

Transforming Teacher Education & Learning (T-TEL) Final Project Report

December 2020

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List of Abbreviations

B.Ed.	Bachelor of Education
CCT	Coalition of Concerned Teachers
CEMIS	Colleges of Education Management Information System
CENTSAG	College of Education Non-Teaching Staff Association of Ghana
CETAG	College of Education Teachers Association of Ghana
CIA	College Improvement Advisor
CIP	College Improvement Plan
CoEs	Colleges of Education
COHBS	Conference of Heads of Basic Schools
CPD	Continuing Professional Development
DBE	Diploma in Basic Education
DFID	Department for International Development
ERTL	Emergency Remote Teaching & Learning
DEO	District Education Office
FCDO	Foreign, Commonwealth & Development Office
GES	Ghana Education Service
GESI	Gender Equality and Social Inclusion
GHS	Ghana Cedi
GNAT	Ghana National Association of Teachers
G-PASS	Girls- Participatory Approaches for Student Success
GRIP	Gender Responsive Improvement Plan
ICAI	Independent Commission on Aid Impact
IEPA	Institute for Educational Planning & Administration
ICT	Information Communication Technology
JHS	Junior High School
KNUST	Kwame Nkrumah University of Science and Technology
MoE	Ministry of Education
MMDAs	Municipal, Metropolitan and District Assemblies
NAB	National Accreditation Board
NaCCA	National Council for Curriculum & Assessment
NCTE	National Council for Tertiary Education
NDC	National Democratic Congress
NIB	National Inspectorate Board
NIST	National Implementation Support Team
NPP	New Patriotic Party
NTC	National Teaching Council
NTEAP	National Teacher Education Assessment Policy
NTECF	National Teacher Education Curriculum Framework
NTS	National Teachers' Standards

ODA	Overseas Development Administration
PBR	Payment By Results
PD	Professional Development
PELQF	Professional Education Leadership Qualification Curriculum Framework
PLC	Professional Learning Community
PRINCOF	Conference of Principals of Colleges of Education
QAAAI	Quality Assurance, Accreditation and Assessment Instrument
RMMDEs	Regional, Metropolitan, Municipal and District Directorates of Education
SHS	Senior High School
SPA	School Partnerships Adviser
STS	Supported Teaching in School
TLA	Teaching & Learning Adviser
TPD	Tutor Professional Development
TSF	Transition Support Fund
T-TEL	Transforming Teacher Education & Learning
UCC	University of Cape Coast
UDS	University of Development Studies
UEW	University of Education, Winneba
UoG	University of Ghana

1 Introduction

Transforming Teacher Education & Learning (T-TEL) was a 6-year £25 million Government of Ghana programme funded by the Foreign, Commonwealth and Development Office (FCDO) and implemented by Mott MacDonald Ltd trading as Cambridge Education.

This final project report, produced in December 2020, summarises the achievements of the programme and the lessons learnt over the past 6 years. During this time T-TEL has supported the National Council for Tertiary Education (NCTE) to implement a wide-ranging set of teacher education reforms. These reforms focused on working with 5 universities and 46 Colleges of Education to introduce a new much more practically focused Bachelor of Education (B.Ed.) degree in Initial Teacher Education to replace the previous Diploma in Basic Education (DBE) to raise the required entry standards for all basic school teachers. T-TEL also worked to strengthen the capacity of institutions overseeing these reforms.

T-TEL is viewed by key stakeholders, including the Ministry of Education and FCDO, as a very successful programme which has brought about significant changes in Ghana's teacher education system. T-TEL's most recent (December 2019) annual review by FCDO states that:

“Feedback for T-TEL's work has been consistently positive through this review process and the programme represents a very strong example of how technical assistance can support national scale reforms and implementation across the education system – as confirmed in the recent ICAI [Independent Commission on Aid Impact] review of UKAid in Ghana. Good relationships have been built with the MoE, national agencies, universities, unions, CoEs, MMDAs, DEOs and partner schools.”

The Independent Commission on Aid Impact (ICAI)'s country report on UK aid to Ghana, published in February 2020, found that T-TEL's work on teacher training was the UK Government funded intervention in Ghana judged 'most likely to be sustained' due to our strong performance on institutional strengthening and “strong signals that practice in CoEs has changed.”

This report sets out how these changes were brought about. It starts by explaining the situation in Colleges of Education in 2014 and the issues which the Government of Ghana decided they needed to address through the T-TEL programme. It then goes on to analyse T-TEL's programme design and objectives and how these changed over the course of implementation, looking at some of the headline results that the programme has achieved to date. The report then looks in more detail at each of the main programme components, namely:

- Tutor professional development, Supported Teaching in School (STS) and school partnerships
- College leadership, national policy reforms, quality assurance and regulations
- Curriculum reform and development within teacher education institutions
- Gender equality and social inclusion (GESI)

The report provides information as to how T-TEL responded to the institutional closures brought about through COVID-19 from March 2020 onwards by making a rapid transition to Emergency Remote Teaching & Learning (ERTL).

The final sections of the report then look at the lessons learnt through T-TEL and the measures which have been put in place to ensure the ongoing sustainability and success of Ghana's teacher education reforms now that T-TEL as a project has come to an end.

2 Issues with Ghanaian teacher education in 2014

Public Colleges of Education (CoEs) lie at the heart of Ghana's initial teacher education system. In 2012 these institutions were upgraded to tertiary status by an Act of Parliament.¹ This change meant that responsibility for oversight and performance of teacher education passed from the Ghana Education Service (GES) to the National Council for Tertiary Education (NCTE). The Pre-Tertiary Teacher Professional Development and Management Framework, developed and launched in 2013, set out a holistic ambition for teacher development, management, and performance within Ghana. Dedicated national agencies such as the National Teaching Council (NTC), National Inspectorate Board (NIB) and the National Council for Curriculum and Assessment (NaCCA), were established to help the teacher education system address the poor learning outcomes recorded across Ghana's basic schools.

However, as of early 2014, despite these new policy developments, the issues faced within CoEs were similar to those of a decade earlier.² Major constraints to effective initial teacher education included:

Poor quality of entrants and consequent focus on remedial content. The three-year Diploma in Basic Education (DBE), offered by Colleges of Education (CoEs) as the standard entry qualification for new teachers entering public basic schools, attracted applicants who did not have the required Senior High School grades to enter university. The academic content knowledge of many of these applicants was poor, particularly in English, Mathematics, and Science, meaning that tutors in CoEs had to spend much of the first year of the DBE doing remedial teaching to address gaps in content knowledge.

Content-heavy and examination-oriented DBE curriculum. This lent itself to rote learning by student-teachers.³ Tutors predominantly used the **lecture method of instruction**. There was little explicit link between the content of the teacher education curriculum and the pre-tertiary curriculum that student-teachers were expected to teach in basic schools.

Lack of practical exposure to teaching. Student-teachers only gained hands-on teaching experience during the third year of the DBE where they would spend an extended amount of time across two semesters in partner schools. The quality of mentoring and supervision within these partner schools was variable. Tutors did not consider some teachers as adequate role models. There was often no formal oversight agreement of roles and responsibilities between the district, metropolitan, and municipal education offices, which oversee basic schools, and the CoE.

Lack of specialization. Along with the content-heavy nature of the curriculum, lack of specialization meant that tutors had difficulty in preparing teachers who might on the one hand

¹ *Colleges of Education Act 847*

² *Teacher Training in Ghana- Does it Count? Multi-Site Teacher Education Research Project (MUSTER), Kwame Akyeampong, 2003; 'Girls Unite and Pass (Participatory Approaches for Student Success) Business Case', DFID, 2012; 'Girls Participatory Approaches for Student Success G-PASS Programme in Ghana- Technical Proposal', Cambridge Education, 2014.*

³ For the purposes of this report 'student-teachers' are the young people in training in the Colleges of Education who will become teachers when they graduate, 'tutors' are the staff in the Colleges of Education who are responsible for training the student-teachers, 'teachers' are what the student-teachers become once they have graduated and start working in basic schools. The term 'teachers' is also used to describe the teachers working in partner schools who play the role of mentors to the student-teachers during the practical, classroom-based elements of their training.

be teaching reading to Primary 1 pupils or who could be teaching English Literature to junior high school (JHS) 3 pupils once they were posted to basic schools after completing the DBE.

Limited resources and lack of appropriate policies and procedures of CoEs. Quality assurance, management and assessment processes within institutions were often inadequate and the quality of teaching and learning was variable. Many tutors lacked the required academic qualifications to teach at the tertiary level. This combination of factors meant that most CoEs were really 'tertiary' in name only.

The combined impact of the factors outlined above meant that, in 2014, "Teachers coming through Ghana's Colleges of Education (CoE) have limited hands-on practical exposure to good teaching methodology and fall back on familiar rote-learning (DFID, 2012:9)."

It was against this context that the FCDO designed the "Girls – Participatory Approaches for Student Success (G-PASS) Programme in Ghana". Whilst the overall focus of G-PASS was on the quality and participation of girls in education, one of its four outputs (Output 3: Better Quality Teaching and Learning) was dedicated to improving the quality of pre-service teacher training.

The objective of this output was to focus on a cohort of 9,000 student teachers across the then 38 public Colleges of Education and support principals and tutors to strengthen student teachers' acquisition of subject content (especially in English, maths and science) and their abilities to teach effectively to meet the varied learning needs of school children. The original ToRs for Output 3 of G-PASS (published by FCDO in February 2014) envisaged that the contracted service provider would carry out the following activities to achieve this objective:

- Facilitate the review and refinement of pre-service course outlines and content, and of teaching and learning materials for the 3-year training period and ensure that materials in English, maths and science reflect and promote more effective teaching practices during the practicum and on-the-job training in selected schools.
- Design and implement a coaching programme for College of Education staff to strengthen the ways in which trainee teachers learn how to teach. This will include identifying ways to integrate continuous assessment of trainees and placing a stronger emphasis on establishing more effective approaches to periods of teaching practice. Overall, the pre-service training should enable trainee teachers to develop the core skills identified in the Policy Framework for Pre-Tertiary Teacher Professional Development and Management (PF-PTTPDM), including using more engaging, interactive and student-focused instructional methods. College of Education principals and tutors should be able demonstrate these methods by delivering their teaching sessions in a similar manner.
- Work with Colleges of Education to build strong and sustainable partnerships with their demonstration schools, and potentially with other schools in the district, including by alternating periods of teaching practice in demonstration schools with periods of study in Colleges to discuss problems arising during teaching practices. Support experienced and effective teachers to act as mentors to support trainee teachers and promote the core skills identified in the PF-PTTPDM during teaching practices. This will involve providing training to potential teacher-mentors from primary and junior secondary, rural and urban, and public and low-cost private schools.
- Promote and support head-teacher training in school management and effective pedagogy, in order to provide day-to-day leadership on teachers' professional conduct and to monitor the mentorship of trainee teachers.

- Provide a training programme for district officials, especially circuit supervisors and girls' education officers, to guide and support trainees on their teaching practices, including being able to provide feedback to trainees, College tutors, teacher mentors and head-teachers.
- In collaboration with the Ghana Education Service, establish a challenge fund to provide small grants to relevant organisations to make tangible contributions to better quality teaching and learning, and to girl-friendly and learning-enabling schools. Relevant organisations may include Colleges of Education, School Management Committees or Parent Teacher Associations in demonstration/model schools, civil society organisations and low-cost private school associations.

Cambridge Education's response to the G-PASS tender pointed out that behaviour change activities within CoEs were not likely to achieve lasting change unless they were also accompanied by wider system reform. In Ghana previous FCDO/ODA funded education improvement projects had failed to make a lasting impact in changing behaviours and attitudes and this could be mainly attributed to project design as ideas and methodologies introduced by projects such as the Junior Secondary Support to Teacher Education Project (JuSSTEP, 1989-93) and the Support to Teacher Education Project (STEP) (1993-97), although apparently successful at the time, faded subsequently. Neither project was designed to attempt underlying structural or institutional reform or to systemise changes, and Cambridge Education was determined to ensure that this would not be the case with T-TEL.

Cambridge Education's tender response noted that there needed to be a holistic focus on teacher performance across three inter-related domains (set out in the diagram below) and that focusing on 'professional development' alone without addressing systemic incentives to manage performance or improve motivation and morale would not bring about the desired changes. Addressing these issues would inevitably necessitate working with the Ministry of Education on broader policy design and development.



The story of how T-TEL took these initial relatively modest ToRs and worked with the Government of Ghana to support wide ranging systemic reforms to teacher education are set out in the following sections of this report.

3 Transforming Teaching, Education & Learning (T-TEL) Design, Objectives and Results

Ghana's teacher education system in 2020 is almost unrecognizable from the situation in 2014 but the full extent of these changes was not envisaged at the start of the programme. Instead T-TEL's original design envisaged a package of activities focused predominantly within CoEs, a modest adjustment of the teacher education curriculum, and strengthening of the CoEs to make them more effective institutions. The section below explains how the ambition of the programme was expanded and the results which were achieved.

3.1 Reforms

The national and inclusive consultative process that T-TEL initiated in the teacher education community in 2016 as part of a process to mobilize a coalition for change, was the genesis of far-reaching and fundamental reforms. The “big conversation” as it was named was a series of national and regional consultations led by the National Council for Tertiary Education (NCTE) and the National Teaching Council (NTC), involving participants from across the teacher education system including universities, CoEs, unions, government agencies, and civil society organizations.

The big conversation focused on answering a single question- “what do we want a good teacher in Ghana to be, know and do?” This was an important question because it enabled stakeholders to focus on defining the type of teachers that they wanted the teacher education system to be producing.

This process led directly to the production of the National Teachers' Standards (NTS),⁴ which sets out a common expectation of Ghanaian teachers' knowledge, behaviour, and practice.

The NTS provided the foundation for subsequent reforms as they establish a common set of agreed requirements. The NTS defines what a “good” teacher in Ghana is across three domains: professional values and attitudes, professional knowledge, and professional practice. This provided a basis for setting standards for teacher performance and teacher education. The NTS formed the foundation for teacher licensing, which was introduced for all new entrants to the teaching profession in 2018 and formed the basis of a review and revision of the DBE teacher education curriculum.

This review of the existing DBE teacher education curriculum concluded that the curriculum did not provide adequate training for beginning teachers to enable them to meet the requirements of the NTS.

The DBE curriculum review process straddled the December 2016 Presidential and Parliamentary Elections which saw a change of power between the National Democratic Congress (NDC) Presidency of his Excellency John Dramani Mahama and the New Patriotic Party (NPP) Presidency of His Excellency Nana Adda Dankwa Akufo-Addo in January 2017.

⁴ NTS: <https://t-tel.org/download/national-teachers-standards/?wpdmdl=3301&refresh=60a240bdad0fd1621246141>

This change of Government provided further momentum and impetus to the teacher education reforms. Following the curriculum review the Minister of Education⁵ decided to replace the DBE with a new Bachelor of Education (B.Ed.) degree in Initial Teacher Education, which was to become the new minimum qualification for anyone aspiring to enter the teaching profession.

The consultative process that had been used to develop the NTS was then extended to develop a National Teacher Education Curriculum Framework (NTECF).⁶ The NTECF set out the mandatory requirements which any B.Ed. in Initial Teacher Education would need to meet to be accredited by the National Accreditation Board (NAB). The NTECF required specializations for Early Grade (KG–P3), Upper Primary (P3–P6), and JHS 1–3.

Furthermore, the Cabinet Memorandum on Policy on Teacher Education Reform, which was approved by the Cabinet of the Republic of Ghana on 28 September 2017 provided for:

- the official introduction of NTS for pre-service teachers;
- the official introduction of the NTECF;
- the proposed conversion of CoEs into university colleges, affiliated to five public universities offering teacher education curricula;
- the design of a new 4-year B.Ed. curriculum for Initial Teacher Education to be offered at the university CoEs.

T-TEL's mandate now evolved to one of supporting the NCTE to deliver this ambitious set of reforms. T-TEL achieved this by working with a team of key experts to help revise the curriculum, and through support provided to all 46 CoEs through five zonal teams of education advisers. Since October 2018 Ghana's 46 public CoEs have been delivering the new B.Ed. in Initial Teacher Education, which has been carefully designed to ensure that it produces a cadre of skilled, knowledgeable and motivated Ghanaian teachers who meet the requirements of the NTS. A team of international assessors has described the content of this B.Ed., which was written in collaboration with a team of 95 Ghanaian educators, as being "truly world class."

Each of the CoEs is affiliated with one of five mentoring universities that provide guidance and support and operate weekly professional development and learning sessions for tutors. The new B.Ed. curriculum blends content and pedagogy so all tutors model the behaviour and practices expected of teachers in basic school classrooms while teaching student teachers. Assessments also now focus on Supported Teaching in School (teaching practice in partner schools), continuous assessment, and portfolio building rather than on final written examinations.

Specific aspects of T-TEL's support that have helped to deliver results include:

Weekly professional development sessions in all 46 CoEs. Tutors facilitate these sessions which are structured around a set of materials and handbooks co-created by writing teams of tutors and T-TEL staff. These weekly sessions are a key behaviour change mechanism and attendance rates are high (average of 85% across all CoEs in 2019–2020). There is no financial incentive for attending these sessions but participants receive certificates from NTC and NCTE, which can be used for their professional portfolios. T-TEL initially hired international experts to develop materials for these sessions but gradually shifted toward the use of local expertise to facilitate genuine co-creation, promote ownership of materials and ensure their relevance.

⁵ Dr. Matthew Opoku Prempeh.

⁶ NTECF: <https://t-tel.org/download/national-teacher-education-curriculum-framework/?wpdmdl=3287&refresh=60a240bdabd401621246141>

Autonomy of institutions. One of T-TEL's main aims was to create a teacher education system in which the 46 public CoEs could operate as high-performing autonomous tertiary institutions that solved problems and improved learning outcomes for all students without external assistance. There was therefore a strong focus on leadership development and training for principals, leadership teams and governing councils. This was accompanied by a concerted effort to support CoEs to develop College Improvement Plans informed by outcomes of a robust institutional self-evaluation and a comprehensive set of policies aligned with national standards in areas such as assessment, training and learning, information and communication technology (ICT), school partnerships, sexual harassment, quality assurance and gender equality and social inclusion.

Payment-by-Results. T-TEL used payment-by-results (PBR) as a mechanism to incentivize CoEs to achieve targets and objectives in their College Improvement Plans with payment received after agreed results had been achieved. Funds could be used flexibly by CoEs to address teaching and learning issues. This approach proved successful and also promoted cross-learning and sharing of good practice among CoEs. The PBR approach was extended to help incentivize the implementation of Gender Responsive Improvement Plans and curriculum delivery through the Transition Support Fund, which helped tutors upgrade their qualifications to meet tertiary standards.

3.2 Results

The teacher education reforms are driven by a desire to ensure that Ghana produces teachers who can inspire learners and encourage critical thinking, problem solving and creativity rather than simply focusing on factual recall to pass written examinations.

While the current batch of B.Ed. student teachers will not enter basic school classrooms until 2023 the T-TEL-initiated changes in teacher education have already achieved impressive results. The most recent annual external evaluation survey where face-to-face lesson observation was possible, carried out in June 2019, showed that:⁷

The proportion of English, Science, and Mathematics tutors in CoEs demonstrating student-focused teaching methods increased from 26% in 2015 to 78% in 2019.

The proportion of English, Science, and Mathematics tutors demonstrating gender-sensitive instructional methods increased from 2% in 2015 to 80% in 2019.

These changes in the CoEs are having significant and measurable impact on the performance and behaviour of newly qualified teachers in Ghana. An external survey of teaching practices among over 500 beginning teachers (those in their first year after completing training) found that:

The proportion of beginning English, Science, and Mathematics teachers with core competencies in the Pre-tertiary Teacher Professional Development and Management Policy Framework increased from 2% in 2015 to 41% in 2019.

The proportion of beginning male and female English, Science, and Mathematics teachers demonstrating gender-responsive instructional strategies increased from <1% in 2015 to 31% in 2019.

⁷ Annual Evaluation Survey, JMK (2019) <https://t-tel.org/download/t-tel-progress-and-achievements-year-4/?wpdmdl=4564&refresh=60a28db9175461621265849>

These are impressive achievements which demonstrate the enormous improvements that have already been made in Ghana's pre-service teacher education system, largely been driven by tutors themselves through weekly professional development sessions. Now that the five universities have taken over responsibility for operating these sessions (supported by T-TEL for the 2019/2020 academic year) it is highly likely that this approach will be sustained beyond the lifespan of T-TEL, which ends in December 2020.

IN BASIC SCHOOLS



Newly qualified teachers demonstrating **core competencies** in the PTPDM has risen by **40.1%** from 1.6% to 41.7%



Newly qualified teachers demonstrating **gender-responsive instructional strategies** has risen by **30.2%** from 0.5% to 30.7%



Newly qualified teachers demonstrating **knowledge and application** of basic school curriculum and assessment has risen by **39.3%** from 1.6% to 40.9%

IN COLLEGES OF EDUCATION



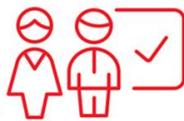
Improving leadership and management through **College Improvement Plans** linked to a new inspection regime- the Quality Assurance and Accreditation Assessment Instrument.



In 2020 data shows that **82.6%** of colleges have a dedicated and **effective safe space focal person system** with trained staff and student teachers who believe this is enabling and empowering the community to report sexual harassment issues.

Proportion of tutors demonstrating an understanding and application of the National Teachers' Standards has risen from

60.1% to 80.2%



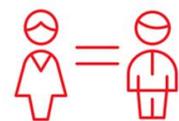
Use of student-focused teaching methods has

risen by **51.9%**

from 26.1% to 78%



52.5% of student teachers demonstrating higher levels of **expected graduate attributes** identified in the curriculum writing guide, up from 39.2%



Use of **gender-sensitive instructional methods** has

risen by **77.4%**

from 2.2% to 79.6%

The following sections of this report provide more detail about the individual components which make up the T-TEL programme including the approaches taken and results achieved.

4 Tutor professional development, supported teaching in school (STS) and school partnerships

Tutor Professional Development (TPD) and Supported Teaching in School (STS) are two critical elements of the T-TEL programme. The intention behind T-TEL's tutor professional development activities is to create regular College-level forums where tutors take responsibility for their own professional development and ensure that teaching and learning within each College is aligned with the National Teachers' Standards (NTS) and the new B.Ed. curriculum. T-TEL believes that this institutional level self-directed learning is the most effective means of sustaining behaviour change. Supported Teaching in School (STS) plays a critical role in the new B.Ed. in helping to ensure that teacher education is practically focused through a network of around 2,000 partner schools.

4.1 Tutor Professional Development

The aim of T-TEL's Tutor Professional Development (TPD) activities is to ensure that tutors in CoEs are reflecting critically on their methods of teaching and learning and supporting each other to use active learner-centred approaches which are aligned with the National Teachers' Standards (NTS). T-TEL's theory of change is based on the belief that tutors act as role models for student teachers and that student teachers will therefore imitate tutors' behaviour when they enter basic school classrooms. If tutors use the 'lecture-method' then this is what student teachers will imitate but if they use a wide variety of interactive approaches (aligned with the NTS) then the use of such approaches will very quickly become standard behaviour for beginning teachers when they graduate from CoEs.

From the very beginning T-TEL wanted to ensure that tutor professional development activities became embedded within each CoE so that they were not seen as an external imposition or something which involved staff travelling for one-off training workshops but instead were something which were part of the weekly routine for CoE tutors. It was therefore decided to operate a system whereby two tutors from each CoE were designated as Professional Development (PD) Coordinators and would then have responsibility for facilitating PD activities in their own CoE.

T-TEL initially planned to support these College-based PD Coordinators by hiring experienced tutors from CoEs to visit Colleges on a regular basis. This plan had to be re-thought after the concept of recruiting and paying staff who were also full-time CoE employees caused some tension and concerns within CoEs. Instead T-TEL hired 5 Ghanaian professionals with strong experience in the application of interactive teaching approaches to become full-time Teaching and Learning Advisors (TLAs). Each TLA was stationed in a different geographic 'Zone' covering between 6 and 10 CoEs, visiting them every two or three weeks to participate in their PD sessions and provide advice and support to PD Coordinators. This system operated from 2015 to 2018.⁸ In 2019 and 2020 once T-TEL activities had become firmly embedded into CoE routines T-TEL zonal teams were organised in a more decentralised, locally responsive manner

⁸ T-TEL was a 4-year programme but was extended by a further 2 years in late 2018 due to the need to support implementation of the first 2 years of the new B.Ed. in Initial Teacher Education. The programme initially worked in all 36 public CoEs with a further 2 CoEs being added in mid-2016 (St Ambrose and Gambaga) and 6 more added in mid-2018 (Al-Faruq, St Vincent, McCoy, Bia, SDA Agona and Methodist Akim Oda) bring the total number of CoEs covered to 46.

with 3 or 4 T-TEL staff in each Zone taking on the role of Zonal Team Leader and Zonal Education Advisers with each staff member having a mandate to support PD sessions as well as other T-TEL activities.

CoEs' weekly Professional Development sessions were structured around Professional Development (PD) guides for tutors and PD coordinators. These guides covered various themes such as 'Creative Approaches', 'Teaching & Learning Materials' and the 'National Teachers' Standards'. The intention behind these guides was that they would be used to support the implementation of a specific model of tutor professional development aligned with the National Teachers' Standards. Each guide contained 8 modules with each module designed to be covered in a weekly 90-minute session which was a formal part of the CoE's timetable. As well as supporting tutors' participation during the weekly sessions, the PD guides encouraged tutors to consider how to apply the strategies in their own teaching in their classrooms and provided examples of how they could be applied to the basic school curriculum.

Since 2015 these guides have been printed and distributed in hard copy and published online and the TPD programme has reached around 2,000 college tutors across 46 CoEs through the weekly PD sessions. This has helped to ensure that tutors are equipped to support the skills development and empowerment of student teachers. Each guide was written through a consultative process involving national experts and selected tutors from CoEs. The process for writing these guides has evolved over time. In the early years of T-TEL international experts played a large role in drafting content and approaches but this approach shifted so that, from Theme 8 onwards, all writers were Ghanaians working within the teacher education system. There has also been a shift in the nature of the themes as can be seen from the full chronological list presented below:

PD Themes⁹

1. Creative Approaches
2. Questioning
3. Talk for Learning
4. Group Work
5. Teaching & Learning Materials
6. National Teachers' Standards and Teacher Education Curriculum Framework for Ghana
7. Assessing Trainee Teachers
8. The Tutor as a Researcher
9. Preparing Tutors for the Delivery of the National Teachers' Standards-Based Bachelor of Education Curriculum
10. Supporting the Teaching of the 4Rs and Science in Basic Schools through Lesson Observation
11. Subject-specific PD/TPLC Handbooks for B.Ed. Year 1 Semester 1
12. Subject-specific PD/TPLC Handbooks for B.Ed. Year 1 Semester 2

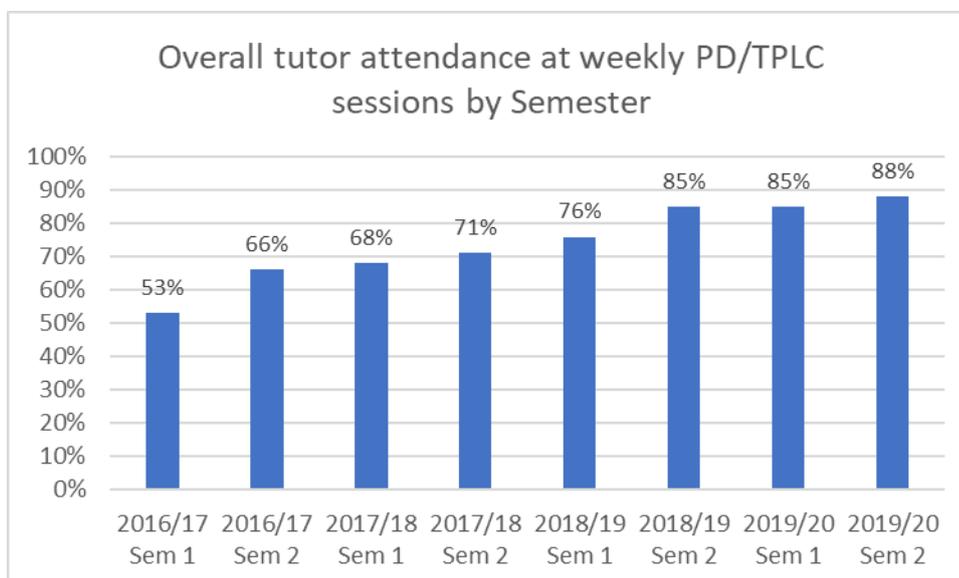
The early themes were quite generic, taking a particular aspect related to teaching and learning such as 'creative approaches' or 'group work' and then demonstrating how it could be practically applied within tutors' lessons and everyday work. From Theme 6 onwards there was a shift towards a more specific examination of the newly introduced National Teachers' Standards (NTS) and National Teacher Education Curriculum Framework (NTECF) and how these new Standards and Framework should be applied in the classroom.

⁹ Handbooks for Themes 1-10 can be downloaded here: [Tutor professional development - T-TEL \(t-tel.org\)](https://t-tel.org) and Themes 11-12 from here: [Home - Curriculum Resources T-Tel \(ncte.edu.gh\)](https://ncte.edu.gh)

Themes 9 and 10 were developed after the new B.Ed. in Initial Teacher Education had been approved and were geared to preparing tutors for this important new development. For Themes 11 and 12 (implemented from the start of the 2019/20 academic year onwards) there was a further shift as i.) development of these themes were led by the 5 mentoring universities (UCC, UEW, UDS, UoG and KNUST) and ii.) for the first time the PD guides and handbooks were subject-specific. This meant that different materials were produced for each subject linked to the B.Ed. courses which were being taught that year. This was an important shift as prior to this all tutors would work through the same set of materials each week. This change was brought about following feedback from tutors and the necessity of ensuring that they were adequately prepared to teach the new B.Ed. courses. It presented some challenges to PD Coordinators who still took the approach of bringing all tutors together at the same time each week and then splitting them into subject-specific discussion groups.

For the subject-specific Handbooks for B.Ed. Year 1 Semester 1 four universities (UEW, KNUST, UoG and UDS) came together to develop a common set of handbooks based on their B.Ed. curriculum whilst UCC developed a slightly different approach which they called 'Teacher Professional Learning Communities' rather than 'Professional Development'. UCC's TPLC approach involved one tutor from each subject group delivering a demonstration lesson each week and then receiving feedback from their peers. CoEs found that this approach was more interactive and so the element of lesson enactment was subsequently included in all Handbooks produced for B.Ed. Year 1 Semester 2 by all five universities.

Attendance in the weekly PD/TPLC sessions has steadily increased over the past few years. In Semester 1 of the 2016/17 academic year 53% of tutors attended each weekly session and this had increased to 85% by Semester 2 of the 2018/19 academic year. Attendance rates remained at 85% during Semester 1 of the 2019/20 academic year before increasing to 88% in Semester 2 where weekly sessions were carried out online due to institutional closures brought about through COVID-19.



There are several reasons which can explain this year-on-year increase in attendance, including:

- The increased acceptance by tutors that weekly sessions are an important and useful part of the College calendar, an acceptance that grew as a majority of tutors began to attend sessions each week.

- Effective leadership from Principals and Vice-Principals where evidence showed that their regular participation in weekly sessions tended to correlate with increased attendance from tutors. T-TEL shared weekly attendance data with Principals on a regular basis, showing them how their College compared with other Colleges in that geographic Zone.
- From Theme 7 onwards tutors who attended sessions each Semester received a Certificate from the National Teaching Council (NTC) and National Council for Tertiary Education (NCTE) which they could put in their professional portfolio.
- The shift away from generic themes towards materials focused on subject-specific B.Ed. courses encouraged more tutors to attend as they realised that they would gain knowledge and experience that were essential for delivery of these new courses.
- From the 2018/19 academic year onwards attendance in weekly PD/TPLC sessions was one of the independently assessed performance indicators used to decide whether CoEs qualified for results-based financing through the Transition Support Fund. These funds could then be used to upgrade the qualifications of tutors, providing a further incentive to attend weekly sessions.

Over the last six years there is compelling evidence that there has been a substantial shift in tutors' behaviour and approaches. It is this shift which has helped to fuel the change to a new more practically focused B.Ed. and ensure that there has been widespread acceptance of the need to move away from content-heavy lecture-focused methods of lesson delivery.

T-TEL has tracked the proportion of tutors using student-focused and gender-sensitive teaching methods during their lessons through an annual external evaluation survey carried out by JMK Research and involving classroom observation and interviews with tutors and student teachers. This survey showed a consistent increase in the proportion of tutors using such approaches from 2015 until 2019. In the most recent survey in 2020, where observation involved online and virtual lessons rather than face-to-face classroom engagement, there was some decline. This decline in 2020 can be attributed to the shift to Emergency Remote Teaching & Learning due to COVID-19 institutional closures and the increased difficulty that this presented to some tutors in adapting their methods to remote delivery.

Progress against these two indicators (% of tutors using student-focused teaching methods and % of tutors using gender-sensitive instructional methods) can be seen in the figures below.

	2015 baseline (face-to-face)	2017 (face-to-face)	2018 (face-to-face)	2019 (face-to-face)	2020 (online learning)
Proportion of male and female English, science, and mathematics tutors demonstrating student-focused teaching methods	26%	66%	77%	78%	68%
Percentage of male and female English, science and mathematics tutors using gender-sensitive instructional methods	2%	47%	68%	80%	74%

This evidence shows that, before COVID-19, approximately four-fifths of tutors were observed to be using both student-focused and gender-sensitive instructional methods in their lessons. T-TEL believes that the weekly PD and TPLC sessions played an important role in helping to bring about and sustain this change.

If T-TEL's hypothesis is correct then, over time, the proportion of beginning teachers entering basic school classrooms who use the student-focused and gender-sensitive instructional methods which they have modelled from their tutors will also increase. JMK Research visited basic schools every year until July 2019¹⁰ to observe several hundred beginning teachers (those in their first year of teaching having graduated from CoEs) teaching in classrooms. The results of these classroom observations are set out below.

	2015 baseline	2017	2018	2019	2020
Percentage of male and female beginning English, science, and mathematics teachers demonstrating core competencies in the Pre-Tertiary Teacher Professional Development Management Policy Framework	2%	15%	32%	42%	
Percentage of male and female beginning English, science, and mathematics teachers demonstrating knowledge and application of basic school curriculum and assessment	2%	15%	33%	41%	
Percentage of beginning male and female English, science, and mathematics teachers demonstrating gender-responsive instructional strategies	1%	9%	19%	31%	

The figures in the table above clearly show that there has been a significant increase in the proportion of beginning teachers demonstrating core competencies in the Pre-Tertiary Teacher Professional Development Management Policy Framework (including student-focused methods), knowledge and application of the basic school curriculum and gender-responsive instructional strategies. Interestingly the biggest single-year increase in the proportion of beginning teachers demonstrating these behaviour and competencies happened between 2017 and 2018 which correlates with the biggest increase in tutor behaviour occurring between 2015 and 2017 given the anticipated lag time between tutors demonstrating these methods and student teachers entering basic school classrooms.

In fact the transformation shown by beginning teachers has been quite remarkable, from no more than 2 out of 100 beginning teachers demonstrating any of the assessed competencies in behaviours in 2015 to 4 out of 10 demonstrating adherence to the PTPDM Policy Framework and knowledge of curriculum and 3 out of 10 demonstrating gender-responsive instructional strategies in 2019. When one considers that these figures are derived from a national sample of all beginning teachers in the country it demonstrates that there has been a genuine transformation in Ghana's teacher education.

¹⁰ it was not possible to visit basic schools in 2020 because they were shut due to COVID-19 but the same survey will be carried out again in 2021 and 2022.

What is even more exciting is that the figures above have been achieved with the outdated DBE curriculum which was replaced by the B.Ed. in Initial Teacher Education for all new entrants to CoEs from October 2018 onwards. There is already early evidence to suggest that the skills and competencies of these B.Ed. student teachers exceed their DBE predecessors (see Section 6.2 of this report) so it is anticipated that there will be a further improvement in beginning teacher skills and competencies once the first cohort of B.Ed. student teachers graduate and enter basic schools from the 2022/23 academic year onwards.

4.2 Supported Teaching in School (STS)

Teaching experience in real life classrooms is essential to ensure that student teachers are fully prepared to be effective teachers who can meet the requirements of the NTS upon graduation from Colleges of Education. The 3 -year DBE curriculum used an 'in-in-out' structure whereby student teacher spend the first two years on campus before spending almost all of the final year teaching in a partner school (either a primary or Junior High School which has an agreement with the CoE). In the first year of the DBE student teachers were supposed to do classroom observation in a school of their choice during CoE holidays whilst in the second year they participated in on-campus teaching practice with their peers but in practice the focus on teaching practice in the DBE happened almost exclusively in year three.

T-TEL's initial aim was to support CoEs to increase the effectiveness of teaching practice by providing training to mentors in partner schools and improving the supervision, linkages between CoEs and partner schools and structure of teaching practice through the provision of Teaching Practice Handbooks for mentors, tutors and student teachers.

This then evolved into supporting NCTE, GES and national stakeholders to develop a National School Partnerships Policy which was used as the basis for collaborative agreements between Regional, Metropolitan, Municipal and District Directorates of Education (RMMDDs), CoEs and individual partner schools to clarify teaching practice roles and responsibilities.

Finally, with the introduction of the new B.Ed. in Initial Teacher Education, T-TEL assisted universities and CoEs to develop a set of Supported Teaching in School (STS) Handbooks and provide training for lead mentors, mentors and tutors. STS is the new name for teaching practice and it plays a much more significant role in the B.Ed. than it did in the DBE with student teachers now spending time in partner schools in each Semester of the 4 year course with STS making up 30% of the total marks assessed towards the awarding of the B.Ed.

STS has been the most challenging component of T-TEL to implement because it involves working with around 2,000 partner schools in addition to the 46 CoEs. This scale of implementation is a challenge when it comes to behaviour change, as is the fact that partner schools have different reporting lines than CoEs with the former under GES and their respective RMMDDs and the latter reporting to NCTE. T-TEL's work on school partnerships was designed to address weaknesses in the teaching practice elements of the DBE and the lack of resources available to structure the learning relationship between mentors (experienced teachers in partner schools) and mentees (student teachers undergoing teaching practice). T-TEL therefore worked with CoEs and national stakeholders to develop three inter-linked 'Teaching Practice Handbooks',¹¹ designed to be used side-by-side to support tutors, mentors and student teachers to engage in a shared, structured programme of learning to achieve the DBE assessment competencies whilst mentees were expected to keep a 'Teaching Practice Journal' to document progress against activities in the Handbooks.

¹¹ Teaching Practice Handbooks: [School partnerships and supported teaching in schools - T-TEL \(t-tel.org\)](https://www.t-tel.org)

4.2.1 STS Handbooks

The Handbooks were written through a collaborative process involving representatives from the MoE, GES, NTC, T-TEL, UCC, UEW and CoEs. The Handbooks were introduced to Year 1 and 2 student teachers in the 2015/16 academic year and were then rolled out to Year 3 student teachers in 2016/17. Year 3 of the DBE is spent almost entirely in partner schools so T-TEL supported CoEs to train over 8,000 mentors from across their partner schools on the use of Handbooks. This training was carried out by each of the then 40 CoEs who delivered a pre-designed workshop to all mentors of student teachers in partner schools using a cluster-based approach.

Whilst the quality of this mentor training was generally very good the subsequent implementation of Handbook activities in partner schools was disappointing and CoE follow-up support to mentors was generally quite limited. Each CoE had a nominated Teaching Practice Coordinator but in many instances this was a tutor who already had a full teaching workload and did not have the time to conduct follow up visits in a significant number of partner schools (the average CoE has 40 partner schools) whilst many tutors were struggling to fit their scheduled mentee supervisory visits around their existing workload. The annual external evaluation survey carried out in mid-2017 found that only 26% of student teachers on teaching practice and only 28% of mentors were using the Teaching Practice Handbook.

T-TEL had recruited 5 zonally-based School Partnership Advisors (SPAs) in 2016 to work with the Teaching Practice Coordinators in each CoE to improve the quality and uptake of Handbook activities in partner schools, modelling the approach used with zonally-based Teaching & Learning Advisors (TLAs) which had helped to embed weekly PD sessions and associated behaviour change in CoEs. However, this approach proved less successful when applied to school partnerships and often the T-TEL SPA ended up visiting partner schools by themselves because the Teaching Practice Coordinators were occupied with College-based tasks. The sheer number of institutions involved (2,000 partner schools compared with 46 CoEs) meant that this approach of individualised visits by 5 T-TEL staff was never going to have a meaningful or lasting impact on behaviour change in partner schools.

One of the main issues with the school partnerships component was that CoEs and their partner schools had different reporting lines (the former to NCTE and the latter to GES) meaning that there was no institutional incentive for partner schools to collaborate with CoEs. Lead mentors (headteachers) and mentors were not paid for what they saw as being additional work with mentees which was not recognised by their employer. This was one reason why take up of the Handbooks remained low. CoEs had no formal means of requiring or mandating mentors to carry out their roles other than through threatening to remove the school from its list of partner schools.

The development of the new B.Ed. and its greater emphasis on STS provided an opportunity to work with stakeholders to raise the profile and status of CoE-school partnerships. Without this emphasis there was a risk that B.Ed. implementation could be undermined because of the lack of attention and emphasis which mentors were placing on their critical role in partner schools.

4.2.2 School Partnerships Policy

T-TEL therefore worked with NCTE and GES throughout 2018 to develop a National School Partnership Policy in collaboration with NAB, NTC, PRINCOF, Conference of Heads of Basic Schools (COHBS), the Teacher Unions – CETAG, Ghana National Association of Teachers (GNAT) and Coalition of Concerned Teachers (CCT). This Policy sets out the purpose of school partnerships, the objectives of STS and the respective roles and responsibilities of all concerned

parties.

Following approval of this Policy, T-TEL worked with NCTE and GES to hold dissemination workshops in November 2018 for 46 College Principals and 129 Municipal, Metropolitan and District Directors of Education (MMDDs) who had partner schools under their jurisdiction as well as General Managers of faith-based organisations who had partner schools under their jurisdiction. Following this workshop all 46 Colleges of Education then signed individual Memoranda of Understanding (MoUs) with their local Education Offices and Partner Schools setting out their mutual agreement to abide by the roles and responsibilities required to operationalise STS in the new B.Ed.

4.2.3 STS and the B.Ed. Curriculum

The extension of the practical STS component within the new B.Ed. curriculum provides an enormous opportunity for student teachers to learn within different practical settings and is arguably the most important change brought about in basic teacher education.

A key point of emphasis in the B.Ed. Curriculum is student teachers being well supported during the school-based components in each of the 4 years of their training. This requires that there are trained mentors in all partner schools who can support and assess student teachers' progress towards meeting the NTS.

The Curriculum also emphasises the importance of college tutors preparing student teachers for their placements and integrating their school-based learning into the overall training and stresses the importance of assessed, supported placements being used to develop student teachers over time.

In the first year there is a greater focus on school-based, organised and directed learning experiences in school where students reflect on teachers' teaching and children's learning. Subsequently, in future years, there is a greater focus on school-focused training where the student teacher, with the support of the mentor, takes increasing amounts of responsibility for planning teaching and assessing the children or young people in their care alongside classroom enquiry and action research. During the four years the student teacher will have the opportunity to teach and observe teaching in a range of schools enabling them to understand how children develop and learn in diverse contexts. For early grade and primary, this must include the opportunity to teach and gain understanding of the curriculum for multi-grade teaching.

To support the implementation of STS T-TEL has worked with NCTE, universities and CoEs to produce STS Handbooks for B.Ed. Year 1 and Year 2. T-TEL then provided funds to all 46 CoEs for them to provide training for tutors, mentors and lead mentors in their partner schools so that they can implement STS effectively.¹² Overall, since the start of the programme, T-TEL has supported Colleges to train over 20,000 mentors and lead mentors in basic schools.

CoEs' experience with the new approach to STS over the first two years of B.Ed. implementation has been largely positive. Tutors and student teachers have noted how the structure of STS, whereby they spend one day a week for six weeks each Semester in partner schools, has helped in contextualising learning and encouraging student teachers to reflect critically on the NTS.

¹² Year 1 Handbook [School Placement Handbook-4 year Bachelor of Education Supported Teaching in School-Year 1.pdf \(t-tel.org\)](#)
Year 2 Handbook [School Placement Handbook-4 year Bachelor of Education Supported Teaching in School-Year 2.pdf \(t-tel.org\)](#)

A further advantage has been that these 32,000 B.Ed. student teachers visiting 2,000 partner schools each week have helped to encourage their mentors to improve the quality of lessons being taught as mentors realised that student teachers were making critical observations about what was being taught. Student teachers are therefore playing a beneficial role as a regular quality assurance mechanism for basic schools nationwide and this is an unforeseen benefit of the new approach to STS. Lead mentors in some partner schools have also noted that mentors are learning from the student teachers and that this has been particularly useful within the context of the new pre-tertiary curriculum which was rolled out across all primary schools in September 2019 and where teachers are required to use more interactive and learner-centred approaches.

Despite these successes there have also been several challenges. Foremost amongst these is the difficulty which CoEs have faced with transportation for student teacher to enable them to meet the requirement for weekly visits to partner schools and the consequence that some partner schools close to CoEs ended up being overcrowded with student teachers. These concerns should ease once the Government of Ghana provides additional buses to all 46 CoEs in early 2021.

Secondly, external evaluations show that there are still a significant proportion of mentors who are not meeting the requirements of the NTS or providing adequate support to student teachers. As a reflection of this, UCC had to reduce the proportion of B.Ed. Year 1 STS marks awarded by mentors and increase the proportion awarded by tutors because many mentors were not following the marking scheme appropriately. It is hoped that the introduction by NTC of a points-based Continuing Professional Development (CPD) system for all in-service teachers linked to mandatory teacher licensing will help to increase the proportion of mentors fulfilling their responsibilities. Under this system being a partner school mentor will qualify a teacher to receive CPD points, meaning that their performance of these duties is now professionally recognised and can benefit their career.

Finally, the closure of all basic schools from mid-March 2020 onwards due to COVID-19 caused significant disruption to the Year 2 Semester 2 B.Ed. STS as all classes were moved online. Some student teachers were still able to benefit from STS as KNUST and UDS affiliated-CoEs used video lessons sourced from the IDP Foundation to enable the STS requirements of Year 2 Semester 2 to be carried out online. Despite this the closure of basic schools has undoubtedly caused a setback to the STS component of the B.Ed., just as it has to wider aspects of Ghana's basic education system, and efforts will need to be made once schools reopen in January 2021 to get this component back on track.

Between 2015 and 2018 T-TEL tracked the proportion of mentors in partner schools who were using gender-sensitive practicum mentoring strategies and this increased from 2% at baseline to 25% in 2018.

For the final two years of T-TEL two new metrics were introduced:

- the percentage of mentors in partner schools who reinforce key components of the National Teachers' Standards which increased from 55% in 2019 to 73% in 2020; and
- the percentage of mentees receiving support from mentors in the delivery of basic education curriculum using pedagogy in line with the National Teachers' Standards which increasing from 51% in 2019 to 64% in 2020.

Whilst these increases are encouraging and show that most mentors are now meeting the standards required of them it should be noted that the 2020 figures were derived from interviews rather than lesson observation because of the continued closure of partner schools.

	2015 Baseline	2017	2018	2019	2020
Percentage of mentors in partner schools using gender-sensitive practicum mentoring strategies introduced by T-TEL		2%	12%	25%	
Percentage of mentors in partner schools that reinforce key components of the National Teachers' Standards				55%	74%
Percentage of mentees receiving support from mentors in the delivery of basic education curriculum using pedagogy in line with the National Teachers' Standards and reflective of gender- and student-responsive instruction				51%	64%

5 College leadership, national policy reforms, quality assurance and regulations

National policy reforms reinforced through quality assurance and regulation lie at the heart of T-TEL's behaviour change and sustainability strategy. These changes in policy and regulation have created systemic incentives for individuals and institutions within the teacher education system to adopt the new behaviours required by the National Teachers' Standards (NTS) and National Teacher Education Curriculum Framework (NTECF). At the same time T-TEL invested in the leadership and management capacity of senior leaders within CoEs to ensure that they had the knowledge and skills to develop their institutions and comply with the new policy and regulatory norms.

5.1 National Policy Reforms

The main national policy reforms in teacher education are set out in the Cabinet Memorandum on Policy on Teacher Education Reform, which was approved by the Cabinet of the Republic of Ghana on 28 September 2017 and which provided for:

- the official introduction of NTS for pre-service teachers;
- the official introduction of the NTECF;
- the proposed conversion of CoEs into university colleges, affiliated to five public universities offering teacher education curricula;
- the design of a new 4-year B.Ed. curriculum for Initial Teacher Education to be offered at the university CoEs.

These reforms are discussed in greater detail in the subsequent section of this report on 'curriculum reform'. It is important to note however that these were not the only policy reforms supported by T-TEL. T-TEL understood that the successful implementation of teacher education reforms relies upon interaction with other parts of the education system so wider changes were required to support the specific teacher education reforms described above. T-TEL therefore made provision for a flexible technical and financial support facility for national quality assurance and regulatory agencies. Whilst modest in comparison with the scope of the whole T-TEL programme, with a budget of £1.5 million against a total expenses budget of £16 million, this flexible support to national agencies played a key role in helping to ensure stakeholder support for teacher education reforms and in progressing related and supportive national policy initiatives.

Examples of some of the policy reforms supported by T-TEL include:

Development and subsequent communication and dissemination of the National Teachers' Standards:

T-TEL supported the initial development of the NTS and then assisted the National Teaching Council (NTC) to raise national awareness of the NTS. This is important because the NTS define what all Ghanaian teachers are supposed to know and do as well as forming the basis for teacher licensing which was introduced in 2018. The NTS will only have the desired impact on teacher behaviour if they are widely known and understood. T-TEL printed 40,000 hard copies of the NTS which NTC distributed to student teachers in CoEs and to in-service teachers through awareness-raising events organised with Regional, Municipal,

Metropolitan and District Directorates of Education (RMMDDs). T-TEL also supported NTC to develop a communications campaign and related materials to support this awareness raising. This helped to raise awareness and understanding of the NTS and their relationship to teacher licensing. An opinion survey carried out in July and August 2019 found that 91% of surveyed teachers and heads of schools were aware of teacher licensing.

Design and roll-out of Portfolio Assessment for Teacher Licensing: The introduction of teacher licensing for all newly qualified teachers in 2018 marked the beginning of Ghana's plans to ensure that all teachers hold a professional license demonstrating their competence and fitness to practice. Initially this license was gained through a written examination which was not felt to be the best way of determining teachers' practical abilities and adherence to the NTS. T-TEL therefore supported NTC to recruit and train several hundred Regional and District Portfolio Assessors who will be responsible for tracking the development of each beginning teacher as they build a portfolio of evidence which demonstrates their competence and adherence to the NTS so that they can gain Qualified Teacher Status. Introducing this nationwide portfolio assessment system is an ambitious undertaking but an essential one so that teacher licensing becomes more than just a written exam but is instead something which encompasses the development of a professional portfolio which will be useful to beginning teachers throughout their career.

Communications Support to the Ministry of Education: T-TEL developed a strong reputation in Ghana for the quality and impact of its communications and worked closely with the Ministry of Education and other national agencies to enhance the capacity of Government Public Relations Officers. This included developing a national communications strategy for education reforms and assisting in running a 'teachers make our nation' campaign to raise the profile of the teaching profession. T-TEL also worked closely with unions, particularly the College of Education Tutors Association of Ghana (CETAG) but also the Trainee Teachers Association of Ghana (TTAG), Ghana National Association of Teachers (GNAT) and the College of Education Non-Teaching Staff Association of Ghana (CENTSAG) to conduct consultation and communication activities related to the education reforms.

Pre-tertiary curriculum development: The revision of the B.Ed. curriculum for Initial Teacher Education coincided with the introduction of a new pre-tertiary curriculum for Kindergarten and Primary schools (KG-P6). This new pre-tertiary curriculum is based on standards and learning outcomes which are to be achieved, thus shifting the focus on to what is actually learnt rather than what is taught and promoting interactive and play-based approaches which encourage experiential learning and position the teacher as a facilitator rather than as a lecturer (as had tended to occur in the old system). The National Council for Curriculum and Assessment (NaCCA) is the national agency responsible for curriculum development. Given the important linkages between teacher education and the pre-tertiary curriculum T-TEL provided technical support to NaCCA for curriculum writing and then project management and communications assistance for the national roll-out of training for all primary school teachers in 2019.

Design and introduction of the Colleges of Education Management Information System (CEMIS): NCTE has oversight responsibility for all 46 CoEs and their 5 mentoring universities. T-TEL supported NCTE to design and introduce CEMIS which is a system used to manage information to improve policy and planning, monitoring and evaluation and decision making. This system was launched in October 2020 with all 46 CoEs now having a 'local' CEMIS which is an information system capable of managing the various parts of college activities which provides a modern platform for data capture whilst also supporting teaching and learning. These 46 CoE based platforms all link up to a national database which enables NCTE to have real-time access to relevant data from CoEs to deliver on its mandate of providing timely advice and policy direction

to the Minister of Education and to monitor the level of adherence to approved policies, standards and norms. Mentoring universities are also able to access the system to analyse data for their affiliated CoEs. CEMIS has provided NCTE with a model and system which they can roll out in future to cover all tertiary education institutions.

Support to the roll-out of a new School Inspection regime: T-TEL recognises that the introduction of a new curriculum or policy will only have the desired impact if it is implemented consistently and as planned across most institutions. T-TEL therefore provided support to the National Inspectorate Board (NIB) to deliver on its institutional mandate of quality assurance and inspection in basic schools. NIB developed a new school inspection framework in 2019 which took account of the NTS and the new pre-tertiary curriculum but roll-out of this framework was hindered by a chronic shortage of inspectors and resources. T-TEL thus supported NIB to train over 300 newly recruited team inspectors on the revised inspection approach and to orientate them on the NTS and Gender & Inclusion responsiveness.

Development and roll-out of the Quality Assurance, Accreditation and Assessment Instrument (QAAAI) for Colleges of Education: The National Accreditation Board (NAB) has responsibility for the accreditation and quality assurance of tertiary institutions including CoEs. Existing quality assurance and inspection instruments focused predominantly on inputs and infrastructure and did not take sufficient account of the specific requirements of CoEs and teacher education. T-TEL therefore supported NAB to develop the Quality Assurance, Accreditation and Assessment Instrument (QAAAI) as a dedicated quality assurance and re-accreditation mechanism for teacher education institutions which places greater emphasis on teaching, learning and assessment than the previous system. Further information on the QAAAI and the College-level changes which it helped to bring about are set out in section 5.2 of this report.

National Teacher Education Policy development with NCTE: T-TEL worked with NCTE to develop several national teacher education policies to provide guidance and direction to CoEs so that they could develop their own institutional policies signed off by their College Councils and aligned to these national policies. These policies included the National Teacher Education Assessment Policy, Gender, Equality and Social Inclusion (GESI) Strategy & Action Plan, Information Communication Technology (ICT) Policy for Colleges of Education and Sexual Harassment Policy. These policies were then assessed at the institutional level through the QAAAI.

The national policy reforms outlined above reinforced the institutional level behaviour changes taking place within CoEs and helped to ensure broader stakeholder engagement in the Government of Ghana's attempts to improve learning outcomes and shift towards a more interactive and student-focused education system.

5.2 Quality Assurance within Colleges of Education

A key aspect of T-TEL's work was to ensure that, by the end of the programme, all 46 CoEs were well-run and managed tertiary institutions working effectively to implement the new B.Ed. in partnership with their mentoring universities.

In the early stages of T-TEL, before the full-scale of the reforms and introduction of the B.Ed. became apparent, T-TEL assisted CoEs to develop "Roadmaps to Tertiary Status" and College Improvement Plans (CIPs) linked to these Roadmaps.¹³ T-TEL then worked closely with NCTE

¹³ [June 5 Roadmap to tertiary status for Colleges of Education.pdf \(t-tel.org\)](#)

and NAB to define the institutional requirements and standards expected of CoEs when it became apparent that they would be running a degree level programme.

These standards were explicitly stated in the QAAAI¹⁴ which had 33 themes across 7 Quality Indicator areas as set out in the diagram below:

Quality Indicators	Aggregated Value
Leadership and Quality of Management	
Training and Learning	
Infrastructure and Environment	
Assessment	
Student Engagement	
Monitoring and Evaluation	
Partnership and Cooperation	
Total Aggregated Value	

Overall Rating Scale

Rating Score between **1.0 and 1.99 - Unsatisfactory** quality

Rating Score between **2.0 and 2.99 – Satisfactory** quality with **Good** features

Rating Score of **3.0 but less than 3.79 – Good** quality with **Outstanding** features

Rating Score of **3.8 to 4.0 – Outstanding** quality

Since 2016 all CoEs had been visited regularly by College Improvement Advisors (CIAs) contracted by T-TEL from the Institution for Educational Planning & Administration (IEPA) at UCC. These CIAs worked with College leadership and management to provide coaching and support to help them to develop and subsequently implement College Improvement Plans (CIPs) aimed at addressing identified areas of institutional weaknesses within individual institutions.

CoEs were incentivised to achieve objectives in these CIPs through the introduction of a results-based financing approach where they received funds from T-TEL if they could produce evidence that these objectives were achieved. A team of 5 T-TEL Zonal Field Supervisors recruited in early 2017 were responsible for working alongside CoEs to assist them with implementation and verification of achievement. One of the main advantages of this results-based financing approach was that it made CoEs appreciate the value of evidence and documentation as they were not able to claim funds for any objectives where they could not provide written proof that they had been achieved.

This support meant that CoEs were well placed when NAB finalised the QAAAI and informed all CoEs that they would be undergoing a formal re-accreditation process against the new Instrument before being allowed to implement the new B.Ed. from October 2018 onwards. 40 public CoEs were assessed by independent NAB teams in 2018 with a further 6 new CoEs assessed in 2019.

CoEs commented on the rigour and thoroughness of NAB's assessment which was much more detailed and outcome focused than they had been used to before, with a much greater emphasis on the provision of evidence and on teaching, learning and assessment processes.

Overall, during the first QAAAI assessment round of 40 CoEs in mid-2018, 4 Colleges were rated 'Excellent', 26 were rated 'Good' and 10 were rated 'Satisfactory'. Looking across all CoEs there was generally good performance on 'Learner Assessment', 'Training & Learning' and 'Student Engagement' where fewer than 5% of Colleges scored lower than 'Good'. The

¹⁴ QAAAI [Quality Assurance - Appendix I.pdf \(t-tel.org\)](#)

areas where improvements were generally needed were on 'Partnerships & Cooperation' (45% of Colleges scoring Satisfactory or worse), 'Monitoring & Evaluation' (25% scoring Satisfactory or worse) and 'Infrastructure & Environment' (20% scoring Satisfactory or worse).

CoEs' QAAAI assessment reports provided a strong basis for College Councils to work with management and develop revised improvement plans to address identified weaknesses. A re-assessment by NAB in 2019 of all CoEs against the 'Partnerships & Cooperation' and 'Monitoring & Evaluation' QAAAI indicators showed that 38 out of 40 CoEs improved on the Partnership and Cooperation indicator with 32 CoEs showing sufficient improvement to move from one category to another (i.e. from 'satisfactory to good' or 'good to excellent'). 39 out of 40 CoEs recorded improvement against the Monitoring and Evaluation indicator with 30 of these showing sufficient improvement to move from one category to another.

The 6 'new' CoEs which entered the public teacher education system in early 2018 underwent their QAAAI assessment in 2019 with the results being released by NAB in 2020. All 6 CoEs passed their assessment with an overall rating of either 'Good' or 'Satisfactory'.

The QAAAI has proved to be a very useful instrument which has created an institutional incentive for CoEs to implement their institutional improvement plans and address identified areas of weakness whilst at the same time generating a wealth of performance information to enable NCTE and NAB to assess CoEs' relative strengths and weaknesses. Going forward with the proposed closer working relationship between universities and their affiliated CoEs the QAAAI should be adapted and used to assess the 5 mentoring universities to ensure that Ghana continues to set and enforce high standards for all teacher education institutions.

5.3 Leadership & Management and College Improvement Planning

T-TEL's leadership programme was framed within the organisational development and quality assurance model of institutional strengthening. The combination of these two approaches into one was intentional to address the specific needs of the CoEs in their journey to become autonomous tertiary education institutions.

T-TEL decided to use a coaching approach through the deployment of College Improvement Advisers (CIAs), combined with targeted leadership capacity development workshops for college leadership teams to improve management and leadership practices. T-TEL defined College leaders as including Vice-Principals, College Secretaries, Librarian, Finance Officer and Internal Auditors as well as Principals whilst Heads of Department were considered as middle leaders. Quality Assurance Officers were also included in all leadership training programmes. This approach proved beneficial as, during the life of the programme, several CoE staff in these positions successfully applied to become Principals as a good number of the existing Principals retired.

The regular leadership capacity development workshops provided an excellent opportunity for College leaders to share experiences and there was a noticeable growth in the level and quality of peer-to-peer interaction and learning taking place during these workshops.

T-TEL's leadership programme was firmly sited within the process of institutional strengthening to enable CoEs to achieve full autonomy as highly functioning tertiary institutions. This process began with Colleges undergoing a self-assessment exercise which was then used as a basis for developing College Improvement Plans.

College Improvement Plans (CIPs) - the CoEs' initial self-assessment explored areas of institutional development, such as leadership and management; the provision and quality of training and learning, and infrastructure and environment; the quality of student assessment and

engagement; processes for monitoring and evaluation and partnership and cooperation at a local, national and international level as appropriate. These were aligned to the national quality assurance framework for CoEs developed with NCTE and NAB. This formed the basis for annual self-assessment and performance improvement across various aspects of the work of the CoE. This is updated annually based on lessons learned and year-on-year progress.

CoEs were supported through the provision of technical assistance, to develop their CIPs in order to address identified areas of weakness within the seven principal areas of college practice –

1. Leadership and management
2. Quality training and learning
3. Assessment
4. Student engagement
5. Monitoring and evaluation
6. College environment and infrastructure
7. Partnerships and cooperation

CoEs were supported to develop a set of 15 policies, linked to national policies, to help guide their journey to tertiary status. These policies were important because the process of policy development, which was carried out in a participatory way with a range of CoE stakeholders, enabled leadership to have important conversations about the way in which institutions were operating.

When reflecting on the leadership and management programme many Principals mentioned that the development of these policies was an important step in democratising decision-making, empowering others through the medium of committees and reducing bottlenecks created by waiting for Principals to make decisions. Now that policies were in place decisions were referred to the appropriate Committee to decide or the actions that needed to be taken were clear because they were stated in the respective policy.

The full list of policies developed by all 46 CoEs is set out below:

- Gender and Inclusion Policy
- Sexual Harassment Policy
- Financial Management Policy
- Health and Safety Policy
- Staff Professional Development Policy
- Staff Code of Conduct
- Staff Appraisal Policy
- Student Admission and Exam Policy
- Teaching and Learning Policy
- Quality Assurance Policy
- Public Engagement Policy
- Assessment Policy
- Staff Recruitment Policy
- Acceptable use Policy
- Students' Engagement Policy

All CoEs also reviewed and revised their Vision and Mission statements to ensure that there was clarity and focus as to what they were trying to achieve. This helped to provide focus to the CIPs.

Once CoE governing Councils were re-constituted following the 2016 Presidential and Parliamentary Elections T-TEL also supported NCTE to provide comprehensive induction training for all Council members to ensure that they had a thorough understanding of their roles and responsibilities. This was the first time that this had happened in Ghana and it proved very successful. NCTE will now ensure that similar training is carried out in future for all newly constituted Councils.

T-TEL and NCTE collated all the materials used during their leadership training programme to produce a “Handbook on Leadership and Quality Assurance in Colleges of Education in Ghana” which contains the following topics: Principles of Leadership & Management; Operations Leadership; Strategic & Distributed Leadership and College Governance; Learning, Teaching & Assessment; Student Engagement; Facility Management; Partnership & Cooperation; Gender Responsiveness and Quality Assurance in CoEs.

T-TEL then used this experience to work with NCTE and NAB to develop a Professional Education Leadership Qualification Curriculum Framework (PELQCF). This Framework was developed through a consultative process involving the five public teaching universities, CoEs, education directors, education leadership practitioners and key agencies of the Ministry of Education. It is the first ever collectively agreed framework against which curricula for preparing professional education leaders in Ghana will be benchmarked and approved.

At baseline in October 2015 only 34% of Principals were demonstrating a defined set of leadership skills¹⁵. This percentage steadily increased over the course of the programme’s external evaluations to 63% in 2017, 83% in 2018, 85% in 2019 and 89% in 2020. It is important to note that there was a relatively high turnover of Principals over the lifetime of the programme so that most of the Principals in 2020 had been appointed since 2015. This meant that induction training into the leadership and management programme was provided in both 2018 and 2019 for new Principals.

From 2015 to 2018 T-TEL’s annual external evaluation also assessed the percentage of CoEs which had a full set of required management policies and the proportion of these which are assessed as being gender sensitive. This increased from 47% and 21% in 2015 to 96% and 81% in 2018.

	2015 baseline	2017	2018	2019	2020
Percentage of CoE leaders exhibiting a defined set of leadership and management skills	34%	63%	83%	85%	89%
Number and % of colleges with i.) a defined set of management policies which ii.) demonstrate a	i.) 47% ii.) 21%	i.) 82% ii.) 70%	i.) 96% ii.) 81%		

¹⁵ This defined set of leadership skills included: crafting and disseminating vision, mission and value statements, leading to the development of: college improvement plans, sets of policies, colleges undertaking self-evaluation, the creation of a gender responsive college community, the introduction and institutionalisation of quality assurance culture, the improvement of learning outcomes, the professional development of tutors, to have a clearer understanding of the governance systems of the college and be able to practice transformational and distributed leadership strategies.

2015 baseline 2017 2018 2019 2020

2015 baseline	2017	2018	2019	2020
defined set of gender-sensitive criteria				

5.4 Results-Based Financing

One of T-TEL's main aims was to create a teacher education system in which the 46 public CoEs were able to operate as high-performing autonomous institutions capable of problem solving and improving learning outcomes without external assistance. This was felt to be an important element of continuous system improvement once T-TEL support came to an end.

Colleges' ability to evaluate their performance against key performance indicators and put in place systems and processes to address under-performance is therefore very important as they develop into institutions which can guide their own continuous improvement.

The Payment by Result Fund (PBR) is a mechanism which was set up initially to incentivize the achievement of targets and objectives whereby payment is made only on the verification of agreed results achieved. It also promoted cross-learning and sharing of good practice among CoEs and the adoption of more effective approaches to CoE management and leadership strengthening through a collaborative approach.

Funding mechanisms, managed by T-TEL, have enabled CoEs to enhance their learning environment for student teachers in alignment with teacher education reforms over the past few years. Two of these mechanisms have helped to address gaps in technical and funding support whilst another is supporting CoEs to foster gender equality and social inclusive learning environments and the fourth – launched in 2019 – addressed the need for CoE staff to upgrade their qualifications and skills in line with the teacher education reforms introduced over the past five years.

The inclusion of funding mechanisms in T-TEL's programme design complemented other activities taking place within CoEs, such as tutor professional development, by providing CoEs with much-needed technical and financial support to address issues constraining their ability to deliver quality teacher education in ways that respect their autonomy and understanding of the space in which they operate. Both the Challenge Fund and the Payment-by-Results (PBR) Fund were developed in such a way that CoEs had the opportunity to test new ways of delivering quality pre-service teacher education and to make institutional improvements on their own terms, based on internally agreed priorities.

Challenge Fund projects, which were competitive, contributed to strengthen relationships between CoEs, their partner schools, district education offices and the wider communities including traditional and religious authorities, with many projects intentionally engaging at least one of these groups in their work. All CoEs held a stakeholders' engagement forum to kick start their projects where they engaged their key stakeholders and solicited their buy in for the respective projects. These ended in learning events at project close where CoEs and their stakeholders were hosted to share achievements, lessons, challenges and sustainability measures.

Challenge Fund projects ran from 2016 to 2017 and were generally successful, leading to successful innovations in several areas including teaching practice, development of teaching and learning materials (TLMs), teaching of science & mathematics, use of technology to support

student teachers remotely and the inclusion of more visually impaired student teachers.¹⁶ Despite these successes Colleges stated that they found the fund disbursement and reporting mechanisms to be cumbersome and time consuming. As a result, and in recognition of the growing maturity of the programme and the CoEs as institutions, from 2017 onwards the work of the T-TEL Funds team shifted to results-based financing (RBF) whereby, instead of receiving and then retiring funds for specific activities, CoEs had to demonstrate that they have achieved results within a pre-agreed framework at which point they would receive flexible financing which they could use to improve their CoE. The emphasis was thus shifted towards demonstrating results rather than accounting for expenditure.¹⁷

The PBR Fund had nationwide success, with assessments undertaken to create the baseline for the College Improvement Plans (CIPs) as part of the PBR process providing a strong basis for CoEs to improve in the areas identified during Quality Assurance Accreditation and Assessment Instrument (QAAAI) assessments.

The **Payment-by-Results (PBR) Fund** was designed to act as an incentive for all CoEs to improve their performance through the achievement of targets and objectives as set out in their College Improvement Plans (CIPs). It was used to provide additional support to CoEs which demonstrated progress in achieving certain results as set out in their College Improvement Plans (CIPs). The PBR fund rewarded the achievement of results but recipients were empowered to decide how those results should be achieved and delivered. The sum of GHS 10,000 (approx. \$2,400 in 2017 prices) was made available for the achievement of each prioritised objective. Three objectives could be achieved by each CoE in every funding and assessment round, meaning a maximum of GHS 30,000 (approx. \$7,200) was available each round.

T-TEL developed a manual to explain the framework within which the PBR Fund would be managed and awarded. Learning from the Challenge Fund and the PBR Fund informed the development of two further funds-

Gender Responsive Improvement Plan (GRIP) - which supported efforts to ensure that T-TEL's work on Gender and Inclusion moved beyond policy setting and capacity building amongst CoE leadership and Gender Champions to become fully embedded in the actions, thoughts and behaviour of tutors and student teachers. GRIPs were developed collaboratively by CoEs based on the findings of their Gender Scorecards so as to deliver practical actions to improve gender awareness, responsiveness and inclusivity. T-TEL provided extensive technical support to enable CoEs develop their GRIP action plans, implementation and reporting. A total of GHS 50,000 (approx. \$11,800 in early 2019) was available to each CoE under the GRIP.

Transition Support Fund (TSF) – a Ministry of Education led funding mechanism to enable CoEs to access funds to be used for professional development and upgrading of teaching and non-teaching staff. The primary objective was to enable tutors to meet the minimum required academic qualifications standards set out by NCTE and NAB before 2022. This was available to CoEs who could provide evidence that they were aligning the implementation of the new B.Ed. to the Government Policy for Teacher Education Reform and that what they are doing reflected the requirements of the National Teachers' Standards (NTS) and the National Teacher

¹⁶ T-TEL held several Challenge Fund Learning Events where CoEs could share the results achieved and lessons learnt, reports of this events can be downloaded here: [T-TEL CF Learning Event Report.pdf \(t-tel.org\)](#); [Challenge Fund Learning Event Report July 11 & 12, 2018.pdf \(t-tel.org\)](#); [Challenge Fund Learning Event Report July 18 & 19, 2018.pdf \(t-tel.org\)](#)

¹⁷ Which is not to say that accounting for expenditure was not a focus of T-TEL. In 2019 and 2020 T-TEL worked closely with NCTE to introduce QuickBooks accounting software across all 46 CoEs to assist their shift from a paper-based to a web-based accounting system.

Education Curriculum Framework (NTECF). A total of GHS 100,000 (approx. \$17,500 in early 2020) was available to each CoE under the TSF, split into two assessment rounds.

As tertiary institutions, the governance systems and structures of CoEs had to be strengthened to ensure appropriate challenge and scrutiny of leadership, management, academic standards and student experience. The CoEs' ability to evaluate their performance against key performance indicators, develop improvement plans and put in place systems and process to address under-performance was therefore very important as they developed into institutions that were responsible for their own continuous improvement.

It is also promoted cross-learning and sharing of good practice among CoEs, and the adoption of more effective approaches to college management and leadership strengthening through a collaborative approach.

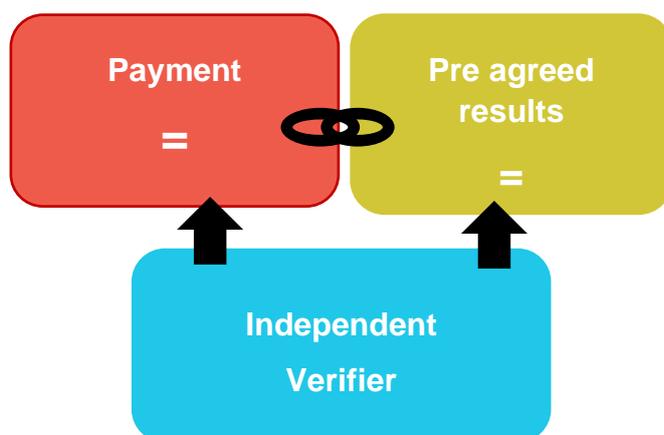
College Improvement Plans (CIPs) – as stated earlier CoEs were supported through the provision of technical assistance, to develop their CIPs in order to address identified areas of weakness within the seven principal areas of college practice. The PBR Fund was open for two years and to receive the award, CoEs had to demonstrate progress in achieving objectives outlined in CIPs. Contracts (PBR Agreements) between T-TEL and each College of Education were signed and witnessed by the NCTE.

College leadership and the governing councils were responsible for implementing and monitoring the CIPs. T-TEL, through the Grants Team, were responsible for verifying the evaluation, reviewing it and recommending for approval by NCTE.

Guidelines on use of PBR Awards - Even though the PBR grants were to be used at the discretion of the CoE, in compliance to the grant agreement, the reward was to be used to further enhance the improvement and quality of teacher education.

For the benefit of doubt and avoidance of misapplication and misappropriation of the fund, a set of criteria were developed to guide the CoE in the expenditure of the funds and attached as an annex to the PBR agreement signed with CoEs. This ensured that the grant was not used for activities that are or may be deemed to be of personal benefit to anyone or group of individuals within or outside of the CoE. These funds were audited as part of overall programme audit.

Funding was linked to delivery and verification of results achieved.



The key steps of T-TEL's RBF were:

- **Step 1: Developing 'work plans' using agreed tools**

- **Step 2: Signing Fund Agreement**
- **Step 3: Implementing and reporting on ‘work plans’**
- **Step 4: Verifying results**
- **Step 5: Paying for achieved results**

In Step 1 CoEs developed ‘work plans’ using agreed tools through a facilitated process. This serves as a learning process for the CoE and provides a baseline, identifies gaps against set indicators and CoEs prioritize what they will be implementing based on their need.

In Step 2 grant agreement signed which includes work plans developed and payment structure.

In Step 3 CoEs implement activities to achieve results and draw on support from T-TEL when required. Reports and supporting documents are submitted for review and constructive feedback is provided for revision.

In Step 4 onsite monitoring and evaluation visits by the T-TEL funds team where the Principals and management of the CoEs are engaged employing a process that allows the CoEs to self-reflect and self-discover key changes and learning taking place in knowledge, skills, attitudes and behaviours ‘before and now’. The reviewed reports are also discussed and this provides a platform to respond to any questions and support from the CoEs on how the reports are to be completed. The process aims at engendering long term sustainability of the achievements that have been set in motion.

All key evidence in support of achieved objectives are also evaluated on site and in cases where additional evidence is required the CoE is asked to provide this when submitting their revised reports.

In Step 5 funds are disbursed following the revision of reports based on feedback during validation visits and approval of recommendations by oversight agency of CoE.

The following are the key lessons learnt in T-TEL’s PBR design and implementation:

1. Focus on outcomes - As much as possible the focus should be on outcomes – which reflect tangible improvement. This means there should be a shift away from activities or outputs (e.g. number of tutors trained, number library tables and chairs purchased).

2. Define results metrics that are linked to the right incentives - Careful thought is required to define payment metrics in ways that do not create perverse incentives. For example, payments should be linked to tangible results and not only completely achieving all targets of a plan without making any impact. This means grantees are even more motivated and will use lessons learnt from mid-term engagements to complete implementation successfully.

3. Allow grantees flexibility to deliver interventions - Development interventions can be complex and there is no one-size-fits-all approach. Grantees should be supported to develop and implement interventions that proves to work in their specific context. This may mean creating a ‘safe space’ for them to innovate, learn, ‘do’ and adapt. It may also mean providing sufficient implementation, monitoring and evaluation time.

4. Adapt organizational structure and decision-making processes – this will allow for some decisions to be made by front liners close to grantees to ensure that they are receiving the support required to improve and achieve outcomes. This will require trusting their observations of what may or may not be adversely affecting outcomes.

5. Be clear on stakeholders’ role - Stakeholders are key partners and should be involved from the beginning of the development of work plans. This ensures their buy in and then support

later on during implementation. Depending on who the stakeholders are, they can also be co-funders who take over funding and this can ensure sustainability of the initial investment.

6. Robustly verify outcomes - In order to ensure clear and credible evidence of outcomes achieved, results must be verified by a specialized programme's person or an independent and specialized third party before grants are disbursed. An approach that is participatory and enables reflective learning and ownership should be used.

7. Collation of data – opportunities are created for quality data collection, which is critical to the evaluation of programmes and determining what works or not. The depth required to link payments to results depends on what is measurable in a specific context and the level of attribution that a particular funder requires.

8. Use of Funds – how grant funds are utilized have to be spelt out clearly in the agreement to ensure that the grantee organization benefits as a whole.

6 Curriculum reform and development within teacher education institutions

The introduction of a new 4-year B.Ed. in Initial Teacher Education as the minimum entry standard for all new entrants to the teaching profession in basic schools is the centrepiece of Ghana's teacher education reforms. It replaced the Diploma in Basic Education (DBE) for all new entrants to CoEs in the 2018/19 academic year and the first graduates of the B.Ed. will graduate in 2022/23. As well as raising the entry standards for all new teachers the B.Ed. represents a radical shift in the way that teachers are trained in Ghana, being much more practically focused than the DBE, adhering to a National Teacher Education Curriculum Framework (NTECF) which is linked to the National Teachers' Standards (NTS) and which blends content and pedagogy whilst making provision for specialisation with different training provided for Early Grade, Upper Primary and Junior High School teachers.

6.1 B.Ed. Curriculum Development and Implementation

The key focus of curriculum reform has been to engage with stakeholders in education to shape a radical rethinking and redesign of teacher education in Ghana. This has led a cultural change that has brought about collaborative learning and built a community of practice across the teacher education sector. Key elements of the change are: the integration of subject content and pedagogy in teaching, a greater emphasis on formative assessment, age-phase specific training, raised awareness of equity and diversity issues and the use of inclusion to address these, increased timing and weighting to mentor supported teaching in school, preparation to teach the new pre-tertiary curriculum and the integration of digital tools in teacher education delivery. It has been an iterative process with each step taken building on the vision of the T-TEL project for preparing inspirational new teachers for Ghana. This vision is enshrined in the National Teachers' Standards (NTS) and the National Teacher Education Curriculum Framework (NTECF) which were developed with stakeholders from across the education system.

The change process involved several phases:

The **first phase** entailed situational research and five large stakeholders' fora to discuss issues impacting effective teacher education in the country which were followed up with relevant stakeholder meetings. The stakeholder groups consulted included: student teachers, teachers' unions, teacher education tutors, university leaders, the parliamentary educational select committee and Ministry of Education.

The **second phase** involved shaping the development of government policies, the development of the National Teachers' Standards (NTS) and the National Teacher Education Curriculum Framework (NTECF) and the democratisation of teacher education including beginning discussions on the affiliation of CoEs to five public universities.

The main features of the NTS are presented in a summarised form overleaf:

The Standards are divided into three main domains, each with its own sub-divisions:

Professional Values and Attitudes

Professional Development

Community of Practice

Professional Knowledge

Knowledge of Educational Frameworks and Curriculum

Knowledge of Learners

Professional Practice

Managing the Learning Environment

Teaching and Learning

Assessment

These three domains and aspects encompass what teachers should value, know and do, and intersect with one another to develop a teacher competent enough to teach at the end of their four-year initial teacher training, as illustrated in the Venn diagram where the synthesis of the three domains represents this competence.



The National Teacher Education Curriculum Framework (NTECF) sets out the essential elements which any Initial Teacher Education (ITE) training programme in Ghana needs to cover in order to produce teachers who can demonstrate the professional values and attitudes, professional knowledge and professional practice outlined in the NTS.

As with the NTS, a collaborative and consultative multi-stakeholder writing process was used when producing the NTECF with the intention that it:

- i.) Fully prepares student teachers to teach the basic school curriculum, in particular English, Mathematics and Science, concentrating on relevant subject and pedagogic knowledge;
- ii.) Equips student teachers to develop pupils' languages (Ghanaian and English) and literacy so all can access the curriculum;
- iii.) Gives higher status to practical teaching experience through supported and assessed teaching in school;

- iv.) Widens the focus of assessment to include in-school learning and assignments as well as examinations, with students being assessed against the NTS;
- v.) Deepens student teachers' curriculum knowledge through introducing level specialisms- KG-P3, P4-P6, JHS and SHS;
- vi.) Emphasise a more interactive, learner-focused approach to training, modelling good teaching.
- vii.) Is explicit in addressing vital cross-cutting issues: equity and inclusivity, assessment, core skills, professional values, action research and reflection;
- viii.) These essential issues have shaped the Curriculum Framework, which is underpinned by the NTS as the determiner of what a 'competent' teacher is, and
- ix.) The goal is to ensure that every child's right to competent teachers who are able to support learning and progress is fulfilled.

The Framework is structured around 4 pillars of teacher education and 5 cross-cutting issues which are set out in the table below and the diagram overleaf.

Four Pillars of Teacher Education	The essential knowledge, skills and understanding necessary for effective teaching
1. Subject and curriculum knowledge	Secure content knowledge for specialism and subjects is the key to teaching the school curriculum.
2. Literacy studies (Ghanaian languages and English)	Language is the key to success in education and life. Getting this right is the most critical issue for our children's future and for education in Ghana.
3. Pedagogic knowledge	Knowledge of instructional and assessment strategies is key to supporting the learning and progress of all pupils.
4. Supported teaching in school	Extended, guided and assessed teaching which enables student teachers to apply their knowledge and the key to improving their teaching.
Cross Cutting Issues	These are issues that cut across all the four pillars and are necessary for teachers to ensure learning for all.
Equity and inclusivity	Cultural and social linguistic diversity in Ghana is manifest in all classrooms. Understanding this is key to addressing barriers to learning, and teaching for diversity.
Professional values and attitudes	The key to professionalism, the development of professional identity, social norms, ethics and practices of the school and teaching profession, including reflective practice and a commitment to lifelong learning.
Assessment strategies	Assessment literacy, understanding the principles and practices of assessment and testing, is key to effective planning for differentiation and making provision for all pupils in the ages, subjects and contexts being taught.
Core skills	The competencies and attributes key to being an effective teacher, including: critical thinking, problem solving skills, creative thinking, communication skills, information and communications technology, social skills, and commitment to life-long learning.
ICT	A key to effective communication, teaching and learning in the 21s century.



The **third phase** covered the activities involved in the intensive writing of the curriculum and the change from 3-year diploma to a 4-year B.Ed. teacher education degree programme for all student teachers with partners from the universities, Colleges of Education and other expert writers which was then approved by NAB.

NCTE produced a Curriculum Writing Guide which provided universities with further details of how the NTECF could be operationalised as a 4-year B.Ed. in Initial Teacher Education with KG-P3, P4-P6 and JHS specialisms. The 5 public teaching universities - the University of Cape

Coast, University of Education Winneba, University of Ghana, Kwame Nkrumah University of Science and Technology and the University of Development Studies- were then given an option by the Minister of Education to either write the new curriculum individually or in partnership. In either case support was available through T-TEL to support in the writing of the B.Ed. curriculum. The Minister further directed that the B.Ed. curriculum written by the universities must be aligned with the NTS and NTECF and submitted to NAB by accreditation.

Subsequently the University of Cape Coast decided to write their curriculum. The other four universities, under the leadership of the University of Education Winneba, chose to write together as a group and wrote formally to request support from T-TEL.

The participatory curriculum development process led by the four universities represented an unprecedented cross-university and college collaboration which enabled many of the best minds in Ghanaian teacher education to work together. In total 95 professors, lecturers and CoE tutors made up the expert writing group, including representatives from each of the four universities and 13 CoEs. In addition, two UNICEF-funded inclusion, equity and gender consultants provided expert advice to ensure that inclusion featured prominently and appropriately across all curriculum materials. Overall, 273 courses in 18 subjects were written and reviewed covering all subjects and learning areas of the Basic School Curriculum. The curriculum also includes supported teaching in school across the three age phases (KG-P3, Primary 4-6 and JHS1-3) of the B.Ed.

The NAB assessment team noted that the curricula produced by these four universities were of a high standard and received accreditation in July 2018. NAB constituted an international assessment team involving American and British educational experts and they noted that the curricula produced by the 4 universities was “genuinely world class” and provided an exciting, coherent and structured approach to teacher education within Ghana. They noted that many countries (including the UK) could learn from the collaborative and consultative and structured approach which Ghana had used to develop this teacher education curriculum.

The University of Cape Coast also produced a B.Ed. curriculum which, after several amendments, was accredited by NAB as meeting the requirements of the NTECF.

The **fourth phase** included the affiliation of 46 CoEs to the five public universities to implement the new B.Ed. Curriculum for initial teacher preparation. The team supported all the universities in their work with CoEs to develop and implement the curriculum in several ways including workshops on inclusion and the use of Universal Design for Learning.

Prior to 2019 all 46 CoEs had been affiliated to the University of Cape Coast. With the introduction of the new B.Ed. the Ministry of Education and NCTE decided that it would be beneficial to extend affiliation to the other four public universities in Ghana with experience and expertise in education- namely the University of Education Winneba, Kwame Nkrumah University of Science & Technology, University of Development Studies and University of Ghana. As well as enabling a wider range of skills and expertise to contribute towards teacher education such a move has also democratised the system and created the potential for collaboration and competition between the universities.

NCTE and the Conference of Principals of Colleges of Education (PRINCOF) were responsible for deciding upon the allocation of CoEs to universities and this was done on the basis of specialisms (with CoEs with expertise in certain subjects, such as French, being affiliated to universities with a strong track record in this area) and geographical distance. UCC is now affiliated to 14 CoEs, UEW to 15, UDS and UoG to 6 each and KNUST to 5. Affiliation agreements were prepared and signed by universities and CoEs. These agreements set out the roles and responsibilities of both parties up until 2023 during what is termed a ‘transition’ period.

More work now needs to be done to agree upon the final institutional arrangements which will be put in place for universities and CoEs beyond 2023. Stakeholder consultation on these arrangements will take place in 2021 and, amongst others, will involve the religious organisations who have been responsible for establishing a significant number of the CoEs in Ghana.

The **fifth phase** involved coordinating the writing of B.Ed. course manuals for each area of specialization so that there are manuals for each year and course for those CoEs operating the curriculum developed by the four universities.

These course manuals were written collaboratively through a series of workshops and meetings which stretched from 2018 until 2020. The purpose of the course manuals is to ensure that the principles and practices of the NTECF and NTS are fully embedded in initial teacher preparation. Each manual provides details as to the goal and content of the specific course, the assessment components, recommended reading and lesson outlines. It is therefore something which can be of great use to both tutors and student teachers. In total, by the end of 2020, 271 Course Manuals have been written for the Early Grade, Upper Primary and JHS Specialisms across Years 1, 2, 3 and 4 of the B.Ed. as summarized in the table below.

Number of Course Manuals by Specialism and Semester

	B.Ed. Early Grade specialism	B.Ed. Upper Primary specialism	B.Ed. JHS specialisms	All specialisms
Year 1 Semester 1	7 (all specialisms study the same courses in Year 1)			7
Year 1 Semester 2	7 (all specialisms study the same courses in Year 1)			7
Year 2 Semester 1	7	7	41	55
Year 2 Semester 2	7	7	42	56
Year 3 Semester 1	8	7	48	63
Year 3 Semester 2	6	6	23	35
Year 4 Semester 2	3	2	43	48
Total	31 (45 in total including Yr 1)	29 (43 in total including Yr 1)	197 (211 in total including Yr 1)	271

Course Manuals are available to download from NCTE's B.Ed. Curriculum Resources Hub. At this stage as the B.Ed. has only been taught for 2 years only Year 1 and Year 2 Course Manuals are available to download. Years 3 and 4 will be made available online when those years commence. [Home - Curriculum Resources T-Tel \(ncte.edu.gh\)](https://ncte.edu.gh)

In addition to the courses listed above T-TEL supported the development of additional curricula and supporting materials including the Arabic Language Curriculum for Years 1 to 4 and Liberal and African studies and Religious and Moral Education Courses for Year 1. These courses were developed and accredited in 2019 as additions to the B.Ed. Ghana's Islamic community is very happy with the work that has been done on the Arabic Curriculum as this is an important step in formalising and professionalising Arabic education in Ghana, especially important now that Arabic Language has been introduced as a subject of study in JHS. Once accredited by NAB the Arabic Curriculum will enable those who wish to train as Arabic teachers to undergo formal certified training in a College of Education. It also presents a big opportunity to train existing Arabic teachers who wish to gain a formal qualification.

The **sixth phase** involved the creation of the National Implementation Support Team (NIST) chaired by NCTE, to oversee and coordinate the reforms, the development of the National

Teacher Education Assessment Policy (NTEAP) by NAB to guide assessment of the new curriculum, and support to universities in developing and implementing roadmaps on curriculum implementation and the affiliation process.

Assessment is critical to the changes which Ghana is trying to bring about in teacher education and behaviour and attitudes will not really change from rote learning unless the assessment system shifts too. This is why the NAB approved the NTEAP in 2019. The NTEAP sets out a standardised approach to assessment which needs to be followed by all universities and CoEs to ensure consistency in the grading of the B.Ed. in Initial Teacher Education. The NTEAP guides how student teachers will be assessed with a greater emphasis on formative assessment of course work (30%) and on assessment of school placements (30%) and less emphasis on examinations (40%). It allows tutors to play leading roles in the assessment of student teachers through the use of portfolio assessment, mentoring, observation, project work and presentations.

NCTE through NIST held discussions with all 5 universities and they have agreed to implement the NTEAP from the start of the 2020/21 academic year onwards for all new entrants whilst some universities have already started implementing the NTEAP for 2019 entrants.

In addition to the NIST the Ministry of Education's Reform Secretariat also has an oversight role to play in ensuring the effective implementation of teacher education reforms.

NCTE as a 'reform owner' has to produce an annual Roadmap for Teacher Education which is signed off by the Reform Secretariat. This Roadmap contains quarterly targets and indicators which need to be achieved and includes many of the activity areas set out in this report. The Executive Secretary of NCTE then signs a performance contract with the Minister of Education agreeing to implement the Roadmap as planned. The Reform Secretariat then assists in producing quarterly performance reports and holding Accountability to the Minister sessions. This system started in 2019 and to date NCTE has been one of the most successful national agencies in terms of achieving annual Roadmap targets.

Much has been learned during T-TEL, not least that the endeavour to achieve dramatic improvements in the quality of preparing new teachers and in the learning outcomes of the children that they will be teaching is a massive undertaking. Through the process T-TEL has identified, and continued to apply, five key levers for success:

Multi-stakeholder and political engagement and participation, all stakeholders putting their weight behind the reform and '*Harnessing the wisdom of (informed) crowds*'

Adherence to the nationally defined vision, principles and practices of the reform at all stages

Genuine collaboration and commitment in the design and writing of the curriculum and related materials across Universities, Colleges and Government agencies

Ongoing engagement with all five universities and their affiliate Colleges of Education to support and shape their progress

Persistence, tact, and patience with stakeholder engagement. For each of the challenges encountered across the six years, once the relevant stakeholders were engaged in an ongoing and fruitful dialogue, the challenges receded, and positive results were achieved. The deep-rooted commitment to experience-related beliefs and practices cannot be underestimated

These factors remain essential in turning the rhetoric of reform into the reality of implementation and can be applied in other educational reform scenarios.

6.2 B.Ed. Curriculum Implementation at Institutional Level

The development and accreditation of a ‘world class’ B.Ed. qualification was an important step in improving teacher education in Ghana but its success would lie in the quality of implementation at institutional level.

Affiliation agreements between universities and CoEs set out the roles and responsibilities of both parties when it came to B.Ed. implementation and T-TEL’s zonal teams used an Affiliation Checklist to ascertain the extent to which these were being implemented as planned. Progress and issues were then reported to the National Implementation Support Team (NIST) which met quarterly, chaired by the Executive Secretary of NCTE.

T-TEL and NCTE also worked with the Ministry of Education to design the Transition Support Fund (TSF) which was a results-based financing instrument to incentivise and encourage tutors and CoEs to implement the B.Ed. curriculum as planned. NAB and NCTE regulations state that the minimum academic qualification for anyone teaching a Bachelor degree course in a Ghanaian tertiary institution should be a Masters in Research. In 2018, when CoEs made the transition from teaching the DBE to the B.Ed., almost 1,000 of the 1,900 tutors did not have this minimum qualification level so there was an urgent need to focus on upgrading through the provision of part-time courses which tutors could fit around their job.

The TSF was an investment of GHS 4.6 million to upgrade the qualifications of teaching and non-teaching staff across all 46 public Colleges of Education. CoEs could access up to GHS 100,000 each which they could then use for the professional development and upgrading of their staff. To access this GHS 100,000 (GHS 50,000 per assessment round) each College had to demonstrate that they were implementing the new B.Ed. curriculum in line with the NTS and NTECF.

27 assessors, including staff from NCTE and NAB, were deployed to all 46 CoEs for the first round of TSF assessment visits in November 2019. A 3-member assessment team visited a batch of CoEs and partner schools assigned to them, submitted a report and made recommendations for the award of funds based on the outcome of their visit. Using an agreed assessment tool, the four elements that were assessed during the TSF visit were:

- Teaching and learning of Student Teachers
- Assessment of student teachers
- Preparation for, and student teachers’ experience of, STS
- Tutor Professional Development

33 out of 46 CoEs passed the November 2019 assessment and received GHS 50,000 each for professional development and staff upgrading. For those 13 CoEs who did not pass their assessments the two areas which generally required improvement were STS (where 6 CoEs failed to meet the required standards) and PD/TPLC session attendance (where 6 CoEs also did not meet the standard).

The 13 CoEs which did not pass their initial TSF assessment were reassessed in early 2020 and 12 of them passed their re-assessments. Generally, the TSF assessments showed that B.Ed. implementation is progressing well and the external assessment process was useful in identifying areas where further attention and improvement is required. Tutors are generally responding well to the challenges and opportunities presented by the new curriculum but a general observation across most CoEs was that tutors’ use of interactive teaching approaches is largely restricted to group work when there are a wide range of other approaches and techniques which they could be using. A further observation is that the new weekly TPLC sessions introduced by the University of Cape Coast in their affiliated CoEs generally provided more opportunity for tutors to practice interactive approaches than the PD sessions

implemented in CoEs affiliated to the other four universities. This was taken into account in early 2020 when all five universities designed weekly sessions for Year 1 Semester 2.

It is still too early to have definitive evidence that B.Ed. student teachers will outperform their DBE predecessors. T-TEL's annual external evaluation attempted to contribute towards the evidence base by conducting a comparative assessment of Year 1 and Year 2 student teachers in both 2019 and 2020 (2020 assessment conducted online and over the phone) against an agreed set of graduate attributes. The results of this assessment are set out in the table overleaf. 58% of Year 2 B.Ed. student teachers in 2020 were assessed as having these attributed compared with 40% of Year 2 DBE student teachers in 2019. This is an encouraging finding and suggests that B.Ed. student teachers are likely to be more skilled and competent than their DBE predecessors, particularly as they are undertaking a 4-year course compared to 3 years for DBE. It is also encouraging that the comparative figures for Year 1 B.Ed. student teachers increased from 38% in 2019 to 47% in 2020 which could suggest that CoEs are becoming more effective at teaching the new B.Ed.

	2019	2020
Percentage of student teachers that demonstrate higher levels of expected graduate attributes identified in the curriculum writing guide	Year 1 (B.Ed.)– 38%	Year 1 (B.Ed.) - 47%
	Year 2 (DBE)– 40%	Year 2 (B.Ed.) – 58%
Percentage of student teachers demonstrating an understanding and application of the National Teachers' Standards	32%	30%

It is somewhat discouraging however that there has been no real change in the proportion of student teachers demonstrating an understanding and application of the NTS (32% in 2019 to 30% in 2020). This suggests that more effort needs to be made to raise awareness and understanding of the NTS amongst 1st and 2nd Year student teachers.

7 Gender equality and social inclusion (GESI)

T-TEL's cross-cutting work on Gender Equality and Social Inclusion (GESI) has focused on promoting inclusion and gender responsiveness within Ghana's teacher education system. This has involved supporting CoEs to promote equality and inclusion across all aspects of their work including policies, budgets, classroom practices and within the entire college environment. It has taken time for these approaches to yield results, with metrics on GESI lagging behind other areas of the programme for the first few years of implementation, but in recent years there has been an encouraging improvement in observed performance across a number of key GESI indicators.

T-TEL's approach has been to mainstream gender and inclusion considerations within all programme areas. For the first few years of the programme there was a greater focus on gender than inclusion but positive steps have been taken over the past twelve months to ensure that visually impaired and hearing impaired student teachers are able to participate fully in teacher education.

Baseline assessments in CoEs and partner schools, carried out in 2015, showed that there was very low awareness and use of gender sensitive instructional strategies with fewer than 2% of tutors and mentors demonstrating such strategies.

T-TEL attempted to address this by mainstreaming gender considerations within Tutor Professional Development (TPD) sessions, Teaching Practice Handbooks and the leadership and management training provided to Principals and other senior leaders within CoEs. Whilst this had some impact it was decided that more needed to be done if there was to be a significant shift in knowledge, attitudes and behaviour.

T-TEL therefore developed a "Gender Handbook for Teaching Practice Mentors" as support material to help ensure that more mentors use gender sensitive approaches and instructional strategies.¹⁸ T-TEL also produced a "Gender Responsive Scorecard for CoEs"¹⁹ to enable CoEs to self-assess their current level of performance against 13 gender responsive competencies. These competencies included: classroom practice is gender responsive; tutors challenge traditional gender roles during lessons; CoE practices, activities and protocols are gender responsive; CoE infrastructure is gender responsive etc.

Whilst these Gender Responsive Scorecards enabled CoEs' nominated Gender Champions to gain a fair understanding of the areas where they needed to improve this did not generally translate into institutional activity to address issues. Instead gender was perceived by many CoEs as being something which was the concern of the Gender Champion rather than the wider CoE community.

T-TEL decided to use a result-based financing approach to stimulate wider interest and attention to gender issues within CoEs through the introduction of Gender Responsive Improvement Plans (GRIPs) in 2018. GRIPs were action plans set by CoEs based on a self-assessment of their strengths and weaknesses against a Gender Scorecard. The successful achievement of the objectives in these action plans qualified CoEs to receive up to GHS 50,000 of results-based

¹⁸ [T-TEL-GENDER-HANDBOOK FOR TEACHING PRACTICE MENTORS.pdf \(t-tel.org\)](#)

¹⁹ [Gender Responsive Scorecard.pdf \(t-tel.org\)](#)

financing from T-TEL and NCTE which they could use towards any aspect of CoE improvement that they wanted. This played a big role in increasing the attention and awareness which CoEs paid to gender and inclusion.

In the 2018/19 academic year 34 out of 36 participating CoEs achieved their set of 3 GRIP objectives in full whilst 1 CoE achieved 2 out of 3 of their objectives in full. In total 105 out of 108 objectives were fully achieved - an achievement rate of 97%. It is pleasing to see that the GRIPs have led to tangible progress and increased understanding of gender issues (inclusion is still not as well embedded as it could be) across all participating CoEs. A further 6 'new' public CoEs developed and implemented GRIPs which were assessed as being achieved in full in 2020.

Some of the results which CoEs have achieved through their GRIPs are set out include:

- Capacity support for college staff on Gender Equality and Social Inclusion (GESI) ensuring that both classroom and college community practices are GESI responsive.
- The construction and effective use of washrooms and changing rooms which address gender and inclusion needs.
- Almost all CoEs have developed sexual harassment policies that are properly aligned with NCTE's sexual harassment policy guideline
- Introduction of gender and inclusion issues in extra curricula activities through platforms such as Gender Clubs and periodic seminars. These platforms serve as avenues for awareness creation, and build confidence of student teachers (especially female students) which can potentially increase the number of female students taking up leadership roles
- Mentors and student teachers have been equipped with knowledge and skills to address issues of gender and inclusion in some basic schools

One notable impact of the GRIP implementation process was the effort by all CoEs to address sexual harassment in their institutions. Paramount of these was the development of sexual harassment policies, and awareness creation on sexual harassment where colleges used the 16 Days of Activism period (25th November to 10th December) in 2019 to intensify awareness and sensitization on sexual harassment within the college community. Beyond awareness creation, CoEs established their formal and informal response systems by appointing and training Safe Space Focal Persons and Grievance Committee Members to make it easy and possible for victims of sexual harassment to seek redress. These efforts have translated into 83% of CoEs having dedicated and effective sexual harassment reporting systems.

For the first time in teacher education it feels as if tutors, mentors and student teachers are starting to understand and prioritize gender issues. The consensus across board from external evaluation of CoEs is that their knowledge has been enhanced and they are to a large extent adopting participatory approaches, contextualizing and situating the training acquired through GRIPs and other T-TEL activities in their various classrooms. This is enabling them to develop gender and inclusive plans and take decisions that address the needs of all learners.

Whilst there have been GESI related improvements in CoE practices and policies the same is also true when it comes to the content of the new B.Ed. curriculum in Initial Teacher Education. The new B.Ed. which has replaced the Diploma in basic education in CoEs is a necessary step in raising the status of teachers and improving the quality of education in Ghana. With support from UNICEF gender and inclusion has been mainstreamed throughout the new B.Ed. curriculum and a Toolkit has been developed to support CoEs and universities to implement these aspects effectively.

Whilst all this progress is encouraging and should be praised it is also important to note that there are still several significant constraints and issues when it comes to GESI within the teacher

education system. Stakeholders participating in the National Gender and Inclusion Summit which took place in May 2019 helped to identify a number of issues including the following:

Issue 1: Under-representation of women in Colleges of Education. There are relatively fewer female principals, tutors and student tutors. This has helped to make many CoEs a male dominated environment, with high proportions of males in leadership, administrative management, admissions and enrolment. There is little evidence of effective strategic recruitment initiatives to increase the proportion of female principals or tutors.

Issue 2: Issues with Inclusive Education including lack of data on enrolment and lack of investment in appropriate equipment and facilities.

Issue 3: Inadequate measures within current policy frameworks to ensure the genuine mainstreaming of gender and social inclusion concerns and effective implementation of GESI related policies in the colleges. Whilst policy frameworks exist and all CoEs have made commendable efforts to ensure that they have appropriate and responsive policies in place these efforts are undermined in many instances by implementation issues. One of the most serious constraints to implementation is a lack of dedicated funding and budgetary support and a belief amongst some CoEs that they are not allowed to include a specific and dedicated GESI budget in their annual budgeting and reporting processes.

Issue 4: Deep rooted discriminatory socio-cultural and institutional practices lead to marginalization and exclusion in CoEs. Whilst CoEs have developed policies which are generally responsive to GESI issues the fact remains that there are individuals within CoEs who hold discriminatory or prejudiced beliefs which can marginalize women, girls and disadvantaged groups. The beliefs and practices of these individuals, regardless of the generally positive policy environment, can reinforce inequality and heighten vulnerability of woman and marginalized populations within CoEs.

Issue 5: Implementation of the new B.Ed. curriculum within CoEs must ensure that gender and inclusion is given adequate attention. The new B.Ed. in Initial Teacher Education has been designed so that it pays significantly more attention to GESI issues than was the case with the previous Diploma. Gender and Inclusion has been mainstreamed across all subjects in line with the requirements of the National Teacher Education Curriculum Framework (NTECF). However, this mainstreaming means that there is a lack of specific subjects for gender, inclusivity and sex education. Implementation is therefore critical to ensure that tutors and university faculty are actually delivering the curriculum as intended.

Issue 6: Inadequate physical infrastructure to support gender equality and social inclusion in CoEs. Infrastructure needs to be expanded across almost all CoEs to ensure gender equality and social inclusion. In many cases a lack of adequate accommodation is cited as one of the reasons for enrolment disparities between male and female student teachers whilst inclusion issues are often hampered by physical constraints which restrict access to teaching and learning facilities. Infrastructure that is geared towards accessibility will improve space for students and ensure their convenience as well as equally promoting diversity.

In response to these issues T-TEL supported NCTE to develop the National GESI Strategy and Action Plan for Teacher Education 2020-2025 which aims to ensure that, by 2025, Ghana has a responsive teacher-education system that promotes equality and inclusion through the achievement of six objectives:

1. Increase representation of females at all levels of teacher education;

2. Facilitate effective implementation of GESI policies and related issues in CoEs;
3. Enhance inclusion and empower marginalized groups within teacher education;
4. Create a safe teaching and learning environment for students, tutors and staff of CoEs;
5. Expand and improve infrastructure to achieve GESI objectives; and,
6. Influence attitudes, behaviours and practice through communications and advocacy.

Each CoE has since produced an institutional GESI Strategy & Action Plan which sets out activities and targets against the six objectives above. NCTE will now monitor progress against these institutional plans and will also work with each university to provide technical advice, guidance and, if needed, financial assistance to their affiliated CoEs to enable them to achieve the targets in their plans.

These activities have led to measurable and meaningful changes in the extent to which the college community have embraced and understood gender and inclusivity issues. The proportion of tutors using gender-sensitive instructional methods in CoEs increased from 2% in 2015 to 80% in 2019 (and 74% in 2020 when learning was carried out online). The proportion of CoEs which were assessed as ensuring an inclusive, gender-sensitive environment for all staff and student teachers more than doubled from 17% in 2019 to 38% in 2020.

There have also been measurable changes in partner schools although these changes have been less pronounced than those within CoEs. The percentage of mentors using gender-sensitive strategies increased from 2% in 2015 to 25% in 2018 whilst 33% of partner schools were assessed as being inclusive and gender-sensitive in 2019 (this metric could not be measured in 2020 due to school closures brought about through COVID-19).

	2015 baseline	2017	2018	2019	2020
Percentage of beginning male and female English, science, and mathematics teachers demonstrating gender-responsive instructional strategies	1%	9%	19%	31%	
Percentage of male and female English, science and mathematics tutors using gender-sensitive instructional methods	2%	47%	68%	80%	74%
Number and % of male and female mentors using gender-sensitive practicum mentoring strategies introduced by T-TEL	2%	12%	25%		
Percentage of CoEs' partner schools that are inclusive and gender-sensitive				33%	
Percentage of colleges that ensure an inclusive, gender-sensitive environment for all staff and student teachers.				17%	38%

8 Responding to COVID-19

In response to the institutional closure of all Colleges of Education in March 2020 due to COVID-19, NCTE with the support of T-TEL established a Virtual Learning Taskforce for Teacher Education. This Taskforce included all five mentoring universities and engaged key stakeholders such as the Principals of Colleges of Education (through PRINCOF), College of Education tutors, non-teaching staff and student teachers (through their respective unions and representative bodies- CETAG, CENTSAG and TTAG). The Taskforce met regularly to ensure that teacher education continues through virtual and online learning until such a point as institutions could re-open and produced a weekly report which is shared with senior leaders within NCTE and the Ministry of Education.

The Taskforce worked to ensure that Semester 2 of the 2019/20 academic year re-opened online for all institutions on 27th April 2020. The Taskforce was clear that the approach being used in our teacher education system was **‘Emergency Remote Teaching & Learning’** which is defined as **“a temporary shift to an alternate delivery model due to crisis circumstances”**. The primary objective is to provide temporary access to instruction and instructional support in a manner that is quick to set up and is reliably available during an emergency or crisis. This differs from “online learning” which involves a curriculum and materials which are designed to be online and which in many cases will have taken several years to design and develop.

The Virtual Learning Taskforce creating an online B.Ed. Curriculum Resources Hub (<http://resourceshub.ncte.edu.gh/>) containing all B.Ed. course materials for Year 1 and Year 2 courses with a separate area for student teachers and tutors. The taskforce worked with universities and CoEs to ensure that as many materials as possible are available on this site.

The Taskforce then worked with each of the universities to extend their virtual learning environment so that student teachers in their affiliated Colleges of Education can participate fully in online classes. Over 95% of B.Ed. student teachers registered on these virtual learning platforms. Ghana’s major telecoms operators have made these learning platforms zero-rated so there are no data charges to access them.

The Taskforce worked with each of the 46 Colleges of Education to enable them to continue to deliver lessons using Google Classroom, Telegram and WhatsApp. Interestingly it was these familiar and low-cost tools (WhatsApp and Telegram in particular) which had the greatest uptake and popularity amongst student teachers particularly as data charges associated with these platforms are relatively low. By Week 6 of the Semester weekly attendance rates amongst the 32,000 registered B.Ed. student teachers had reached 85% and remained at similar levels for the remaining 8 weeks.

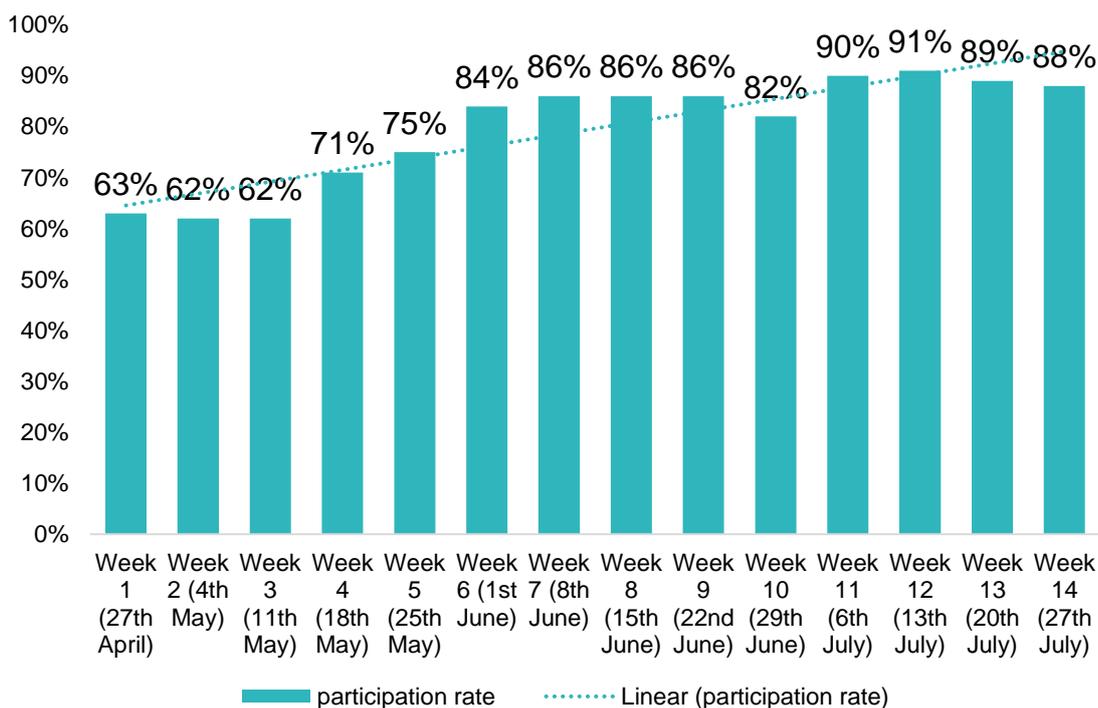
The Virtual Learning Taskforce identified a group of Virtual Learning Troubleshooters made up of staff of CoEs, T-TEL and NCTE who made virtual visits to CoEs where weekly attendance records showed that student teacher attendance was low or where tutors had failed to deliver all scheduled lessons. Virtual visits made by T-TEL senior management to CoEs across all zones identified that there were CoEs which were very willing to participate actively in virtual learning but which were hampered by a lack of technical understanding and knowledge. This is where the Troubleshooters played an important role, visiting these CoEs and talking through their issues.

They also helped these CoEs establish simple learning platforms using Telegram and Google Classroom where these were not in place already.

T-TEL also worked closely with Colleges of Education to ensure that the needs of all learners are considered, including those with visual and hearing impairments and those without smartphone access. Funding from Mastercard Foundation was used to obtain 2,750 smartphones and 4,750 SD cards which were made available to student teachers without devices on a hire purchase basis. Mastercard Foundation funds were also used to improve Wi-Fi connectivity in 36 CoEs through NCTE’s eLearning Fund.

The Taskforce also supported tutors to adapt their lessons and teaching so that they take account of the specific demands of online learning. This included enrolling tutors on university-led courses and regular virtual lesson observation. Over 1,900 tutors, university and government staff enrolled in a specially offered online Certificate in Design, Teaching and Learning delivered by the Amsterdam University of Applied Sciences. Zonal T-TEL teams and virtual troubleshooters conduct regular ‘virtual’ lesson observations to track the extent to which lessons adhere to best practice and suggest areas for improvement.

Semester 2 of the 2019/20 academic year re-opened online for all institutions on 27th April 2020 and was completed as scheduled in early August. Student teacher participation rates for each week of the Semester across all 46 CoEs are set out in the table below.



Factors which led to the improvement in virtual learning attendance across the course of the Semester include:

- a. Effective monitoring, supervision and provision of logistics. In all colleges, principals seek to ensure that tutors are doing their work, and that students are encouraged to participate in the lessons. The College Management Teams, Course Tutors and Technical Teams work collaboratively. For example, the College Management Teams

- supervise and monitor course tutors during the week for the virtual teaching and learning. This is yielding positive results. Words of encouragement to tutors, technical teams and to student teachers help in the achievement of intended and desired goals.
- b. Strong collaboration between Student Representative Councils (SRCs) and their CoE. The SRC of all colleges collaborate with their colleges to improve student teachers' participation in virtual learning. They encourage their peers, provide platforms for student teachers to make suggestions, contributions and to give constructive criticisms. These collaborations are erasing student teachers' misconceptions about their new style of learning.
 - c. Professional development for tutors. T-TEL supported all tutors from the CoEs to adapt their lessons and teaching so that they take account of the specific demands of online learning. Tutors were enrolled in Amsterdam University of Applied Sciences' online certificate programme on design, teaching and learning. This course-built tutors' capacity to move their lesson delivery to virtual learning environment. The course consisted of autonomous modules to prepare tutors on the essential elements of online teaching.
 - d. Using a platform with which student teachers and tutors are comfortable and familiar. Most colleges are use WhatsApp, Telegram and Google Classroom for online learning.
 - e. Tutors' and student teachers' increased familiarity with virtual learning platforms;
 - f. Targeted efforts by "troubleshooters" to address issues in CoEs with low attendance rates. A cadre of 15 virtual "troubleshooters" provides targeted support to CoEs that are having difficulty coping with technical issues related to the virtual learning platforms.
 - g. A realisation from the majority of student teachers that, following the president's announcement of 31st May, it was unlikely that CoEs would resume face-to-face classes before the end of the Semester.
 - h. Psychosocial and emotional wellbeing support sessions organised for student teachers to manage their emotions and take control of their well-being. Specifically, the sessions focused on equipping the student teachers with practical tools they can be used to manage their "anxiety" emanating from the challenges they are facing as a result of COVID-19, school closure, and emergency remote teaching and learning.
 - i. Distribution of smartphones and SD cards to student teachers who are unable to attend virtual learning because they do not have smartphones and or are living in areas with no internet connectivity.
 - j. Wi-Fi connectivity support provided to 36 CoEs through NCTE's e-Learning Fund financed by Mastercard Foundation.

Distribution of smartphones and SD cards as a combination proved significantly more popular than SD cards alone although this has much to do with the timing of the distribution in relation to the Semester. Although considerable efforts were made through all CoEs and TTAG to identify student teachers in need of devices, initial scepticism on the part of student teachers as to the quality of devices and whether they would actually be distributed meant that some CoEs undercounted the number of student teachers needing smartphones.

T-TEL worked very closely with TTAG, PRINCOF, CoE management and Student Representative Councils across all 46 CoEs to identify those student teachers who were excluded from virtual learning because i.) they didn't have a smartphone or ii.) they lived outside of mobile data coverage or a combination of i.) and ii.). This led to the identification of 2,750 student teachers who didn't have a smartphone and 2,000 student teachers who had smartphones but lived outside of network coverage.

NCTE had limited information on the needs of Visually Impaired (VI) and Hearing Impaired (HI) and this programme of support has played a significant role in both enhancing national-level awareness of VI and HI student teachers and in addressing the constraints which prevented them from participating in virtual learning.

In May 2020 NCTE had no data on the number of VI and HI student teachers enrolled in CoEs, let alone information on the extent to which they were able to participate in virtual learning. A needs assessment was then carried out by T-TEL in collaboration with NCTE which established that there were 29 VI and HI student teachers enrolled in B.Ed. Year 1 and Year 2 programmes. These learners were practically 'invisible' at a national level until this assessment. Individual interviews were held with all VI and HI student teachers as well as 15 of their tutors across 3 CoEs and this helped to build a detailed picture of their learning needs and where additional support was required.

The support provided to each of these 29 VI and HI student teachers, as well as equipment provided to the Special Educational Needs (SEN) departments of 3 CoEs has played a significant role in both enabling these student teachers to participate in virtual learning and making them a much more visible part of the teacher education system. This latter point is emphasised by the fact that a VI student teacher presented his experiences at the T-TEL Learning Event held in October 2020. Now that these learners are visible efforts will be made to ensure that they are able to participate going forward, leading to a permanent shift in the quality and availability of data which NCTE hold on VI and HI student teachers.

Many CoEs required technical assistance and support to make best use of their existing Wi-Fi infrastructure and equipment. In a number of cases the technical support provided through this intervention had a greater impact on improving Wi-Fi connectivity than the financial support provided through the e-Learning Fund. NCTE should ensure that each CoE has a qualified ICT Technician to help ensure further improvements in connectivity in future.

The technical support visits by 4 technical teams from NCTE, National Information Technology Agency (NITA), NAB and T-TEL helped the colleges to (a) purchase appropriate equipment for the Wi-Fi extension, (b) prioritise the locations for the installation and configuration for efficient usage, c.) strike a better deal (VFM) in awarding the contract for the installation. It was clear from these technical support visits that many colleges were not maximizing the value of their existing infrastructure because of a lack of knowledge and expertise. In a number of cases colleges were using expensive solutions which were not necessary or appropriate. The technical teams helped all colleges to maximise the value of the GHS 20,000 provided through the eLearning Fund in improving existing infrastructure as part of a sustainable connectivity solution.

It is clear that these technical visits added considerable value as well as enabling NCTE to have a detailed knowledge on the current state of Wi-Fi in each college. The team worked with ICT tutors and technicians to develop their knowledge and skills through the discussions and interactions. NCTE is now organizing a refresher training programme for the colleges' ICT tutors and technicians to strengthen and enhance their capacity to effectively manage the configuration and installation of the Wi-Fi extension put in place. In some instances recruitment will be required so that every college has a competent ICT technician.

Whilst virtual learning (Emergency Remote Teaching & Learning) access rates across the teacher education system are high there is evidence that this approach is less effective than face-to-face teaching & learning. The annual evaluation survey showed that the proportion of

tutors using interactive student-focused methods during lessons had dropped since 2019 (to 68% in 2020 compared with 78% in 2019). Whilst this is still a major improvement over the 2015 baseline of 26% it does represent a drop, particularly for female tutors where there was a 15% drop in the proportion using student-focused teaching methods compared with an 8% drop for male tutors (please see table overleaf for further details).

Tutors demonstrating the use of student-focused teaching methods by sex and subject (%)

Subjects (Male Tutors)	Annual survey (Oct-2015)	Annual survey (Jun- 2018)	Annual survey (Jun-2019)	Annual survey (Jul-2020)	Δ from 2019 to 2020
English	23.3	74.6	80.0	72.4	-7.6
Mathematics	28.6	86.3	72.6	68.2	-4.4
Science	26.0	73.4	79.4	67.4	-12.0*
Total	26.4	78.4	77.1	68.9	-8.2*
Total (N)	220	222	293	241	
Subjects (Female Tutors)	Annual survey (Oct-2015)	Annual survey (Jun- 2018)	Annual survey (Jun-2019)	Annual survey (Jul-2020)	Δ from 2019 to 2020
English	36.7	71.4	83.3	66.7	-16.6*
Mathematics	22.2	78.6	84.2	73.3	-10.9*
Science	5.9	64.7	75.0	58.8	-16.2*
Total	25.0	71.2	81.3	66.1	-15.2*
Total (N)	56	59	75	62	

* $p \leq 0.05$

Tutors noted that one of the main challenges with the virtual online teaching method is Teaching & Learning Materials (TLMs). They explained that the use of TLMs in the classroom helps students to easily understand what is being taught and to make references when needed. However, the use of online platforms makes it difficult for students to make references while online lessons are ongoing. Tutors also indicated that they found it challenging to monitor participation and student engagements during group work and activity-oriented lessons.

Qualitative insights gained from the student teacher focus groups showed significant challenges with network connectivity and quality mobile devices to access lessons. Some student teachers indicated that they did not understand lessons because download of video and audio posted by tutors on the platforms were a challenge due to the networks. These student teachers further indicated that they sometimes rely on their colleagues to provide explanations when they are unable to follow the lessons.

The implications of these findings are that, whilst the switch to virtual and blended learning does have some advantages, particularly considering rapid expansion of access, which we should

consider how to incorporate within teacher education once the COVID-19 situation has normalized, it must also be recognised that face-to-face instruction is more effective than Emergency Remote Teaching & Learning so should be prioritised where possible.

What lessons have we learned for now and the future?

1. Act quickly with vision

Set a vision and then act quickly whilst consulting widely. Speed of response is important in a crisis.

2. Build on what exists

Build on what already exists rather than looking to create something new and accept that this cannot be a perfect substitute for face-to-face learning. Existing platforms such as WhatsApp and Telegram proved most effective.

3. Maximize inclusivity

Inclusivity is key to the legitimacy and success of virtual learning. High participation rates are essential.

4. Think about data from the start

Regular data is essential to track performance and take action to address identified issues.

Thinking beyond the crisis – what can we take with us?

The switch to virtual and blended learning does have some advantages, particularly considering rapid expansion of access, which we should consider how to incorporate within teacher education once the COVID-19 situation has normalized. We must also recognise that, within our context, face-to-face instruction is more effective than Emergency Remote Teaching & Learning so we should aim to prioritise it wherever possible.



9 Summary of Lessons Learnt

The key lessons learned through T-TEL are as follows:

Building stakeholder consensus through dialogue and consultation with key actors and agencies across the education system to develop a shared understanding of issues.

Working with stakeholders to leverage this shared understanding to produce national standards and frameworks (NTS and NTECF) approved by the Cabinet of the Republic of Ghana, the highest authority in the country, to ensure that the foundations for the teacher education reforms are binding and cannot easily be reversed or altered. These documents must have sufficient force, weight and clarity to convince the entire education system that change is compulsory and not optional.

Ensuring that these standards, frameworks, and related policy documents introduce strong systemic incentives for sustained behavior change aligned with the intent of the reforms. This includes the importance of changing the assessment system so that there is a systemic incentive to move away from rote learning, written examinations and factual recall. Changing the curriculum and introducing new methodologies and approaches will only succeed and be sustained if assessment systems are redesigned to reinforce these changes.

Reducing the prevalence and significance of final written examinations, as specified in the National Teacher Education Assessment Policy (thus incentivizing more practical applied teaching and learning in CoEs) and the Quality Assurance, Accreditation and Assessment Instrument, which enhances the focus on training and learning, assessment and leadership and management when assessing the quality of CoEs.

Introducing a programme of capacity building and support for key national agencies whose policies and actions will, to a large extent, determine the extent to which teacher education reforms improve learning outcomes in basic schools. These agencies include NCTE, NTC, NAB and NaCCA. By providing flexible funding to enable these agencies to implement priority activities T-TEL has helped to address systemic issues that had the potential to undermine reforms if not implemented effectively (examples include teacher licensing, CoE inspection, and accreditation arrangements and the introduction of the new pre-tertiary curriculum).

Developing the teacher education curriculum in conjunction with the pre-tertiary education curriculum (which was rolled-out to all basic schools in Ghana in September 2019) rather than seeing them as two separate processes. Developing them in conjunction will help to ensure that the content and pedagogy being learnt by the teachers is harmonized with that which they will be expected to deliver in schools.

Enhancing the role of five public teaching universities in implementing the teacher education reforms to introduce competition, collaboration, and incentives to invest and improve performance in CoEs. When all CoEs were overseen by a single university, there was little incentive to improve performance as that university controlled the entire system. This also meant that expertise within the other four universities was not contributing effectively to teacher education. Now that the 46 CoEs are allocated to one of five universities, this has both widened the pool of expertise available to support teacher education (from 1 university to 5) and created incentives for each university to invest in the professional development, infrastructure, and performance oversight of their affiliated CoEs so that they compare favourably with their peers.

Ensuring that key activities, such as weekly Tutor Professional Development sessions, take place within CoEs and are facilitated by tutors themselves. This enhances the chance that these activities will be sustained as no one is being paid an allowance to attend, there are no external facilitators who require payment and there is no need to transport participants away from their place of work.

Increasing the use of Ghanaian expertise and expertise from within existing teacher education institutions (universities and CoEs) to develop key reform materials and policies rather than reliance on international experts. This helps to ensure that there is a cadre of talented Ghanaian individuals across the country who understand the reforms and who can advocate for their continued implementation once T-TEL has ended.

Working to build the capacity and capability of CoE leadership teams and councils and respecting their institutional autonomy to decide how to make use of PBR funds to meet their local priorities. This has helped to ensure that funds have been used effectively to meet local needs as well as strengthening the experience and confidence of CoEs to address issues and concerns.

Strengthening engagement and collaboration between CoEs and municipal, metropolitan and district directorates of education through memorandums of understanding guiding work in partner schools. Engagement with the Ghana Education Service at a national level has proved difficult so an alternative strategy has been pursued whereby CoEs are supported to build relationships with their local education offices to strengthen collaboration and effective implementation of supported teaching in schools in partner schools.

Supporting existing institutions within the education system to own and drive changes rather than establishing parallel delivery systems. The role of a programme like T-TEL should be to create a trusted support and challenge function that is responsive and performance oriented and which aims to work collaboratively over time to change behaviour and practices rather than seeking to implement these changes ourselves.

Recognizing that gender, equality and social inclusion can be achieved even in rigid cultural settings when stakeholders are properly engaged and equipped with requisite skills and resources.

Finally, one area where further work is required is in partner schools. While there is evidence of impact within CoEs, surveys show that only about 30% of mentors in the 2,500 partner schools were carrying out their roles effectively when surveyed in June 2019. However, restructuring of the supported teaching in schools (where, under the new B.Ed. student teachers visit partner schools one day a week throughout Year 1 and Year 2) is starting to have an important impact on behaviour. These regular visits from B.Ed. students, who then give feedback on the lessons they observed, if done correctly, ensures that teachers need to plan and deliver high quality lessons. The student teachers (and their tutors) are thus helping to play a regular quality assurance and external support function, which did not exist in the same way under the DBE with its in-in-out structure.

10 Sustainability and Next Steps

A major focus over the past twelve months has been ensuring that measures are in place to sustain and extend the gains made to date in the teacher education system so that these are not impacted by the end of T-TEL in December 2020. NCTE has been playing an increasingly central role in the effective oversight and coordination of teacher education reforms and this has been reinforced through the creation of the National Implementation Support Team (NIST) and the development and roll-out of a College of Education Management Information System (CEMIS) which has enabled NCTE to access up to date information about a range of key performance and financial metrics.

Sustainability has also been embedded through T-TEL's support to NTC to recruit and train Regional and District Portfolio Assessors who will be responsible for tracking the development of each beginning teacher as they build a portfolio of evidence which demonstrates their competence and adherence to the NTS so that they can gain Qualified Teacher Status. Introducing this nationwide portfolio assessment system is an ambitious undertaking but an essential one so that teacher licensing becomes more than just a written exam but is instead something which encompasses the development of a professional portfolio which will be useful to beginning teachers throughout their career.

Following discussions with Mastercard Foundation and the Ministry of Education in late 2019 and early 2020, T-TEL's management took the decision to establish a new Ghanaian not-for-profit company limited by guarantee to continue providing high quality advice and support to Ghana's education reforms. This new organization, named Transforming Teaching, Education & Learning (T-TEL) was officially registered on 7th July 2020.

T-TEL aims to provide high quality technical advice, project management, research and implementation support services and is a proudly Ghanaian organisation which will utilise local talent and expertise to enable our education system to reach greater heights. T-TEL's first Board Chair is Professor Jophus Anamuah-Mensah whilst Sister Elizabeth Amoako-Arhen is the Vice Chair. T-TEL is currently in negotiations with the Mastercard Foundation over an initial 2-year contract for Phase One of Transforming Senior High School Teaching, Education & Learning (T-SHEL) with an anticipated start date of January 2021. T-SHEL aims to extend the reforms which have taken place in Ghana's basic schools across all Senior High Schools (SHS) and universities which train SHS teachers. T-SHEL Phase One also contains an element of financial and technical support to assist CoEs in the training of student teachers for JHS. We are hopeful that the story of T-TEL which is told in this report, covering the period from 2014-2020, is just the start of the T-TEL journey.

