



COMMONWEALTH *of* LEARNING

**Report on Policies
and Practices in
Open, Distance and
Technology-Enabled
Learning in Teacher
Training in Ghana**

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Professor Humphrey Danso prepared this document with support from Dr Betty Ogange, Education Specialist: Teacher Education, and Ms Karmila Harder, Programme Assistant, Commonwealth of Learning, Canada.

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4710 Kingsway, Suite 2500

Burnaby, British Columbia, Canada V5H4M2

Telephone: +1 604 775 8200

Fax: +1 604 775 8210

Web: www.col.org

Email: info@col.org

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Abbreviations

AAMUSTED	Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development
AU	African Union
CEMIS	College of Education Management Information System
CoE	College of Education
CPD	Continuous Professional Development
COL	Commonwealth of Learning
DBE	Diploma in Basic Education
GBEST	Ghana Basic Education Skills Examination Test
GES	Ghana Education Service
GTEC	Ghana Tertiary Education Commission
ICT	Information and Communications Technology
IIEP	International Institution for Educational Planning
IMF	International Monetary Fund
INSET	In-Service Education and Training
ITE	Initial Teacher Education
JHS	Junior High Schools
LEDC	Less Economically Developed Countries
LMS	Learning Management System
MoE	Ministry of Education
MOOCs	Massive Open Online Courses
NAB	National Accreditation Board
NaCCA	National Council for Curriculum and Assessment
NIB	National Inspectorate Board
NRCD	National Redemption Council Decree
NST	National Standards Test
NTC	National Teaching Council
NTECF	National Teacher Education Curriculum Framework
ODL	Open and Distance Learning

OER	Open Educational Resources
PD	Professional Development
PTPDM	Pre-Tertiary Teacher Professional Development and Management
PTTPM	Professional Development & Management Policy
SDG	Sustainable Development Goals
SHEP	School Health Education Programme
SHS	Senior High Schools
STS	Supported Teaching in Schools
TEL	Technology-Enabled Learning
TESSA	Teacher Education in Sub-Saharan Africa
TPD	Teacher Professional Development
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization
UCC	University of Cape Coast
UEW	University of Education, Winneba
WASSCE	West African Secondary School Certificate Examination
ZINTEC	Zimbabwe Integrated Teacher Education Course

Executive Summary

To contribute to policy dialogue and deliberations for empowering educators and education leaders, this study was designed to inform national capacity building and policy development on open, distance learning (ODL) and technology-enabled learning (TEL) in pre-service teacher training and in-service professional development in Ghana. The Commonwealth of Learning (COL), therefore, engaged a consultant in May 2022 to prepare a report on policies and practices in ODL and TEL in teacher training in Ghana. The consultant gathered data on pre-service teacher preparation and in-service teacher professional development (TPD) policies and frameworks in Ghana; reviewed and documented the resources available for teacher development; examined the decision-making process on teacher training policies, including teacher management information systems; summarised the key findings; identified the main issues; and provided recommendations.

The study revealed that there are inadequate policies on ODL and TEL for TPD; inadequate resources for ODL and TEL for TPD implementation; lack of policy on the use of a blended/dual system at a pre-service teacher training level in Colleges of Education (CoE); no teacher qualification framework/joint teacher training programmes with other countries in the region to support teacher mobility; the demand for teachers is more than supply; and no interactive teacher database to help promote resource- and data-sharing. It is recommended that policies on ODL and TEL for TPD should be formulated to guide the training of pre-service and in-service teachers; resources for ODL and TEL for TPD implementation should be provided to support the training of pre-service and in-service teachers; policy on the use of a blended/dual system should be formulated for pre-service teacher training at CoE; a qualification framework/joint teacher training programmes should be developed with other countries in the region to support teacher mobility; access to pre-service teacher training programmes should be increased to ensure that the demand for teachers in the country is met by the supply; and an interactive teacher database should be developed to help promote resource- and data-sharing for TPD.

Chapter 1: Introduction

1.1 Background

Teachers are a critical factor in education, hence the importance of quality in teacher training, recruitment, retraining and professional development. According to the UNESCO Institute for Statistics, about 69 million new teachers are needed globally to reach the 2030 education goals (UNESCO, 2022). The report notes that the greatest teacher shortages are in Sub-Saharan Africa, where a total of about 17 million teachers are needed to achieve universal primary and secondary education by 2030. At the 20th Conference of Commonwealth Education Ministers (20CCEM) held in Fiji in 2018, it emerged that about 19 million more teachers would be needed across the Commonwealth by 2030 (The Commonwealth, 2018), suggesting that the Commonwealth countries outside of Sub-Saharan Africa might have a combined shortfall of about 2 million teachers. This brings into focus the effectiveness of campus-based and other flexible approaches in pre-service teacher preparation in meeting this shortfall.

The quality of teachers in any education system is often associated with pre-service teacher preparation. Pre-service teacher preparation – also referred to as initial teacher education (ITE) – comprises formal education in particular fields of study, and practical and pedagogical training. Prospective teachers in most countries complete this formal education to obtain a diploma or degree required to become a schoolteacher. Those who have attained such degrees or certifications are also referred to as “trained teachers.”

The lack of quality learning resources is a contributing factor to low-quality teacher training and professional development in many contexts. A recent policy brief by COL suggests that policymakers can add value to global resources, such as COL Massive Open Online Courses (MOOCs), by promoting an open and tolerant attitude to pedagogies and technologies rather than prescribing and enforcing specific applications, formats and systems (Commonwealth of Learning, 2021).

The policy brief calls for governments and other education stakeholders to leverage global MOOCs to achieve quality teacher development. While several MOOCs are available for adaptation and use by teacher training institutions, the extent to which teacher training and

professional development programmes in the Commonwealth encourage the use of open educational resources (OER) and their perceived impact is yet to be documented. The availability of regionally tailored resources, like those developed by Teacher Education in Sub-Saharan Africa (TESSA), may improve the uptake of OER for teacher development programmes.

The need to find ways of using existing resources differently, expanding access to learning opportunities at an affordable cost and providing alternative pathways to initial teacher training using distance learning has been highlighted in some global reports (UNESCO, 2021).

Using ODL methodologies, teacher trainers and developers can draw on new constituencies of the population to work as teachers while using technologies appropriately to enrich teachers' context and support practice. ODL and TEL can be used to stimulate and support teachers' active learning and reconceptualisation of the traditional organisation of ITE and continuing development.

In many developing countries, reliable information on teacher qualifications and teacher training policies remains hard to come by (UNESCO, 2022). Also, national teacher education programmes vary in terms of their content, duration and qualification levels. As a result, global and regional comparisons are difficult to use and interpret.

Therefore, for Commonwealth countries to meet the targets of SDG 4, in-country policies are needed to address the challenges around pre-service teacher training as well as in-service TPD. There is a need to work with various government-level stakeholders to evolve policies and strategies towards innovative teacher development, using open, distance and technology-enabled learning to address the teacher shortfall in specific countries as well as teacher quality.

Ghana has over the years put in place strategies to train and develop teachers to become the backbone of training the human resource needs of the country. The Presidential Committee on Education (2002) recommended a critical review of and approach to making teacher education relevant to the development of the country. In Ghana, teacher training utilises the generalist and subject-training approaches: generalist teachers for KG and Primary 1–6; specialist teachers for junior high schools (JHS) and senior high schools (SHS). The preparation of teachers to teach at

the basic school level takes place in post-secondary institutions known as Colleges of Education (CoE).

Currently, there are 48 CoE in Ghana. There are also three universities (University of Cape Coast [UCC], University of Education, Winneba [UEW], and Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development [AAMUSTED]) which are traditional teacher education institutions with the mandate to prepare teachers to teach at various educational levels. CoE primarily use a traditional face-to-face and school attachment/internship mode of delivery, while traditional universities use a face-to-face, distance/sandwich and school attachment/internship mode of delivery.

Numerous studies have been conducted on teacher education in Ghana. Asare and Nti (2014) investigated contemporary issues and matters arising in teacher education in Ghana. The study presented the key teacher training institutions in Ghana and highlighted the structure of teacher preparation, type of teacher training pursued, and pathways to teacher development in Ghana. Buabeng et al. (2020) examined the policies and practices of teacher education in Ghana. The study highlighted the structure and changes in Ghana's teacher development policies and practices following the adoption of a new programme that took effect in 2018 with the intake of the first batch of four-year degree students in the country's CoE.

The study showed that improved teacher qualifications and a conscious effort to link theory to practice would result in improved teacher knowledge and skills required for a professional teacher. Sampong (2009) evaluated a distance teacher education programme at a university in Ghana. The study concluded that, although there were some discrepancies between programme standards and performance, the programme was fulfilling its purpose of upgrading the professional and academic performance of a large number of teachers in the public K-8 schools in Ghana.

This study was designed to inform national capacity building and policy development on ODL in pre-service and in-service teacher training and professional development in Ghana. The study contributes to policy dialogue and deliberations to empower educators and education leaders in Ghana to make evidence-based policy decisions for quality pre-service and in-service teacher training, gain access to learning resources, and evolve contextualised open, distance and

technology-enabled learning options for pre-service and in-service programmes. The report can also be used as a reference point for strengthening the capacity of teacher training institutions in ODL to train enough teachers to meet the in-country needs.

The study addressed the following questions:

1. Policies and frameworks: How is pre-service and in-service teacher training in Ghana structured? What policies and frameworks guide pre-service teacher training in the country?
2. Resources: In what ways have teacher training institutions in Ghana used OER/MOOCs in pre-service and in-service teacher training? What are the emerging policy issues in the country regarding ODL, OER, MOOCs, TEL, etc., in teacher training?
3. Teacher and teaching institutions data: Which institutions are the teacher training institutions in Ghana? How is ODL currently being used? What is the status in terms of teachers trained and the number of trained teachers required in the country? How are teacher management information systems used for decision-making for teacher training in the country?

1.2 Report objectives

The main objective of this study was to develop a report on teacher training through open, distance and technology-enabled learning in Ghana. To achieve the main objective, the following specific objectives were pursued:

- i. to gather data on pre-service teacher preparation and TPD policies and frameworks in Ghana
- ii. to review and document the resources available for teacher development, including OER
- iii. to examine the decision-making process on teacher training policies, including teacher management information systems
- iv. to summarise the key findings.

Chapter 2: Review and Documentation of the Resources Available for Teachers

2.1 Introduction

The world is facing unprecedented challenges in politics, social, economics, health, energy, ethics, science and technology (The Millennium Project, 2014). Regional conflicts, depleting oil resources, the widening gap between rich and poor, terrorism, and competitive economic pressures are among the challenges facing our world today. In the face of these challenges comes many opportunities, including economic liberalisation, internet technology (global village), new computer applications and inventions.

Less economically developed countries (LEDC) (including Ghana) cannot compete and succeed in this world without a creative and innovative populace who can help LEDC to overcome their challenges. Global challenges and associated opportunities have led to the reinforcement of digital learning worldwide (Sailer et al., 2021). Ghana's recent education reform (Ministry of Education Ghana, Education Strategic Plan [ESP], 2018–2030) has three main priority areas: improved learning outcomes; enhanced accountability and equity at all levels of the education sector focusing on widening participation in Technical and Vocational Education and Training (TVET) education to reduce unemployment; and application of digitisation in teaching and learning to improve quality and access. The expected outcomes of the reforms cannot be achieved without teachers who have the know-how in the three areas above to impact learners. This review focuses on documenting the resources available for teacher development, including OERs, and examines the decision-making process on teacher training policies.

2.2 The education system in Ghana

ODL and TEL offer learning opportunities to communities that have historically been excluded from formal educational learning systems. Government, agencies and other critical stakeholders of the educational sector have made many strives by providing effective policies and practices for ODL and TEL in teacher training in Ghana. The Ministry of Education (MoE) is responsible for making policy documents or policy formation for the education systems in Ghana. Also, the MoE is responsible for developing an educational framework, policies and plans for the

achievement of the United Nations (UN) Sustainable Development Goals (SDGs), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Institution for Educational Planning (IIEP) and the African Union (AU) Agenda 2063.

Under the MoE, the Ghana Education Service (GES) is the largest agency that provides pre-tertiary education. In Ghana, there are sub-sectors of educational levels. They are (1) an 11-year compulsory and free basic education comprising two-year kindergarten, six-year primary education, and three-year junior high school (JHS) education; (2) another free three-year senior high school (SHS) education where students can pursue general arts, business, general science, technical or vocational programmes (TVET) that can lead to higher education at the tertiary level; (3) special education for students with disabilities; (4) and finally, non-formal education for individuals not in the formal system.

The MoE has various policies, including the Pre-Tertiary Teacher Professional Development and Management (PTPDM) policy for teacher registration and licensing. Other new policies and frameworks for open, distance and technology-enabled education include the Information and Communications Technology (ICT) in Education Policy; the National Science, Technology and Innovation Policy; and the ICT for Accelerated Development policy framework. The National Council for Curriculum and Assessment (NaCCA), the National Teaching Council (NTC), and the National Inspectorate Board (NIB) are also the current three autonomous bodies responsible for system accountability in the educational systems in Ghana.

Regarding trained teachers in Ghana, as of 2020, trained teachers in primary education (% of total teachers) in Ghana is 67.32 (World Bank, 2021). The highest score over the past 21 years was 71.80 in 1999, while the lowest value was 47.57, recorded in 2009 (see Figure 1). The result indicates that unprofessional teachers with no educational certificate or pedagogical educational skills teaching at the primary level is 33% as of 2020 versus 35% in 2019. Owing to open and distance education, trained teachers have increased over the past five to ten years.

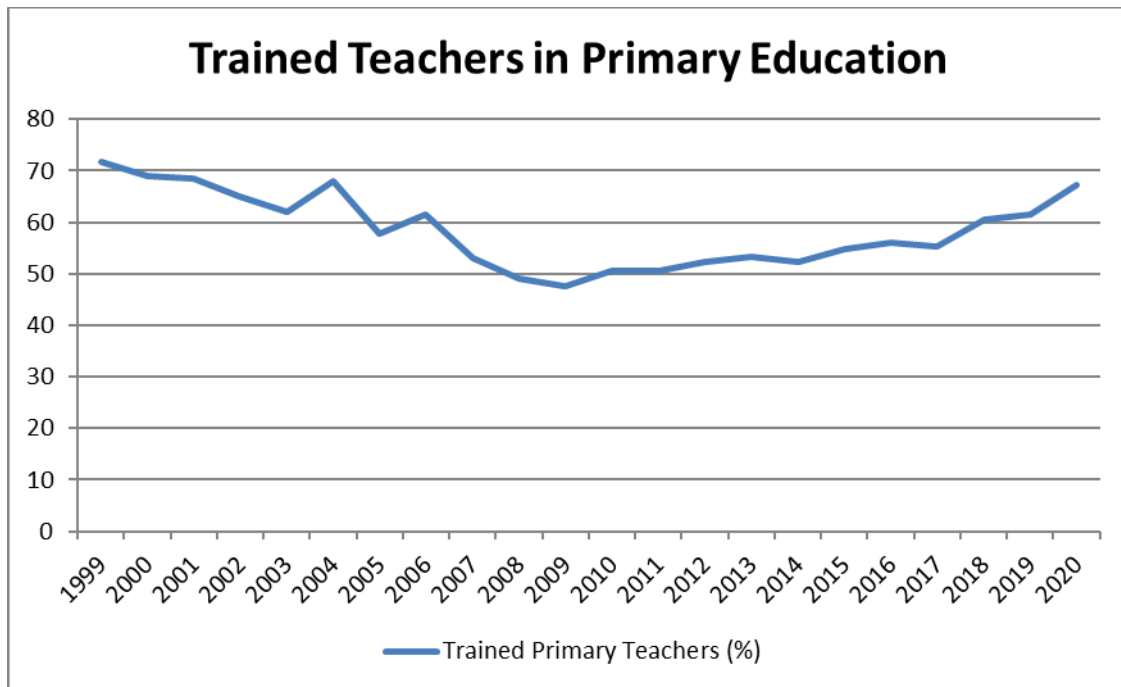


Figure 1: Trained teachers in primary education (% of total teachers)

Also, as of 2020, the total number of current primary education pupils is 4,584,381. For the past eight years (2013–2020), the ratio of female to male pupils in primary school has been 1.01 (see Figure 2). The highest score is 1.02, recorded in 2020, higher than over 68 countries with 1.0 or below (The World Bank, 2021). The result shows that females are more than males in primary education, and girl child education has been a priority of the government of Ghana.

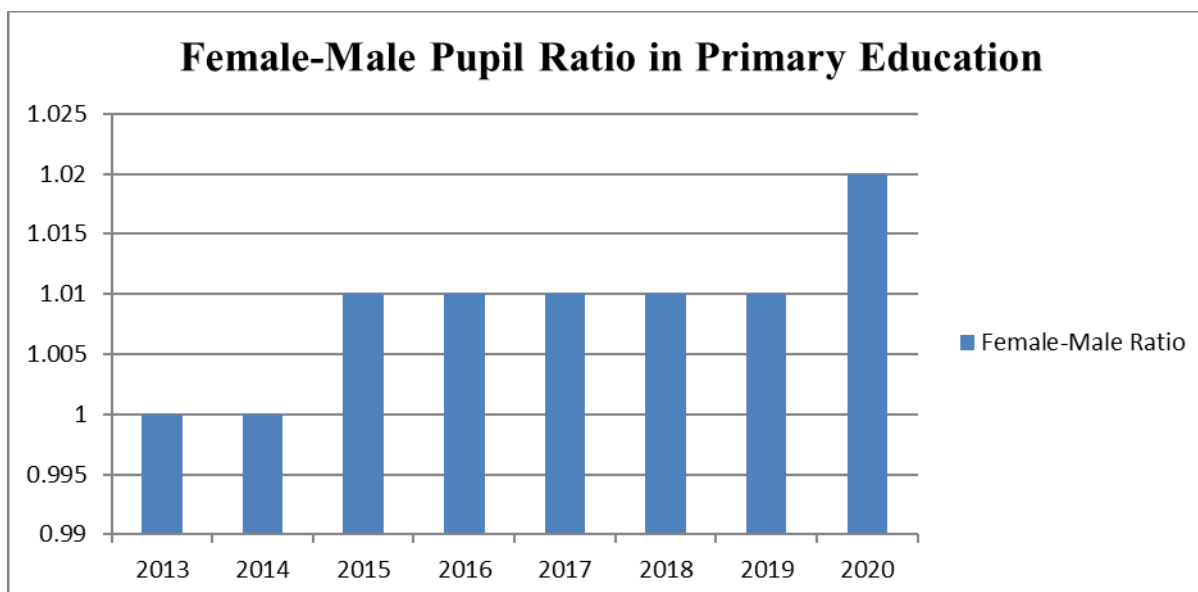


Figure 2: Ratio of female–male pupils in primary education

The average value of the pupil-teacher ratio from 1974 to date is about 29.88 students per teacher, with a minimum of 23.24 students per teacher in 1986 and a maximum of 35.39 students per teacher in 2006. The current enrolment for the pre-primary, primary and junior high levels is 5,876,785 as against 283,430 teachers, representing a pupil-teacher ratio of 21.

Regarding trained teachers teaching in secondary schools, the average percentage of the total teachers in Ghana was 73.49 from 1999 to 2018 (The World Bank, 2021). The highest and lowest scores over the past 20 years are 81.34 in 2004 and 68.68 in 2008, respectively (refer to Figure 3). The 2018 data show that trained teachers with the necessary pedagogical skills and knowledge make up 77%, less than the world’s average figure of 83%. The government of Ghana launched free senior high schools in September 2017, so enrolment at the secondary level has increased drastically. As of March 2020, the current student population at the secondary level is 404,856, and the female-males ratio is 1.0.

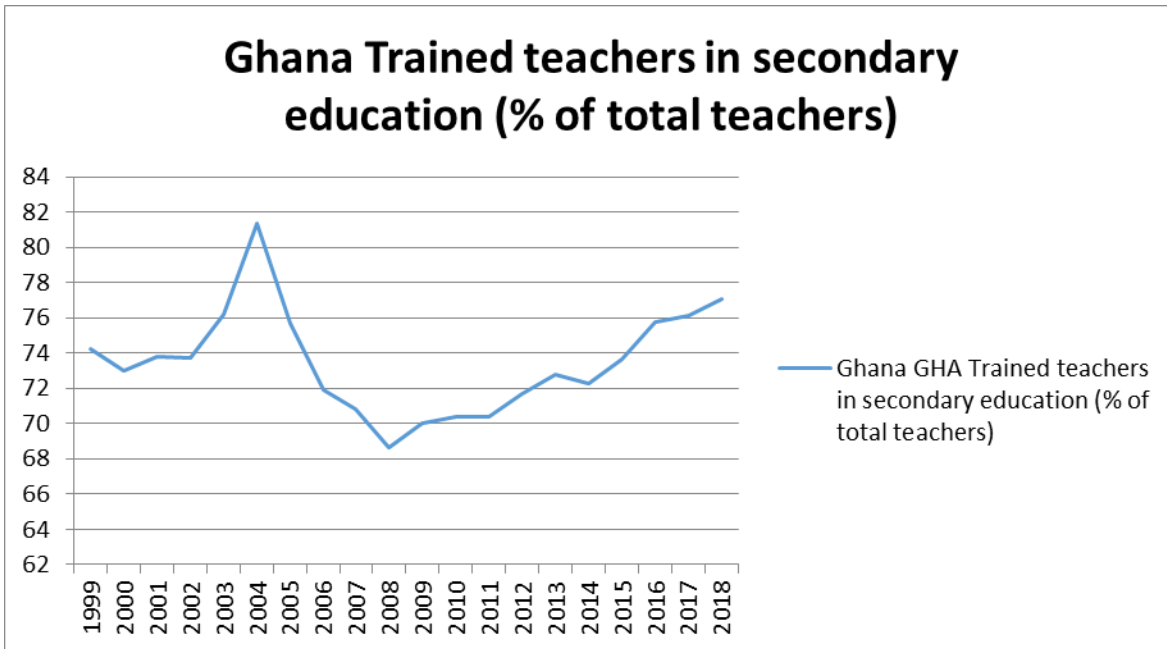


Figure 3: Trained teachers in primary education (% of total teachers)

Concerning tertiary education, enrolment figures have increased over the past five years (see Figure 4). For instance, the 2020 enrolment figure is 547,050, more than 496,150 (2019) and 422,120 (2018) (Statista, 2022).

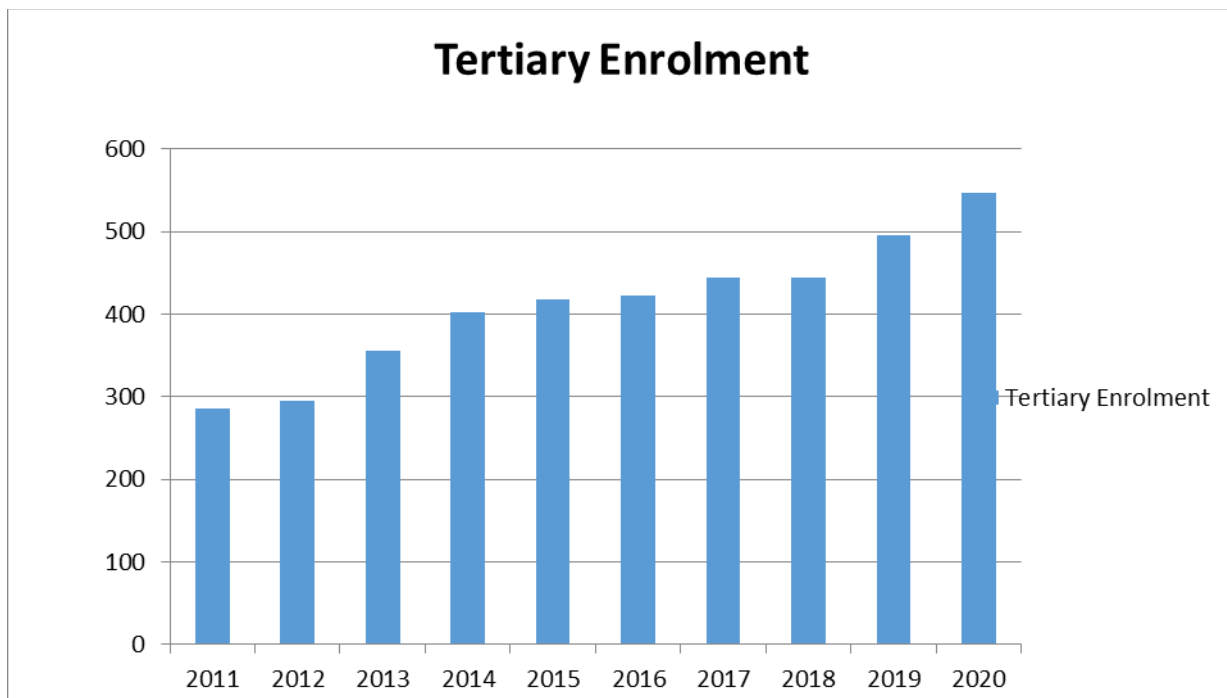


Figure 4: Tertiary education enrolment (Statista, 2022)

TVET in Ghana has achieved its highest student enrolment since its foundation. TVET schools in Ghana collectively recorded 44,000 student enrolments – a nearly 100% increment in past enrolments. These statistics show that the Ghanaian populace is grasping the TVET concept.

The above statistics indicate that Ghana’s Education Sector Plan is making positive strides towards the achievement of SDG 4 (quality education) to be achieved by 2030. SDG 4, which has 10 targets, aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. The first and second targets highlight the need for free compulsory education at the pre-primary, primary and secondary levels. Currently, every Ghanaian child enjoys free education from kindergarten to secondary or SHS. Another target is that there should be equal access to affordable TVET for all. As indicated earlier, owing to free TVET education, there has been a 100% increase in enrolment at various TVET institutions in Ghana. However, TVET at the tertiary level is not free, and the government needs to make it progressively free in line with prevailing global agreements before 2030. Another target is to eliminate all discrimination in education. In fact, the statistics show that females at the primary level are higher than males, and there is parity between females and males at the secondary level. Thus, there is gender equality because both genders have equal opportunities to enjoy high-quality education, achieve at equal levels, and enjoy equal benefits from education. Also, by 2030, all youth and a large ratio of adults should achieve literacy and numeracy. The NTC has introduced the Ghana Basic Education Skills Examination Test (GBEST) that assesses students in basic literacy and numeracy to ensure students admitted to various public teacher training institutions are qualified. Also, the National Standards Test (NST) implemented by the MoE in 2021 ensures that basic students at the pre-primary level access their knowledge, skills, values and attitudes, considering literacy and numeracy.

GES was established in 1974 by the National Redemption Council Decree (NRCD) 247 as part of the public service of Ghana. The NRCD 247 was subsequently amended by NRCD 252, 357, and SMCD 63. Under the fourth Republican Constitution of Ghana, Acts of Parliament have amended these earlier legislations, including Act 506 (1994) and Act 778 (2008). A 15-member council, called the GES Council, governs GES. GES is responsible for implementing approved national pre-tertiary educational policies and programmes to ensure that all Ghanaian children of

school-going age, irrespective of gender, society, disability, religious and political affiliations, are provided with inclusive and equitable quality formal education.

The vision of GES is to “create an enabling environment in all educational institutions and management positions that will facilitate effective teaching and learning and efficiency in the management for the attainment of the goals of the Service”. Also, its mission is to “ensure that all Ghanaian children of school-going age are provided with inclusive and equitable quality formal education and training through effective and efficient management of resources to make education delivery relevant to the manpower needs of the nation.”

As part of efforts to promote quality pre-tertiary education service delivery, GES is making the following reforms:

- re-alignment of the Teacher Education Division of GES as an agency under the Ministry of Education (now known as the National Teaching Council)
- re-alignment of the Curriculum Research and Development Division of GES as an agency under the MoE (now known as the National Council for Curriculum and Assessment)
- re-alignment of the Inspectorate Division of GES as an agency under the MoE (now called the National Inspectorate Board)
- re-alignment of the Technical/Vocational Education Division (TVED) of GES as an agency under the MoE (to be named Ghana Technical Education Service)
- creation of a new division of GES (to be called Management Service Division), which shall include Special and Inclusive Education, Guidance and Counselling, and the School Health Education Programme (SHEP).

2.3 Teacher Training

The introduction of PTPDM contributes to the professional development of pre-service teacher education. The NTC (2020) provides that the PTPDM enhances the competencies and capacities of teachers in Ghana by conducting regular in-service education and training (INSET). Teachers must currently attain minimum credit points and a certificate of accredited professional development (PD) for promotional ranks (NTC, 2020).

Anamuah-Mensah and Benneh (n.d.) state that the structures of pre-service teacher training in Ghana include a three-year Diploma of Basic Education (DBE) for basic- and elementary-level teachers. However, most CoE currently run four-year degree educational programmes for teachers to teach in basic/elementary and JHS. AAMUSTED, UCC, and UEW are the public universities mandated to run educational certificates and degrees, especially for first- and second-cycle schools (Grades K-12), colleges, and TVET institutions in Ghana. Buabeng et al. (2020) report that some training programmes are general (for basic levels), and others are specific (for junior or senior high or special schools) through the full-time, sandwich, or distance learning modes.

The government, through the MoE, has enhanced pre-tertiary educational training in Ghana by providing innovative strategies and technology employed by education stakeholders to advance open, distance and technology-enabled education for unprofessional teachers who lack pedagogical skills to gain the requisite knowledge for quality education. Lock et al. (2021) posit that governments must provide frameworks to create technology-enabled online and blended modes for quality education. Currently, most training colleges and universities in Ghana have adopted open, distance and technology-enabled programmes to train unprofessional teachers that include the same educational structures as the regular programmes, including practicum sessions to evaluate trainers' competencies, capabilities, or skills before they graduate as professional teachers (Buabeng et al., 2020).

2.4 Policies and framework for pre-service teacher training in Ghana

Globally, pre-service teacher education faces challenges, and it is impracticable to predict the future (Drahmann, 2020). However, there are policies and trends Ghana's education systems need to achieve or deal with global standards. GES has made significant strides towards developing policies and frameworks for pre-service teaching training to meet international standards (Buabeng et al., 2020).

GES has a policy framework known as PTPDM which draws from the 2008 Education Act that provides direction for teachers' professionalism and quality education in Ghana. The NTC (2017) provides that PTPDM enhances the competencies and capacities of teachers in Ghana by conducting regular INSET. GES has recently revised and provided a new national pre-tertiary

framework, such as the National Teacher Education Curriculum Framework (NTECF), to provide for policy direction and implementation of pre-tertiary development to achieve the AU Agenda 2063 (CESA 16-25), UN SDG 4, and UNESCO Education 2030 Framework for Action. Also, the new policies follow guidelines from local policies and frameworks, such as the ICT in Education Policy; the National Science, Technology and Innovation Policy; and the ICT for Accelerated Development policy framework. This new framework shifts the notion of passing an examination to nurturing and instilling ethical values. Again, the current policies and framework focus on raising literate and confident individuals who think critically to solve societal problems. Again, GES is strengthening pre-service teacher training by improving the 4Rs (reading, writing, arithmetic, and creativity), other neglected languages, such as Arabic and French, and learning-centred pedagogies using ICT tools.

The global pandemic (Covid-19) prompted most schools, colleges, and universities to use technological tools for teaching and learning in most nations. ICT has become an integral part of quality education (Sailer et al., 2021). Surprisingly, few individuals in Sub-Saharan Africa have access to ICT, making it a threat to embedding ICT in teaching and learning (Asunka, 2008). However, the educational sector in Ghana has made appreciable progress in including ICT in education. For instance, the strategic education plan of 2003–2015 and 2010–2020 strengthened ICT through policies such as the ICT for Accelerated Development (ICT4AD) Policy; the Basic School Computerization policy; and the ICT in Education policy for teaching and learning in Ghana (Natia & Al-hassan, 2015).

Also, government flagships – such as the *One teacher, One laptop* initiative – is a significant contribution to keeping teachers abreast of ICT tools in education. However, as Sailer et al. (2021) suggest, MoE and GES should revise their current framework and professional development training seminars as well as pre-teaching and continuing education, focusing on ICT-related teaching skills to advance students' constructive learning with ICT. Also, Koseoglu et al. (2020) argue that the policies and framework for pre-service teacher training should close gender inequalities in educational systems. Koseoglu et al. (2020) concluded that the current curriculum should concentrate on gender-sensitive designs, equal opportunities for all, and relevant cultural designs. The Education Strategic Plan (2018–2030) is designed to strengthen sector institutions to overcome their capacity gaps and accomplish the goals outlined in the

Education Sector Plan 2018. The end goals of these reforms are “to deliver quality education service at all levels that will equip learners in educational institutions with the skills, competencies and awareness that would make them functional citizens who can contribute to the attainment of the national development goals.”

2.5 Teacher professional development in Ghana

Continuous professional development (CPD) of teachers plays an important role in the in-service teacher development activities in every country. Teacher CPD has become a major focus within the school reforms and improvement in Ghana. The global challenges require teacher bodies such as GES to employ creative approaches to update staff knowledge and build capacity through CPD (Mensah, 2016). In Ghana, the government recognises the need for the training and development of professional teachers. Teacher CPD in Ghana is provided by the MoE, GES, service providers, and NGOs, among others.

GES has developed frameworks similar to those of the Nursing and Midwifery Council, Dental and Medical Council, and Ghana Legal Counsel that guide the growth, competencies, integrities and professional status of teachers in Ghana (NTC, 2020). As mentioned earlier, the introduction of PTPDM contributes to TPD of in-service teacher education, and the NTC (2020) provides that PTPDM enhances the competencies and capacities of teachers in Ghana by conducting regular INSET. Teachers must currently attain minimum credit points and get a certificate of accredited PD for promotional ranks (NTC, 2020).

2.6 Structure of pre-service teacher training

Achieving quality education depends on sound structures (Asare & Nti, 2014). Asare (2011, p. 43) emphasises that “[a] sound education structure leads to an enlightened society and manpower development, which can lead a crusade for social transformation and economic progress”. In Ghana, there is an organised structure of pre-service teacher training that trains individuals to acquire competencies and skills (Buabeng et al., 2020). Put differently, Ghana’s teacher education has a pre-service structure that trains teachers to develop professional knowledge and innovative pedagogies to improve their performance (Buabeng et al., 2020).

Nowadays, owing to innovative strategies and technology employed by education stakeholders in emerging markets advancing distance learning or MOOCs, most unprofessional teachers enrol themselves in the distance modes for their educational training or qualification (Burns, 2011; Cleveland-Innes et al., 2019; Kabir, 2016; Nikoi & Armellini, 2012; Mays, 2022; Mishra et al., 2022). Lock et al. (2021) posit that institutions should create technology-enabled online and blended modes for quality education. Irrespective of the modes, the structures include practicum sessions to evaluate trainers' competencies, capabilities, or skills before they graduate as professional teachers (Anamuah-Mensah & Benneh, n.d.; Buabeng et al., 2020). The structure includes pre- and post-internships (on-campus practicum) and internships (usually one year) at school.

2.7 ICT resources for teacher education in Ghana

The Internet offers a great opportunity to expand the delivery of education globally through the World Wide Web. Burns (2011) contends that the key potential of online learning is its ability to offer multichannel instruction and multiformat learning resources and provide anytime, anyplace learning, provided the learner has Internet service. There are different forms of ICT (digital) supported learning. However, using the classification provided by the Sloan Consortium (2008), an online course refers to a course that has about 80% of its content, delivery and interaction done through the Internet. The national teacher education curriculum sees ICT as a key to effective communication, teaching and learning in the 21st century (MoE, 2017). This Curriculum Framework proposes the integration of ICT into ITE programmes. Ghana's teacher training curriculum fully embraces ICT, hence the need to build ICT resources for education. The different form of ICT-supported learning, as classified by the Sloan Consortium (2008), is outlined in Tables 1 and 2.

Table 1: Classification of online courses (Burns, 2011)

Proportion of content delivered online	Type of course	Description
0%	Traditional	<ul style="list-style-type: none"> • Course uses no online technology. • Content is delivered in written, oral, or audiovisual format.
1–29%	Web facilitated	<ul style="list-style-type: none"> • Course uses Web-based technology to facilitate what is essentially a face-to-face course. • Course might use a learning management system (LMS) to post syllabus and assignments.
30–79%	Blended/hybrid	<ul style="list-style-type: none"> • Course blends online and face-to-face settings. • Substantial proportion of the content is delivered online. • Course typically uses online discussions and has some face-to-face meetings.
80+%	Online	<ul style="list-style-type: none"> • Course delivers the bulk of content online. • Course typically has no face-to-face meetings.

Table 2: Types of distance learning (Burns, 2011)

Types of Distance Education	Examples
Correspondence model	Print
Audio-based models	<ul style="list-style-type: none"> • Broadcast: IRI • Narrowcast: IAI (via audio tape or CDs) • Two-way radio • Audio-conferencing and telephone • Broadcast radio
Televsual models	<ul style="list-style-type: none"> • Broadcast television (education and instructional) • Video-conferencing • Video
Computer-based multimedia models	<ul style="list-style-type: none"> • Interactive video (disc and tape) • CD-ROMs • Digital video discs (DVDs/VCDs) • Interactive multimedia
Web-based models	<ul style="list-style-type: none"> • Computer-mediated communication • Internet-based access to World Wide Web resources • Online courses (e-learning) • Online conferences (webcasts and webinars) • Virtual classes/schools (cyber schools) and universities
Mobile models	<ul style="list-style-type: none"> • Hand-held devices • Portable media players (podcasting) • Cell phones and smartphones • Tablets • E-readers

The ICT resources available for teacher education in Ghana are inadequate, but Ghana seems to have the key ingredient (internet). The available resources are outlined below:

- Broader internet coverage. Ghana has over 53% internet penetration rate in January 2022 (Statista, 2022).
- Ghana has good mobile broadband network coverage, with 80% 3G and 35% 4G as of 2018 (RIS, 2018).
- The Covid-19 pandemic made almost all 46 teacher education colleges develop some form of LMS (mostly Moodle) to support virtual learning. Those without an LMS use learning applications like Zoom, Google Classroom, Telegram, and others (Agbador, 2020).
- All 46 CoE have ICT resource centres but with limited internet. The ICT centres have an average of 30 computers.

In addition to the above resources, GES developed the following learning platforms during the Covid-19 era to support teaching and learning in primary, junior secondary and senior secondary schools, respectively:

- Edmondo Ghana
- iCampus Ghana
- Read2Skill.

There are many benefits to adopting online learning. They are:

- replacing the traditional face-to-face form of instruction in remote areas
- facilitating education in an emergency where the face-to-face instruction is not possible, e.g., during the Covid-19 era
- offering a cost-effective form of education in instances where the traditional face-to-face form is deemed expensive
- providing opportunity and easy access, thereby encouraging mass education.

Chapter 3: Teacher Training through Open Distance Learning

Quality teacher education is important for the development of every nation and the achievement of SDG 4. The demand for quality teacher education through the ODL mode is increasing (Gupte, 2010). Open learning is an organised educational activity based on the use of teaching materials, in which constraints on study are minimised in terms of access, time, place, pace, method of study, or any combination of these (Tarusikirwa, 2016). Distance education is an educational system in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner (Brown & Brown, 1994). The term “open and distance learning (ODL)” is used as an umbrella term for educational approaches that reach students in their schools, provide learning resources for them, or enable them to qualify without attending college in person, or open up new opportunities for keeping up to date regardless of where or when they want to study (UNESCO, 2001).

The flexibility inherent in ODL and the fact that it can be combined with a full or near-full-time job makes it particularly appropriate for the often widely distributed force of teachers and school managers (Tarusikirwa, 2016). International experience has shown that ODL can be effectively deployed for teacher education, and though it has been regarded as a temporary expedient, adopted, dropped and sometimes re-adopted, the evidence of its effectiveness is, in fact, that it is robust enough to be developed and treated as a regular part of national systems of education instead (Lizenberg, 2013). ODL has been adopted worldwide as the potential solution to a range of teacher education issues, from cost and supply to access, diversity and quality (Mayes & Burgess, 2010). ODL has been widely applied to teacher education, and there is some record of success in its use for all four regular elements of the curriculum – general education, subject-specific knowledge, pedagogy, and practical teaching (Kumar, 2021). ODL may use print, broadcasts, cassette recordings, computer-based materials, computer interaction, video-conferencing, and face-to-face learning (Kumar, 2021). The essence of ODL is that it enables students to learn without being present at an institution.

ITE refers to that part of a teacher’s education, preparation and training that leads to fully qualified, licensed or credentialed teacher status within a national or state/provincial system (Mayes & Burgess, 2010). It is the stage prior to in-service teacher education that seeks to

enhance teacher quality and performance beyond the professional entry level. ODL approaches to ITE have been identified as having major advantages over conventional programmes that require residency in terms of cost, scale and access. Moon and Robinson (2003) explained that there are three areas of advantage:

- a. resource efficiency (buildings, teaching staff and funds) by reducing the overall cost of producing a qualified teacher
- b. supply in drawing in new constituencies of teachers and producing more trained teachers in a shorter amount of time
- c. curriculum and training through offering greater opportunities to strengthen the relationship between theory and classroom practice (e.g., using real-life teaching on video; having teachers discuss their experiences on radio; and assessing classroom-focused activities, such as requiring trainees to integrate their learning from ODL materials into specific activities undertaken upon placement).

Tarusikirwa (2016) discussed the Zimbabwe Open University ODL model of teacher development and noted that student teachers were continually teaching in schools while simultaneously undergoing teacher development. Gupte (2010) examined the perceptions of successful Bachelor of Education (BEd) students at Indira Gandhi National Open University (IGNOU) and found that they had succeeded in achieving their objectives of gaining promotion and increased salary levels after completing their BEd programme. Furthermore, the students were satisfied with the programme design; although it was intensive, it was possible for them to complete the ODL programme within the minimum duration even though they had full-time jobs.

Buabeng et al. (2020) examined a number of reforms involving curricular changes and restructuring of teacher education institutions tasked with the responsibility of preparing teachers for the basic school level in Ghana. They further highlighted the structure and changes in Ghana's teacher development policies and practices following the adoption of a new programme which took effect in 2018 with the intake of the first batch of four-year degree students in the country's CoE. Lizenberg (2013) developed a model of teacher formation that addresses both trainees in their initial formation and in-service training for expert teachers. The model has a twofold instance: a traditional yet technologically-enriched phase for the trainees under an

experiential flipped-classroom approach; and an open and distance phase in which they build their own lifelong PLE through peer collaboration with their classmates and graduate teachers.

3.1 Models of ODL teacher training

3.1.1 Zimbabwe’s approach

Siyakwazi (2014) discussed the model use in Zimbabwe as the 3-3-3 model of teacher development. This was later modified with the first year of training being spent in schools, the second year in colleges, and the third year in schools, as shown in Figure 5.

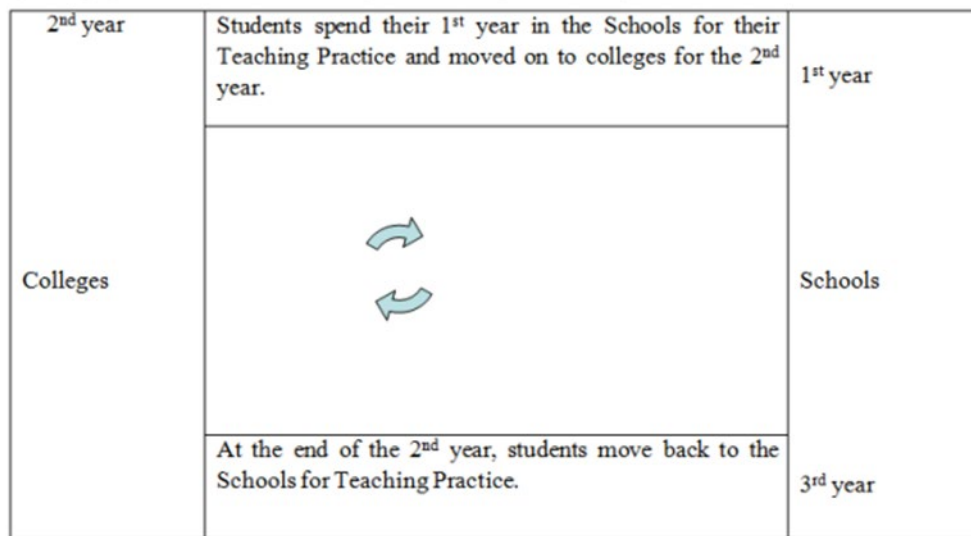


Figure 5: First Zimbabwe ODL model of teacher development (Tarusikirwa, 2016)

In the first model, teacher training consisted of three years of teacher development (i.e., 3-3-3). In this model, teachers were trained for three years. In the three years, the first three terms of training (first year) were spent in schools out of college, while the next three terms (second year) were spent in college, and the final three terms (third year) were spent in schools/out of college, clearly an ODL approach to teacher development – the Zimbabwe Open University approach (Tarusikirwa, 2016).

The second model consisted of four years (3-3-3-3). This model was adopted later for conventional colleges. In this model, the first year was spent in college, the second year in schools, the third year in college, and the final year was spent in schools. The ZINTEC (Zimbabwe Integrated Teacher Education Course) model for teacher development used in Zimbabwe soon after independence in 1980 to counter the huge shortage of teachers in schools

was a semblance of this model (Burns, 2011). Following the massification of both primary and secondary education in Zimbabwe soon after independence, the ZINTEC model for teacher development was developed. The original ZINTEC model was four years long. Students were assigned to full classes, and there was no mentor. The model heavily depended on modules, vacation sessions and seminars. There was a Department of Distance Education within the Ministry of Higher Education that was responsible for producing modules for all primary school curriculum subjects to guide students.

Currently, conventional colleges in Zimbabwe use the 2-5-2 model of teacher development. In this current model of teacher development, student teachers spend the first two terms of their training in colleges. This is followed by a period of five terms of training in schools and, finally, by two terms back in college. For the most part of their training, students are in schools teaching under the supervision of college, university and school/ministry staff. This model of teacher development is heavily embedded in aspects of ODL in every respect, as displayed in Figure 6.

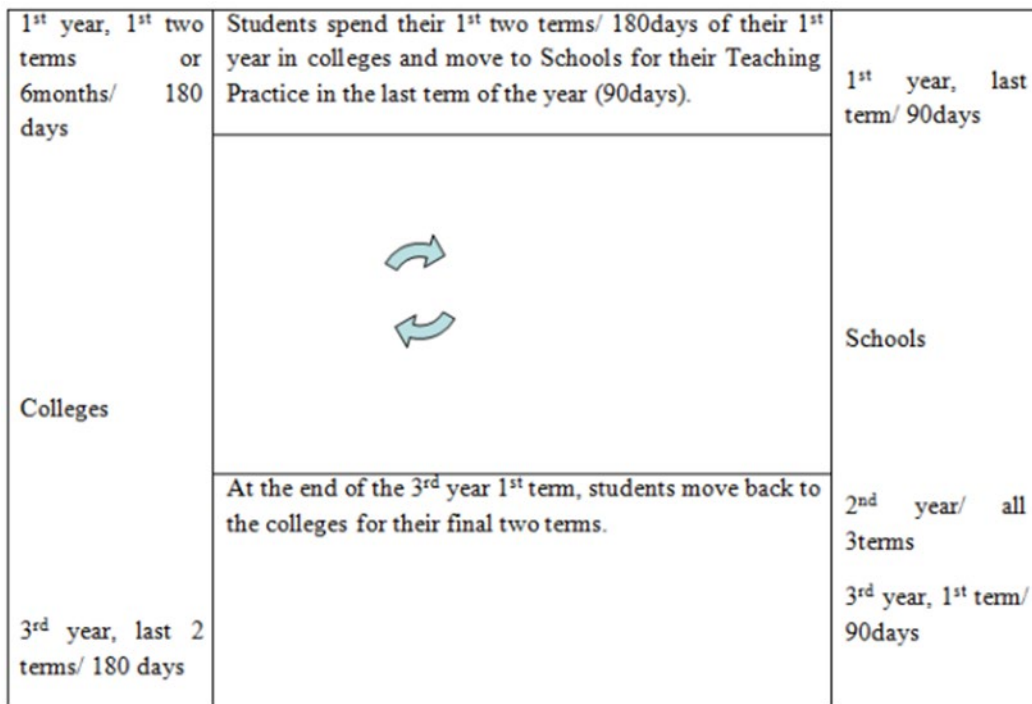


Figure 6: Current Zimbabwe ODL model of teacher development (Tarusikirwa, 2016)

3.1.2 Ghana's approach

For the purposes of clarity, Ghana's approach is discussed under to two levels of education:

- i. Colleges of Education (CoE)
- ii. Universities

Colleges of Education

Under CoE, ODL is not really practised. However, a model consisting of two main modes of delivery is used. These are (1) face-to-face (F2F), and (2) supported teaching in schools (STS). Face-to-face delivery is done at colleges, while STS is practised in the real school environment. The structure of CoE is presented in Table 3. Face-to-face delivery covers the whole of the first year, the third semester, the fifth semester and the eighth semester. STS covers the fourth semester, sixth semester and seventh semester. This structure is for a four-year Bachelor of Education (BEd) programme which took effect in 2018. Though CoE structure is similar to the Zimbabwe model, there is no use of ODL in the delivery.

Table 3: Structure of Colleges of Education

Year 1		Year 2		Year 3		Year 4	
Semester	Semester	Semester	Semester	Semester	Semester	Semester	Semester
1	2	3	4	5	6	7	8
F2F	F2F	F2F	STS	F2F	STS	STS	F2F

F2F (face to face); STS (supported teaching in schools)

Universities

The Universities in Ghana that train teachers offer two modes of delivery:

- i. Distance programmes
- ii. Regular programmes

The distance education programmes are run for student teachers at universities in Ghana. The students are provided with course materials (reading modules) to learn on their own and then gather at a centre close to their location for face-to-face meetings with their tutors during weekends (mostly every two weeks). There are two levels of distance education programmes at the universities: (1) a two-year Diploma in Education, and (2) a four-year Bachelor of Education (BEd) degree.

The regular education programmes were fully face-to-face, but after the Covid-19 pandemic, they are being run by the universities in dual mode. The universities now combine the face-to-face and online modes of delivery. The regular education programmes are four-year Bachelor of Education (BEd); one-year Master of Education (MEd); two-year Master of Philosophy (MPhil); and four-year Doctor of Philosophy (PhD) in Education. For the four-year Bachelor of Education (BEd) programme, students are made to go for one semester (at Level 300, Semester 7) for the school-based internship programme while they stay on the university campus for the remaining semester for delivery.

There are other approaches to teacher education in Ghana. According to Buabeng et al. (2020), the various pathways that an individual can use to enter the teaching profession are as follows:

1. Three-year Diploma in Basic Education (DBE). CoE were responsible for the training of these teachers at the basic school level. However, this pathway has made way for the four-year BEd programme at CoE. The last batch of the three-year DBE students completed in the 2021 academic year.
2. Two-year post-DBE (for basic school teachers). The programme is designed for teachers who already possess the DBE. These teachers get trained at the universities.
3. Four-year bachelor's degree (for both basic and second cycle schools). These are mostly graduates from universities.
4. Two-year DBE (sandwich) programme for teachers who already possess an initial professional teacher's Certificate "A" three-year post-secondary qualification. This is offered by the universities.
5. One-year (distance education) DBE for practising teachers who have not received initial professional teacher training (non-professional teachers with senior high-school certificates). This programme is offered at CoE in partnership with TED of GES as an ad hoc measure to increase teacher numbers to handle basic schools, especially in rural communities (Asare & Nti, 2014).

3.1.3 Teacher preparation programme design in Ghana

Prior to the implementation of the current Ghana teacher education reforms in 2019, the preparation of pre-service teachers for the basic school level followed a dual mode where both content and methodological courses were taken within the stipulated period of the programme

(Buabeng et al., 2020). In this structure, prospective teachers took a number of content courses and pedagogical courses concurrently. Also, the structure allowed for three types of prospective teachers: (1) the generalist, who is trained to teach all subjects at the elementary level (Grades 1 to 6); (2) early childhood educators; and (3) the specialist teacher, who is usually at JHS.

According to Buabeng et al. (2020), the model of teacher development is shown in Figure 7.

Irrespective of the type of teacher to be produced, the programme design had four features. They are (Buabeng et al., 2020):

- i. a number of content courses related to the subjects to be taught at the basic school level
- ii. methodology courses to equip prospective teachers with instructional skills to be able to handle various topics in the basic school curriculum and in a grade for which they are been prepared to teach
- iii. practicum (teaching experience), which comes in two phases. The first phase, often referred to as on-campus teaching practice, requires prospective teachers to engage in peer teaching on their campuses for a semester. Peer teaching is done under the supervision of tutors on the various CoE campuses who are subject specialists. An assumption underlying this phase is to provide opportunity for the prospective teacher to teach in a familiar environment, thereby boosting their self-confidence as teachers. Also, this phase allows the tutors to reinforce what has been taught in the various courses (i.e., content, methodology, psychology and curriculum) through the feedback they provide and also enables prospective teachers to modify/develop some professional competencies before going into basic schools. The second phase, commonly referred to as off-campus teaching practice or field experience, offers prospective teachers the opportunity to teach in a real classroom with all its complexities. During this phase, prospective teachers are supervised by tutors from their college as well as experienced teachers at their placement schools. It is anticipated that when prospective teachers undergo this model of teacher development, they will acquire deep knowledge of the content in the various subject areas, become well-versed in methodology and also skilfully integrate content knowledge acquired and the pedagogical knowledge for classroom instruction.

- iv. The fourth feature requires prospective teachers to take courses in literacy studies in areas such as English, Information Literacy, Computing, and a Ghanaian language (mostly informed by the location of the College).

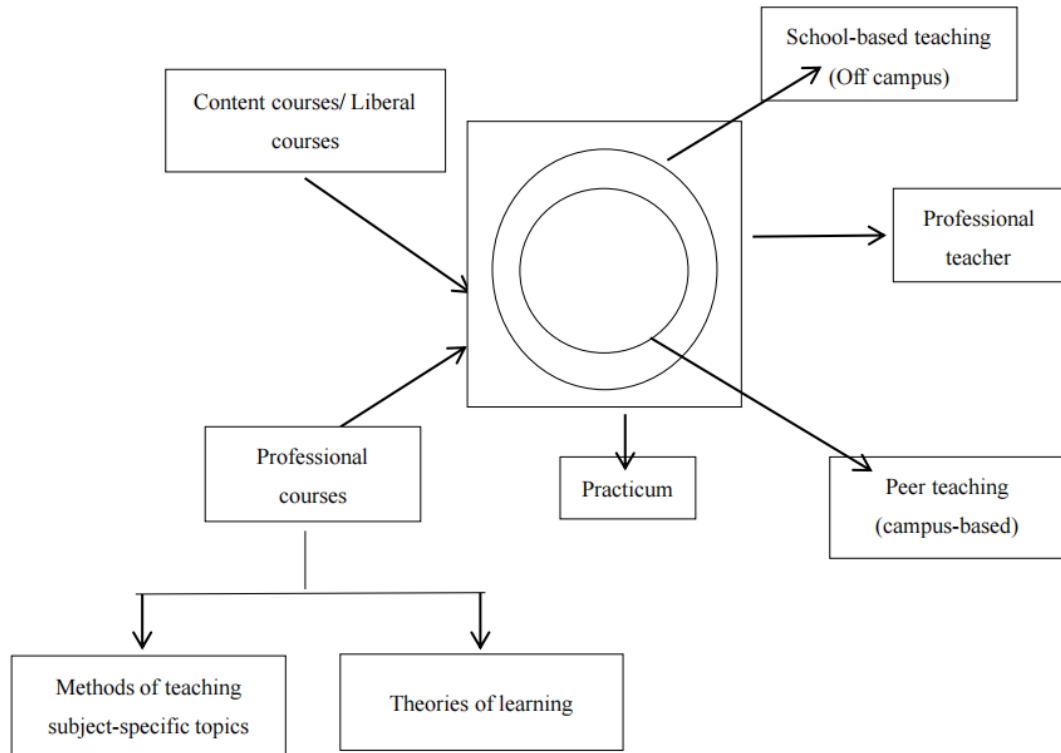


Figure 7: The phases of the teacher development model (Buabeng et al., 2020)

3.1.4 Argentina's approach

Lizenberg (2013) developed a model based on ODL for developing a sustainable teacher training environment to empower teachers as learning designers, unlike technocentric instrumental approaches. This model was implemented for the subject (Multimedia applied to English Language Learning), an elective subject in the Teacher of English Programme at *Instituto Superior del Profesorado "Dr. Joaquín V. González"*, a state higher education institution devoted to ITE in Buenos Aires, Argentina.

The objectives of the course include the development of competencies for lifelong learning, the creation of a community of practice, and the inclusion of digital media in a relevant and creative way in the teaching of English as a foreign language. The model proposed the use of ODL to enable the simultaneous development of initial trainees and in-service teachers in the critical

adoption of digital media for the teaching of English as a foreign language, through a problem-based learning approach and intensive use of digital social networks. The expected learning outcomes were the continual updating of the digital media inclusion in teaching and learning practices and the sense of belonging to a learning community with fellow teachers and prospective teachers within a sustainable ecosystem of learning.

3.2 Distance learning in Ghana

The government of Ghana has made distance learning a viable complement to conventional education, especially at the tertiary level (Owusu-Mensah et al., 2015). The concept of distance learning is old and in Ghana, it was known as correspondence education meant for professionals and workers to upgrade themselves (Mensah & Owusu-Mensah, 2002). The authors explained further that, between 1991 and 1994, the government of Ghana partnered with COL and UNESCO and sponsored a number of surveys to assess the distance education needs of Ghana. This resulted in four universities agreeing to start distance education programmes. The universities included the University of Ghana, UCC, the University of Science and Technology (now Kwame Nkrumah University of Science and Technology), and the University College of Education, Winneba (now UEW). Out of the four universities, UEW was the first to start distance education in Ghana in 1996, which was followed by the University of Ghana and UCC in 2001 (Mensah & Owusu-Mensah, 2002).

By the year 2013, nine tertiary institutions (four public and five private institutions) were offering distance learning programmes in Ghana (Larkai et al., 2016). One private institution has since halted its programmes, as its accreditation status expired (NAB, 2016). Between 2008 and 2015, the total enrolment of public tertiary institutions for distance learning was 362,402, while private institution enrolment was 11,615 (Larkai et al., 2016). This indicates that the public tertiary institutions enrolled most of the distance learning students. UEW and UCC together accounted for over 75% of enrolment (Larkai et al., 2016). Currently, the other two public institutions offering distance education programmes are Kwame Nkrumah University of Science and Technology and the University of Ghana.

In 1993, the government of Ghana established the National Accreditation Board (NAB), now Ghana Tertiary Education Commission (GTEC), with the mandate to accredit tertiary institutions

(both public and private) with regard to the content and standards of their programmes. GTEC regulates the programmes of tertiary institutions irrespective of the mode (face-to-face, online or distance) of delivery. Therefore, all the institutions delivering distance learning in Ghana are accredited by GTEC.

In Ghana, distance learning is common, where learners learn on their own and, from time to time, go to designated centres closer to them to meet their tutors for discussions and interaction relating to subject matters. The concept of “open” is missing in Ghana’s ODL approach because distance learning in Ghana makes use of weekend face-to-face classes with little online application. This may be because of a lack of infrastructure and well-trained staff who have insufficient understanding of the concept.

3.3 ODL resources

According to COL (2005), there are four principal ways in which learning materials are produced:

- i. by an instructional designer who is the content provider and the writer
- ii. by an instructional designer who commissions freelance content providers to write the materials
- iii. by an instructional designer who converts text provided by a teacher, or
- iv. by a team of people, including content providers, instructional designers and specialists such as audio and video producers.

ODL resources can broadly be categorised as follows:

1. print-based materials
2. audio cassettes
3. radio
4. Internet-based or Web-based materials.

The following is the list of resources that ODL courses sometimes assume that students have access to (COL, 2005):

- textbooks
- libraries
- computers

- Internet
- a place to study quietly
- a place to keep materials
- study centres
- other students
- electricity
- pens, paper, rulers, drawing equipment
- calculators
- audio tape player
- video player
- radio
- TV
- tutors
- local centres.

ODL materials differ from textbooks. The differences are outlined in Table 4.

Table 4: Comparison between ODL materials and textbooks (COL, 2005)

ODL materials typically ...	Textbooks typically...
are divided into study units, sometimes representing a week's work	are divided into chapters, based on topics rather than study time
include a study guide on how to use the materials and how to study by oneself	do not include study guides or study guidance
include study tips (e.g., on note-taking)	do not include study tips
include examples	include examples
include diagrams and pictures	include diagrams and pictures
include numerous activities	have few or no activities
provide feedback on answers	do not provide feedback
are tightly structured	are more loosely structured
address the learner as "you"	use passive language (e.g., "it can be seen that..." or "the reader will note that...")
have a generous layout, often including space for learners to write in	have pages filled with text, figures, tables, lists and other graphic elements – there is no space for learners to write in
have the individual learner as an audience	serve a dual audience: the learner and the teacher
attempt to meet all the needs of the learner	assume that the learner has a teacher who would be able to amplify the printed text

Chapter 4: Methodology

This section of the study describes the methods used in this study. Desk review and interviews were the main instruments used for undertaking this study. Qualitative research methodology was used for data collection and analysis. The main approaches to undertaking this part of the study included the following activities:

1. Reviewing and documentation of the resources (including policies and frameworks) that are available for teachers. A desk literature review was conducted to identify and document the resources available for pre-service and in-service teacher development in Ghana. The resources included the policies and frameworks provided by the informants.
2. Interview guides were prepared, validated and then used to collect data on pre-service teacher preparation and TPD policies and frameworks in Ghana. Two interview guides were prepared: (1) an interview guide for pre-service teacher training (see Annexure 1); and (2) an interview guide for TPD (see Annexure 2). The interview guides were developed with the variables from literature. After the development of the interview guides, they were shared with two teacher policy development experts in Ghana and COL's contact person for their verification, corrections and input. Thereafter, the interview guides were finalised and ready for data collection.
3. Interviews with key informants. Three key informants were carefully selected for the interviews; one was an officer at the NCT and the director responsible for the continuous development of teachers; the second informant was an officer at GTEC; and the other informant was a principal of a CoE. The informants were contacted, and the purpose of the study was explained to them. They were then made to understand the reason why they were purposively selected for the study. They gave their consent and scheduled a convenient date and time for the interview. The interviews were conducted, and the responses from the informants were written (see Annexure 3). Copies of the policies and frameworks that were mentioned by the informants were collected.
4. Summary of the key interviews. The responses were then summarised in tables, and the content was analysed under the following subheadings:
 - a. policies and frameworks, and structure of programmes
 - b. resources

- c. teacher data
- d. issues and recommendations.

Chapter 5: Results and Analysis

The responses of the interview informants are presented in Tables 5 to 8 and analysed under the five subheadings below.

5.1 Demographic characteristics of informants

The three interviewees were males aged 50, 52 and 62 years. One of the informants was an officer at the NCT and the director responsible for the continuous development of teachers. Another informant was a principal of a CoE, and the last was a retired officer of GTEC. The informants' work experience was 25, 27 and 39 years, respectively. These demographic characteristics show that the informants were in a good position to provide reliable information for the study.

5.2 Policies and frameworks, and structured programmes

This section seeks to identify the policies and frameworks, structured TPD and initial teacher training programmes. The first part of the study sought to identify the policies and frameworks used for TPD and initial teacher training programmes in Ghana. A summary of the responses from the key informants can be found in Table 5. According to the informants, the existing policies and frameworks for TPD included the following:

- “1. Pre-Tertiary Teacher Professional Development & Management Policy (PTTPM Policy)*
- 2. Continuous Professional Development Framework*
- 3. Mentoring & Coaching Framework*
- 4. Early Childhood Education Framework*
- 5. National Teacher Education Curriculum Framework (NTECF)”*

For the initial teacher training programmes, the informants mentioned the following existing policies and frameworks:

- “1. Colleges of Education Act, 2012 (Act 847)*
- 2. National Teaching Standard*
- 3. Harmonised Statute for Colleges of Education*

4. Harmonised Scheme of Service for Staff of Colleges of Education”

Some of the policies and frameworks are available online.¹ Evidently, there are a number of policies and frameworks available for TPD and initial teacher training programmes in Ghana. However, none of them is on ODL and TEL. This suggests that there are limited policies and frameworks available on ODL and TEL for TPD and initial teacher training programmes in Ghana.

Table 5: Policies and frameworks, and structure programmes

Variable	Responses	
	Teacher professional development	Pre-service teacher training
Existing policies and framework	<ul style="list-style-type: none"> i. Pre-Tertiary Teacher Professional Development & Management Policy (PTTPM Policy) ii. Continuous Professional Development Framework iii. Mentoring & Coaching Framework iv. Early Childhood Education Framework v. National Teacher Education Curriculum Framework (NTECF) 	<ul style="list-style-type: none"> 1. Colleges of Education Act, 2012 (Act 847) 2. National Teaching Standard 3. Harmonised Statute for Colleges of Education 4. Harmonised Scheme of Service for Staff of Colleges of Education
Types and characteristics of institutions	National Teaching Council (NTC)	-Colleges of Education

¹ Colleges of Education Act, 2012 (Act 847). <https://booknook.store/product/colleges-of-education-act-2012-act-847/>

National Teaching Standard. <https://ntc.gov.gh/wp-content/uploads/2021/12/NTS.pdf>

Harmonised Statute for Colleges of Education. <https://searchworks.stanford.edu/view/12137970>

Harmonised Scheme of Service for Staff of Colleges of Education. <https://searchworks.stanford.edu/view/12137961>

Variable	Responses	
	Teacher professional development	Pre-service teacher training
	-Professionalise Teachers	-Currently offering four-year pre-service teacher education training -The three-year pre-service teacher education training phased out in 2021
Requirements and criteria for programmes	-Complete initial teacher training programme -Write and pass teacher license exams -Register with the NTC for teacher license -Participate in CPD programmes to gain CPD points for renewal of license	-WASSCE candidate with A1-C6 for any three core subjects (English, Mathematics, Science and Social Studies) and any three electives. Technical Institute NAPTEX candidate with credit passes for any three core subjects (English, Mathematics, Science and Social Studies) and any three electives
Nature of programmes	School-based insert, cluster-based insert, department-based insert, professional learning community	-Face to face -Supported Teaching in Schools (STS) -Blended during the Covid-19 period -Distance learning (Universities)
Types of programmes	1. Supply type – GES, MoE, NTC training (free) 2. Demand type – Service	-Teacher training for junior high school (JHS)

Variable	Responses	
	Teacher professional development	Pre-service teacher training
	providers (require payment)	-Teacher training for upper primary -Teacher training for lower primary
Structure of programmes	1. Mandatory training 2. Rank-based training 3. Recommended training	-Face to face -Supported teaching in schools (STS)
Duration of programmes	Three-year cycle	CoE -Currently four years -three-year cycle phased out in 2021 University -Four-year BEd -Two-year Diploma in Basic Edu. -Two-year post-dip in Basic Edu.
Open, distance and technology-enabled programmes are available.	CPD training from development partners such as COL, UNICEF	CoE -No -Used a blended approach during the Covid-19 period University Distance education
Demand versus supply of trained schoolteachers	Demand is out with supply	The demand is more than the supply; especially private schools use untrained teachers
Ensuring teacher promotion	The teacher serves for a period (three to five years) after	Policy on teacher ranking system

Variable	Responses	
	Teacher professional development	Pre-service teacher training
	employment or previous promotion and must apply for promotion and attend a promotion interview or write an aptitude test and pass to be promoted.	
Ensuring teacher retention	<ol style="list-style-type: none"> 1. Promotion of teachers 2. Payment of professional development allowance to teachers 3. Study leave for teachers 	<ol style="list-style-type: none"> 1. Less attrition rate 2. Promotion system 3. Study leave policy
Avenue for teacher employment	<ol style="list-style-type: none"> 1. Government – through the MoE or GES 2. Private – through private schools 3. NGOs 	<ol style="list-style-type: none"> 1. Government employment of teachers 2. Private school employment of teachers
Ensuring immediate teacher deployment after completing pre-service training	Pre-service teachers must write teacher licensure exams and pass, then wait for the next recruitment advertisement to apply for recruitment and posting.	<p>After pre-teacher training, the teachers must undertake one national service in schools before being employed and posted to schools.</p> <p>Posting teachers to areas where they are needed.</p>
Mechanisms to ensure transparent recruitment	Online application for online/automatic selection.	There is no strict mechanism to ensure transparent recruitment.

Variable	Responses	
	Teacher professional development	Pre-service teacher training
	Students are given the option to select the regions and districts they prefer.	
Teacher qualification framework/joint teacher training programmes with other countries in the region to support teacher mobility.	Not in existence	Not available
How would such a framework reduce teacher shortfall/oversupply?	NA	-NA -At universities

Regarding the structure of the TPD and initial teacher training programmes in Ghana, the informants provided information on the following, as shown in Table 5.

5.2.1 Requirements and criteria for programmes

The informants explained that the requirements and criteria for entry into initial teacher training were being senior high school graduates with at least C6 credit passes in the West African Secondary School Certificate Examination (WASSCE) for any three core subjects (English, Mathematics, Science and Social Studies) and any three electives; or a Technical Institute NAPTEX candidate with credit passes for any three core subjects (English, Mathematics, Science and Social Studies) and any three electives. There are other entry requirements for TVET applicants and mature applicants. Below is a screenshot of the admission requirements for a university that trains pre-service teachers in Ghana.

UNDERGRADUATE PROGRAMMES

Senior High School (SHS) Certificate Holders

1. **WASSCE certificate** holders must have at least six (6) credit passes (A1-C6) including three (3) Core Subjects: English Language, Mathematics and Integrated Science or Social Studies, as well as three (3) relevant elective subjects with a total aggregate of 36 or better.
2. **SSSCE certificate** holders must possess six (6) credit passes or better (A-D) in three (3) Core Subjects: English Language, Mathematics and Integrated Science or Social Studies, as well as three (3) relevant elective subjects with a total aggregate of 36 or better.
3. **School Certificate/GCE** Holders must have Five (5) credits at GCE "O" Level, including English Language and Mathematics as well as two (2) "A" Level passes other than General Paper in relevant subjects. They must also satisfy the Special Programme requirement(s) for programme(s) chosen

TVET Applicants

One of the following qualifications: Automotive Technology; Motor Vehicle Technician III (MVT III), Mechanical Technology; Mechanical Engineering Technician III (MET III), Construction Technology; Construction Technician Certificate III and Electricals/Electronics Technology; Electrical Technician Engineering.

POST-DIPLOMA APPLICANTS (Diploma Holders)

They must possess a Higher National Diploma or its equivalence in a relevant field of study from a recognised institution. (Successful Post-Diploma applicants may be placed at Level 200 or 300 of the four-year degree programme depending on their academic qualifications)

A screenshot of the admission requirements for the 46 CoE in Ghana is also provided below.

COLLEGES OF EDUCATION- GHANA

ADMISSION INTO THE FORTY-SIX (46) PUBLIC COLLEGES OF EDUCATION FOR THE 2022/2023 ACADEMIC YEAR

Applications are invited from suitably qualified candidates for admission to the NEW FOUR YEAR BACHELOR OF EDUCATION (B.Ed) DEGREE PROGRAMME in the Forty-Six (46) Public Colleges of Education in Ghana for the 2022/2023 academic year.

Admission Requirements:

WASSCE /SSSCE Qualification Applicants

The general requirement for admission to the Bachelor of Education (B.Ed) Programme is as follows:

WASSCE Holders: CREDIT PASSES (A1-C6) in Six (6) subjects comprising Three (3) Core subjects, including English Language and Core Mathematics, and Three (3) Elective subjects relevant to the course of study.

SSSCE Holders: PASSES (A-D) in Six (6) subjects comprising Three (3) Core subjects, including English Language and Core Mathematics, and Three (3) Elective subjects relevant to the course of study.

Technical and Vocational Education and Training Applicants

Applicants must:

Possess Certificate II in three (3) relevant trade areas awarded by TEU, NVTI, City & Guilds, and other authorised awarding bodies in addition to NABPTEX Certificate II in lieu of passes in English and Mathematics.

Have NABPTEX certificate II in relevant trade areas in addition to three (3) credit passes in WASSCE/SSSCE core subjects, including English and Mathematics.

Posses a National Certificate II qualification in Competency Based Training (CBT) in a relevant trade area awarded by TEU on the National TVET Qualification Framework (NTVETQF).

Foreign Qualifications ■

The requirements and criteria for TPD are as follows:

1. complete an initial teacher training programme
2. write and pass the teacher license exams
3. register with the NTC for a teacher license
4. participate in CPD programmes to obtain CPD points for renewal of license.

5.2.2 Nature and type of programmes

The informants explained that the nature of the initial teacher training programme was face to face and STS, which attached the pre-service teachers to schools to practise what they have learnt in school at CoE. The STS is a practicum that takes place in real schools outside CoE. The informants also expressed that the blended teaching and learning strategy was adopted by CoE during the Covid-19 period but, at the time, it was not used anymore. It was also mentioned by the informants that three types of programmes were run by CoE: (1) teacher training for junior high school (JHS); (2) teacher training for upper primary; and (3) teacher training for lower primary.

The universities provide the initial teacher training programme through a regular mode (which combines face to face and practicum) and distance learning. Distance learning is structured in a way that allows students to learn on their own (with the training modules provided to them by the universities) and to meet during weeks (at designated centres closer to their location) for face-to-face interactions with their tutors, and to write exams. The universities also run sandwich programmes in education which permit students to come to campus during vacation periods for face-to-face interactions and exams. The distance education and sandwich programmes are specifically targeting both untrained and trained teachers who are already teaching at schools to either acquire a professional teacher education qualification, in the case of untrained teachers or to acquire a higher qualification, in the case of trained teachers.

For TPD, the informants explained that the programme included a school-based insert, cluster-based insert, department-based insert and a professional learning community. Also, two types of training programmes were provided by the NTC: (1) supply training, provided by the GES, MoE, NTC; and (2) demand training, provided by service providers. Supply training comes at no cost to the in-service teacher, while demand training comes at a cost to the teacher.

5.2.3 Structure and duration of programmes

The informants explained that for TPD, they had mandatory training, rank-based training, and recommended training as laid down by the NTC. In-service teachers are supposed to accrue a number of points from all three pieces of training before their license can be renewed at a three-year cycle. The pre-service teacher training is structured around face-to-face and STS modes.

Concerning the duration of the programmes, the informants stated that for the pre-service teacher training, they used face-to-face and STS, which is currently a four-year degree programme run by CoE. They used to run a three-year diploma programme, which was phased out in the year 2021 with the last batch of students. The universities run four-year BEd programmes, a two-year DBE, and a two-year post-DBE.

5.2.4 Availability of open, distance and technology-enabled programmes

The informants stated that there were no open, distance and technology-enabled programmes run by CoE in Ghana. During the Covid-19 crisis, CoE adopted a blended approach to teaching and learning. The universities in Ghana run distance education programmes. All the universities that provide ITE run distance education programmes. The distance education programmes have various learning centres across the country where the students meet their tutors during weekends (mostly fortnightly).

The informants mentioned that open, distance and technology-enabled programmes are used for providing training for the continuous professional development of teachers with the help of development partners such as COL and UNICEF.

5.2.5 Demand versus supply of trained teachers – an avenue for teacher employment

The informants alluded to the fact that, at the time in Ghana, the demand for teachers was more than the supply. Private schools usually used untrained teachers because of the high demand for trained teachers in the country.

There are three main avenues for teacher employment:

- i. the government through the MoE or GES
- ii. private schools
- iii. NGOs

The informants expressed that there was no strict mechanism to ensure transparent recruitment, but the existing use of online applications for selection for recruitment of teachers could ensure transparency if not manipulated. Furthermore, students were given the option to select the

regions and districts they preferred to be placed in and could also ensure transparency in recruitment.

5.2.6 Teacher promotion and retention

The informants explained that the promotion of teachers was done through a promotion policy which ensured that a teacher served for a period (3–5 years) after employment or previous promotion and had to apply for promotion and attend a promotion interview or write an aptitude test and pass to be promoted from one rank to the other.

They further clarified that teachers were retained in the teaching profession through incentives such as promotion of teachers, payment of professional development allowance to teachers, and study leave provision.

5.2.7 Immediate teacher deployment after completing pre-service training

The informants explained that, after the initial teacher training, pre-service teachers must undertake:

- i. one-year national service in schools
- ii. write teacher licensure exams and pass
- iii. wait for the next recruitment advertisement
- iv. apply for recruitment and posting.

This means the pre-service teachers are not recruited immediately after their training but will have to wait for about a year before recruited and posted to teach.

5.2.8 Teacher qualification framework/joint teacher training programmes with other countries

The informants expressed that there was no teacher qualification framework/joint teacher training programmes with other countries in the region to support teacher mobility.

5.2.9 Summary of policies and frameworks, and structure programmes

From the above results, it is clear that there are structures in place for initial teacher training and professional development of the in-service teacher. These include:

- i. Types and characteristics of institutions
- ii. requirements and criteria for programmes

- iii. nature and type of programmes
- iv. structure and duration of programmes
- v. avenue for teacher employment and transparent recruitment
- vi. teacher promotion and retention
- vii. immediate teacher deployment after completing pre-service training.

Concerning the issue of the availability of open, distance and technology-enabled programmes, it was found that CoE were not using them for training pre-service teachers. However, universities had distance education programmes that utilised ODL and TEL.

It was found that open, distance and technology-enabled programmes were used by the NTC and other organisations in the professional development training of in-service teachers. It also found that there was no teacher qualification framework/joint teacher training programmes with other countries.

5.3 Resources

Table 6 shows the responses of the informants on the resources available for open, distance and technology-enabled programmes. It can be seen that ODL and TEL were not implemented in CoE but were implemented in universities to train pre-service teachers. Regarding the use of MOOCs, the informants expressed that, in both CoE and universities, they were not implemented to train pre-service teachers.

The informants expressed that ODL and TEL were implemented in the professional development training of in-service teachers by the NTC and other organisations. However, MOOCs were not implemented in the professional development training of in-service teachers.

The informants stated that there was no national/regional OER database for teachers. This suggests that the resources for training pre-service and in-service teachers through ODL, TEL and MOOCs are lacking.

Table 6: Resources

Variable	Responses	
	Teacher professional development	Pre-service teacher training
How ODL and TEL are implemented	-Implemented in the professional development training of in-service teachers by the NTC and other organisations.	-Not implemented in CoE -Implemented in universities as distance learning programmes
How are MOOCs used in TPD/ITT?	Not in use	Not in use
Is there a national/regional OER database for teachers?	No	No
Functions of the database	NA	NA
Access levels are granted to teachers and teacher educators on these databases	NA	NA

5.4 Teacher data

The responses from the informants are presented in Table 7. Table 7 shows that there are some teacher management information systems such as:

- i. NTC Teacher Portal
- ii. College of Education Management Information System (CEMIS)

The NTC Teacher Portal is a teacher management information system used for TPD which is hosted by the NTC. CEMIS is used for initial teacher training programmes and is hosted by GTEC. CEMIS is not fully operational; it is still under construction/development.

According to the informants, the systems were updated often/frequently as information was available. This suggests that there are some teacher management information systems available

for the training and development of teachers. These available teacher management information systems are used for decision-making, such as the renewal of teacher licenses.

The informants explained that an interactive teacher database would:

- i. help teachers to link up, interact and share resources and experiences
- ii. help to identify the training needs of teachers
- iii. help the employer to identify and deploy resources needed for teacher development.

Table 7: Teacher data

Variable	Responses	
	Teacher professional development	Pre-service teacher training
How teacher management information systems are utilised	NTC Teacher Portal – teachers must register and build their portfolio and CPD points for renewal of their license every three-year cycle	We are currently creating CEMIS under GTEC
Availability of centralised/decentralised teacher management information systems (MIS)	NTC Teacher Portal	CEMIS is centralised at GTEC
Who is the custodian of the MIS?	NTC	GTEC
How often are the records on the MIS updated?	Frequently – after promotion, CPD training, completion of study leave, portfolio building	As often as information is available
Where the systems exist	NTC Teacher Portal – online	GTEC online system – but CoE have focal persons who control it
Are they used for decision-making?	Yes – for decisions on renewal of teacher license	It would be used for decision-making when it is in full operation

Variable	Responses	
	Teacher professional development	Pre-service teacher training
How can an interactive teacher database help promote resource and data-sharing, as well as policy development?	<ul style="list-style-type: none"> • It helps the employer to deploy resources for teacher development • It helps to identify the training needs of teachers 	It would be current; CoE have weekly programmes, and they link up and share experiences

5.5 Identified issues

Table 8 provides the informants' suggestions on the issues and recommendations. The responses provided are as follows:

- i. the need for policies on ODL and TEL to improve TPD
- ii. the need for the provision of resources for ODL and TEL implementation
- iii. the need for provision of policy on the use of a blended/dual system at the pre-service teacher training level
- iv. the need for the establishment of an interactive teacher database to help promote resource- and data-sharing.

Table 8: Issues and recommendations

Variable	Responses	
	Teacher professional development	Pre-service teacher training
Key policy issues emerging on frameworks, resources and data on TPD/ITT		<ul style="list-style-type: none"> -Limited resources -Need for policies on ODL and TEL -Need for ODL and TEL resources
What policy recommendations can be made to improve national effectiveness in	1. Policies should be made on ODL and TEL to improve TPD	-Policy on the use of a blended/dual system at the

Variable	Responses	
	Teacher professional development	Pre-service teacher training
leveraging ODL and TEL for TPD/ITT?		pre-service teacher training level -Policy on the establishment of an interactive teacher database to help promote resource- and data-sharing

Chapter 6: Key Findings

6.1 Policies and frameworks

6.1.1 How is pre-service and in-service teacher training in Ghana structured?

It is clear from the outcome of this study that there are structures in place for pre-service and in-service teacher training in Ghana. These include:

- i. types and characteristics of institutions for providing pre-service and in-service teacher programmes
- ii. requirements and criteria for pre-service and in-service teacher programmes
- iii. nature and type of pre-service and in-service teacher programmes
- iv. structure and duration of pre-service and in-service teacher training programmes
- v. avenue for teacher employment and transparent recruitment of pre-service teachers
- vi. promotion and retention of in-service teachers
- vii. immediate teacher deployment after completing pre-service training.

6.1.2 What policies and frameworks guide pre-service teacher training in the country?

The study found that there are some existing policies and frameworks for pre-service and in-service teachers in Ghana. The policies and frameworks for in-service TPD include:

1. Pre-Tertiary Teacher Professional Development and Management Policy (PTTPM Policy)
2. Continuous Professional Development Framework
3. Mentoring and Coaching Framework
4. Early Childhood Education Framework
5. National Teacher Education Curriculum Framework (NTECF).

For pre-service teacher training programmes, the following existing policies and frameworks were identified:

1. Colleges of Education Act, 2012 (Act 847)
2. National Teaching Standard
3. Harmonised Statute for Colleges of Education
4. Harmonised Scheme of Service for Staff of Colleges of Education.

There are a number of policies and frameworks available for TPD and initial teacher training programmes in Ghana. However, none of them is on ODL, OER and TEL. This suggests that there are limited policies and frameworks available on ODL, OER and TEL for TPD and initial teacher training programmes in Ghana.

6.2 Resources

6.2.1 In what ways have teacher training institutions in Ghana used OER/MOOCs in pre-service and in-service teacher training?

On the issue of the availability of ODL, OER, MOOCs and TEL, it was found that CoE were not using them for training pre-service teachers. However, the universities had distance education programmes that utilised ODL and TEL.

It was found that ODL, OER and TEL were used by the NTC and other organisations in professional development training for in-service teachers.

6.2.2 What are the emerging policy issues in the country with regard to ODL, OER, MOOCs, TEL, etc., in teacher training?

It was found that there were no emerging policy issues in the country regarding ODL, OER, MOOCs, and TEL in teacher training.

6.3 Teacher and teaching institutions data

6.3.1 Which are the teacher training institutions in Ghana?

The teacher training institutions in Ghana were (1) CoE and (2) the universities. CoE totalled 46 in the country, while three universities were mandated to train teachers:

1. University of Education, Winneba (UEW)
2. University of Cape Coast (UCC)
3. Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development (AAMUSTED)

6.3.2 How is ODL currently being used?

ODL is currently being used by the universities as distance education programmes that utilise ODL and TEL for the training of pre-service teachers. For CoE, ODL was not used for training

pre-service teachers. The NTC and other organisations used ODL for training in-service teachers for professional development.

6.3.3 What is the status in terms of teachers trained and the number of trained teachers required in the country?

According to Statista (2022), the primary school teaching staff in Ghana reached 185,715 in number, while at the secondary education level in Ghana, there were 187,914 official teachers in 2020. Therefore, the total number of primary and secondary school teaching staff was about 373,629. The count of teachers at this educational level has increased over the years. However, important increases were recorded in 2017 and 2019. By 2018, Ghana had weaned itself from the net hiring freeze conditionality of the International Monetary Fund (IMF), enabling the government to employ more teachers in the public education system.

6.3.4 How are teacher management information systems used for decision-making for teacher training in the country?

The study found that there were two teacher management information systems in Ghana, but only one of them (NTC Teacher Portal) was active. Even with the NTC Teacher Portal, not all the in-service teachers in the country had registered on the system and, therefore, did not contain the information of the entire in-service teacher corps. The NTC Teacher Portal is a teacher management information system used for TPD, which is hosted by the NTC. The NTC Teacher Portal is used for decision-making, such as the award of CPD points and renewal of teacher licenses. The other system is CEMIS, which is for the training of pre-service teachers. CEMIS is hosted by GTEC. It is currently not fully operational, as it is still under construction/development.

Chapter 7: Issues and Recommendations

7.1 What key policy issues emerged from the frameworks, resources and data on TPD?

Considering the reviews, results and findings of the study, the key issues that emerged on frameworks, resources and data on TPD are as follows:

1. inadequate policies on ODL and TEL for TPD
2. inadequate resources for ODL and TEL for TPD implementation
3. lack of policy on the use of a blended/dual system in pre-service teacher training at CoE
4. no teacher qualification framework/joint teacher training programmes with other countries in the region to support teacher mobility
5. the demand for teachers is more than the supply
6. there is no interactive teacher database to help promote resource- and data-sharing.

7.2 What policy recommendations can be made to improve national effectiveness in leveraging ODL and TEL in TPD in Ghana?

The following recommendations are made to improve national effectiveness in leveraging ODL and TEL in TPD in Ghana:

- i. policies on ODL and TEL for TPD should be formulated to guide the training of pre-service and in-service teachers in Ghana
- ii. resources for ODL and TEL for TPD implementation should be provided to support the training of pre-service and in-service teachers in Ghana
- iii. policy on the use of a blended/dual system should be formulated for pre-service teacher training at CoE
- iv. develop qualification framework/joint teacher training programmes with other countries in the region to support teacher mobility
- v. increase access to pre-service teacher training programmes to ensure that the demand for teachers in the country is met by the supply
- vi. develop an interactive teacher database to help promote resource- and data-sharing for TPD.

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Annexures

Annex 1: Interview Guide for Initial Teacher Preparation Professionals

Introduction

Dear sir/madam, Thank you for permitting us to interview you. The purpose of this interview is to help us gather data to develop a report on policies and practices in Open, Distance, and Technology-Enabled Learning (TEL) in teacher training in Ghana. Please be assured that your identity will not be disclosed to any other person. Your answers will be completely confidential. Kindly remain anonymous, and feel free to provide your responses in the best way you can. Thank you.

Questions Guide

No.	QUESTIONS AND ANSWERS
1	Demographic Characteristics of Candidate
	*Candidate age and number of years worked Age: [] No. of years worked: []
2	Pre-service teacher training <i>Policies and frameworks</i>
	*What pre-service teacher training policies and frameworks exist in the country? - types and characteristics of institutions offering initial teacher preparation. Response: Existing policies and frameworks: Types and characteristics of your institutions:

3

*What are the requirements and criteria for entry into initial teacher preparation programmes?

Response:

Requirements:

Criteria:

4

* What are the nature and types of initial teacher preparation programmes?

Response:

Nature:

Types:

5

*What is the structure and duration of initial teacher preparation programmes?

Response:

Structure:

Duration:

6

*What open, distance and technology-enabled programmes are available?

Response:

7

*What is the demand versus supply of trained schoolteachers?

Response:

How does the country ensure teacher promotion and retention?

Response:

Teacher promotion:

8

Teacher retention:

9

*What is the avenue for teacher employment?

Response:

10

* How does the country ensure immediate teacher deployment after completing pre-service training?

Response:

11

*What are mechanisms to ensure transparent recruitment in the country?

Response:

12

*What teacher qualification framework/joint teacher training programmes with other countries in the region are there to support teacher mobility?

Response:

13

*How would such a framework reduce teacher shortfall/oversupply in the country?

Response:

Resources

14

*How are ODL and technology-enabled learning being implemented?

Response:

*How have MOOCs been used in pre-service teacher training in the country?

Response:

15

*Is there a national/regional OER database for teachers?

Response:

16

*What are the functions of the database?

Response:

17

*What access levels are granted to teachers and teacher educators on these databases?

Response:

Teacher data

How are teacher management information systems utilised?

Response:

18

Are there centralised/decentralised teacher management information systems in the country?

Response:

Who is the custodian?

Response:

How often are the records updated?

Response:

*Where do these systems exist, are they used for decision-making for pre-service teacher training?

Response:

Where the systems exist:

Are they used for decision-making:

*How can an interactive teacher database help promote resource- and data-sharing, as well as policy development in the country?

Response:

Issues and Recommendations

*What are the key policy issues emerging on frameworks, resources and data on pre-service teacher training?

Response:

19

20

21

What policy recommendations can be made to improve national effectiveness in leveraging ODL and technology-enabled learning pre-service teacher training in Ghana?

Response:

Thank you!

Annex 2: Interview Guide for Teacher Professional Development Experts

Introduction

Dear sir/madam, Thank you for permitting us to interview you. The purpose of this interview is to help us gather data to develop a report on policies and practices in Open, Distance, and Technology-Enabled Learning (TEL) in teacher training in Ghana. Please be assured that your identity will not be disclosed to any other person. Your answers will be completely confidential. Kindly remain anonymous, and feel free to provide your responses in the best way you can. Thank you.

Questions Guide

No.	QUESTIONS AND ANSWERS
1	Demographic Characteristics of Candidate
	<p>*Candidate age and number of years worked</p> <p style="padding-left: 40px;">Age: []</p> <p style="padding-left: 40px;">No. of years worked: []</p>
2	Teacher Professional Development (TPD)
	<p><i>Policies and frameworks</i></p> <p>*What policies and frameworks exist in the country for teacher professional development? – types and characteristics of institutions offering teacher professional development.</p> <p>Response:</p> <p>Existing policies and frameworks:</p> <p>Types and characteristics of your institutions:</p>

*What are the requirements and criteria for teacher professional development programmes?

Response:

Requirements:

3

Criteria:

* What are the nature and types of teacher professional development programmes?

Response:

Nature:

4

Types:

*What is the structure and duration of teacher professional development programmes?

Response:

Structure:

5

Duration:

6

*What open, distance and technology-enabled programmes are available?

Response:

*What is the demand versus supply of trained schoolteachers?

Response:

7

How does the country ensure teacher promotion and retention?

Response:

Teacher promotion:

8

Teacher retention:

*What is the avenue for teacher employment?

Response:

9

* How does the country ensure immediate teacher deployment after completing pre-service training?

10

Response:

*What are mechanisms to ensure transparent recruitment in the country?

Response:

11

*What teacher qualification framework/joint teacher training programmes with other countries in the region are there to support teacher mobility?

Response:

12

*How would such a framework reduce teacher shortfall/oversupply in the country?

Response:

13

Resources

*How are ODL and technology-enabled learning being implemented?

Response:

14

*How have MOOCs been used in teacher professional development in the country?

Response:

*Is there a national/regional OER database for teachers?

Response:

15

*What are the functions of the database?

Response:

16

*What access levels are granted to teachers and teacher educators on these databases?

Response:

17

Teacher data

How are teacher management information systems utilised?

Response:

18

Are there centralised/decentralised teacher management information systems in the country?

Response:

Who is the custodian?

Response:

How often are the records updated?

Response:

*Where do these systems exist, are they used for decision-making for teacher professional development?

Response:

Where the systems exist:

Are they used for decision-making:

*How can an interactive teacher database help promote resource- and data-sharing, as well as policy development in the country?

Response:

Issues and Recommendations

*What are the key policy issues emerging on frameworks, resources and data on teacher professional development?

19

20

21

Response:

What policy recommendations can be made to improve national effectiveness in leveraging ODL and technology-enabled learning for teacher professional development in Ghana?

Response:

22

Thank you!

Annex 3: Interview data

QUESTION	RESPONSE (TPD 1)	RESPONSE (TPD 2)	RESPONSE (ITT 1)
Demographic Characteristics			
Age:	50	62	52
Years of work experience:	27	39	25
Policies and Frameworks			
Existing policies and framework	<ul style="list-style-type: none"> i. Pre-Tertiary Teacher Professional Development & Management Policy (PTTPM Policy) ii. Continuous Professional Development Framework iii. Mentoring and Coaching Framework iv. Early Childhood Education Framework v. National Teacher Education Curriculum Framework (NTECF) 	There are some existing policies	<ul style="list-style-type: none"> 1. Colleges of Education Act, 2012 (Act 847) 2. National Teaching Standard 3. Harmonised Statute for Colleges of Education 4. Harmonised Scheme of Service for Staff of Colleges of Education
Types and characteristics of institutions	<ul style="list-style-type: none"> National Teaching Council (NTC) -Professionalise Teachers 	<ul style="list-style-type: none"> Ghana Tertiary Education Commission (GTEC) 	<ul style="list-style-type: none"> -Colleges of Education -Currently offering four-year pre-service teacher education training

QUESTION	RESPONSE (TPD 1)	RESPONSE (TPD 2)	RESPONSE (ITT 1)
			-The three-year pre-service teacher education training phased out in 2021
Requirements and criteria for TPD/ITT programmes	<ul style="list-style-type: none"> -Complete initial teacher training programme -Write and pass teacher license exams -Register with NTC for teacher license -Participate in CDT programmes to gain CPD points for renewal of license 	Six credit passes (A1-C6) in WASSCE: three core subjects and three elective subjects	<ul style="list-style-type: none"> -WASSCE candidate with A1-C6 for any 3 electives (English, Mathematics, Science and Social Studies), and any three electives. Technical Institute NAPTEX candidate with credit passes for any three electives (English, Mathematics, Science and Social Studies) and any three electives.
Nature of TPD/ITT programmes	School-based insert, cluster-based insert, department-based insert, professional learning community	<ul style="list-style-type: none"> -Face-to-face instruction -Distance learning 	<ul style="list-style-type: none"> -Face to face -Supported Teaching in Schools (STS) -Blended during the Covid-19 period
Types of TPD/ITT programmes	<ol style="list-style-type: none"> 1. Supply type – GES, Ministry of Education, NTC training (free) 2. Demand type – Service providers (require payment) 		<ul style="list-style-type: none"> -Teacher training for junior high school (JHS) -Teacher training for upper primary -Teacher training for lower primary
Structure of TPD/ITT programmes	<ol style="list-style-type: none"> 4. Mandatory training 5. Rank-based training 6. Recommended training 		<ul style="list-style-type: none"> -Face to face -Supported Teaching in Schools (STS)

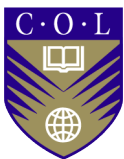
QUESTION	RESPONSE (TPD 1)	RESPONSE (TPD 2)	RESPONSE (ITT 1)
Duration of TPD/ITT programmes	Three years cycle	-four-year BEd -two-year post-Diploma -one-year MEd -two-year MPhil -four-year PhD	-Currently four years -Three years phased out in 2021
Open, distance and technology-enabled programmes are available	CPD training from development partners such as COL, UNICEF	Distance education	-No -Used a blended approach during the Covid-19 period
Demand versus supply of trained schoolteachers	Demand outweighs supply	Demand is more than supply	The demand is more than the supply. Especially private schools use untrained teachers
Ensuring teacher promotion	Teachers serve for a period (three to five years) after employment or previous promotion and have to apply for promotion and attend promotion interview or write an aptitude test and pass to be promoted.	Use of a promotion system	Policy on teacher ranking system
Ensuring teacher retention	1. Promotion of teachers 2. Payment of professional development allowance to teachers 3. Study leave for teachers	Provision of allowances and promotion to teachers	1. Less attrition rate 2. Promotion system 3. Study leave policy
Avenue for teacher employment	4. Government - through the Ministry of Education or GES 5. Private - through private schools 6. NGOs	GES	3. Government employment of teachers 4. Private school employment of teachers

QUESTION	RESPONSE (TPD 1)	RESPONSE (TPD 2)	RESPONSE (ITT 1)
Ensuring immediate teacher deployment after completing pre-service training	Pre-service teachers must write teacher licensure exams and pass, then wait for the next recruitment advertisement to apply for recruitment and posting.	Posting teachers to areas where they are needed	After pre-teacher training, pre-service teachers must undertake one national service in schools before being employed and posted to schools
Mechanisms to ensure transparent recruitment	Online application for online/automatic selection.	Students are given the option to select the regions and districts they prefer	No strict mechanism to ensure a transparent recruitment
Teacher qualification framework/joint teacher training programmes with other countries in the region to support teacher mobility	Not in existence	None	Not available
How would such a framework reduce teacher shortfall /oversupply?	NA		NA
Resources			
How ODL and technology-enabled learning are implemented?	-Implemented in the professional development training of in-service teachers by the NTC and other organisations.	-Through public and school libraries -At the universities	-Not implemented by CoE -Implemented by universities as distance learning programmes

QUESTION	RESPONSE (TPD 1)	RESPONSE (TPD 2)	RESPONSE (ITT 1)
How are MOOCs used in TPD/ITT?	Not in use	None	Not in use
Is there a national/regional OER database for teachers?	No	-	No
Functions of the database	NA	-	NA
Access levels are granted to teachers and teacher educators on these databases	NA	-	NA
Teacher data			
How teacher management information systems utilised	NTC Teacher Portal – teachers have to register and build their portfolio and CPD points for renewal of their license every three-year cycle	-	We are currently creating CEMIS under GTEC
Availability of centralised/decentralised teacher management information systems (MIS)	NTC Teacher Portal	-	CEMIS is centralised at GTEC
Who is the custodian of the MIS	NTC	-	GTEC

QUESTION	RESPONSE (TPD 1)	RESPONSE (TPD 2)	RESPONSE (ITT 1)
How often are the records on the MIS updated?	Frequently – after promotion, CPD training, completion of study leave, portfolio building	-	As often as information are available
Where the systems exist?	NTC Teacher Portal – online	-	GTEC online system- but CoE have focal persons who control it
Are they used for decision-making?	Yes – for the decision on the renewal of teacher's license	-	It will be used for decision-making when it is in full operation
How can an interactive teacher database help promote resource- and data-sharing, as well as policy development?	<ul style="list-style-type: none"> • It helps the employer deploy resources for teacher development • It helps to identify the training needs of teachers 	-	It will because currently, CoE have a weekly programme in which they link up and share experiences
Issues and Recommendations			
Key policy issues emerging on frameworks, resources and data on TPD/ITT		-	-Limited resources -Need for policies on ODL and TEL -Need for ODL and TEL resources
What policy recommendations can be made to improve national effectiveness in leveraging ODL and	1. Policies should be made on ODL and TEL to improve teacher professional development	-	-policy on the use of a blended/dual system at pre-teacher training level -policy on the establishment of interactive teacher database to help promote resource- and data-sharing

QUESTION	RESPONSE (TPD 1)	RESPONSE (TPD 2)	RESPONSE (ITT 1)
technology-enabled learning for TPD/ITT?			



4710 Kingsway, Suite 2500
Burnaby, British Columbia Canada V5H4M2
Telephone: +1 604 775 8200 | Fax: +1 604 775 8210
Email: info@col.org

Web: www.col.org
Facebook: <https://www.facebook.com/COL4D>
Twitter: <http://twitter.com/COL4D>
LinkedIn: <https://www.linkedin.com/company/commonwealth-of-learning>
YouTube: <https://www.youtube.com/user/comlearn>
