATION | GENDER | PROGRAMMES | | | | | | | NO. OF PROGS | STATUS |
| | | | | | | | AGRIC | BUS | TECH | HOM. ECONS | VIS. ARTS | GEN. ARTS | GEN. SCI | | |
| | | | | | | | 101 | 201 | 301 | 401 | 402 | 501 | 502 | | |
| CENTRAL | Abura/Asebu/ Kwamankese | 0030406 | Moree Comm. Senior High | Moree | Mixed | X | X | X | X | X | X | | | 6 | Day |
| CENTRAL | Abura/Asebu/ Kwamankese | 0030402 | Aburaman Senior High | Abura Dunkwa | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Abura/Asebu/ Kwamankese | 0030403 | Abakrampa Senior High/Tech | Abakrampa | Mixed | X | X | X | X | X | X | X | 7 | Day/Boarding |
| CENTRAL | Agona East | 0030909 | Agona Namonwora Comm.Senior High | Agona Namonwora | Mixed | X | X | | X | | X | X | 5 | Day |
| CENTRAL | Agona East | 0030904 | Kwanyako Senior High | Kwanyako | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Agona West Municipal | 0030915 | Agona Fankobaa Senior High | Agona Fankobaa | Mixed | X | X | | X | X | X | X | 6 | Day |
| CENTRAL | Agona West Municipal | 0030902 | Swedru Sch. Of Business | Swedru | Mixed | X | X | | X | X | X | | 5 | Day/Boarding |
| CENTRAL | Ajumako/ Enyan/Esiam | 0030706 | Enyan Maim Comm. Day School | Enyan Maim | Mixed | X | X | | X | | X | X | 5 | Day |
| CENTRAL | Ajumako/ Enyan/Esiam | 0030701 | Mando Senior High/Tech. | Mando | Mixed | X | X | X | X | X | X | X | 7 | Day/Boarding |
| CENTRAL | Ajumako/ Enyan/Esiam | 0030703 | Enyan Denkyira Senior High | Denkyira | Mixed | X | X | X | X | | X | | 5 | Day/Boarding |
| CENTRAL | Ajumako/ Enyan/Esiam | 0030702 | Bisease Senior High/Com | Bisease | Mixed | | X | | X | | X | X | 4 | Day/Boarding |
| CENTRAL | Asikuma/Odoben/ Brakwa | 0030802 | Odoben Senior High | Odoben | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |

Source: GES School Registry, 2019
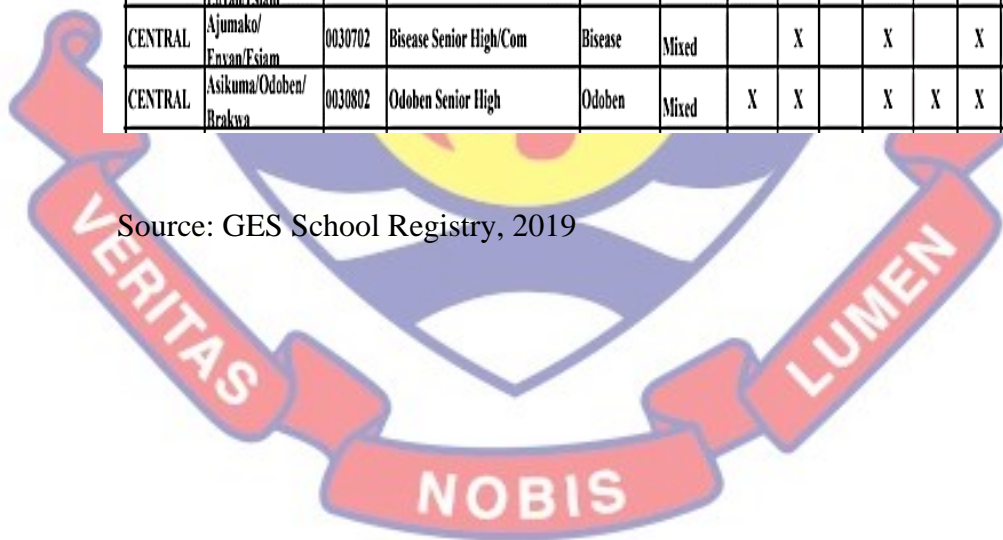
| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CENTRAL | Assin North Municipal | 0031207 | Assin State College | Assin Bereku | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Assin North Municipal | 0031208 | Gyaase Community Senior High | Assin-Akonfudi | Mixed | X | X | | X | X | X | X | 6 | Day |
| CENTRAL | Assin North Municipal | 0031202 | Obiri Yeboah Senior High/Technical | Assin Fosu | Mixed | X | X | X | X | | X | X | 6 | Day/Boarding |
| CENTRAL | Assin North Municipal | 0031204 | Assin North Senior High/Tech | Assin Asempaneye | Mixed | X | X | X | X | X | X | X | 7 | Day/Boarding |
| CENTRAL | Assin South | 0031206 | Assin Nsuta Agric. Senior High | Assin Nsuta | Mixed | X | X | | X | X | X | | 5 | Day/Boarding |
| CENTRAL | Assin South | 0031201 | Assin Manso Senior High | Assin Manso | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Assin South | 0031203 | Nyankumase Ahenkro Snr. High | Nyankumase Ahenkro | Mixed | X | X | | X | X | X | | 5 | Day/Boarding |
| CENTRAL | Awutu/Senya | 0030628 | Awutu Bawjiase Comm. Senior High | Bawjiase | Mixed | X | X | | X | X | X | X | 6 | Day |
| CENTRAL | Awutu/Senya | 0030629 | Odupong Comm. Day School | Odupong-Kasoa | Mixed | X | X | | X | X | X | X | 6 | Day |
| CENTRAL | Awutu/Senya | 0030603 | Obrachire Senior High/Tech | Obrakyere | Mixed | X | X | X | X | X | X | X | 7 | Day/Boarding |
| CENTRAL | Awutu/Senya | 0030602 | Senya Senior High | Senya | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Cape Coast Metro | 0030110 | Effutu Senior High/Tech | Cape Coast | Mixed | | X | X | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Cape Coast Metro | 0030108 | Oguaa Senior High/Tech | Cape Coast | Mixed | X | X | X | X | X | X | X | 7 | Day/Boarding |
| CENTRAL | Ekumfi | 0030309 | J.E.A. Mills Senior High | Otuam | Mixed | X | X | | X | X | X | X | 6 | Day |
| CENTRAL | Gomoa East | 0030615 | Fettehman Senior High | Gomoa Fetteh | Mixed | | X | | X | X | X | X | 5 | Day |
| CENTRAL | Gomoa East | 0030508 | Gomoa Gyaman Senior High | Gomoa Gyaman | Mixed | X | X | | X | X | X | | 5 | Day |
| CENTRAL | Gomoa East | 0030502 | Potsin T.I. Ahm. Senior High | Potsin | Mixed | | X | X | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Gomoa West | 0030503 | Gomoa Senior High/Tech | Dawurampon | Mixed | X | X | X | X | X | X | X | 7 | Day/Boarding |
| CENTRAL | Gomoa West | 0030507 | College of Music Senior, Mozano | Mozano | Mixed | | X | | X | | X | | 3 | Day/Boarding |
| CENTRAL | Komenda/Edina/Eguafo/Abirem | 0030202 | Eguafo-Abrem Senior High | Eguafo Abirem | Mixed | X | X | | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Komenda/Edina/Eguafo/Abirem | 0030203 | Komenda Senior High/Tech. | Komenda | Mixed | X | X | X | X | X | X | X | 7 | Day/Boarding |
| CENTRAL | Mfantsiman Municipal | 0030303 | Mankessim Senior High/Tech | Mankesim | Mixed | X | X | X | X | X | X | X | 7 | Day/Boarding |
| CENTRAL | Mfantsiman Municipal | 0030308 | Abeadze State College | Abeadze Domeabra | Mixed | | X | | | X | X | | 3 | Day/Boarding |
| CENTRAL | Mfantsiman Municipal | 0030305 | Kwegyir Aggrey Senior High | Anomabo | Mixed | | X | X | X | X | X | X | 6 | Day/Boarding |
| CENTRAL | Twifo Hemang Lower Denkyira | 0031102 | Jukwa Senior High | Jukwa | Mixed | X | X | X | X | X | X | X | 7 | Day/Boarding |
| CENTRAL | Upper Denkyira East Municipal | 0031002 | Dunkwa Senior High/Tech | Dunkwa-on-Offin | Mixed | X | X | X | X | | X | X | 6 | Day/Boarding |
| CENTRAL | Upper Denkyira West | 0031006 | Ayanfuri Senior High | Ayanfuri | Mixed | | X | | X | | X | | 3 | Day |

Source: GES School Registry, 2019

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# APPENDIX B

## Data On Pre-Tertiary Teachers in the Central Region obtained from GES

### Central Regional Directorate

| S/N | Region | Status | Name_institution | TOTAL |
|---|---|---|---|---|
| 2 | CENTRAL | Public | MOREE SENIOR HIGH TECHNICAL | 106 |
| 3 | CENTRAL | Public | AGGREY MEMORIAL A.M.E ZION SECONDARY SCHOOL | 200 |
| 4 | CENTRAL | Public | ABAKRAMPA SENIOR HIGH SCHOOL | 120 |
| 5 | CENTRAL | Public | ABURAMAN SENIOR HIGH SCHOOL | 146 |
|  | CENTRAL | Public | ASUANSI TECHNICAL INSTITUTE | 86 |
| 6 | CENTRAL | Public | SIDDIQ SENIOR HIGH SCHOOL, NYAKROM | 110 |
| 7 | CENTRAL | Public | SWEDRU SCHOOL OF BUSINESS | 254 |
| 8 | CENTRAL | Public | NYAKROM SECONDARY/TECHNICAL SCHOOL | 154 |
| 12 | CENTRAL | Public | AGONA FANKOBAA SENIOR HIGH SCHOOL | 56 |
| 14 | CENTRAL | Public | ENYANMAIN COMMUNITY DAY SENIOR HIGH SCHOOL | 30 |
| 16 | CENTRAL | Public | MANDO SENIOR HIGH TECHNICAL SCHOOL | 154 |
| 17 | CENTRAL | Public | BISEASE SENIOR HIGH SCHOOL | 136 |
| 18 | CENTRAL | Public | ENYAN DENKYIRA SECONDARY/TECHNICAL SCHOOL | 112 |
|  | CENTRAL | Public | ENYAN ABAASA TECHNICAL INSTITUTE | 35 |
| 20 | CENTRAL | Public | BREMAN ASIKUMA SENIOR HIGH SCHOOL | 176 |
| 21 | CENTRAL | Public | ODOBEN SENIOR HIGH SCHOOL | 98 |
| 22 | CENTRAL | Public | BRAKWA SENIOR HIGH TECHNICAL SCHOOL | 64 |
| 24 | CENTRAL | Public | ASSIN STATE COLLEGE | 82 |
| 25 | CENTRAL | Public | OBIRI YEBOAH SECONDARY/TECHNICAL SCHOOL | 148 |
| 26 | CENTRAL | Public | ASSIN NORTH SENIOR HIGH TECHNICAL SCHOOL | 122 |
| 27 | CENTRAL | Public | GYAASE SENIOR HIGH SCHOOL | 36 |
| 28 | CENTRAL | Public | ADANKWAMAN SECONDARY/COMMERCIAL SCHOOL | 94 |
| 29 | CENTRAL | Public | ASSIN NSUTA AGRIC. SENIOR HIGH SCHOOL | 110 |
| 30 | CENTRAL | Public | ASSIN MANSO SHS | 202 |
| 31 | CENTRAL | Public | NYANKUMASI AHENKRO SENIOR HIGH SCHOOL | 144 |
| 36 | CENTRAL | Public | WINNEBA SENIOR HIGH SCHOOL | 162 |
| 37 | CENTRAL | Public | ADISADEL COLLEGE | 200 |
| 38 | CENTRAL | Public | ACADEMY OF CHRIST THE KING | 168 |
| 39 | CENTRAL | Public | WESLEY GIRLS' HIGH SCHOOL | 180 |
| 40 | CENTRAL | Public | UNIVERSITY PRACTICE SENIOR HIGH SCHOOL | 164 |
| 41 | CENTRAL | Public | ST. AUGUSTINE'S COLLEGE | 146 |
| 42 | CENTRAL | Public | OGUAA SNR. HIGH TECHNICAL SCHOOL | 130 |
| 43 | CENTRAL | Public | MFANTSIPIM SCHOOL | 196 |
| 44 | CENTRAL | Public | HOLY CHILD SCHOOL | 134 |
| 45 | CENTRAL | Public | EFUTU SECONDARY/TECHNICAL SCHOOL | 124 |
| 46 | CENTRAL | Public | GHANA NATIONAL COLLEGE | 226 |
|  | CENTRAL | Public | CAPE COAST TECHNICAL INSTITUTE | 65 |
| 51 | CENTRAL | Public | COLLEGE OF MUSIC - MOZANO | 36 |
| 52 | CENTRAL | Public | GOMOA SECONDARY/TECHNICAL SCHOOL | 166 |
| 54 | CENTRAL | Public | APAM SENIOR HIGH SCHOOL | 172 |
| 55 | CENTRAL | Public | KOMENDA SENIOR HIGH TECHNICAL SCHOOL | 132 |
| 57 | CENTRAL | Public | EGUAFO-ABREM SENIOR HIGH SCHOOL | 170 |
|  | CENTRAL | Public | EDINAMAN SENIOR HIGH SCHOOL | 198 |
| 3 | CENTRAL | Public | MFANTSIMAN GIRL'S SENIOR HIGH SCHOOL | 208 |
| 3 | CENTRAL | Public | METHODIST SENIOR HIGH SCHOOL | 136 |

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| S/N | Region | Status | Name_Institution | Total |
|---|---|---|---|---|
| 3 | CENTRAL | Public | MANKESSIM SECONDARY/TECHNICAL SCHOOL | 194 |
| 3 | CENTRAL | Public | KWEGYIR AGGREY SENIOR HIGH / TECHNICAL SCHOOL | 150 |
| 3 | CENTRAL | Public | TWIFO PRASO SENIOR HIGH SCHOOL | 166 |
| 3 | CENTRAL | Public | MOKWAA COMMUNITY DAY SHS | 26 |
| 3 | CENTRAL | Public | DUNKWA SECONDARY/TECHNICAL SCHOOL | 144 |
| 3 | CENTRAL | Public | BOA AMPONSEM SENIOR HIGH SCHOOL | 172 |
| 3 | CENTRAL | Public | AGONA KWANYAKO SENIOR HIGH SCHOOL | 172 |
| 3 | CENTRAL | Public | NSABA PRESBYTERIAN SENIOR HIGH SCHOOL | 156 |
| 3 | CENTRAL | Public | SWEDRU SENIOR HIGH SCHOOL | 238 |
| 3 | CENTRAL | Public | NAMANWORA COMMUNITY DAY SENIOR HIGH SCHOOL | 30 |
| 3 | CENTRAL | Public | AWUTU WINTON SENIOR HIGH SCHOOL | 60 |
| 3 | CENTRAL | Public | BAWJIASE SENIOR HIGH SCHOOL | 96 |
| 3 | CENTRAL | Public | SENYA SENIOR HIGH SCHOOL | 124 |
| 3 | CENTRAL | Public | OBRACHIRE SECONDARY/TECHNICAL | 114 |
| 3 | CENTRAL | Public | POTSIN T.I AHMADIYYA SENIOR HIGH SCHOOL | 246 |
| 3 | CENTRAL | Public | FETTEHMAN SENIOR HIGH SCHOOL | 84 |
| 3 | CENTRAL | Public | GOMOA GYAMAN SENIOR HIGH SCHOOL | 92 |
| 3 | CENTRAL | Public | DIASO SENIOR HIGH SCHOOL | 62 |
| 3 | CENTRAL | Public | ODUPONG SENIOR HIGH | 102 |
| 3 | CENTRAL | Public | JOHN EVANS ATTA MILLS SHS | 76 |
| 3 | CENTRAL | Public | EKUMFI T.I AHMADIYYA SENIOR HIGH SCHOOL, ESSARKYIR | 134 |
| 3 | CENTRAL | Public | JUKWA SENIOR HIGH SCHOOL | 120 |
| 3 | CENTRAL | Public | TWIFO HEMANG SENIOR HIGH TECHNICAL SCHOOL | 60 |

## STATISTICS ON NUMBER OF TEACHERS IN PUBLIC SHS IN

## GHANA

## GES CENTRAL REGIONAL

| NO | NAME OF INSTITUTION | NUMBER |
|----|---------------------|--------|
| | CATEGORY A | |
| 1 | ADISADEL COLLEGE | 200 |
| 2 | MFANTSIPIM SCHOOL | 196 |
| 3 | HOLY CHILD SCHOOL | 134 |
| 4 | ST. AUGUSTINE'S COLLEGE | 146 |
| 5 | WESLEY GIRLS' HIGH SCHOOL | 180 |
| 6 | MFANTSIMAN GIRL'S SENIOR HIGH SCHOOL | 208 |
| | | *1040* |
| | CATEGORY B | |
| 1 | AGGREY MEMORIAL A.M.E ZION SECONDARY SCHOOL | 200 |
| 2 | NSABA PRESBYTERIAN SENIOR HIGH SCHOOL | 156 |
| 3 | SWEDRU SENIOR HIGH SCHOOL | 238 |
| 4 | SIDDIQ SENIOR HIGH SCHOOL, NYAKROM | 110 |
| 5 | NYAKROM SECONDARY/TECHNICAL SCHOOL | 154 |
| 6 | BREMAN ASIKUMA SENIOR HIGH SCHOOL | 176 |
| 7 | ADANKWAMAN SECONDARY/COMMERCIAL SCHOOL | 94 |
| 8 | AWUTU WINTON SENIOR HIGH SCHOOL | 60 |
| 9 | GHANA NATIONAL COLLEGE | 226 |
| 10 | ACADEMY OF CHRIST THE KING | 168 |
| 11 | UNIVERSITY PRACTISE SENIOR HIGH SCHOOL | 164 |

| 12 | EKUMFI T.I AHMADIYYA SENIOR HIGH SCHOOL, ESSARKYIR | 134 |
|---|---|---|
| 13 | WINNEBA SENIOR HIGH SCHOOL | 162 |
| 14 | APAM SENIOR HIGH SCHOOL | 172 |
| 15 | EDINAMAN SENIOR HIGH SCHOOL | 198 |
| 16 | METHODIST SENIOR HIGH SCHOOL | 136 |
| 17 | TWIFO HEMANG SENIOR HIGH TECHNICAL SCHOOL | 60 |
| 18 | TWIFO PRASO SENIOR HIGH SCHOOL | 166 |
| 19 | BOA AMPONSEM SENIOR HIGH SCHOOL | 172 |
| 20 | DIASO SENIOR HIGH SCHOOL | 62 |
| 21 | MOZANO SENIOR HIGH | 72 |
| | | *3080* |
| | **CATEGOR Y C** | |
| 1 | MOREE SENIOR HIGH TECHNICAL | 106 |
| 2 | ABAKRAMPA SENIOR HIGH SCHOOL | 120 |
| 3 | ABURAMAN SENIOR HIGH SCHOOL | 146 |
| 4 | NAMANWORA COMMUNITY DAY SENIOR HIGH SCHOOL | 30 |
| 5 | AGONA KWANYAKO SENIOR HIGH SCHOOL | 172 |
| 6 | AGONA FANKOBAA SENIOR HIGH | 56 |
| 7 | SWEDRU SCH. OF BUSINESS | 254 |
| 8 | ENYAN MAIN COMMUNITY DAY SENIOR HIGH SCHOOL | 30 |
| 9 | MANDO SENIOR HIGH TECHNICAL SCHOOL | 154 |
| 10 | ENYAN DENKYIRA SECONDARY/TECHNICAL SCHOOL | 112 |
| 11 | BISEASE SENIOR HIGH SCHOOL | 136 |
| 12 | ODUPONG SENIOR HIGH | 102 |
| 13 | BRAKWA SENIOR HIGH TECHNICAL SCHOOL | 64 |

| 14 | ASSIN STATE COLLEGE | 82 |
|----|---------------------|-----|
| 15 | GYAASE SENIOR HIGH SCHOOL | 36 |
| 16 | OBIRI YEBOAH SECONDARY/TECHNICAL SCHOOL | 148 |
| 17 | ASSIN NORTH SENIOR HIGH TECHNICAL SCHOOL | 122 |
| 18 | ASSIN NSUTA AGRIC. SENIOR HIGH SCHOOL | 110 |
| 19 | ASSIN MANSO SHS | 202 |
| 20 | NYANKUMASI AHENKRO SENIOR HIGH SCHOOL | 144 |
| 21 | BAWJIASE SENIOR HIGH SCHOOL | 96 |
| 22 | ODUPONG COMM. DAY SCHOOL | 84 |
| 23 | OBRACHIRE SECONDARY/TECHNICAL | 114 |
| 24 | SENYA SENIOR HIGH SCHOOL | 124 |
| 25 | EFUTU SECONDARY/TECHNICAL SCHOOL | 124 |
| 26 | OGUAA SNR. HIGH TECHNICAL SCHOOL | 130 |
| 27 | J.E.A. Mills Senior High | 76 |
| 28 | FETTEHMAN SENIOR HIGH SCHOOL | 84 |
| 29 | GOMOA GYAMAN SENIOR HIGH SCHOOL | 92 |
| 30 | POTSIN T.I AHMADIYYA SENIOR HIGH SCHOOL | 246 |
| 31 | GOMOA SECONDARY/TECHNICAL SCHOOL | 166 |
| 32 | COLLEGE OF MUSIC SENIOR, MOZANO | 36 |
| 33 | EGUAFO-ABREM SENIOR HIGH SCHOOL | 170 |

| 34 | KOMENDA SENIOR HIGH TECHNICAL SCHOOL | 132 |
|----|-----|-----|
| 35 | MANKESSIM SECONDARY/TECHNICAL SCHOOL | 194 |
| 36 | ABEADZE STATE COLLEGE | 64 |
| 37 | KWEGYIR AGGREY SENIOR HIGH / TECHNICAL SCHOOL | 150 |
| 38 | JUKWA SENIOR HIGH | 120 |
| 39 | DUNKWA SECONDARY/TECHNICAL SCHOOL | 144 |
| 40 | AYANFURI SENIOR HIGH | 68 |
| | | *4740* |
| **Total** | | **8884** |

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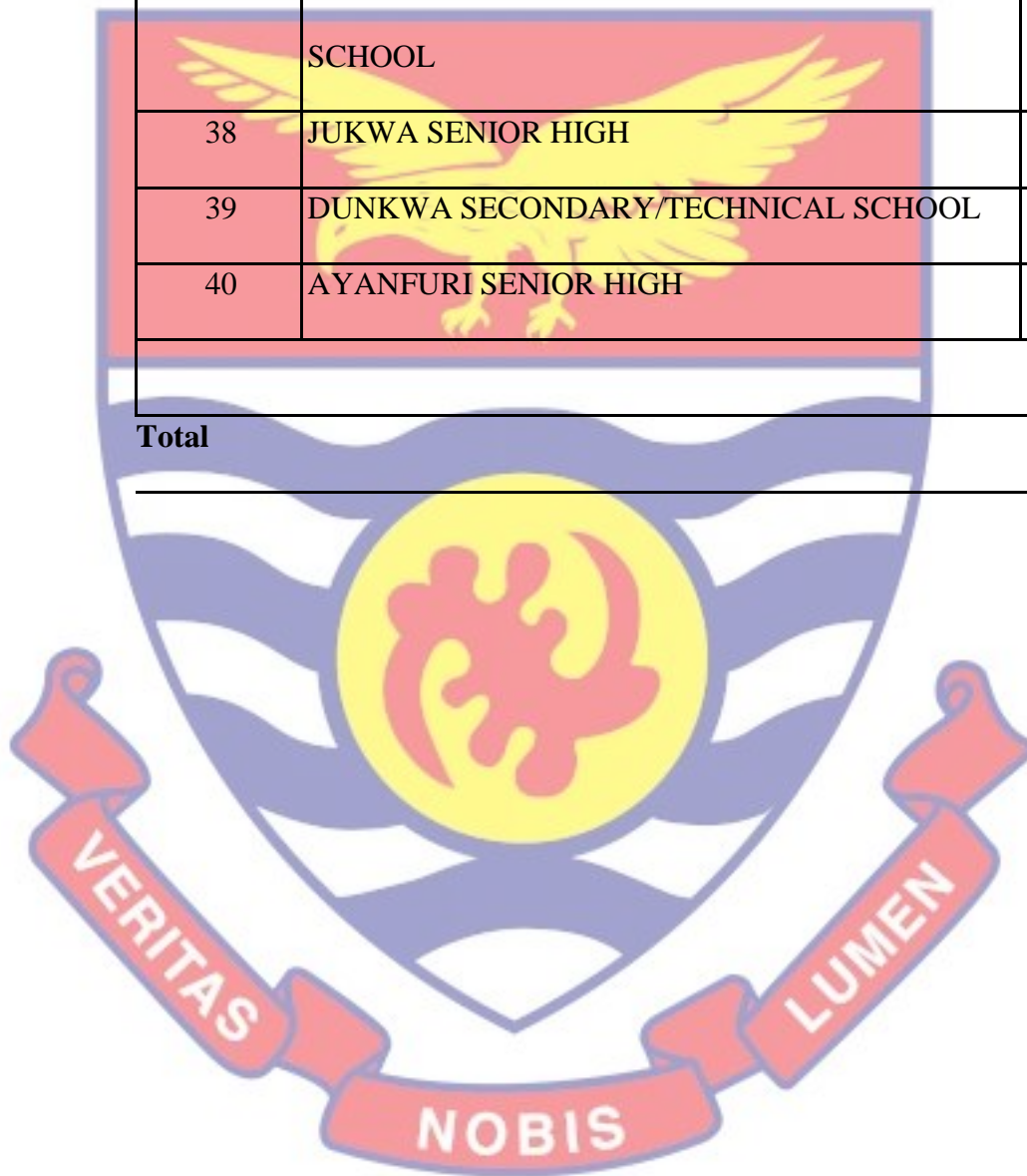
**DATA ON SCHOOLS AND PRE-TERTIARY TEACHERS FOR**

**SAMPLING**

| | | |
|---|---|---|
| **A** | TOTAL NUMBER OF SCHOOLS | **67** |
| **B** | TOTAL NUMBER OF SCHOOLS IN | **6** |
| **C** | CATEGORY ATOTAL NUMBER OF | **21** |
| **D** | SCHOOLS IN CATEGORY BTOTAL | **40** |
| **E** | NUMBER OF SCHOOLS IN | **8884** |
| **F** | CATEGORY CESTIMATED | **1064** |
| **G** | NUMBER OF TEACHERS | **3080** |
| **H** | ESTIMATED NUMBER OF TEACHERS IN | **4740** |
| | CATEGORY A | |
| | ESTIMATED NUMBER OF TEACHERS IN | |
| | CATEGORY BESTIMATED NUMBER OF | |
| | TEACHERS  IN CATEGORY C | |

Source: GES school registry 2019; Central regional data on pre- tertiary
teachers, 2018/2019
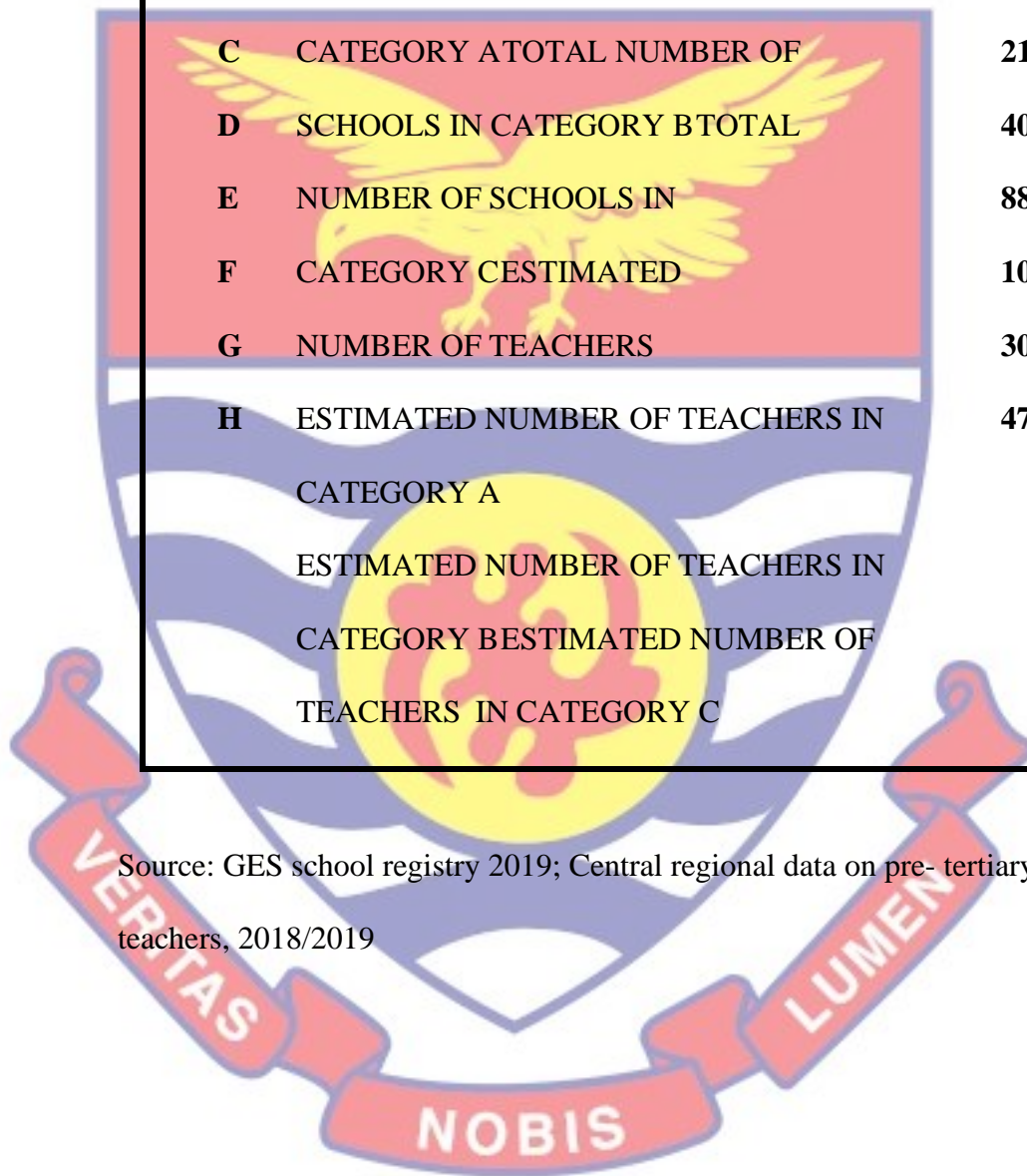
# APPENDIX C

## INTRODUCTION LETTER

# UNIVERSITY OF CAPE COAST
### COLLEGE OF EDUCATION STUDIES
### FACULTY OF HUMANITIES & SOCIAL SCIENCES EDUCATION
### DEPARTMENT OF BUSINESS & SOCIAL SCIENCES EDUCATION

Telephone:    +233-(0)3321 35411 / +233-(0)3321 32480 /3
EXT            (268), Direct. 35411
Telegrams & Cables: University, Cape Coast
E-mail:      dbase@ucc.edu.gh

UNIVERSITY OF CAPE COST
PRIVATE MAIL BAG

Date: 20th October, 2020

Our Ref: *DOBSSE/59/V.1*

Your Ref:

**TO WHOM IT MAY CONCERN**

Dear Sir/Madam,

**INTRODUCTORY LETTER**

Mrs. Anastasia Nana Ama Kumi-Korsah is a PhD (Management Education) student of this Department. As part of her programme, she is supposed to design and execute research of acceptable standard. She is working on a research entitled: **"Continuous Professional Development and Teacher Service Delivery in Ghana"**.

Her study seeks to explore continuous professional development and teacher service delivery in Ghana. She would, therefore, need quantitative and qualitative data from GES and sampled teaching staff. This information would be used as literature to support her study.

We would be grateful if you could give her the necessary assistance to enable her complete the research.

Thank you.

Yours faithfully,

**DR. BERNARD Y.S. ACQUAH**
**HEAD**

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Department of Management
School of Business
University of Cape Coast
PMB
Cape Coast

August 13, 2019

Regional Director
Ghana Education Service
Central Region

Dear Sir,

**REQUEST FOR INFORMATION**

My name is Mrs. Anastasia Nana Ama Kumi-Korsah, a PhD student of the Department of Business and Social Sciences Education (DoBSSE) of the University of Cape Coast. In fulfilment of the research component (thesis) of my programme, I am exploring **Continuous Professional Development and Teacher Service Delivery in Ghana,** with special focus on the Central Region. To enable me to accurately estimate my population, sample size and to gather data, I humbly request that I be furnished with information on the following:

1. Staff strength for all teaching staff in Public Senior High Schools (SHSs) in the Central Region (total number of teachers in Public SHSs).
2. Break down of staff strength for all teaching staff in specific schools in the Central Region (total number of teachers in for instance, Wesley Girls High School etc.).
3. Contact numbers and addresses of headmasters in all public SHSs in the Central Region (This is to enable me to interact with headmasters prior to data collection visits particularly for schools in distant locations).

I am hopeful that this information will enable me to gather data that is truly reflective of the variables of interest for my study.

Please find attached an introductory letter from my Department for your perusal.

Counting on your cooperation.

Yours faithfully,

Anastasia Nana Ama Kumi-Korsah (Mrs)

(0246660507)

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**APPENDIX D**

**ETHICAL CLEARANCE**

# UNIVERSITY OF CAPE COAST

## INSTITUTIONAL REVIEW BOARD SECRETARIAT

TEL: 0558093143 / 0508878309
E-MAIL: irb@ucc.edu.gh
OUR REF: UCCIRB/A/2016/1112
YOUR REF:
OMB NO: 0990-0279
IORG #: IORG0009096

1ST OCTOBER 2021

Ms. Anastasia Nana Ama Kumi-Korsah
Department of Business and Social Sciences Education
University of Cape Coast

Dear Ms. Kumi-Korsah,

**ETHICAL CLEARANCE – ID (UCCIRB/CES/2021/09)**

The University of Cape Coast Institutional Review Board (UCCIRB) has granted Provisional Approval for the implementation of your research titled *Continuous Professional Development and Teacher Service Delivery in Ghana*. This approval is valid from 1st October 2021 to 30th September, 2022. You may apply for a renewal subject to submission of all the required documents that will be prescribed by the UCCIRB.

Please note that any modification to the project must be submitted to the UCCIRB for review and approval before its implementation. You are required to submit periodic review of the protocol to the Board and a final full review to the UCCIRB on completion of the research. The UCCIRB may observe or cause to be observed procedures and records of the research during and after implementation.

You are also required to report all serious adverse events related to this study to the UCCIRB within seven days verbally and fourteen days in writing.

Always quote the protocol identification number in all future correspondence with us in relation to this protocol.

Yours faithfully,

Dr. Samuel Aseidu Owusu,
**UCCIRB Administrator**

ADMINISTRATOR
INSTITUTIONAL REVIEW BOARD
UNIVERSITY OF CAPE COAST

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**APPENDIX E**

**UNIVERSITY OF CAPE COAST**

**FACULTY OF HUMANITIES AND SOCIAL SCIENCES EDUCATION**

**DEPARTMENT OF BUSINESS AND SOCIAL SCIENCES EDUCATION**

**INTERVIEW PROTOCOL FOR KEY INFORMANTS**

This interview guide is designed for the purpose of a one-on-one interview to explore CPD for pre-tertiary teachers and its impact on teacher professional practise. Participants are assured of strict confidentiality and anonymity for all information they provide.

**Date:**

**Venue:**

**Time:**

**Part 1: Preliminary Information (*for headteachers only)*

**Gender**

Male ☐                                    Female ☐

**Age Range**

26yrs or younger ☐                    27 – 42 ☐

43yrs or older ☐

**Highest Educational Level**

Certificate of Education (or equivalent) ☐    Bachelor's Degree ☐

Master's Degree ☐                             Doctoral Degree ☐

Others (please specify): ☐

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**Teaching Experience**

2 – 5 years          ☐                    6 – 10 years          ☐

11 – 15 years        ☐                    16 – 20 years         ☐

Beyond 20 years      ☐

**Teaching rank**

Senior Superintendent II    ☐          Principal Superintendent    ☐

Assistant Director I        ☐          Assistant Director II       ☐

Deputy Director             ☐          Director I                  ☐

**Characteristics of existing CPD for pre-tertiary teachers**

1. What are the types of CPD initiatives available for pre-tertiary

   teachers?

   *Probing questions*

   a. What does GES prescribe as CPD?

   b. What does GES recognize as CPD?

2. Who provides CPD for pre-tertiary teachers?

   *Probing questions*

   a. Who drives CPD initiatives for pre-tertiary teachers?

   b. Who is responsible for the professional development of teachers?

3. How is CPD organised for pre-tertiary teachers?

   *Probing questions*

   a. How is it structured?

   b. Is it organised quarterly, termly, or annually?

4. What is the nature of CPD activities pre-tertiary teachers are engaged

   in?

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*Probing questions*

a. What types of activities do they engage in as part of their CPD?

b. Do they actively participate in such activities?

c. Do they mostly comprise lectures and presentations?

d. Which activities are most popular? *(Headteachers only)*

5. What is the focus of CPD activities pre-tertiary teachers engage in?

   *Probing questions*

   a. What do teachers learn as part of their professional development?

   b. What areas are targeted as part of teachers' professional development?

   c. What areas are generally discussed as part of teachers' professional development?

**How well are the professional needs of pre-tertiary teachers being met**

6. What is the demand of pre-tertiary teachers for CPD initiatives?

7. Are needs assessments carried out in relation to pre-tertiary teachers' professional development?

8. What do you believe pre-tertiary teachers need as part of their professional needs? *(Headteachers only)*

9. Has existing CPD initiatives been adequate in meeting the professional needs of pre-tertiary teachers?

**Impact of CPD on Teacher Professional Practise**

10. Do you believe existing CPD has influence the overall professional practise of pre-tertiary teachers?

    *Probing question*

   a.   How has it influenced their knowledge, what they do in the

       classroom and how they feel about teaching?

**Barriers to Teacher Professional Development**

11. What barriers exist in relation to teachers' professional development?

    *Probing questions*

    a.   What hinders pre-tertiary teachers' participation in CPD

       initiatives?

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**APPENDIX F**

**UNIVERSITY OF CAPE COAST**

**FACULTY OF HUMANITIES AND SOCIAL SCIENCES EDUCATION**

**DEPARTMENT OF BUSINESS AND SOCIAL SCIENCES**

**EDUCATION**

**INTERVIEW PROTOCOL FOR PER-TERTIARY TEACHERS**

This interview guide is designed for the purpose of a one-on-one interview to explore CPD for pre-tertiary teachers and its impact on teacher professional practise. Participants are assured of strict confidentiality and anonymity for all information they provide.

**Date:**

**Venue:**

**Time:**

**Part 1: Preliminary Information**

**Gender**

Male ☐                                    Female ☐

**Age Range**

26yrs or younger ☐                       27 – 42 ☐

43yrs or older ☐

**Highest Educational Level**

Certificate of Education (or equivalent) ☐     Bachelor's Degree ☐

Master's Degree ☐                        Doctoral Degree ☐

Others (please specify): ☐

**Teaching Experience**

2 – 5 years ☐                            6 – 10 years ☐

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11 – 15 years          ☐                    16 – 20 years          ☐

Beyond 20 years        ☐

**Teaching rank**

Senior Superintendent II    ☐          Principal Superintendent    ☐

Assistant Director I        ☐          Assistant Director II       ☐

Deputy Director             ☐          Director I                  ☐

**Teacher conceptualization of CPD**

1. What constitutes CPD for pre-tertiary teachers?

   *Probing questions*

   a. What CPD initiatives are available for you?

   b. What personally counts as CPD for you?

   c. What generally counts as CPD for your colleagues?

**Characteristics of existing CPD for pre-tertiary teachers**

2. Who provides CPD for you?

   *Probing questions*

   c. Who drives CPD initiatives for you?

   d. Who is responsible for your professional development?

3. How is CPD organised for you?

   *Probing questions*

   c. How is it structured?

   d. Is it organised quarterly, termly, or annually?

4. What is the nature of CPD activities you engage in?

   *Probing questions*

   e. What types of activities do you engage in as part of your CPD?

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f. Do you actively participate in such activities?

g. Do most of such activities comprise lectures and presentations?

h. Which activities are most popular?

5. What is the focus of CPD activities you engage in?

*Probing questions*

d. What do you often learn as part of your professional development?

e. What areas are targeted as part of your professional development?

f. What areas are generally discussed as part of your professional development?

6. Are available CPD initiatives sufficient as far as you are concerned?

7. Do you have appropriate access to CPD initiatives?

*Probing questions*

a. How often do get to participate in CPD initiatives?

8. Is your participation in CPD initiatives linked to your performance management reviews?

*Probing questions*

a. Is your participation in CPD linked to your performance appraisal?

9. Can you tell me some of your experiences as part of your professional development?

*Probing questions*

a. Have existing CPD been useful or beneficial?

**How well are the professional needs of pre-tertiary teachers being met**

10. How would you describe your demand for CPD initiatives?

11. Are needs assessments carried out for you in relation to your CPD?

12. What do you consider to be your professional needs as part of your professional development?

13. Has existing CPD initiatives been adequate in meeting your professional needs?

**Impact of CPD on Teacher Professional Practise**

14. Do you believe existing CPD has influence your overall professional practise?

*Probing question*

b. How has it influenced your knowledge, what you do in the classroom and how you feel about teaching?

**Barriers to Teacher Professional Development**

15. What barriers exist in relation your professional development?

*Probing questions*

b. What hinders your participation in CPD initiatives?

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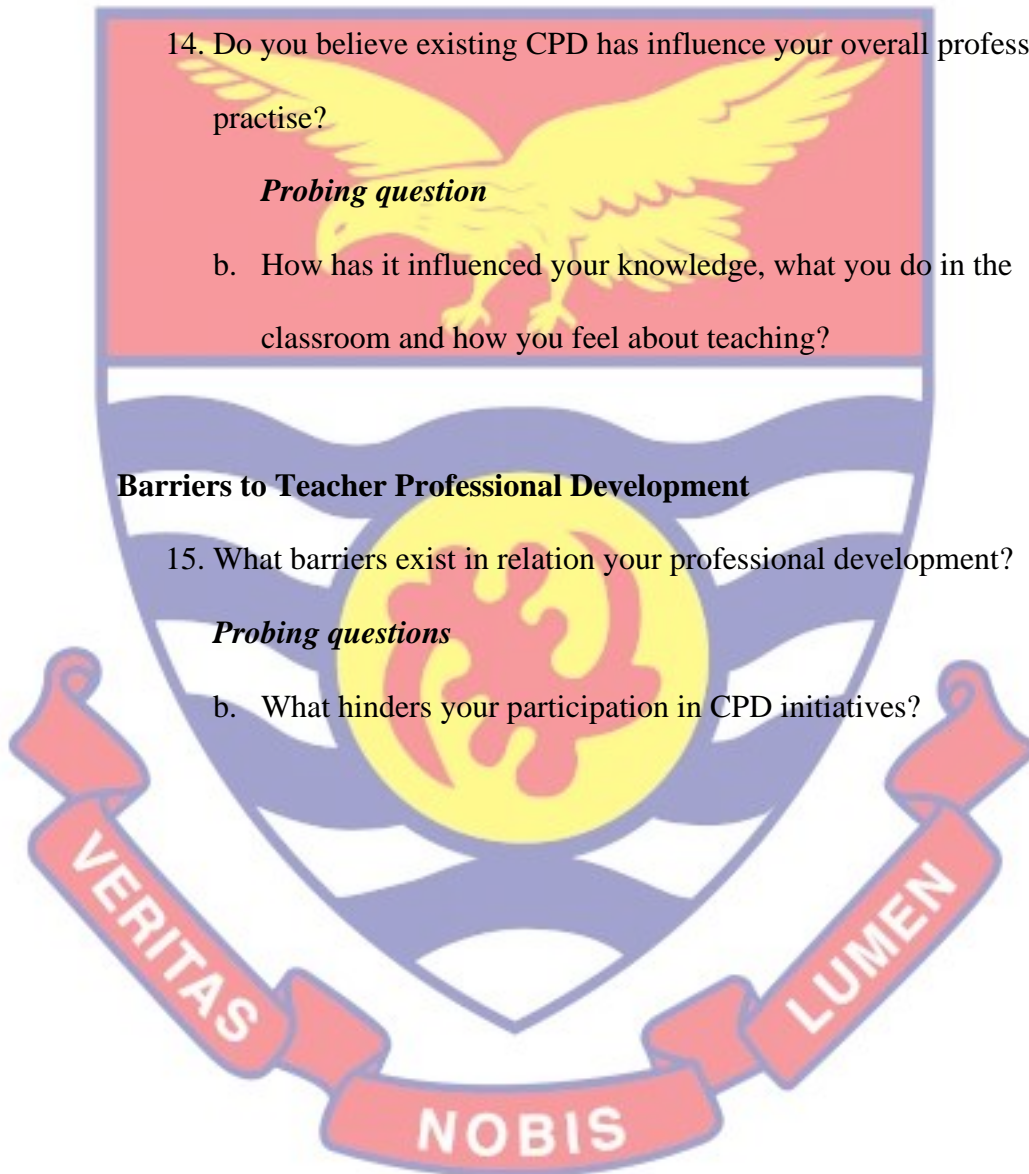
**APPENDIX G**

**UNIVERSITY OF CAPE COAST**

**COLLEGE OF EDUCATION STUDIES**

**FACULTY OF HUMANITIES AND SOCIAL SCIENCES EDUCATION**

**DEPARTMENT OF BUSINESS AND SOCIAL SCIENCES**

**EDUCATION**

**TEACHER PROFESSIONAL DEVELOPMENT QUESTIONNAIRE**

**Dear Sir/Madam,**

I am a PhD student conducting a study on Continuous Professional Development and its perceived impact on Teacher Professional Practise in Ghana. I would be immensely grateful if you could spare a few minutes of your time to answer the questions in this instrument on your Continuous Professional Development experiences. Please note that no response will be directly attributed to you. You are assured of strict confidentiality and anonymity of all the information you provide. If you would be interested in the findings of this research, kindly notify me so as to furnish you with all relevant data when the final draft of this research is published. Please tick the statements below and append your signature to complete your consent form.

I confirm that I have read and understand the subject information provided above and have had the opportunity to ask questions.

I understand that my participation is voluntary and I am free to withdraw at any time without any reason and without any consequences.

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I understand that any information provided will be held in confidence and no information that identifies me will be made public.

Thank You.

……………………………………Signature

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## Section A

**Background Information**

*Instruction: Please answer the following questions by indicating your response or ticking [√] where appropriate.*

1. School category  …………..…………………………………

2. Gender          Male  ☐          Female  ☐

3. Age range

    a. 26 years or younger  ☐

    b. 27 – 42  ☐

    c. 43 years or older  ☐

4. Highest educational level

    a. Diploma in education  ☐

    b. Bachelor's degree  ☐

    c. Masters  ☐

    d. PhD  ☐

5. Teaching experience  ☐

    a. 2 - 5 yrs.

    b. 6 - 10 yrs.  ☐

    c. 11 - 15 yrs.  ☐

    d. 16 - 20 yrs.  ☐

    e. 20 yrs. & beyond  ☐

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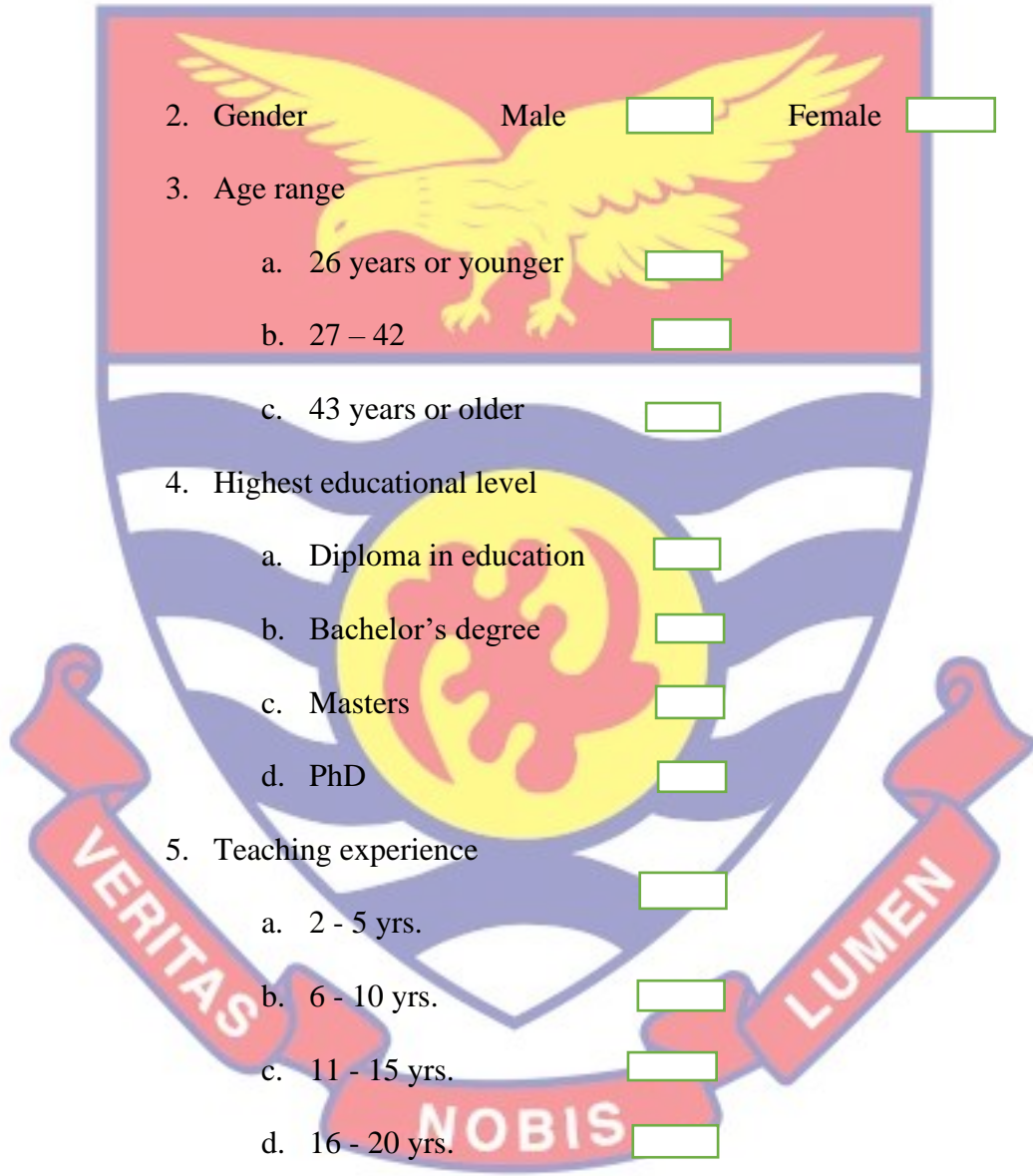
**Section B**

6. Please tick (√ )which option you recognise as part of your Continuous Professional Development (CPD) as a professional teacher.

| **CPD Activities** | |
| --- | --- |
| a.  Seminars | |
| b.  Workshops | |
| c.  Academic programmes (e.g., Diploma/Degree/Masters) | |
| d.  Observation visits to other schools | |
| e.  Peer-peer discussions | |
| f.  Individual/collaborative research | |
| g.  Mentor-mentee relationship | |
| h.  Peer observation | |
| i.  Informal dialogue to improve teaching | |
| Others, please state ……………………………………… ……………………………………… ……………………………………… ……………………………………… ……………………………………… | |

7. Please indicate from the activities stated above, which activities you believe to be popular and recognized in your profession

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8.  How many times are CPD activities organized for you?

    a.  Quarterly ☐

    b.  Per semester ☐

    c.  Yearly ☐

    d.  Randomly ☐

9.  When was the last time you participated in any CPD activity?

    a.  Within the last 6 months ☐

    b.  6 -12 months ☐

    c.  12 - 24 months ☐

    d.  24 months & more ☐

**SECTION C**

*10. Please tick (√ ) as many as applies which of the Continuous*

*Professional Development (CPD) areas you believe best reflects your*

*professional needs and for which you believe some form of training*

*may be required.*

| CPD needs | |
|---|---|
| Teaching children with special needs | |

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| | |
|---|---|
| ICT teaching skills | |
| Student discipline and behavioural problems | |
| Instructional practices | |
| Subject matter (content area) | |
| Student counselling | |
| Assessment | |
| Teaching in multicultural setting | |
| Classroom management | |
| Interpretation of syllabus and examination | |
| Teaching methodology | |
| Professional ethics | |
| Principles of education | |
| Lesson plan preparation | |
| Current trends in subject area | |
| Learning strategies | |

Others, please state

……………………………………………………………

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11. To what extent do you believe that existing programmes have

addressed such CPD needs

| CPD needs | Very High | High | Some what | Low | Not at all |
|---|---|---|---|---|---|
| Teaching special needs children | | | | | |
| ICT teaching skills | | | | | |
| Student discipline and behavioural problems | | | | | |
| Instructional practices | | | | | |
| Subject matter (content area) | | | | | |
| Student counselling | | | | | |
| Assessment | | | | | |
| Teaching in multicultural setting | | | | | |
| Classroom management | | | | | |
| Interpretation of syllabus and examination | | | | | |
| Teaching methodology | | | | | |
| Professional ethics | | | | | |

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|---|---|---|---|---|---|
| Principles of education | | | | | |
| Lesson plan preparation | | | | | |
| Current trends in subject area | | | | | |
| Learning strategies | | | | | |
| Others | | | | | |

### SECTION D

*Please indicate whether you **Strongly Agree (SA), Agree(A), Disagree(D)** or*

***Strongly Disagree (SD)** by ticking (√) the scale which best describes the*

*nature of CPD activities teachers engage in.*

| S/N | Nature of CPD activities | SA | A | SD | D |
|---|---|---|---|---|---|
| 12. | Most CPD activities I participated in involved listening and observation of speakers | | | | |
| 13. | Most CPD activities I have engaged in required active participation and hands-on activities | | | | |
| 14. | CPD activities I participated in required that I observe and learn to reteach my colleagues | | | | |

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|---|---|---|---|---|---|
| 15. | Workshop and seminars are the only CPD activities I have engaged in | | | | |
| 16. | I often engage in other CPD activities such as peer-to-peer observation and mentor-mentee relationships | | | | |

## SECTION E

*Please indicate whether you **Strongly Agree (SA)**, **Agree(A)**, are*

*Uncertain(U), **Disagree(D)** or **Strongly Disagree (SD)** by ticking (√) the scale*

*which statement best describes the impact of your Continuous Professional*

*Development on your professional practise as a teacher*

| S/N | Perceived impact of Continuous Professional Development on teacher professional practise | SA | A | U | D | SD |
|---|---|---|---|---|---|---|
| 17 | I can resolve classroom conflicts on my own because of my CPD | | | | | |
| 18 | I am able to handle classroom situations better after going through CPD | | | | | |
| 19 | My delivery in the classroom has improved tremendously from participating in CPD | | | | | |
| 20 | I can manage my instructional time better after some CPD sessions | | | | | |

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|---|---|---|---|---|---|---|
| 21 | I work better with other teachers knowing what I know now from being part of CPD activities | | | | | |
| 22 | I am able to engage my students better after some CPD sessions | | | | | |
| 23 | I discipline my students appropriately using strategies I have learnt from participating in CPD | | | | | |
| 24 | I have become more creative with my subject matter after being exposed to CPD. | | | | | |
| 25 | Available CPD has enabled me to teach at a steady pace | | | | | |
| 26 | I am able to deal with classroom issues more effectively after my CPD | | | | | |
| 27 | CPD activities have helped me to communicate with my students better | | | | | |
| 28 | Through existing CPD I have come to appreciate the goals of learning in my subject area | | | | | |
| 29 | Through available CPD, I appreciate concepts in my area of expertise better. | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 30 | I understand better how to get my students to learn after participating in CPD | | | | | | |
| 31 | I understand how to use varied assessment techniques to get the best out of my students as a result of some CPD activities I have participated in. | | | | | | |
| 32 | Through existing CPD, I understand how to structure my lessons to ensure student learning. | | | | | | |
| 33 | CPD has helped me to know how to apply different teaching methods in the classroom | | | | | | |
| 34 | Available CPD have helped me to understand theories and concepts in my subject area better. | | | | | | |
| 35 | I understand how to structure my learning objectives from available CPD. | | | | | | |
| 36 | Available CPD has helped me to appreciate individual differences in the classroom. | | | | | | |
| 37 | CPD has helped me to know when to apply different teaching methods. | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 38 | Available CPD has helped me to understand how to maintain clear direction in my lessons. | | | | | | |
| 39 | Available CPD has made me enthusiastic about teaching | | | | | | |
| 40 | I have become more confident about what I teach after engaging in CPD | | | | | | |
| 41 | Through CPD, I have become more dedicated to my profession. | | | | | | |
| 42 | Available CPD has helped me to become more reflective of my teaching | | | | | | |
| 43 | I have a positive outlook on teaching after engaging in CPD | | | | | | |
| 44 | Through available CPD I have become motivated to do more in the classroom | | | | | | |
| 45 | Engaging in CPD has helped me to become more committed to getting work done | | | | | | |
| 46 | Through available CPD I am always able to conduct myself in a professional manner | | | | | | |

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47. How do you believe available CPD has impacted your professional

practise as a teacher?

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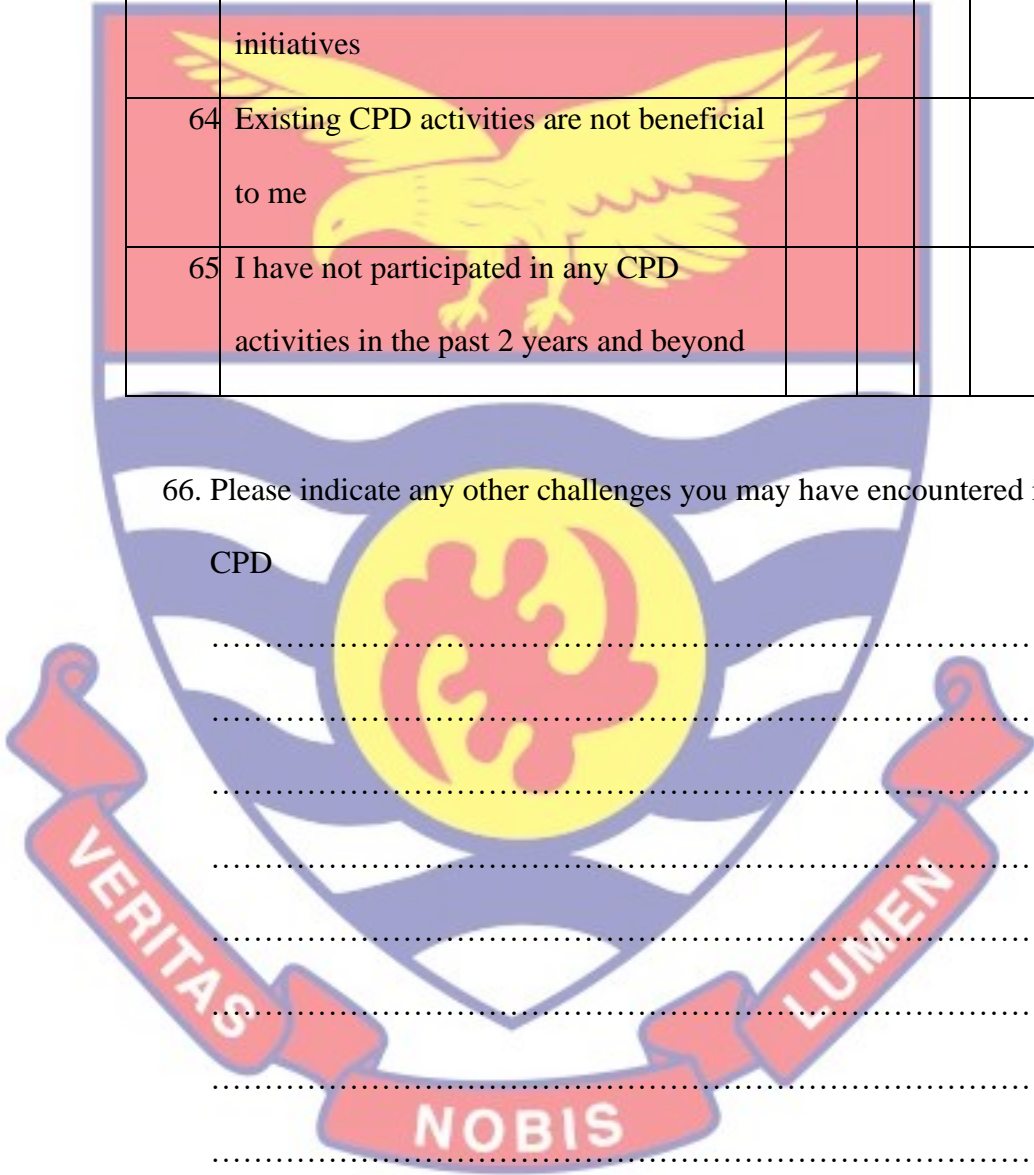……………………………………………………………………………

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## SECTION F

*Please indicate whether you **Strongly Agree (SA)**, **Agree(A)**, are*

***Uncertain(U)**, **Disagree(D)** or **Strongly Disagree (SD)** by ticking (√) the scale*

*which best describes the challenges associated with your Continuous*

*Professional Development (CPD) as a teacher*

| S/N | Challenges associated with Continuous Professional Development (CPD) | SA | A | U | D | SD |
|---|---|---|---|---|---|---|
| 48 | My school can barely afford to provide CPD | | | | | |
| 49 | There is no encouragement from my school to participate in CPD | | | | | |
| 50 | It is inconvenient when I have to leave the classroom to participate in some CPD activities. | | | | | |

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| | | | | | | |
|---|---|---|---|---|---|---|
| 51 | I am unable to participate in some CPD activities because it is often organised outside my school | | | | | |
| 52 | I find some CPD activities unnecessary because it is difficult to implement what is learnt. | | | | | |
| 53 | The timing for some CPD activities makes it difficult for me to attend | | | | | |
| 54 | CPD activities are mostly not continuous so we benefit every once in a while, | | | | | |
| 55 | The content of some CPD activities is often not relevant because there is no needs assessment. | | | | | |
| 56 | Some organised CPD activities often provide repetitive knowledge which lack current trends | | | | | |
| 57 | The duration for CPD is often too short for any meaningful learning | | | | | |
| 58 | There is poor information dissemination about CPD initiatives | | | | | |
| 59 | My professional needs are not being met through available CPD | | | | | |
| 60 | I do not have sufficient and appropriate access to CPD initiatives | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 61 | I am unable to participate in CPD activities due to monetary constraints | | | | | | |
| 62 | Available CPD has not adequately covered all my training needs | | | | | | |
| 63 | I am not satisfied with available CPD initiatives | | | | | | |
| 64 | Existing CPD activities are not beneficial to me | | | | | | |
| 65 | I have not participated in any CPD activities in the past 2 years and beyond | | | | | | |

66. Please indicate any other challenges you may have encountered in your

CPD

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*Thank you for your participation.*