Teacher Development Programme
Inspiring Teaching, Transforming Learning

End of Programme Report

June, 2019

Green corner – Save a tree today!

Mott MacDonald is committed to integrating sustainability into our operational practices and culture. As a world leading consultancy business we are always seeking to improve our own performance and reduce the environmental impact of our business. Meanwhile, many of our staff are committed to living sustainably in their personal lives – as an employee-owned company Mott MacDonald shares their concerns. We feel an ethical obligation to reduce our emissions and resource use and have committed to reducing our per capita carbon footprint by a minimum of 5% year on year.

We print our reports and client submissions using recycled, double-sided paper. Compared to printing single sided on A4 virgin paper, double sided printing on recycled paper saves the equivalent of two trees, over a ton of CO_2 and a cubic metre of landfill space for every 100 reams. By choosing the greener path we have been able to achieve efficiencies benefiting both Mott MacDonald and our customers.

We would like to share some of the principles of our own 'Going Green' initiative:

- When possible we scan rather than print and consider what really needs to be on paper
- We use electronic faxing when practicable
- We work on e-forms
- We use recycled paper when possible and print on both sides
- Reducing paper in the office creates a better working environment for our staff and our clients

We believe that you, as one of our esteemed clients, will share our concern to conserve precious resources for the benefit of our planet and its inhabitants.

Report Distribution and Revision Sheet

Project Name: Teacher Development Programme
Code: PO6090/318132
Report No.: 6.PM.07
Report Title: End of Programme Report

Rev No	Date of issue	Originator	Checker	Approver	Scope of checking
1	June 2019	Tayo Odekunle	Emma Mba	Nguyan Feese	Formatting / Checking

Scope of Checking

This report has been discussed with the originator and checked in the light of the requirements of the terms of reference. In addition, the report has been checked to ensure editorial consistencies.

Distribution List

Name	Position
DFID	
Esohe EIGBIKE	Education Adviser, DFID
Ededem HOGAN	TDP Programme Officer, DFID
TDP	
Nguyan FEESE	Senior Strategic Advisor
Emma MBA	National Programme Manager
Abdurrahman UMAR	Deputy National Programme Manager
Edwina HAHNER EGBUNA	Project Manager
Ron TUCK	Project Director
Roxanne ZERBONIA	RTI

Disclaimer

This document is issued for the party, which commissioned it and for specific purposes connected with the below-captioned project only. It should not be relied upon by any other party or used for any other purpose. We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties. This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party, which commissioned it.

Note on Documentary Series

A series of documents will be produced by Mott MacDonald the Consultants in support of their contract with the Department for International Development for the Teacher Development Programme in Nigeria. All TDP reports will be accessible from the TDP website: http://www.tdpnigeria.org. The documentary series will be arranged as follows:
<Programme Year>.<Output>.<Number>
Outputs:
PM: Programme Management
Output 1: In-service teacher training
Output 2: Pre-service teacher education
Output 3: Research and Evidence
C: Communications

Acronyms and Abbreviations

ANFE	Adult and Non-Formal Education	NTEP	National Teacher Education Policy
ASC	Annual School Census	NTI	National Teachers' Institute
AV	Audio-Visual	NUT	Nigerian Union of Teachers
CoE	College of Education	PBR	Payment by Results
CPD	Continuing Professional Development	PES	Primary Education Studies
CSO	Civil Society Organisation	PRESET	Pre-Service Teacher Training
CM	Cluster Meeting	PSTL	Pre-Service Technical Lead
CT	Class Teacher	P&S	Policy & Strategy
DFID	Department for International Development	PS	Permanent Secretary
ECCE	Early Childhood Care and Education	PSA	Programme Support Activity
EDOREN	Education Data Research and Evaluation in Nigeria	QA	Quality Assurance
EMIS	Education Management Information System	R&E	Results and Evaluation
ESSPIN	Education Sector Support Programme in Nigeria	R&ETL	Results and Evaluation Technical Lead
FME	Federal Ministry of Education	SBMC	School Based Management Committee
GSI	Gender & Social Inclusion	SBTD	School Based Teacher Development
HME	Honourable Minister of Education	SDGs	Sustainable Development Goals
HT	Head Teacher	SE	Special Education
ICT	Information and Communication Technology	SLPs	State Level Programmes
IEC	Information, Education and Communication Materials	SMOE	State Ministry of Education
IDPs	International Development Partners	SMOEST	State Ministry of Education, Science and Technology
INSET	In-Service Training	SNE	Special Needs Education
ISTL	In-Service Technical Lead	SSC	State Steering Committee
JSS	Junior Secondary School	SSV	School Support Visit
JSUBEB	Jigawa State Universal Basic Education Board	STC	State Technical Committee
KSUBEB	Katsina State Universal Basic Education Board	SUBEB	State Universal Basic Education Board
LGA	Local Government Area	TA	Technical Assistance
LGEA	Local Government Education Authority	TD	Teacher Development
LOB	Learning Outcome Benchmark	TDNA	Teacher Development Needs Assessment
MDAs	Ministries, Departments and Agencies	TDP	Teacher Development Programme
MDGs	Millennium Development Goals	TDT	Teacher Development Team
MLA	Monitoring Learning Achievement	TETFund	Tertiary Education Trust Fund
MOEHCD	Ministry of Education & Human Capital Development	TF	Teacher Facilitator
MOEST	Ministry of Education, Science and Technology	TPD	Teacher Professional Development
MT	Master Trainer	TRCN	Teachers' Registration Council of Nigeria
MTR	Medium Term Review	TSB	Teachers' Service Board
M&E	Monitoring and Evaluation	TSS	Teachers' Salary Scale
NCCE	National Commission for Colleges of Education	UBEC	Universal Basic Education Commission
NCE	Nigeria Certificate in Education	UBE-IF	Universal Basic Education Intervention Fund
NERDC	Nigerian Educational Research and Development Council	ZSPEAC	Zamfara State Primary Education Assessment Committee
NSC	National Steering Committee	ZSUBEB	Zamfara State Universal Basic Education Board
NTC	National Technical Committee		

Contents

Section 1 Introduction

1.1. Background

This is the End of Programme Report for the six-year (2013–19) UKAid-funded Teacher Development Programme (TDP). TDP) strengthened the capacity of both Federal and State institutions responsible for pre-service and in-service to deliver high quality teacher development. It was originally designed to work in six states in Nigeria over two phases. Phase 1 began in Jigawa, Katsina and Zamfara States and Phase 2 was to expand into Kaduna, Kano and Niger States in 2017. A decision was taken not to expand to Niger State. TDP commenced with support to the relevant Ministries, Departments and Agencies (MDAs) to implement the National Teacher Education Policy (NTEP) by assisting government to improve the quality of teaching in basic education schools and support the production of more effective teachers. The Programme's targets and timeline are shown below.

Programme Targets[1]
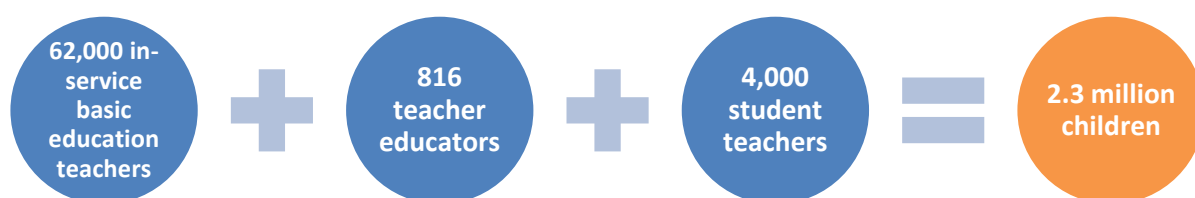
Programme Timeline
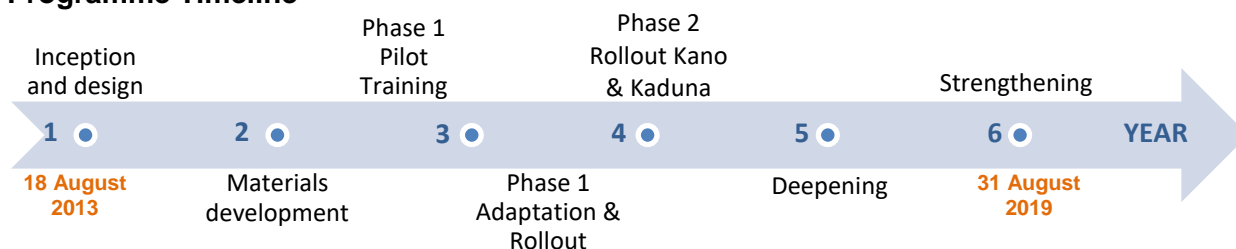
Report Structure

The purpose of this report is to present the design of TDP, explain the methodology for implementing the Programme, the achievements of the Programme and the lessons learnt. It is expected that the report will provide useful information for the design of a follow-up programme and some guidance on how to approach certain elements at the local government, state and federal levels. This report will be presented in five sections:

Section 1   Introduction and Programme Design
Section 2   Implementation
Section 3   Results and Lessons Learnt
Section 4   Programme Management

---

[1] From the TDP Business Case

Section 5   Financial Report

1.2. TDP Objectives and Outputs

TDP's purpose: to improve pupils' learning outcomes by building the capacity of primary and junior secondary school teachers in pedagogy and content knowledge in three core curriculum subjects of English, Mathematics and Science and Technology.

Objective	Output
i) Improve the in-service training and support of primary and junior secondary school teachers	**Output 1***:* Improved in-service training of primary and junior secondary school teachers *(In-service Teacher Training)*
ii) Develop more effective teacher educators of primary and junior secondary school student teachers	**Output 2**: More effective teacher educators of primary and junior secondary school student teachers (*Pre-service Teacher Training)*
iii) Strengthen evidence-based research informing decisions on teachers' effectiveness and efficiency	**Output 3**: More evidence to inform policy (*Results and Evidence*)

1.3. Programme Design

The Inception Phase of the Programme was used to develop the strategies that would be implemented by the Programme to achieve the targets, some of which were revised at the mid-point of the Programme. These strategies are available on the TDP website[2].

Output 1: In-service Teacher Training (INSET)

Output 1 had a target of improving the quality of 62,000 primary and junior secondary teachers across five states over a six-year period. During Phase 1 the team worked in fourteen local government areas (twelve schools in each local government area) and trained four teachers per school including the head teachers. The four objectives of Output 1 were:

62,000 in-service basic education teachers

1. Strengthen a sustainable cadre of teacher educators responsible for the delivery of in-service training.
2. Produce materials (audio-visual (AV) and print) for teacher training and classroom use.
3. Develop a school-based, cost effective in-service training approach supported by the low-cost technology.
4. Support states to provide regular and on-going training and support (Pedagogy for class teachers (CTs) and head teachers (HT) and Leadership and Management for HTs to a total of 62,000 CTs & HTs) in all states by 2019.

---

[2] tdpnigeria.org

Output 2: Pre-service Teacher Education (PRESET)

The goal of the Pre-service Output is '**More effective teacher educators for primary and junior secondary school teachers.**' The target was to train 815 teacher educators in twelve colleges of education (CoEs) and 4000 student teachers by the end of the Programme in August 2019.

The PRESET strategy was to strengthen the National Commission of Colleges of Education's (NCCE) capacity to sensitise colleges of education on the Nigerian Certificate in Education (NCE) reforms and support effective implementation of the reforms in the colleges. This was piloted in six colleges in the initial three states of Jigawa, Katsina and Zamfara States.

The NCCE Reforms
1. introduction of a new curriculum
2. restructuring of the COEs
3. enhancing quality assurance procedures and processes
4. improving the pedagogy and content knowledge of teacher educators in the colleges
5. improving the quality of student teaching practice
6. developing State Universal Basic Education (SUBEB) -COE Linkages and Partnerships

Output 3: Results and Evidence

The main goal of the Results and Evidence Output is the generation of evidence-based research informing decisions on teacher effectiveness and efficiency. The following are the three main elements of Results and Evidence:

1. **Demonstration of Results**: the evaluation of the in-service training model in terms of its impact, outcomes and outputs.
2. **Production of evidence to support the theory of change**: Studies to evaluate the results of the in-service and pre-service training models and add to the educational evidence base in Nigeria.
3. **Monitoring of activities**: the monitoring of in-service and pre-service training model activities to ensure the quality of their implementation.

An initial Logframe was developed to guide Programme implementation. Section Two will provide information on how the Programme was implemented at the federal, state and local government levels.

Section 2 Programme Implementation

This section presents the methodology for the implementation of the six-year Programme. The Programme started with the initial engagement with government and other relevant stakeholders; the development of strategies and plans; the Inception Phase was used to pilot activities; scale up to more schools within the initial three states of Jigawa, Katsina and Zamfara; and the rollout to more schools in Phase 1 states by government and to two additional states - Kaduna and Kano.

Programme Principles

- ✓ Working through existing systems to make them more efficient
- ✓ Reforming pre-service as the key to sustainable change in the quality of teachers
- ✓ The centrality of the head teacher in school improvement
- ✓ Ensuring continuing professional development including self-study, supervision and support
- ✓ Facilitating activity learning and supporting teachers to support pupils' development
- ✓ Teaching reading in Hausa and English

2.1. Engagement with Government

Aligning Programme objectives with federal and state government teacher education reform process was fundamental to the commencement of implementation. Introductory meetings were held:

1. The Programme commenced with DFID introducing the TDP Management to the Hon. Minister of Education and the Federal Ministry of Education (FME) Directors in August 2013. DFID outlined the objectives of the Programme and secured agreement for TDP to commence implementation.

2. One-on-one meetings were held at the federal level with the Permanent Secretary of the FME; the Executive Secretaries of the NCCE; the Universal Basic Education Commission (UBEC); Teacher Registration Council of Nigeria (TRCN); National Teachers' Institute (NTI); and the National Union of Teachers (NUT) amongst others.

3. At the state level, the TDP team held meetings with the Hon. Commissioners of Education, Executive Chairmen of SUBEBs and Provosts of the Colleges of Education of Jigawa, Katsina and Zamfara States.

4. In addition to meeting with the federal and state government stakeholders, the Programme met and shared the Programme objectives with Development Partners like the British Council, JICA, USAID, UNICEF and the World Bank.

POLITICAL ENGAGEMENT

TDP supported the alignment of the objectives of the DFID-funded programme with federal and state government teacher education reforms for both pre-service and in-service through advocacy and capacity building. The Programme also provided leadership amongst DFID programmes on teacher education and in each state through the coordination of activities. The Programme commenced with stakeholder workshops to share objectives, supported the development of organisational strategies for the implementation of teacher education activities, and build government capacity for programme implementation and monitoring.

Stakeholder Workshops: Following the one-on-one meetings with the different stakeholders, a series of stakeholder workshops were held to create understanding and awareness on the Programme objectives.

1. National Stakeholder Workshop

The Permanent Secretary ()PS FME outlined the administrative structure for managing the Programme thanked DFID for providing capacity for the implementation of the National Teacher Education Policy (NTEP) through the Teacher Development Programme . A wide range of stakeholders attended including representatives of relevant Ministries, Departments and Agencies (MDA), Unions and International Development Partners. Abuja October 2013

2. Study Tour to Bangladesh

Key national and state stakeholders visited the DFID-funded English in Action Programme in Bangladesh to enable the team to internalise the objectives of TDP. While in Bangladesh the TDP team worked with the federal and state representatives to set strategic direction for teacher development by agreeing a vision, mission, goals and objectives for teacher development in Nigeria.

4. Strategic Planning Retreat in Ghana

A Strategy Review Retreat was held to review following the lessons learnt from the implementation of the reform in teacher education in Phase 1 to develop strategies for the next three years in the Phase 1 states (Katsina, Jigawa and Zamfara) as well as in the two new states (Kaduna and Kano). It provided an opportunity for political and technical engagement at all levels.

3. State-based Stakeholder Workshops

State based stakeholder workshops were held to deepen understanding on the goals and objectives for teacher development and then developed state and college level strategies for implementation.

5. UBEC / SUBEB Seminar on Strategic Choices for Basic Education Reforms in Nigeria in Cambridge

The Executive Secretary (ES) of the Universal Basic Education Board (UBEC) and SUBEB Chairmen from the five TDP-supported states attended a seminar in Cambridge which involved developing a strategic planning framework for basic education. The lessons learnt from the TDP Programme were incorporated into this framework, thereby further institutionalising and reinforcing the work of the reforms.

TDP worked with the relevant Directors at the FME, NCCE and UBEC on the implementation of the National Policy on Teacher Education (NTEP); supported NCCE to implement the NCCE reforms for the Nigerian Certificate of Education (NCE); and through on-going engagement worked with UBEC to revise and strengthen its cluster-based teacher professional development (TPD) model. At the state level, there is on-going engagement on how to conduct teacher development activities effectively and strengthen the system in a sustainable way.

2.2. Inception Phase

TDP had a six-month inception phase (August 2013 - February 2014). Based on the consultations carried out during the inception period a series of strategies were developed to guide the implementation of the reform programmes. **The stakeholder workshops and**

strategy development activities during the inception phase assisted TDP to create the necessary political will for reform within the relevant federal and state MDAs.

TDP Implementation Strategies
1. In-service Teacher Training Strategy
2. Pre-service Teacher Training Strategy
3. Monitoring and Evidence Strategy
4. Advocacy and Communications Strategy
5. Value for Money Strategy
6. Risk Management Strategy
7. Anti-corruption Strategy

2.3. Post-Inception Phase Methodology

At the end of the Inception Phase, the Programme began Phase 1 of Programme implementation. By Year 4, the Programme scaled up within the pilot schools, the Phase 1 states were rolling out to other schools, and the implementation commenced in Kano and Kaduna States. Year 5 involved further rollout and deepening of the model and Year 6 focused on further strengthening of the government systems to implement effectively and the collection of more evidence on what is and what is not working well. Further strategies were developed for junior secondary school training, Programme Rollout, Education Technology and for Year 6 (post endline evaluation outcomes).

TDP achieved rollout by providing technical assistance to NCCE and UBEC to lead the reform process in the pilot states with the colleges and SUBEBs. By working with the federal regulatory agencies in the pilot states the reforms received a lot of traction and government partners paid for a number of training programmes using state budgets, UBEC Teacher Professional Development (TPD) funds and other available funds. This methodology ensured the identification of master trainers within the states and colleges of education and trainers from the LGEAs who were trained and supported to train and support teachers. The idea was to ensure that states had the capacity and capability to train and support teachers within the states. The implementation was a learning process where TDP tried out an activity, learnt from it and adjusted the method to improve results. In order words the training and support of teachers and teacher educators was an iterative and adaptive process.

The following sections therefore give an overview of the lifetime of the Programme implementation for each Output, documenting the changes in implementation at each stage.

2.4. Output 1: In-service Teacher Training (INSET)

Phase 1 Piloting in Jigawa, Katsina and Zamfara

1. **Strengthen a sustainable cadre of teacher educators responsible for the delivery of in-service training.** The Programme worked through government systems to identify twelve master trainers from government agencies known as Teacher Development Teams (TDTs) and twenty-eight teacher facilitators (TFs) to serve as the cadre of teacher trainers

within each state. The state master trainers were trained by a team of international and national experts to support and train the TFs. The TFs then trained and supported four teachers (including the head teacher) in each of the 168 support schools in each state. These teachers were trained in clusters of teachers by two TFs.

2. **Develop and produce materials (AV & print) for teacher training and classroom use.** The Programme worked with international, national and state based consultants to design and develop the following print and audio-visual materials for teachers and classroom use based on the topics set out in Table 1:

   a) Print materials and technology:

   - Teacher guides for Pedagogy, English, Mathematics and Science and Technology
   - Lesson plans for the three subjects for each class and term
   - Posters and flash cards
   - Tablets for TDTs and TFs
   - Phones and SD cards for teachers
   - Amplifiers for schools

   b) Audio-visual materials:

   Audio-visual materials include: video clips of teachers teaching sample lessons from the Teacher Guides; and songs and stories for teaching linked to the lesson plans.

Table 1: Topics for Primary Teacher Training

Term	Pedagogy	English	Mathematics	Science & Technology
1	• Classroom management • Leadership • Pupil behaviour and social skills • Activity-based learner-centred approaches • Use of teaching and learning materials • Assessment	• Developing reading and writing skills • Developing listening and speaking skills	• Numbers and numeration • Algebraic process	• Science process skills • Information technology
2		• Simple conversation • Stress and intonation	• Geometry • Measurement	• Basic science
3		• Comprehension • Grammar • Aspects of writing	• Money • Statistics • Time	• Basic technology • Health education

3. **Develop a school-based, cost effective in-service training approach supported by the low-cost technology:** A comprehensive, blended approach of face-to-face training through cluster meetings and support to teachers in school was piloted in 168 schools with 672 teachers in each of the three states. The training comprised:
   - A 2-year training programme, where teachers were expected to attend 11 cluster meetings of two days each with six support visits during the two years.
   - Two teachers per subject per school- teachers were trained in one of English, Mathematics and Science and Basic Technology.
   - Training and support per term (Figure 1):
     - Centralised training of master trainers (TDTs):5 days by national and international consultants
     - Step down training of trainers (TFs): 3 days by TDTs
     - Mentoring of TFs by TDTs once a term

- o Training of teachers: 2 days by TFs through cluster meetings
- o School support visits (SSVs) by TFs – 2 visits per term for each teacher
- o Head teacher leadership and management training by TDTs supported by TFs – 2 days per term
- o Self-study through audio-visual materials on low cost technology at teachers' pace.

4. **Support states to provide regular and on-going training and support (Pedagogy for CTs & HTs and Leadership and Management for HTs) to a total of 62, 000 CTs & HTs) in all states by 2019.** Leadership and management training is a priority area and materials were developed in collaboration with ESSPIN and UNICEF. Training commenced with 504 head teachers trained. It is expected that when properly trained, the head teachers would lead on providing a school-based professional-development process and also manage school English clubs.

Figure 1: The Phase 1 TDP model of teacher support
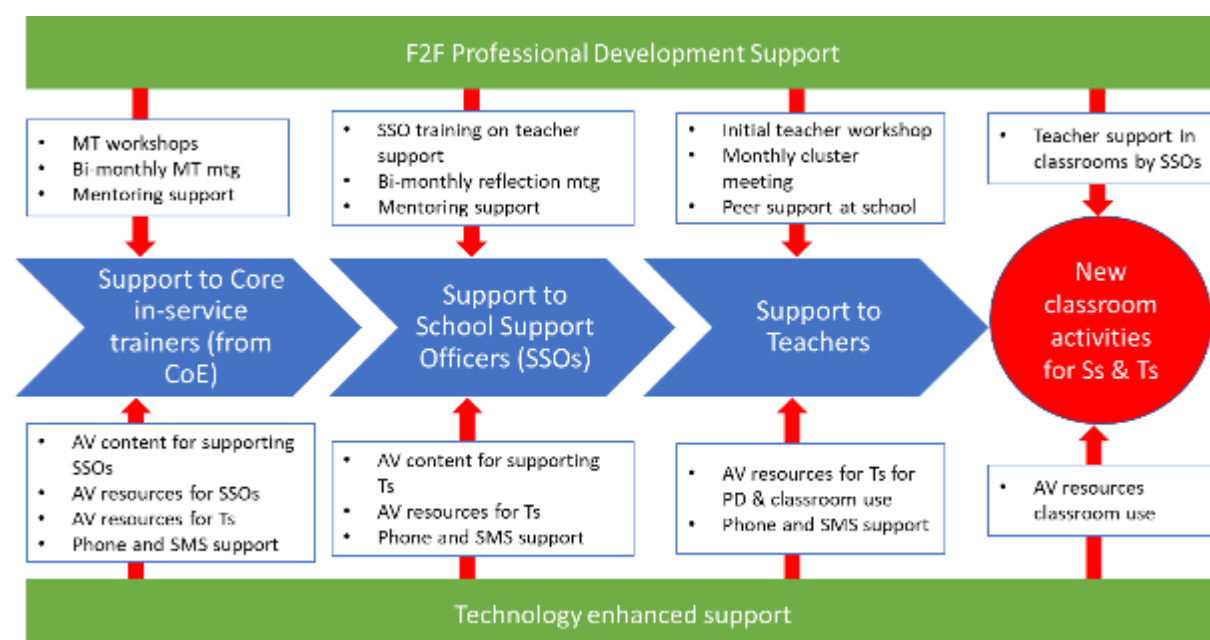
Phase 1 Adaptation and Rollout

Following two years of piloting the model was scaled up to cover more teachers and schools in the three states and revised in September 2016. The Programme, on assessing the progress made so far, stated clearly the assumptions about the conditions that need to be met to increase the likelihood of improving learning achievement. The Programme then continued to monitor implementation to test these assumptions. Our assumptions at the end of Phase 1 were that:

1. Given the low level of teacher competence, teachers need to have more intensive and broad-based training;
2. A stronger emphasis on improving content knowledge is necessary;
3. Teachers need to receive local support over a sustained period of time to consolidate their learning; and
4. Pupils will also benefit from direct access to educational technology.

Key Developments in TDP's Strategy at Rollout

Table 2 sets out the changes in the strategy from the pilot phase to Phase 1 to adaptation stage. Figure 2 shows the changes in the training and support model. Key developments included:

- **The introduction of class teaching**: All teachers in all intervention schools received training in both pedagogy and the three subjects of English, Mathematics and Science and Technology, so that teachers were able to function as class teachers – not subject teachers.
- **School-based training aligned with funding streams**: The training model was streamlined into a one-year programme instead of the two years for the pilot phase. All training for teachers takes place within the school and all teachers in the school are trained, except for the smallest schools, where the teachers are brought together in a cluster of schools.
- **Expansion of trainers in line with the expansion in training**: The cadre of trainers was expanded in line with state administrative structures and the number of teachers in the state. The states were supported to develop appropriate competency-based assessments for this appointment process.
- **Supporting head teachers to lead their schools**: Increased intensity of training for head teachers, recognising the critical role of the head teacher in leadership, management and facilitating peer learning within the school
- **Improving foundational reading skills**: Literacy for Primary 1 to Primary 3 teachers to teach phonics and sounds in Hausa and English. The reading training for all teachers was a 14-week training with interactions every two weeks between teacher facilitators and teachers. This process involved the assessment of trainers, teachers and pupils on an on-going basis to ensure that knowledge was being transferred.
- **Improving English proficiency of teachers:** English Forums were established in primary schools as part of the Strengthening Teachers' English Proficiency (STEP) activity.
- **Pupils having access to technology as well as teachers:** As part of the Rollout Strategy, the Programme developed an Education Technology Strategy. The goal of the strategy was to catalyse the use of educational technology in educational institutions for improved learning outcomes. The approaches that were set out to achieve the objectives were built on two premises: strengthening existing educational technology and piloting new innovative approaches to technology use. The use of technology was extended from provision of SD cards to also allow access to open educational resources (OER). There was access to technology for pupils as well as teachers, through the provision of low-cost technology. Schools with existing ICT centres were supported to become a source of sustainability beyond the life of the Programme.

Table 2: Changes in support provided to teachers

Pilot Phase	Rollout Phase
Train four teachers per school	All teachers in a school trained and the school rearranged to enable class teaching not subject teaching
Training two teachers on English, two on Mathematics and two on Science & Technology	All teachers trained on core subjects of English, Mathematics, Science & Technology (P1-3 and P4-6) and pedagogy using Teacher Guides
Training on P1–3 and P4–6 and pedagogy using Teacher Guides	All teachers trained on literacy, numeracy and science lesson plans
Phones & SD cards given to teachers with AV materials - "Trainer in the Pocket"	SD cards given to teachers with AV materials - "Trainer in the Pocket"
	Additional OER provided for classroom activities linked to the curriculum in core subjects using available technology e.g. ICT centres
Posters, flashcards and amplifiers given to schools	Teachers supported to make classroom resources encouraging innovation
	All teachers supported through English Clubs to improve their English Language proficiency to communicate better in the classroom

Figure 2: The Revised TDP model of teacher support
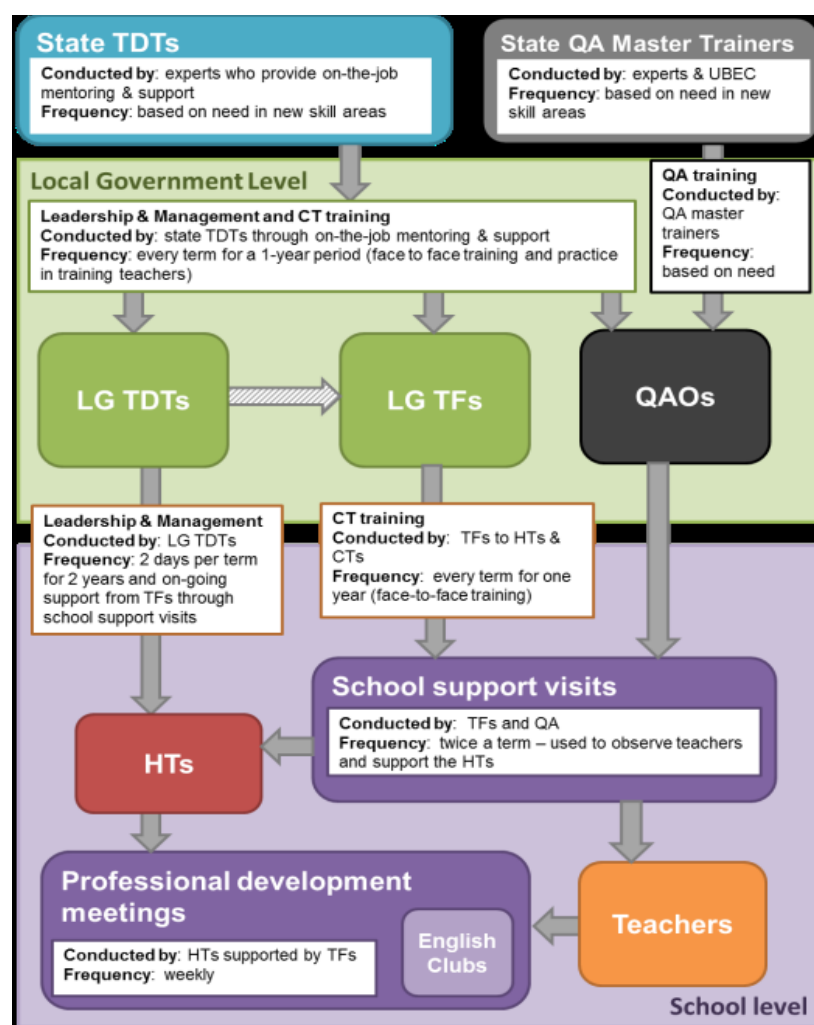
Phase 2 Rollout to Kaduna and Kano

In August 2016 the Programme was rolled out to two additional states Kano and Kaduna. In both states the largest schools in each local government were selected as the intervention schools, and also as the Associate Schools (see pre-service section below) where student teachers came to practice and observe model teaching.

During Year 5 and following the results of the Endline Evaluation, the focus of in-service shifted towards deepening the model to address some of the challenges identified and supporting state-driven initiatives to institutionalise the reforms to ensure they were sustained. This was based on individual state needs and commitment from government partners. As a result of this refocusing of Programme activities, support to the JSS level was limited to the production of materials.

TDP supported states to plan and monitor these training processes and improve their quality. TDP developed and provided materials to support the training for Primary 1-6 and Junior Secondary 1-3 including instructional materials such as posters and flash cards and big books (in English and Hausa). Teachers benefitted from provision of lesson plans, teacher guides and leadership and head teachers from management manuals. The Programme supported teachers to develop and use low-cost/no-cost materials as teaching aids. TDP provided audio-visual materials and low-cost education technology (Ed Tech) to Associate Schools. These materials constitute a bank of content which teachers can access and use anytime and anywhere which is why they are called the 'trainer in the pocket'. TDP also tested at small scale, different types of technology to understand how these might improve teaching and learning. Since 2017, in response to demand from states, TDP has supported four states to review and revise their approaches to selecting and recruiting teachers and head teachers, reforms which are being implemented through merit-based recruitment in states. The major changes to the model are set out below.

The layering and coordination of training programmes across providers and funders: Stronger collaboration with other programmes helped to avoid duplication e.g. training in Kaduna and Kano was linked to the Global Partnership for Education (GPE) project intervention plans. In Zamfara, the TDP intervention encouraged the SUBEB to integrate the training being conducted in the state. This involved TDP, Reading and Numeracy Activity (RANA) and Jolly Phonics working together to train all master trainers and trainers on the various interventions and then agree on how they would be rolled out, since all three programmes had components on phonics and reading. TDP also worked with DFID's Partnership to /Engage, Reform and Learn Accountable, Responsive and Capable Government (PERL/ARC) Programme in Kaduna State and their Partnership Fund financed several activities to support the state's teacher reforms.

Standardising training approaches: UBEC has agreed a set of standards for teacher professional development and are using the standards to revise its TPD Guidelines which set out the processes for TPD across the whole country. This is also being applied to any training conducted by Basic Education Service Delivery for All (BESDA) – the World Bank's new scheme to improve access and quality of basic education, managed by UBEC.

Intensive support to Kaduna on teacher assessment, competency-based recruitment and teacher induction: TDP provided technical advice to Kaduna on all aspects of their

teacher reforms, including developing the processes for the recruitment and the monitoring of quality and the induction process. This was done in conjunction with the TRCN and was based on the Teachers Code of Conduct.

Supporting teacher professionalisation: TDP supported the TRCN to conduct a review of its Professional Standards for Nigerian Teachers (PSNT) and develop new standards for school leaders and a Career Path for teachers. The Professional Standards provide a mechanism for teachers to be assessed at all levels from initial teacher training to recruitment and assessment for training needs and promotion. Having Standards for School Leadership is a first step to raising the profile of head teachers, which is long overdue. The Career Path is the Federal Government's contribution to providing guidance and minimum standards to states on how to manage their teachers from recruitment through to training and promotion. If this can be effectively implemented, it can raise the quality of teachers in the country as well as motivate those that are competent and committed to the profession.

Further strengthening of mentoring and support processes: The school support visits (SSVs) have become more practical opportunities to support teachers and encourage learning communities through materials production, lesson observation and Mandatory Professional Development Meetings (MPDMs). This support mechanism has been adopted by UBEC and the Programme supported the rollout of training to master trainers across all states in the country on this mechanism.

Introduction of Ed-Tech into teaching and learning: While in Phase 1 teachers were given phones and SD cards, it was made clear by SUBEBs that this was not a replicable process by government, so working with them, the Programme revised its strategy for technology use. By Phase 2, teachers were using their own phones for AV materials and SSOs and HTs were trained on how to transfer materials from tablet to phone or phone to phone. Some states had by then bought SSOs tablets, and HTs smart phones. All teachers trained received audio visual materials downloaded directly onto their phones. Other materials distributed to schools included tablets, local servers loaded with materials and portable projectors.

Action Research by Teachers on Child Safeguarding: The Programme trained teachers on classroom management and child-centred pedagogy from the beginning. However, it became clear that some teachers still found behavioural management a challenge and used corporal or verbal punitive measures with the pupils. An innovative, small-scale study was carried out with all the teachers in four schools in one local government in Jigawa State to look at how the school and the teachers manage pupil behaviour and what safe alternative measures could be tried out. New strategies were tried and adopted by teachers and schools and, as a result, children feel safe and supported in schools and teachers feel happy to get along with pupils.

Support to J level training, with master trainers from the colleges of education receiving training on the STEP course and on setting up and running English forums for teachers. In addition, training materials for JSS English, Mathematics and Basic Science were developed, and the college master trainers were trained and supported to use these to train JSS teachers. UBEC has agreed to use these for their training of JSS teachers in all states in the country.

Development of JSS Master Trainers

JSS is delivered through a subject-based approach. Master trainers were identified from the colleges of education and were supported to develop training materials and a training model that could be used with JSS teachers. Two programmes were developed: a subject-based training for three of the core subjects; and a programme for developing all JSS teachers' proficiency in using English Language in the classroom to teach. These were both designed to use the blended approach of face to face training, self-study using technology and follow up support.

English, Mathematics and Science and Technology Training for JSS Teachers

A one-year training programme of face-to- face training two days a term (40%) and self-study using the manual and AV materials for 2-3 hours a week (60%).

Face to Face Training started with selected lessons from the scheme of work. Teachers used video clips and were supported to analyse the methodology and engage with the subject content. Teachers were supported to conduct micro-teaching in small groups. Trainers observed the micro-teaching and provided constructive feedback on their performance. With trainers and peer support, teachers developed lesson plans based on the scheme of work.

Self-study: Teachers returned to their schools with their lesson plans, other appropriate additional resources on their SD cards/phones and self-study tasks were built on these resources. Whilst in school, teachers in their cluster attended a demonstration lesson given by their master trainer. This demonstration was linked to the module content and used as consolidation of the principles introduced in the face-to-face training. Teachers discussed the issues that arose from the demonstration lesson, using tasks in their self-study packs. They brought their evaluations to the next face-to-face training event.

School Support: Master trainers provided follow up support through school visits. They observed teachers and provided feedback and support after the lesson.

Strengthening Teachers' English Proficiency (STEP)

The focus was on encouraging teachers to use English in the classroom more effectively. 4,672 teachers benefited from the STEP programme.

Face to Face Training: A 5-day initial training was carried out for the teachers by master trainers selected from the CoEs and TDTs in the five states.

Self-study: This was a 40-hour course divided into 20 units of study (two books of 10 units each). Each teacher was expected to complete one unit per week. The self-study focused on the use of a guidebook including resources on SD cards.

Follow up support: Besides the training, teachers had the opportunity of interacting with other colleagues in the JSS English forums. These were also introduced in primary schools in Kano and Kaduna States.

Assessment: Pre-training and post-training tests were conducted for the teachers to gauge understanding and monitor progress. In Kano the percentage of those in the highest band jumped from 56% to 65%, while those in the lowest two bands dropped from 44% to 35%.

Year 6 Strategy

Based on the Endline Evaluation results, the Programme developed a strategy for refocusing work in its final year. This included the following:

a) Encouraging UBEC to work with partners such as TDP, Jolly Phonics, RANA and NEI+ to identify best practices and successful strategies for a comprehensive reading programme for teachers in Hausa and English, which addresses teachers' own English and Hausa skills (including reading and writing).

b) Gathering evidence of what works and what doesn't in order to evaluate TDP's success but perhaps more importantly to provide evidence to DFID to guide design and implementation of future education programmes. The key questions for which evidence was sought, through surveys or programme monitoring, were:

    i. How competent in terms of subject knowledge and pedagogy were the student teachers who had benefitted from the pre-service reforms?

    ii. Did more rigorous teacher recruitment procedures lead to real improvements in the quality of the teaching force?

    iii. How well were teachers using TDP materials (both print and AV) (i.e. how was it impacting on classroom teaching) and what steps could be taken to improve the quality of usage? This evaluation included the annual materials usage survey conducted by the states, and an assessment of the Education Technology rollout.

    iv. What was the impact of TDP's attempts to improve the effectiveness of SSVs and HT mentoring? This was a qualitative study which focused on analysing the success factors contributing to positive examples of head teacher and teacher mentoring, and whether these had been replicated effectively.

c) Refocusing the work of SSOs to a more realistic level and train LGEAs to plan and monitor SSV programmes. The capacity of head teachers and teachers is still very limited, and outside support needs to be provided to strengthen mentoring and professional development activities within the schools. UBEC has institutionalised SSVs through their revised training model, which TDP supported them to develop and build states' capacity on. States have taken different measures to ensure funding, regularity and quality of the SSVs.

d) Discontinuing the training of JSS teachers and focusing instead on sharing the materials with the states and UBEC. This was an attempt ensure that TDP did not spread its resources too thinly and therefore had resources to address the issues ab gather evidence on the effectiveness of proposed activities for the remainder of the Programme.

e) Consolidating the achievements to date and continuing to focus on the institutionalisation and sustainability of successful practices both in In-service and Pre-service. In this regard, political engagement and systems strengthening continued to be important aspects of TDP's work. The key focus of technical staff was to support the implementation of state and national sustainability plans and to identify and share good practices and results recorded at the classroom, school and college levels.

2.5. Output 2: Pre-service Teacher Training (PRESET)

The PRESET reforms were determined by NCCE from the beginning of the Programme and tried out in Phase 1 colleges, before being taken forward in Phase 2 colleges. There was little difference in the two models, but it was clear that the design of having Phase 2 Provosts engaged in the process from the beginning meant that they had already bought into the changes and moved through the process far quicker than the Phase 1 colleges. For example, in one Kano college, they went straight to training all student teachers on pedagogy rather

than piloting it with a small number first. The activities conducted through NCCE and the colleges are set out in the section below.

1. **To support the implementation of the new NCE curriculum:** The Programme supported NCCE to:
    a) Carry out sensitisation for management and staff of six on the new NCE curriculum.
    b) Develop manuals for the training of six COEs on the implementation of the curriculum.
    c) Train six COEs on the implementation of the new curriculum (structure, content and methodology).
    d) Disseminate the guidelines on the restructuring of the colleges based on the new curriculum.
    e) Upgrading of 25,000 unqualified teachers in Kano State through a part-time programme run by all four colleges of education in the state and supported by TDP to align the training with the INSET model. This was funded by the state government through direct funding to the colleges.

2. **To facilitate the restructuring of CoEs consistent with the new NCE curriculum:** In this regard TDP provided technical assistance to the management of the COEs to:
    a) Formulate and implement policy decisions on the restructuring process.
    b) Reorganise the COEs in line with the new curriculum and policy of states.
    c) Disseminate information on the criteria and process for restructuring.
    d) Provide support for the decision-making process of restructuring.

3. **To support the enhancement of quality assurance processes and procedures**
    a) **At national level:** The Programme held meetings with NCCE to determine priorities for support and workshops to support improvements to internal NCCE procedures. This included the development of training manuals for QA assessor training.
    b) **At college level:** The Programme worked with the colleges to:
        i)   Develop a timetable for the implementation of the new curriculum, restructuring, Toolkit for Pre-service student-teacher standards, etc;
        ii)   Facilitate workshops for college staff and State officials on the significance and implications of enhanced quality assurance (QA) procedures;
        iii) Conduct review of current QA arrangements in each CoE;
        iv)   Conduct self-assessment of the CoEs based on NCCE's Toolkit;
        v)   Analyse and disseminate results of review and assessments and agree with college authorities the priorities for improvement;
        vi)   Provide support to the CoEs to draw up work plans for implementation of improvements;
        vii) Conduct QA training for college staff;
        viii) Provide support for implementation of improvements consistent with the work plan, including institutionalisation of Pre-service Student-teacher Standards; and
        ix)   Provide support to the colleges to conduct internal QA and prepare for external accreditation.

4. **To enhance active learning pedagogies and update subject knowledge of CoE staff.** This was done through:

a) Conduct of baseline studies on the teaching and classroom practices of college lecturers;

b) Conduct of needs assessment on the training needs of college lecturers in the context of the need to improve and regularly update their content knowledge and pedagogical skills;

c) Design of a continuing professional development certificate (CPDC) programme that can provide opportunities to teacher educators to update their knowledge of subject matter content and pedagogy (see Figure 3 for the structure of the programme);

d) Development and / or adaptation of materials for the training of master trainers and college faculty;

e) Development of a Moodle Site and training provided for participants and facilitators to upload and give feedback on assignments as part of an e-portfolio of professional practice;

f) Training of master trainers for the training of academic staff on constructivist gender-based pedagogy;

g) Development of Accreditation Tools by NCCE and conduct of accreditation for CPDC in the twelve colleges; and

h) Capacity building of NCCE to replicate the reforms in CoEs in the non-support states.

Figure 3: CPDC Structure
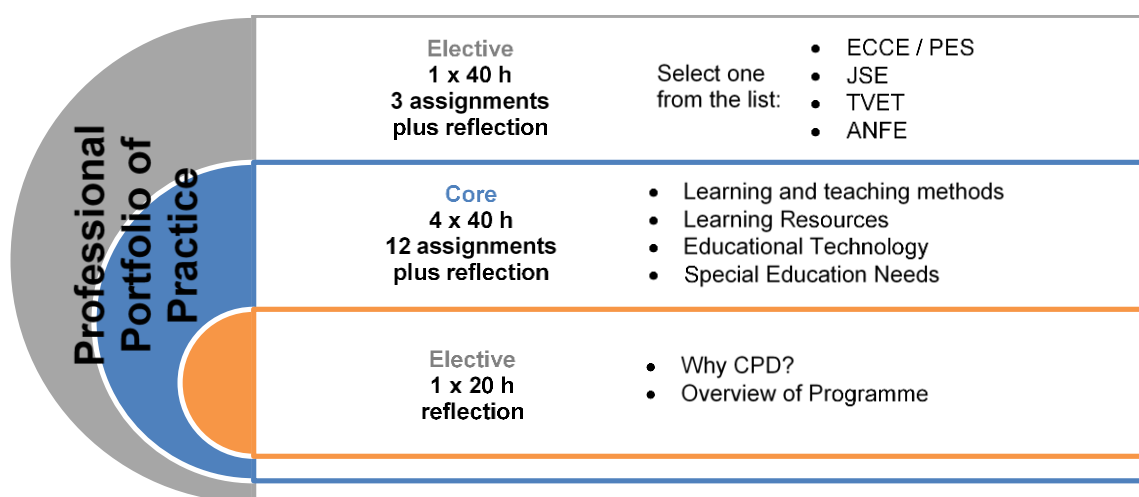
5. **Improvement of Pre-service Teaching Practice:** The following activities were also implemented:

a) Situation Analysis of Teaching Practice in the colleges;

b) Consultative meetings for head teachers of Associate Schools and managers of the colleges;

c) Development of Teacher-Mentors' Manual and College-based Supervisors' Manual.

d) Conduct of training of mentors;

e) Conduct of training of teacher educators;

f) Training of student teachers on the use of new technology ("The-Trainer-in-the Pocket'); and

g) Implementation of the Incentive Award Scheme (see below) for two years in the Phase 1 colleges and one year in the Phase 2 colleges.

Incentive Award Scheme

The Incentives Award Scheme (IAS), was implemented from September/October 2017 in partnership with NCCE in five colleges of education in the three Phase 1 states of Zamfara, Katsina and Jigawa. In 2018 IAS was rolled out to six additional colleges in the Phase 2 states of Kano and Kaduna.

The specific objectives of the IAS were to:

- provide incentives to student teachers to demonstrate their skills and knowledge when on teaching practice.

- incentivise teacher educators to incorporate activity-based teaching and learning strategies in their college teaching and then support and supervise student teachers to apply those methods when on teaching practice.

- support college managers and Provosts in restructuring colleges of education in ways that improve the quality of student teachers, so that their college education focuses on the skills and knowledge they will need to be effective teachers.

- encourage female teacher educators in colleges of education to take on leadership roles and to encourage the recruitment of a larger proportion of female staff across CoEs

- develop selected Associate Schools as beacon schools where initiatives in pre-service and in-service education come together to demonstrate tangible improvements in the quality of teaching and learning.

Findings of IAS

The money paid to the student teachers has to a considerable extent helped to offset some of the costs associated with TP such as transportation, purchase of cardboard to prepare instructional materials and student teachers' feeding costs.

For lecturers the amount paid has helped to supplement the teaching practice (TP) allowances paid to them by the TETFund and their respective colleges. It enabled them to undertake at least six supervisory visits per student and in some cases up to ten visits per student. According to the lecturers, the Incentives Award Scheme has made significant contributions to the way they now value TP as a critical component of teacher preparation.

The performance of the student teachers in Associate Schools was better than those in non-Associate Schools and the difference got wider with each successive visit.

The receipt of the IAS awards led to improvements in pre-service teaching practice and progress towards the prescribed curriculum standards.

The mentoring and supervision of student teachers were more effective amongst IAS recipients than non-recipients. The lecturers further confessed to changing their approach to TP supervision from being assessors to becoming mentors.

There was ample evidence of female students and female lecturers responding positively to their additional IAS awards.

6. **Establishing SUBEB-COE Linkages and Partnerships:** The following activities were also implemented:
   a) Situation Analysis of Teaching Practice in the colleges;

b) Creating synergies between SUBEB teacher requirements and the colleges' teacher training;

c) Creation and development of Associate Schools to model good teaching practice for students;

d) Training of SUBEB officials on TP monitoring;

e) Training of primary school teachers as mentors to support, guide and monitor students on teaching practice; and

f) Analysis of graduate output of CoEs against SUBEB's teacher requirements; with the aim of determining the extent to which graduate output matches SUBEB's demand and the outcome is being used to address any gaps identified. See section below on Results and Evidence.

7. **Ed-Tech for Colleges of Education:** An EdTech module was designed as part of the continuing professional development course (CPDC) meant to improve teacher educators' (or CoE lecturers') lecturing practices. As part of this course, a Moodle learning platform was also designed for participants of the CPDC to upload assignments and for facilitators of the course to assess them. For student teachers undergoing training on pedagogy, audio/visual content (the same as that for in-service teachers) on mobile phones were provided as part of the teaching practice training (students were also given teacher guides adapted from in-service teacher guides). Moreover, at the CoEs, assessments of the management information systems (MIS) were carried out, while computer laboratories at the CoEs were equipped with various open educational resources. In addition to the support to the CoEs, support was provided to upload the NCCE QA toolkit onto the NCCE website so that the QA units of the CoEs could, directly input their self-assessments into the forms – either on- or off-line.

2.6. Output 3: Results and Evidence

Inception and Phase 1 Activities

The main goal of the Results and Evidence output during the Inception Phase and Phase 1 was the generation of evidence on teacher effectiveness and efficiency to demonstrate results, test the theory of change and monitor programme implementation.

1. Demonstration of Results:

a)   **Baseline Studies**: In Phase 1, baseline studies were carried out across treatment (receiving the Programme intervention) and comparison (not receiving the intervention) groups of beneficiaries across the three states of Jigawa, Katsina and Zamfara. The aim was to determine their pre-implementation levels in terms of teacher pedagogic activity, pupil learning outcomes (English, Maths and Science & Technology), teacher subject knowledge (same core subjects), teacher motivation and head teacher school leadership. The findings from this assessment helped to inform the development of the initial training materials. Following feedback on materials usage and the Year 3 Annual Review another review of the materials was carried out to better align the materials to the needs of teacher and also align the print and audio-visual materials.

b)   **Formative studies:** These were carried out in 2016 to inform implementation of the in-service training model, particularly in Phase 2 of the Programme.

2. Producing evidence to support the theory of change:

a)   The Programme carried out a **materials survey** among teachers in Zamfara. The survey set out to gather evidence on the types of resources teachers were most receptive to, and particularly on whether teachers were accessing the resources they had been given by the Programme. Using questionnaires where teachers self-reported their level of usage of the various materials, the survey found the following:

- low usage of print materials as compared with high viewership and listenership of the audio and audio/visual materials;
- relatively poor usage of the lesson plans due to confusion around their purpose and relevance;
- high usage of amplifiers though evidence of increased frustration due to significant issues with poor battery life;
- some evidence of teachers using more effective classroom practices though some concerns around whether teachers really understood the purpose of some of these practices; and.
- materials' content recognition appeared to be weak among both teachers as well as teacher facilitators; however, for the English subject, teachers on average recognised more survey items than facilitators.

b)   In addition, the programme carried out the **observation of lecturers** at the CoEs and discovered that lecturers, on average, at four CoEs in two states spent a little more than half their time (44%) on activities categorised as student-centred using a timed observation instrument.

3. **Monitoring:** in Phase 1 monitoring included the development of forms and instruments for both in-service and pre-service training activities and the use of both paper and tablet-based data collection mechanisms.

Rollout and Phase 2 Activities

By the time of rollout and Phase 2 activities, the work of Output 3 had been revised to focus on two areas:

- Producing evidence to support the theory of change; and
- Strengthening government systems for monitoring the implementation of NTEP.

1. Producing evidence to support the Theory of Change

Teacher supply and demand studies were carried out in the three Phase 1 states. The studies were conducted to find out whether the supply of basic education teachers in these states was likely to match current and future demand. The studies found that there was little or no relationship between the number and type of teachers produced and the number and type of teachers required for the basic education systems. The findings from these studies helped considerably in strengthening relationships between SUBEBs and CoEs. This was seen through (i) bringing together the supply and demand dimensions of the development of teachers in the northern states; (ii) a clearer understanding of teacher quality and performance; and (iii) the implementation of the basic education curriculum in schools.

Endline Evaluation for Phase 1 of the in-service Output: this was conducted in 2017 using mixed-methods evaluation. The findings showed that TDP is well-appreciated, valued, and seen as effective by a wide range of stakeholders, and has had a positive impact on the way teachers teach. It was implemented largely to plan despite very difficult circumstances and was adapted in response to issues identified in earlier research. The report found that the pedagogy of teachers improved greatly; however, there was little or no improvement on teachers' subject content knowledge leading to little or no improvement in students' learning outcomes. The evaluation found that absenteeism was a major issue. As mentioned earlier, the Year 6 Strategy focused on taking a deeper look at key assumptions underlying the theory of change to examine the factors which were having positive impact on teacher quality and learning. This included setting out the studies the Programme would carry out during the year. More details and a summary of findings from these studies is set out in Section 3.

2. Monitoring the implementation of NTEP

The Programme worked with the FME, NCCE, UBEC and TRCN at the national level and the colleges and SUBEBs at the state level to develop a framework for monitoring the implementation of the NTEP. This work commenced in Year 4 and continued into Year 5. FME was supported to disseminate the NTEP and the monitoring framework to all 36 states and the Federal Capital Territory. The monitoring framework became the basis for the development of the monitoring systems for SUBEBs (first called the Local Government Database, then changed to the Basic Education Professional Development Database (BEPDD) and for colleges, the College Management Information System (CMIS).

BEPDD: The aim of BEPDD is to have a consistent mechanism for monitoring and reporting at all levels. This has been done by training and supporting stakeholders at national, state, LGEA and school levels, to:

- develop a database to serve as a monitoring tool at LGEA/SUBEB levels.;
- build capacity of the relevant staff at the LGEA, state and national level to be able to effectively use and maintain the database;
- strengthen the capacity of the LGEA, state and national MDAs to use the data for planning;
- provide a sustainable database which could be reviewed and revised by government in the future without the reliance on external consultants; and
- use BEPDD as a tool for demonstrating greater transparency and accountability.

CMIS: The aim of CMIS is to provide the format for result-based planning, monitoring and implementation of both academic and non-academic activities and programs of the colleges, through the provision of quality data. It also aims to align the colleges' MIS with the NCCE toolkits and the NTEP monitoring framework This has been done by working in collaboration with NCCE to provide for the colleges:

- a centralised system for students' registration every academic year;
- a platform for uploading students' profile and academic performance;
- a platform for lecturers to upload lectures results of students; and
- information on both academic and administrative staff of the colleges.

Section 3: Results and lessons learnt

3.1. The Theory of Change

The design of TDP's Output 1 was informed by a Theory of Change that articulates how the in-service teacher training activities are intended to result in the desired outcomes (improved teacher subject and pedagogical knowledge); intermediate impact (increased teacher effectiveness); and final impact (improvement in pupil learning levels), and underlying assumptions (Figure 4).

Figure 4: TDP's Theory of Change
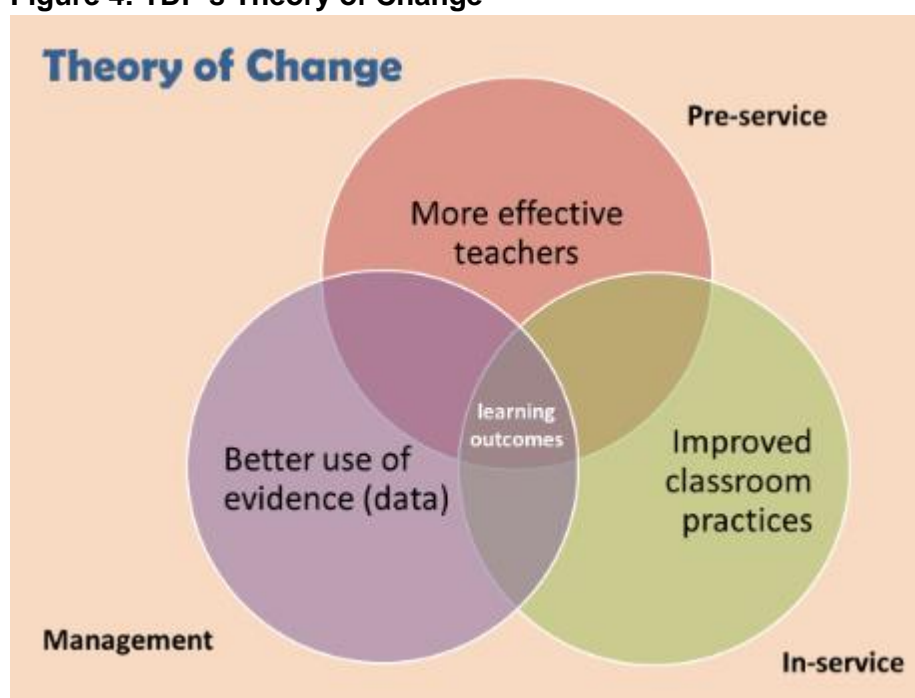
Phase 1 Theory of Change

The Theory of change was expanded by the evaluation team during the development of the evaluation framework prior to the baseline research, and the evaluation questions and assumptions to be examined by the evaluation were developed on this basis. After one year of Programme implementation four assumptions were added to the theory of change:

- given the low level of teacher competence, teachers need to have more intensive and broad-based training;
- a stronger emphasis on improving teacher subject knowledge is necessary;
- teachers need to receive local support over a sustained period of time to consolidate their learning; and
- pupils will also benefit from direct access to educational technology.

Phase 2 Theory of Change

As part of the Programme Rollout Strategy, the theory of change was updated (Figure 5) and aligned with the National Teacher Education Policy (NTEP).

Key propositions and assumptions of TDP's strategy

The key propositions of TDP's strategy relevant to Output 1 are:
- An expanded cadre of local trainers and quality assurance officers will provide teachers with ongoing, in-situ, support;
- Head teachers' leadership role and management functions significantly influence the potential effectiveness of classroom teachers;
- Teachers will be trained primarily to be classroom teachers rather than subject teachers;
- Teachers of all capabilities and length of service will benefit from an intensive one-year in-service training to improve their content knowledge and ability to teach this content;
- The use of technology for self-learning is key to the learning of pupils and the professional development of teachers; and
- Increasing teachers' English proficiency is a critical component of improved (classroom and subject) teaching.

TDP's key assumptions underlying each of these propositions remain that:
- More intensive and broad-based training is an effective means of raising the competence of the current cohort of in-service teachers;
- Head teachers have the autonomy and resources in the current system to exercise leadership and management skills;
- *Subject content* knowledge can be acquired indirectly through the pedagogy training and self-learning facilitated by access to Ed Tech;
- Support and mentoring will be provided at sufficient intensity and quality to consolidate learning of existing teachers and student teachers; and
- CPDC training is an effective means of raising the competence of the current cohort of teacher educators.

Source: TDP 2017.

Figure 5: TDP's Revised Theory of Change
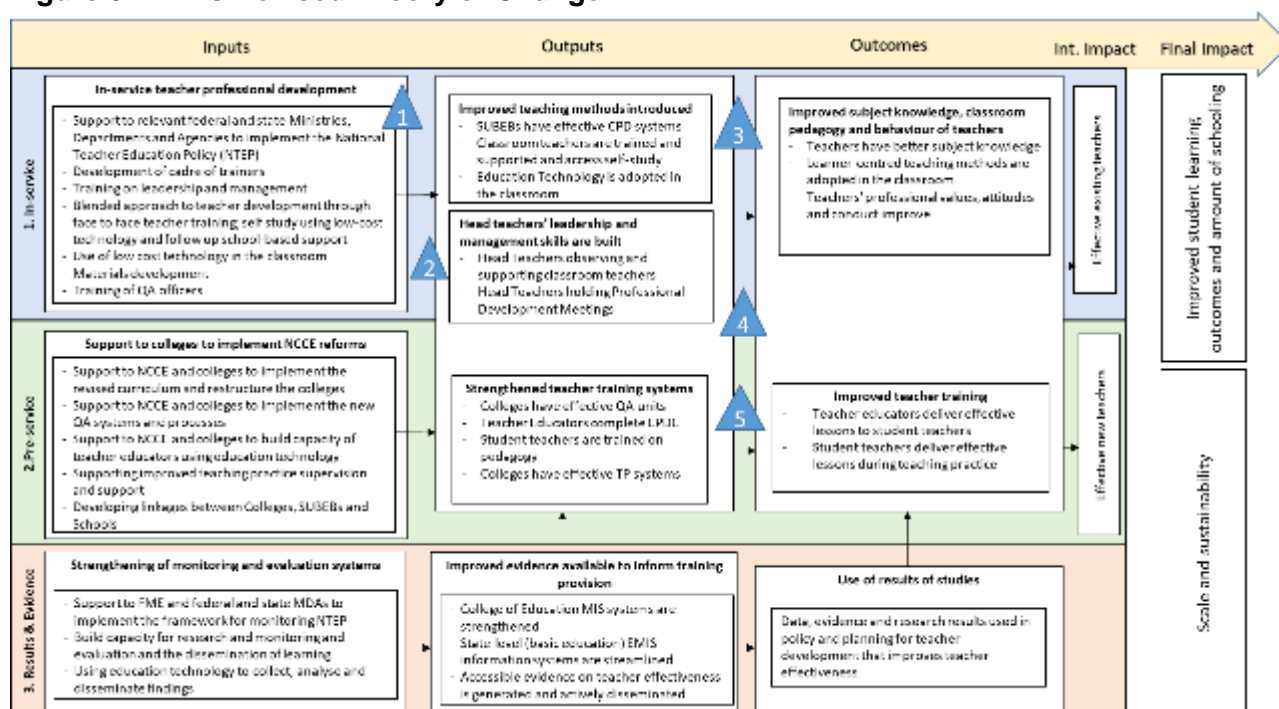
Table 3 shows the revised Programme Logframe, based on the new Theory of Change, setting out the information needed by management to keep the progress of the TDP under review.

Table 3: New TDP Log frame indicators and Sources of Data

IMPACT	INDICATOR NUMBER	INDICATOR NAME	DATA SOURCE
Improved quality of learning for primary school students	IMP.1	Learning gains for primary pupils measured as % of pupils performing at grade level in the 3 core primary subjects (English, Mathematics, Science and Technology)	Baseline and End line evaluation survey report
	IMP.2	Learning gains for poorest 20% of primary pupils performing at grade level in the 3 core primary subjects (English, Mathematics, Science and Technology) expressed as %	Baseline and End line evaluation survey report
	IMP.3	Increase in state level total primary school completion rate (percentage points).	State EMIS data (Annual School Census)
OUTCOME		**INDICATOR NAME**	**DATA SOURCE**
More effective primary teachers, more effective teacher educators and better use of evidence for policy and planning.	OTC.1	Learning gains for primary pupils performing at pre-grade level in the 3 core primary subjects (English, Mathematics, Science and Technology) expressed as %	Baseline and Endline evaluation survey assessment result
	OTC.2	% of teachers demonstrating proficiency in subject content knowledge	Baseline and Endline evaluation survey assessment result
	OTC.3	Proportion of lesson time teachers involve pupils in positive interaction (%)	Baseline and Endline evaluation survey assessment results/Classroom observation record
	OTC.4	Teacher absenteeism over a five-school day period (%)	Baseline and Endline evaluation survey assessment result/Classroom TP observation record
	OTC.5	% of teacher educators delivering effective lectures	Baseline and Endline evaluation survey assessment results/Lecture observation record

	OTC.6	% of student teachers delivering effective lessons during teaching practice	Baseline and Endline evaluation survey assessment results/Classroom TP observation record
OUTPUT 1	**INDICATOR NUMBER**	**INDICATOR NAME**	**DATA SOURCE**
Trained primary and junior secondary school teachers	OUT 1.1	Number/Percentage of state primary and JSS teachers who have received year of in-service training and support	Routine Programme report (Training reports, school support visit reports, head teachers' supervision report, Logframe tracker, EMIS)
	OUT 1.2	Number/% of Head Teachers trained observing and supporting classroom teachers	Routine Programme report (Training reports, Classroom observation report, Log frame tracker, EMIS)
	OUT 1.3	% of trained teachers accessing relevant audio-visual materials on their mobile devices	SSV reports, teacher lesson observations reports, survey reports.
	OUT 1.4	% of SUBEBs with effective CPD systems	SUBEB self-assessment reports,,
OUTPUT 2	**INDICATOR NUMBER**	**INDICATOR NAME**	**DATA SOURCE**
Colleges of education are strengthened, and training of teacher educators is improved	OUT 2.1	% Colleges with functional QA units	College self-assessment reports
	OUT 2.2	Number of steacher educators who have completed the CPDC programme	CPDC training reports, CoE Moodle use metrics
	OUT 2.3	Number of student teachers trained on pedagogy using low cost technology	Training reports
	OUT 2.4	% Colleges with effective TP systems	College self-assessment reports
OUTPUT 3	**INDICATOR NUMBER**	**INDICATOR NAME**	**DATA SOURCE**
Data, evidence and research on teacher effectiveness effectively gathered and disseminated	OUT 3.1	% of colleges with effective MIS	College self-assessment reports
	OUT 3.2	% of SUBEBs with effective reporting systems	SUBEB self-assessment reports

Year 6 Strategy

The Year 6 Strategy set out the revised strategy for TDP implementation for the final year of the Programme. It drew on the findings of the Endline Evaluation to:

a) identify where the assumptions in TDP's Theory of Change needed to be re-examined;
b) identify changes in implementation practice that will improve delivery and results including what TDP will stop doing; and
c) ensure that clear lessons are learned about what works and what doesn't.

The key challenges identified in the Endline Evaluation were:

- No improvements in teacher subject knowledge and low levels of teacher language proficiency;
- Problems around language of instruction;
- Problems around usage of learning materials;
- Ineffective monitoring and support by SSOs;
- Lack of effective mentoring by head teachers; and
- No improvement in pupil learning outcomes.

The major challenge continued to be poor teacher subject knowledge and the lack of success in engendering any significant improvement. It was reasonable to assume that real improvements in subject knowledge would have produced some tangible improvements in learning outcomes. The Programme concluded that it remained possible that some improvement in subject knowledge could be achieved using the in-service training and support model adopted by TDP, but that four key conditions needed to be met for this to happen.

1. Teachers' reading skills and English proficiency must be improved
2. Teachers must become more competent in teaching reading in Hausa
3. Teachers should be supported to use technology-based materials effectively
4. Monitoring, support and mentoring systems must be made more effective.

Following the success of the work carried out in Kaduna on introducing competency-based teacher recruitment, it is clear that a fifth condition is needed:

5. Teachers should have a basic level of numeracy and literacy to be able to access any form of training.

3.2. Findings from Research and Studies Conducted

Baseline Evaluation
Sample sizes:
- Teachers: 1158
- Pupils: 2571

Pupil performance (skills demonstrated against expectations for the end of Primary 2):	
basic literacy skills	3%
basic numeracy skills	6%
basic skills in Science & Technology	15%

In all three subjects, girls and pupils categorised as being from the poorest households (with the least assets, as determined by pupils' household assets), performed significantly worse than boys or pupils from households with greater assets.

No significant differences were found between treatment and control schools.

Teacher performance

English	0.4%
Maths	8.0%
Science & Technology	0.1%

Teachers' ability to assess and monitor pupils' academic progress:

0.3% of teachers had sufficient knowledge to identify pupil learning problems or use graphs and tables to monitor pupils' progress

Teacher involves students in positive interaction for about **24%** of a 35-minute class

Self-reported absences over the previous five school day period was at **14%**.

Teachers who had NCE qualification were found to be significantly more motivated than those who had no NCE.

School leadership and management including practices of the head teachers and involvement of school-based management committees were identified as critical elements in the improvement of school performance.

The study identified four key constraints to teacher effectiveness which included:

- teachers' weak subject knowledge;
- limited use of effective teaching practices;
- teacher absenteeism; and
- loss of instructional time.

However, the study noted that there is a small group of teachers with sufficient Mathematics knowledge who have stronger English and Science subject knowledge (though still weak overall), stronger ability to assess and monitor pupils' and somewhat lower absenteeism. However, it notes that this group still displays limited positive interaction skills.

Endline Evaluation
The Programme Endline Evaluation was finalised in April 2018. The key findings of the report showed that:

- Head teachers felt that TDP had a positive impact on their **school leadership and management**, including by increasing their knowledge on managing their relationships with teachers, and providing constructive feedback and support;
- TDP has had a positive impact on **teachers' practices in the classroom**. The use of effective teaching practices has increased significantly since baseline, and more so in treatment than in control schools. Teachers spend less time chanting, or writing on or reading from the blackboard, and more time assisting pupils working or discussing in groups, and they make more use of improvised materials;

- **Teachers' subject knowledge** in English, Mathematics and Science was found to be low in the 2014 baseline study and has not improved since. Teachers must become more competent in teaching reading in Hausa and English;
- Teachers are more often **absent from school** than at baseline, and teachers in TDP schools were absent no less than those in control schools; and
- There was no significant progress made in pupils' learning levels.

Other Studies carried out

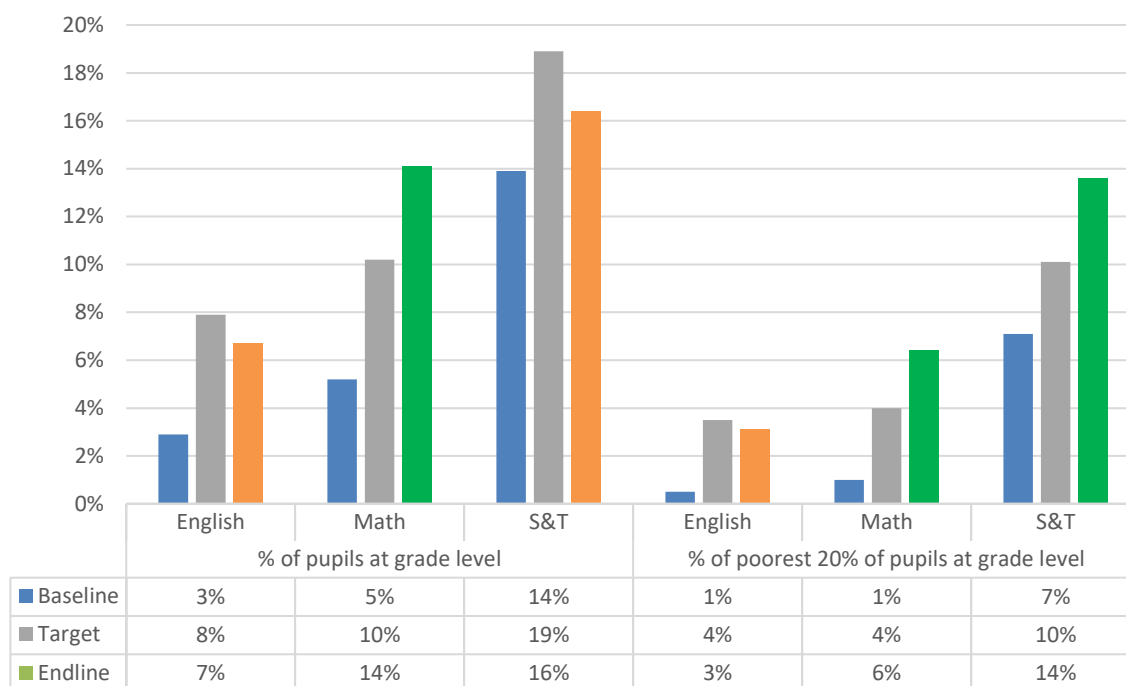| Objective	Findings
Teacher Supply and Demand Studies *Objectives*: to find out whether the supply of basic education teachers in these states was likely to match current and future demand	There are large teacher shortages in the three states, which have been getting worse over time as enrolments grow and new teachers are not being employed. Teacher requirements are going to lead to a 43% increase in teacher demand in the next decade. In Jigawa, for example, this would result in an annual recruitment of 7,000 teachers and an annual enrolment in the colleges to roughly 16,000 by 2022. Spending on teacher salaries in Jigawa would have to increase from N9billion per year to N50billion by 2025.
Tracer Study of COE Graduates *Objectives*: • determine the total number of the 2014-2018 NCE graduates of the 12 CoEs, • determine the number of the graduates who are currently employed and are teaching in public or private schools; and • assess the performance of the graduates teaching in the schools.	The study revealed that the total graduate output of the colleges was 71,265 students during the period under study. A total of 20,183 of the graduates were employed and teaching in the basic school system in the five states. (9,148F, 11,035 M). The performance of the graduates was rated as generally satisfactory by head teachers and the findings of the classroom observation of the graduates. It is a matter of serious concern that only 28% ie less than one-third of the graduates produced were employed by the state SUBEBs. This raises questions about the relevance of the colleges' graduates to the states' teacher needs and brings into sharp focus the lack of political will on the part of all the states (except Kaduna) to address the teacher supply gaps in their respective states. It was encouraging to note that across the 12 colleges, the proportion of graduates from previously under-represented courses such as Primary Education Studies (PES) and Early Childhood Care and Development Education (ECCDE) were increasing year on year, as correspondingly the proportion taking traditionally secondary courses were decreasing.
TDNA Baseline and Endline Report for Kano and Kaduna *Objectives*: to assess the changes in teacher subject content knowledge proficiency levels in the two states before and after the TDP interventions.	Results from the Kaduna teacher development needs assessment (TDNA) baseline and endline show that the newly recruited teachers have higher levels of subject content knowledge than the retained teachers, who had higher levels than the teachers who were sacked. It also showed that the retained teachers are "trainable" as their scores improved between the baseline and endline - at baseline 42% had limited or emerging professional knowledge compared to only 26% at endline. Even in Kano, the subject content knowledge of teachers in Science and Technology improved across the bands (Figure 3), with the top two bands growing from 7% at baseline to 18% at endline. However, the top band (sufficient proficiency) still shows unacceptably low growth from a baseline of 0% to an endline of 1%. If this level of growth was to be sustained (requiring intensive training every year), it would take longer than the working life of a teacher to have the entire workforce gain sufficient knowledge. More radical approaches (such as the case in Kaduna) are clearly needed.
Kaduna Teacher Reform Research *Objectives:* • To assess the influence of the reformed teacher	**The report gives strong evidence to show that competency-based recruitment can be done in Nigeria and the result is a higher standard of subject knowledge and uptake of training**. The research showed that the reforms achieved their aims by improving the quality of the teacher workforce, with teachers able to engage better with training implementation and being more innovative in the classroom. Teacher motivation levels are high with teachers being described as "enthusiastic and committed."

recruitment processes on teacher effectiveness. • To document stakeholder perspectives of the influence of the reform on the broader learning environment including teacher gap, school management, stakeholder engagement with the reform and its sustainability	
Materials Usage Survey *Objectives*: to assess the usage of various materials given to teachers as part of their in-service training and to identify areas where more support is required to teachers	The survey clearly shows that in the years when face-to-face training is at its peak, the use is higher (which accounts for the high baseline) and this tailored off in the second year (2018) as teachers felt that they had already seen the videos and didn't need to watch them again. Based on the feedback from 2018 data, the SSIT in the five states developed a strategy to ensure that teachers are making more appropriate use of the resources, which are not just for lesson planning, but which also include materials to be used in the classroom. As a result of the additional support given during MPDMs, the figures across four of the five states increased dramatically from 2018-2019 (14%, 26% and 10%). Katsina has shown consistently low results averaging at 47%, despite additional support being provided.
Child Safeguarding Action Research *Objectives*: to look at how the school and the teachers manage pupil behaviour and what safe alternative measures could be tried out	This was an innovative, small-scale study which was carried out by all of the teachers in four schools in one local government in Jigawa State. Results from the teacher research were very positive. Teachers are using creative strategies to solve behaviour problems rather than resorting to caning, shouting and verbal abuse. Teachers in all schools attested to the positive gains of the safeguarding activities and were surprised that it was yielding positive results at such a short interval for both pupils and teachers. The teacher-pupil relationship is improving as result of the new approach and teachers are interacting more with the pupils to understand their needs. Teachers are paying attention to reactions and responses from the pupils to understand their behaviour and how to handle them. The teachers are extending their roles beyond the classroom as the interaction has been extended to parents and guardians of pupils.
Study on Effectiveness of SSVs *Objectives*:	Still in progress
EdTech Assessment *Objectives*:	Still in progress
Phase 2 CPDC Endline Survey *Objectives*: to assess the changes in teacher educators' performance in the classroom following their participation in the CPDC Programme	The findings on Phase 1 colleges indicate that: "The use of active learning methodologies was prevalent among the observed lecturers across the six colleges. Up to 76% of lecturers observed were found delivering their lessons using activity-based learner centred approaches." The Phase 2 baseline data was 40% and the endline is 92%, showing a tremendous improvement in the quality of delivery by the teacher educators. The CPDC Programme has transformed teacher educators' classroom practices. This is important as when student teachers are taught using models of good practice it builds their skills and their understanding of what good teaching looks like.
Assessment of Student Teachers *Objectives*:	Still in progress

3.3. Logframe Results

More children are learning at grade level, more poorer children are learning at grade level and fewer children are learning at pre-grade level

Figure 6: Learning Outcome Results: grade level

	English	Math	S&T	English	Math	S&T
	% of pupils at grade level			% of poorest 20% of pupils at grade level		
Baseline	3%	5%	14%	1%	1%	7%
Target	8%	10%	19%	4%	4%	10%
Endline	7%	14%	16%	3%	6%	14%

Impact Indicators 1 and 3 set out the learning gains for all primary pupils and for the poorest 20% of pupils measured as % of pupils performing at grade level in the 3 core primary subjects (English, Mathematics, Science and Technology) (Figure 6). The baseline scores were collected when the pupils were in primary 3, and the endline scores were collected when the same pupils were in primary 6. **There is an improvement in the learning achievement in the three core subjects, and the score at endline for Mathematics exceeded the target. However, the performance in English and Science did not meet the target set**. The low levels of English proficiency of teachers and the lack of a comprehensive implementation strategic for L1 and L2 teaching in Nigeria has no doubt had a part to play in these scores. By the time the Endline took place, TDP had just begun to implement a deepening of the training for teachers which supported improved "reading across the curriculum" skills for teachers and pupils. The Programme is currently coordinating the inputs of donor programmes to work with NCCE to revise the language and PES curricula to ensure that student teachers leave colleges with better skills and knowledge in using L1 and L2 appropriately in the early grades.

These results are also not unconnected to the environmental challenges such as overcrowded classes, absenteeism, lack of subject content knowledge and lack of resources, etc. In the second phase of the Programme, TDP strengthened teachers' English proficiency through training and self-study, introduced a reading programme, ensured SSVs are effective, and encouraged the use of educational technology materials and the improvisation of other resources to strengthen the capacity of the teachers.

Significant improvements were seen in the learning achievements for the poorest 20% of pupils' in the three core subjects. For instance, English recorded 0.5% at baseline and closed with 3.1% (i.e. 520% increase) while Mathematics scores moved from 1% to 6.4% (560% increase) and Science ends with 92% increase (from 7.1% to 16.6%). Notwithstanding this huge leap in the performance, it is still a slightly below-expected standard in English. The environment and economic factors and quality of teachers in the system impacted, to a large extent, on the performance and achievement of the pupils. Hence, there is a need to intensify the efforts in the next programme to close the gap between the poor and the not-so-poor.

Outcome Indicator 1 looks at the learning gains for primary pupils performing at pre-grade level in the 3 core primary subjects (English, Mathematics, Science and Technology) expressed as %. The learning gain for primary pupils in the three core subjects has improved over the baseline achievement in the treatment group when compared to control group (Figure 7). These results show that the percentage of pupils in the lowest performing band has reduced considerably and more than the target across all three subjects. This means that the weakest pupils are improving significantly.

Figure 7: Learning Outcome Results: pre-grade level
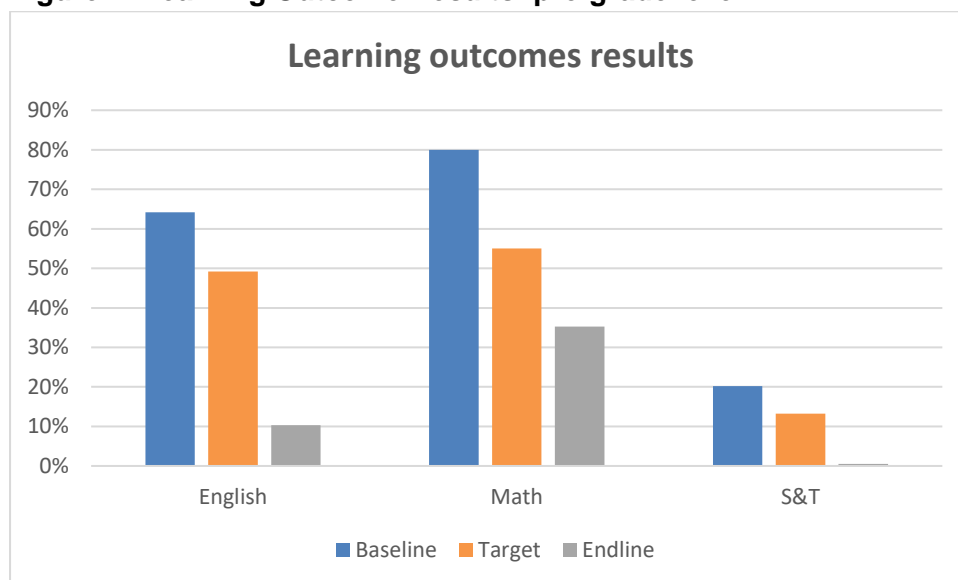
More children, especially girls, are completing their primary education

Impact Indicator 3 shows the increase in state level total primary school completion rate (percentage points) (Figure 8). The logframe target for this indicator was for year 5, with the target of 4% being exceeded. This year, the phase 1 states' completion rates have increased by 8.5% and all five states have increased by 5.8%. In the five states, completion rates for boys have increased from 68% to 74% to 79%, while girls' completion rates have increased from 59% to 65% to 73% over the three years (2015/16, 2016/17, 2017/18). **This has resulted in an extra 74,907 children staying in school to complete primary 6, 58% (43,146) of whom are girls.** Kano's completion rate for girls this year is 107%. Discussions with the state indicate that this represents an increase in the number of girls coming back to school after dropping out.

Figure 8: Completion rates by state and gender
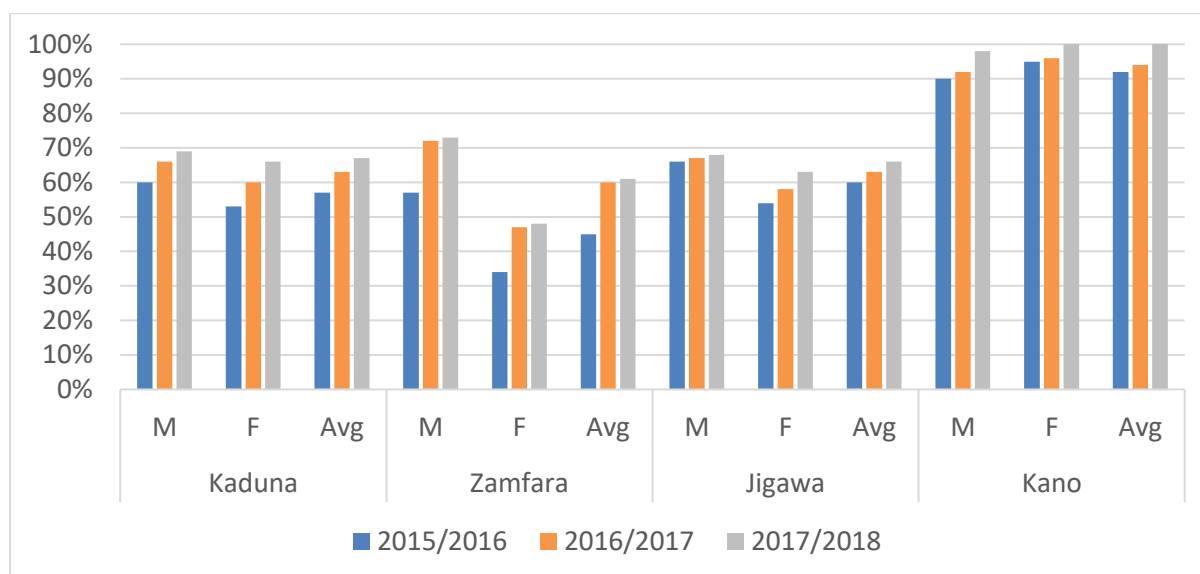
Teachers have improved pedagogical skills, but subject content knowledge remains a challenge, with improvements being very gradual and teacher absenteeism has increased

Outcome Indicator 2 shows the % of teachers demonstrating proficiency in subject content knowledge. Proficiency in subject content knowledge is one of the prerequisites for effective teaching and learning in a class. The teachers in TDP treatment schools have greatly improved their pedagogical skills. However, the percentage of teachers demonstrating sufficient subject content knowledge at baseline and endline is worrisome except in Mathematics, where the target was almost achieved. This percentage remained almost constant in English and Science and Technology (at zero) (Figure 9).

Figure 9: Teachers' subject proficiency
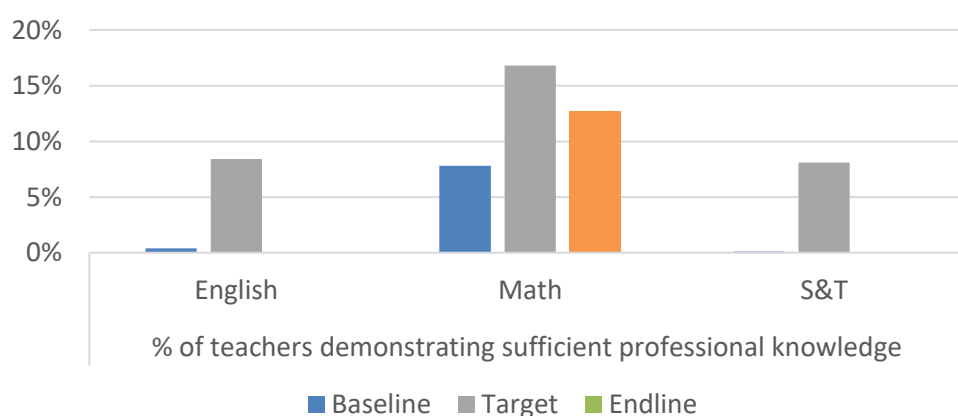
Teachers' proficiency and capacity is greatly affected by their background and quality of education from their pre-service education. The fact that barely any teachers demonstrated proficiency at Baseline or Endline points quite clearly to the fact that a) these teachers may have qualifications, but the qualifications clearly don't reflect the reality of their knowledge levels and b) the recruitment practices are not competency based.

Following the Endline result, TDP evolved a strategy aimed at looking at the elements of the training that can best improve the situation and the minimum level of contextual factors that need to be in place to guide states going forward. TDP conducted research on teacher reform in Kaduna to strengthen and validate the need for recruitment and placement of competent teachers and head teachers in school. Results from Kaduna have shown that implementing competency-based recruitment processes result in a more trainable teacher workforce, and bigger improvements in subject content knowledge of teachers (Figures 10-12). **The report gives strong evidence to show that competency-based recruitment can be done in Nigeria and the result is a higher standard of subject knowledge and uptake of** training. The Programme invested significant time and resources into supporting this process to ensure it was successful. The data from the report show that:

- the quality of teachers at Endline is significantly higher than the quality of teachers at the Baseline.
- the quality of retained teachers at Baseline was higher than the quality of "sacked" teachers. There are small numbers in the "sacked" teacher category who were transferred to other schools which is why some of the teachers scored well in this category. However, some poor quality retained teachers may have slipped through the net, but the proportion is small considering the size of the change that Kaduna hoped to bring about.
- The retained teachers in Kaduna are trainable: at Baseline 42% had limited or emerging professional knowledge in Mathematics compared to only 26% at Endline. In Science, the Baseline figure of 85% having limited or emerging professional knowledge dropped to 71% at Endline. The most encouraging result for Science and Technology was that the proportion of teachers with emerging /near professional knowledge changed significantly between the baseline of 60:11 to the endline of 49:26, showing that even those in the second worst category can improve with time (Figure 11). The data is less encouraging for the bottom band as almost the same proportion had limited professional knowledge in Science and Technology at baseline (25%) and endline (22%) – indicating that these teachers really don't have the minimum levels of literacy and numeracy to improve.
- The new teachers have higher levels of proficiency than any of the other categories of teachers, with only 16% (Mathematics) having limited or emerging proficiency – showing that Kaduna did a good job of implementing competency-based recruitment considering the low starting point of behaviours and attitudes (Figure 10).
- Even in Kano, the subject content knowledge of teachers in Science and Technology improved across the bands (Figure 12), with the top two bands growing from 7% at Baseline to 18% at Endline. However, the top band (sufficient proficiency) still shows unacceptably low growth from a Baseline of 0% to an Endline of 1%. **If this level of growth was to be sustained (requiring intensive training every year), it would take longer than the working life of a teacher to have the entire workforce gain sufficient knowledge**. More radical approaches (such as the case in Kaduna) are clearly needed.

Figure 10: Percent scores for Numeracy Test by Type of Teachers in Kaduna State
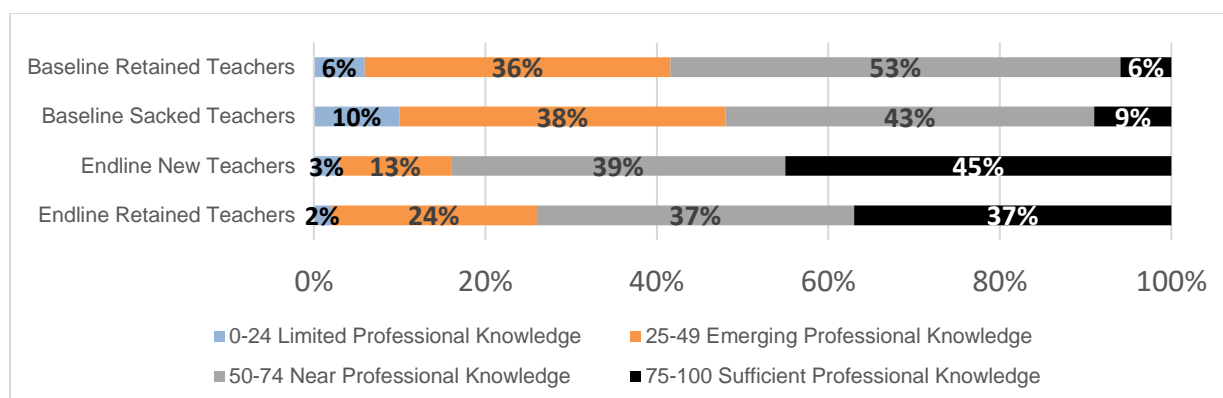
Figure 11: Percent scores for Basic Science Test by Type of Teachers in Kaduna State
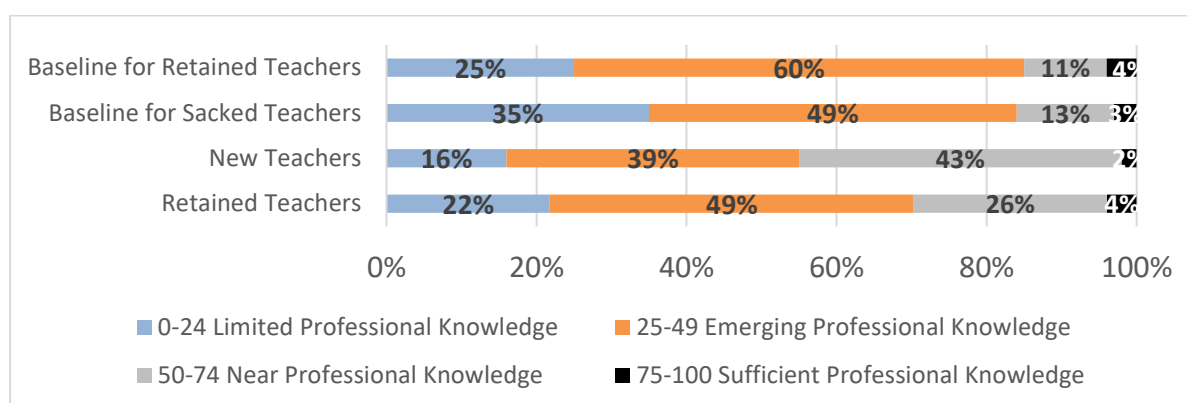
Figure 12: Basic Science Baseline and Endline Score for Kano Teachers
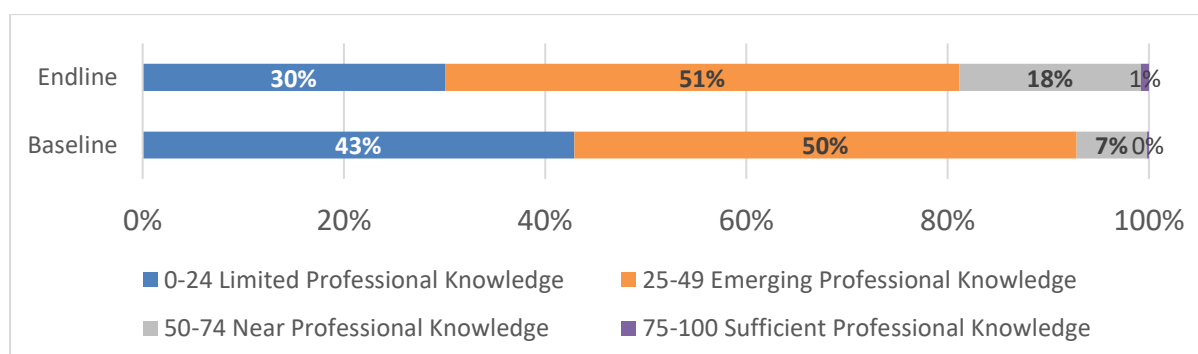
Outcome Indicator 3 shows the proportion of lesson time teachers involve pupils in positive interaction (%). **The quality of teachers' interaction with both co-teachers and pupils in the treatment schools has greatly improved.** TDP created a platform and opportunities for interaction through training on classroom management, MPDMs and feedback mechanisms. Also, strengthening the learner-centred approach has fostered good interaction between the teacher and the pupils. The Endline report provided strong evidence that TDP intervention has helped to increase the time teachers spent in positive interaction with pupils by 4% which is statistically significant (Figure 13). In addition, TDP commissioned a child safeguarding action research to strengthen the capacity of the teacher to better understand the pupils' behavioural tendencies and effective classroom management strategies. This was successful, with teachers in a very short space of time building a stronger understanding of the reasons behind children's behaviour and therefore being able to respond accordingly to enable them to learn.

Figure 13: % of lesson time spent in positive interaction
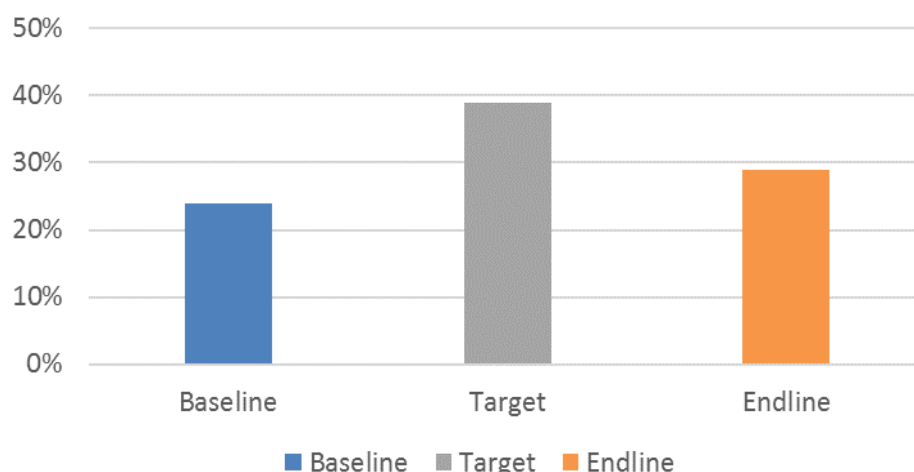
Outcome Indicator 4 sets out the levels of teacher absenteeism over a five-school day period (%). The percentage of teachers' absenteeism over a five school-day period ranges between 47% and 48% in both treatment and control schools. At the Endline, the situation is slightly better in treatment schools than in control schools. However, the overall absenteeism in schools worsened by 15.7%. This absenteeism leads to loss of instructional time and affects teaching and learning in the classroom. Health and welfare issues (57%), religious obligation (14%), time spent in salary collection (7%) and seeking additional income (5%) are some of the reasons given for teachers' absenteeism in schools. All these factors are externalities which are beyond any programme intervention. Hence, state governments are strongly advised to look into teachers' welfare, motivation and monitoring to improve attendance in the schools. As we have noted on previous occasions, TDP has very limited means of impacting on school attendance when the issues affecting it are external. In addition, due to the patronage-based recruitment practices, head teachers often have little control over the situation. Success can be achieved however, and the leadership and management course for head teachers attempts to address this. An example where a head teacher has been able to address absenteeism has been seen in Kano (see case study below).

Kano Case Study: Improving school time management through effective school leadership

Garba Kabiru Fagge has been in the Kano state basic education system as a head teacher for 15 years. During this time, he has encountered a lot of challenges in school administration and management. However, for the school head, one of the biggest obstacles he has had to deal with is the issue of teacher absenteeism and late coming which is particularly worrisome for him as it directly affects the time on task of his teachers and pupils.

To tackle this trend, the head teacher who has been a beneficiary of TDP's school leadership training which exposed him and other head teachers to various school management techniques, strategies and procedures quickly swung into action and employed the use of a mandatory professional development meeting or MPDM which was one of the techniques he acquired from the school management course, to show his teachers how absenteeism impacted negatively not only on the pupils' education but on the entirety of the school. He also used the MPDM to find out how they could collectively address the root cause of the problem which they had discovered to be the long distances the teachers had to transit from before they got to school each day.

Consequently, the teachers collectively came up with the idea of using a time book to record every teachers' punctuality and a set of sanctions to be given to defaulting teachers, such as given extra

duties after school. However, Garba did not want to demoralise teachers, when often the reason behind lateness of absenteeism might be beyond their control. He therefore established a system of discovering personal issues and taking steps to help resolve these that also rewarded hardworking teachers and made them role models to other teachers.

Garga also acts as a role models to teachers, ensuring he is early to school and he rewards punctual pupils with pencils and notebooks. For the head teacher, tackling the problem of teacher absenteeism and late coming in Kano's largest primary school has been a challenging hurdle which he has been able to successfully overcome through a mix of team work through the MDPMs, discipline with the time book, direct intervention through better inter-personal communication skills, leadership by example and effective management through the delegation of duties, roles and responsibilities. As a result, the 117 teachers are now present on time and stay til the end of school, providing all 13,746 pupils in his care with the best in terms of teaching and learning.

Output Indicator 1.1 Number / Percentage of state primary and JSS teachers who have received one year of in-service training and support

Period	Target	Achieved	% Achieved	Comment
Year 6	17,888	37,054	207%	Overachieved
Programme	62,068	102,362	165%	Overachieved

The Programme surpassed its target of 62,068 by 40,294 (65%) Out of the total 102,362 teachers trained, 97, 690 were primary teachers and 4,672 were JSS teachers This means that 81% of all primary teachers across the five states have now benefitted from training. Of the 97,690 primary teachers trained and observed, only 22,379 (23%) were trained by TDP, the rest 75,311 (77%) were trained as roll-out by the states using state funds. This is significant because it is a clear demonstration that the states have taken ownership of the training model because they find it more effective and more aligned to states' commitment to achieve their educational goals. This commitment and confidence in the TDP training model made some states to release funds to roll out to all schools, particularly in Kaduna. This total ownership by the states is responsible for the massive over-achievement of the target. The fact that the roll out is delivered by government personnel at state and local level through a cascade model means that the model is sustainable and can operate at scale across states to benefit all primary teachers over time. The Programme's principles of working through state systems, evidence-based advocacy and hand-holding has contributed greatly to this remarkable achievement. Engagement at the national level, has increased the potential for rolling out more effective models of training, with UBEC revising their TPD model to reflect an agreed set of training standards developed in partnership with TDP.

Output Indicator 1.2. Number/% of Head Teachers trained observing and supporting classroom teachers

Period	Target	Achieved	% Achieved	Comment
Year 6	2,740	5,328	194%	Overachieved
Programme	10,966	11,337	103%	Overachieved

The Programme will surpass its target of 10,966 HTs trained by the end of this month (June). Currently, TDP has trained over 45% (7,337) of HTs in all the five states. There is an on-going HT training in Kano of 4,000 HTs which would be completed before the end of June 2019. Once these have been included, a total of 11,337 would have been trained which is beyond

the expected target and accounts for 69% of all HTs in the five states. This result varies widely between states, with Kaduna and Zamfara training all head teachers, whereas Jigawa training only 16.5%. Without effective head teachers, class teacher training is rarely implemented successfully.

Output Indicator 1.3: % of trained teachers accessing relevant audio-visual materials on their mobile devices

Period	Target	Achieved	% Achieved	Comment
Year 6	89.0%	57.6%	68%	Underachieved
Programme	89.0%	57.6%	68%	Underachieved

This process of data collection on the status of percentage of trained teachers accessing relevant audio-visual materials on their mobile devices has been completed in the five states and has been carried out three times (2017, 2018 and 2019). The states have been supported on the data collect, analysis, interpretation and also on developing and implementing a workplan to address the results. Figure 14 shows the trends in the use over the five states and overall. The graph clearly shows that in the years when face-to-face training is at its peak, the use is higher (which accounts for the high baseline) and this tailored off in the second year (2018) as teachers felt that they had already seen the videos and didn't need to watch them again. Based on the feedback from 2018 data, the SSIT in the five states developed a strategy to ensure that teachers are making more appropriate use of the resources, which are not just for lesson planning, but which also include materials to be used in the classroom. As a result of the additional support given during MPDMs, the figures across four of the five states increased dramatically from 2018-2019 (14%, 26% and 10%). Katsina has shown consistently low results averaging at 47%, despite additional support being provided. The SSIT are addressing this in their 2019 action plan.

Figure 14: % of trained teachers accessing relevant audio-visual materials on their mobile devices
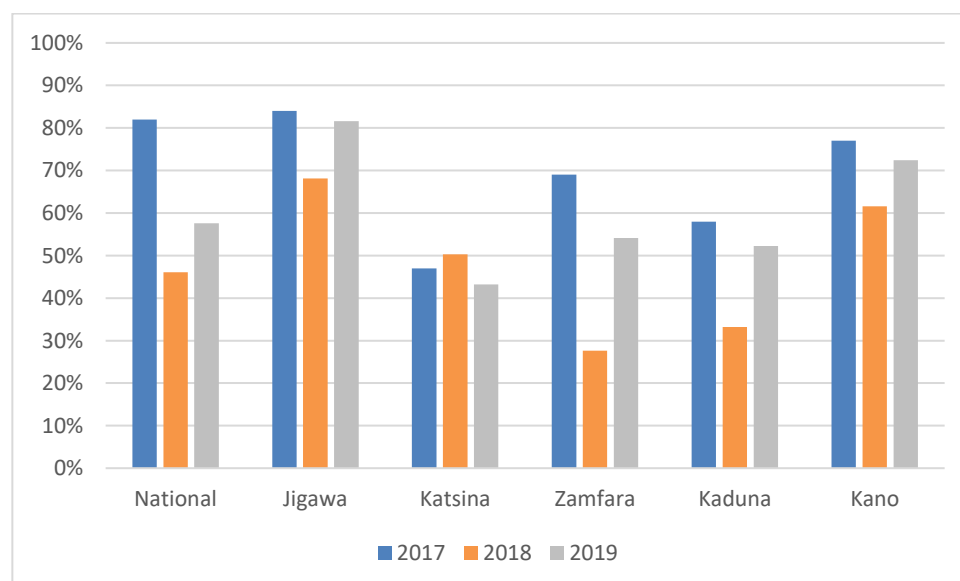
Output Indicator 1.4: % of SUBEBs with effective CPD systems

Period	Target	Achieved	% Achieved	Comment

Year 6	5	5	100%	Achieved
Programme	5	5	100%	Achieved

The 2019 NTEP SUBEB Self-assessment report on the five states indicates that SUBEBs in all the five states have an effective CPD system in place having met at least eight all the following criteria. The result records an improvement over what was recorded across the states in the last two years. **This shows that the Programme's approach of political engagement, evidence-based advocacy, capacity building and hand-holding is effective in strengthening systems and the result is improved implementation.**

1. Training needs are clearly identified based on QA reports and the monitoring reports of trainers.
2. QA officers are trained on the content of the training for more effective collaboration
3. There is a database of teachers containing current and accurate information concerning the courses attended by teachers and the days attended each term and year.
4. There are sufficient trainers (who meet the quality standards required) available to meet the projected annual requirements for training teachers.
5. Head teachers are trained on how to provide on-going support to teachers
6. All schools are provided with appropriate levels of supervisory support from the LGEAs at the agreed frequency level
7. Training courses available for teachers are accredited by TRCN.
8. Training should be school-based (in large schools) or cluster-based (in smaller schools) to ensure the training is as close to the classroom as possible
9. Training should take place at a time that does not take teachers out of the classroom, for example, during the week before school resumes, at weekends or after school.
10. Head teachers should organize regular staff development meetings where best practices can be shared between

Output 2
Teacher educators and student teachers are delivering more effective lessons

Outcome indicator 5: % of Teacher educators delivering effective lectures

Period	Target	Achieved	% Achieved	Comment
Year 6	64%	92%	144%	**Overachieved**
Programme	64%	92%	144%	**Overachieved**

To determine the extent to which this indicator has been achieved, endline studies of lecturers' use of active learning methodologies in their lessons in Phase 1 and Phase 2 colleges were commissioned. The findings on Phase 1 colleges indicate that: "The use of active learning methodologies was prevalent among the observed lecturers across the six colleges. Up to 76% of lecturers observed were found delivering their lessons using activity-based learner centred approaches." The Phase 2 baseline data was 40% and the endline is 92%, showing a tremendous improvement in the quality of delivery by the teacher educators. **The CPDC programme has transformed teacher educators' classroom practices.** This is important as when student teachers are taught using models of good practice it builds their skills and their understanding of what good teaching looks like.

Outcome indicator 6: % of student teachers delivering effective lessons during TP

Period	Target	Achieved	% Achieved	Comment
Year 6	114%	99%	86.8%	The target is unachievable
Programme	114%	99%	86.8%	The target is unachievable

The data for this indicator for Years 4 (94%), 5 (90%) and 6 (99%) was only obtained in Year 6, once the colleges' MIS systems started to function more effectively and data became available. Therefore, targets were set before the baseline was known. The targets were +10% points each year. As the baseline score for effective lessons (i.e. those scoring A, B or C in their TP) was 94%, it is not possible to increase this by 20%! However, we have done an analysis of the results over the three years from the available data and this is shown in Figure 15.

In interpreting the analysis of the student teachers' TP scores for 2016/2017, 2017/2018 and 2018/2019, it is important to note that in 2016/17 student teachers were passing TP, even though they were not effective, but the scoring got tougher in 2017/18 with fewer getting As and Bs. Finally, in 2018/19, the scores are more representative of the actual performance of the student teachers. However, it is clear that the % of teachers scoring A or B (even on a more stringent test) has increased significantly from 49% in 2017/2018 to 84% in 2018/2019 and that the % scoring A, B or C has also increased from 90% in 2017/2018 to 99% in 2018/2019 (Figure 15). When put together with the findings of the Incentive Award Scheme Research Report, it is clear that the teaching practice reforms are improving the effectiveness of student teachers in the classroom, even though the indicator as originally envisaged proved to be relatively unsound for measuring this.

Figure 15: TP scores analysed for years 4 – 6

	2018/19 Results	2017/18 Results	2016/17 Results
■ %A	6%	5%	14%
■ %B	78%	44%	52%
■ %C	15%	41%	28%
■ %D	1%	5%	2%
■ %E	0%	3%	1%
■ %F	0%	2%	3%
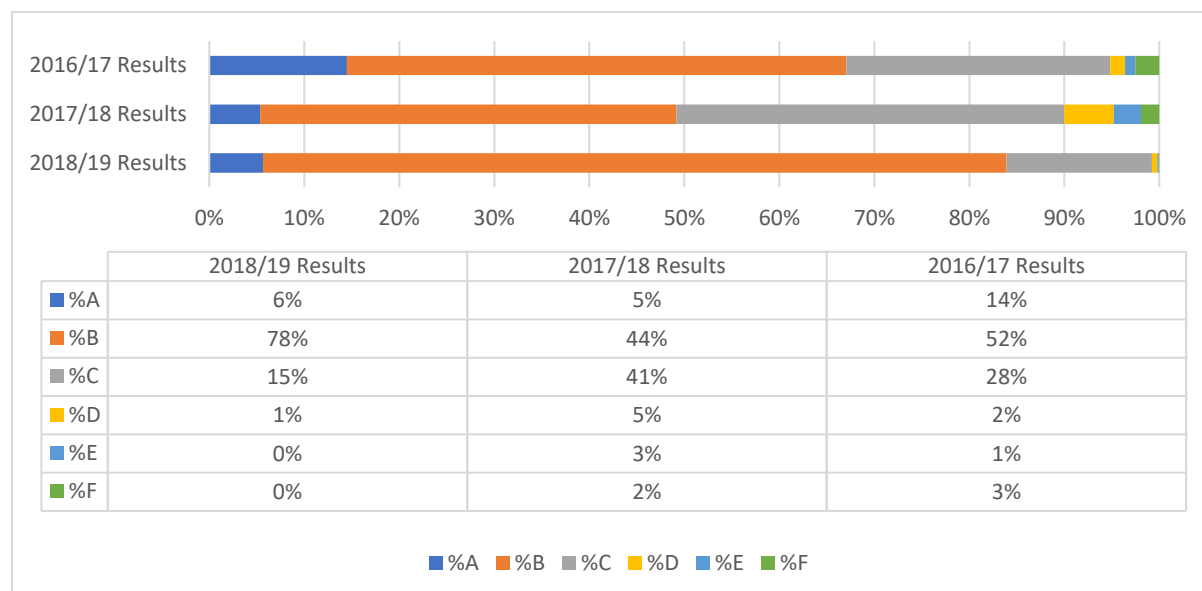
Output Indicator 2.1: % of colleges with functional QA Units

Period	Target	Achieved	% Achieved	Comment
Year 6	12	12	100%	Achieved
Programme	12	12	100%	Achieved

All the colleges have effective QA systems. This is evident in the fact that:

i. The new QA processes and procedures have been mainstreamed into the colleges' QA systems i.e. they have all conducted institutional self-assessment at least twice in a year and all the colleges' programmes have been accredited by NCCE or are awaiting NCCE's accreditation, having satisfied all the conditions for external accreditation.

ii. Functional QA Units/Departments have been established in all the colleges. QA Committees (headed by the Director QA), with membership drawn from all departments have been established. The QA Committees have successfully led the processes of Institutional Self- Assessment and Accreditation, and ensured that the processes were properly conducted, and reports submitted to NCCE.

iii. The quality of teaching in the colleges has also improved. The findings of the CPDC Endline study show that up to 76% of lecturers have made the transition from lecturer-centred to student centred teaching.

iv. The quality of TP has also improved. The number of supervisory visits has increased from three to six visits or more. Student teachers receive good guidance, support and prompt feedback from supervisors and school-based mentors during TP. This can be attributed to the training of TP supervisors and school-based mentors in a sustained manner and the monitoring of supervisors and mentors by the colleges' QA teams.

Output Indicator 2.2: Number of teacher educators who have completed the CPDC programme

Period	Target	Achieved	% Achieved	Comment
Year 6	124	648	523%	**Overachieved**
Programme	816	1,041	128%	**Overachieved**

The planned target for CPDC completion for 2019 was 124 lecturers. The result achieved in 2019 was 648 i.e. the target has been exceeded by 523%. The number of teacher educators who were targeted to complete the continuing professional development course as stated in the Logframe is 816. The cumulative number of all teacher educators who successfully completed the CPDC is 1,041. Thus, the target of 816 has been surpassed.

As stated above, 816 out of a total of 4,348 teacher educators from 12 colleges were targeted and 1,041 have completed the course. This number represents 24% of all teacher educators in the 12 colleges: 56% in the Phase 1 colleges; and 12% in the Phase 2 colleges. Set against the target of 816, it is a noteworthy achievement. What is also noteworthy is that the CPDC has been integrated into the colleges' assessment, reward and promotion systems and the colleges have developed and are implementing Sustainability Plans that target all the lecturers in the 12 colleges. Thus, it is expected that all lecturers who have not benefitted from the CPDC will eventually do so. For example, Isa Kaita COE, in Katsina has already enrolled Cohort 4 with 24 participants, taking the total participation to 59%.

A negative finding is that only 15% of those who have completed the course are female. The problem is that there are few female lecturers in the colleges. They constitute 5% -10% of the total teaching force. (NB: the figure may vary from college to college). It is therefore not surprising that female lecturers constituted only 15% of those who completed the CPDC

course successfully. Although exceeding the Logframe cumulative target is commendable, there is a need for the colleges to recruit more female lecturers who will serve as role models for female students.

Output Indicator 2.3: Number of student teachers trained on pedagogy using low cost technology

period	Target	Achieved	% Achieved	Comment
Year 6	892	20,147	2,259%	**Overachieved**
Programme	4,000	41,042	1,026%	**Overachieved**

The target for 2019 is 892 students trained on pedagogy. The result achieved for 2019 is 20,147. The cumulative Logframe target for the entire life cycle of the Programme is 4,000 student teachers trained, while the achieved cumulative target is 41,042. Thus, the planned Programme target has been exceeded (1,026%). This remarkable achievement is largely due to the fact that TDP used its understanding of how colleges work to negotiate system reform.

a) The Programme identified and addressed a serious gap in the college system as previously student teachers were not given any practical preparation for TP.
b) TDP engaged with the senior management of the colleges to discuss this problem and highlight the benefits of introducing such a training. Lessons learnt from Phase 1 colleges was shared with Phase 2 colleges, some of which adopted the training of all student teachers right from day 1.
c) The Programme worked with the colleges to consider how the training might be integrated into the college systems. This integration was done differently in each college according to their thoughtful analysis of what would work best in each institution.
d) Capacity was built in each college to take this forward as a cadre of master trainers have been trained for each college. The existence of a cadre of 12 master trainers in each college enabled the colleges to mainstream the training of student teachers into pre-teaching practice training normally conducted a week or two before the commencement of teaching practice.
e) Materials were developed by TDP and the master trainers and used by the colleges to train the student teachers.

The net effect of this in terms of numbers is that all student teachers who are eligible to participate in TP are trained. As mentioned below, the only exception was FCET Gusau which in 2019 conducted only one -day training instead of the 5-day training of student teachers. It also reflects the colleges' acknowledgement of the importance of the strengthened teaching practice model which emphasised the value of training and support for student teachers.

The re-TP training of student teachers has been extended from 1-2 days orientation to 5 days training. (NB: FCET Gusau was unable to do this in 2019 due to internal crisis). The training materials for the training of student teachers are used during the 5-day training. Thus, the materials have been integrated into the training of student teachers for TP. This strategy has helped in ensuring that all students who eventually qualify for teaching practice are trained on pedagogical content knowledge (English, Mathematics, and Science) using the manuals and audio-visual materials developed by TDP and made available free to the colleges. The materials have also been downloaded on to the colleges' local servers for students to access

at the Educational Technology Centres/e-library. The provision of internet to all 12 colleges has now made it possible for on-line access of the materials.

The low number of student teachers trained in pedagogy for FCE Zaria and CoE Gidan Waya was due to the fact that the student teacher training in the two colleges focused only on those that would do their teaching practice in Associate Schools. The ongoing union strikes and management crisis at FCET Gusau had adversely affected the student teacher training and most of the college's activities including the five-day training could not be conducted in 2019.

Output Indicator 2.4: % of colleges with effective TP systems.

Period	Target	Achieved	% Achieved	Comment
Year 6	12	12	100%	Achieved
Programme	12	12	100%	Achieved

The planned target for 2019 was 12 colleges and was fully achieved. Thus, all the colleges have effective TP systems. Supervisors and school-based mentors have been trained on how to implement the new TP model articulated by NCCE, the most important components of which are: minimum of six supervisory visits per student and the provision of quality, guidance, support and feedback to student teachers. The IAS study commissioned by TDP clearly indicated that these have been achieved in all the colleges. This success can be attributed to:

a) The existence of cadre of trainers (made up of NCCE staff and college staff) who regularly trained mentors and supervisors on mentoring and TP supervision
b) The development of manuals/materials for the training of supervisors and mentors;
c) The integration of the training of student teachers on pedagogy into the pre-TP orientation of student teachers – number of days increased to five
d) The implementation of the IAS in all the colleges which motivated supervisors and mentors to provide quality support and feedback to student teachers and motivated the latter to use active learning methodologies during TP
e) The monitoring of the supervisors and mentors regularly during TP by the colleges' QA team using the Assessment Framework developed for the IAS which ensured that: there is an intensive supervisor-supervisee and mentor-mentee engagement and student teachers receive quality guidance, support and prompt feedback from supervisors and mentors as reported in the report on the IAS study. Student teachers were attached to school-based mentors who provide day to day support and model best pedagogical practices.

Output 3

Output Indicator 3.1: %/number of colleges with effective MIS

Period	Target	Achieved	% Achieved	Comment
Year 6	9	6*	66.7%	Underachieved
Programme	9	6	66.7%	Underachieved

* to be reviewed end of June – likely to increase to 10.

Multiple assessment techniques were used for this indicator including: discussions with the colleges' MIS officers and the vendors contracted to design and deploy the portal for the colleges; and a review of existing monitoring reports of the deployment and utilisation of the systems. Each college was therefore scored based on aggregated responses on each element

identified to assess the indicator. Five elements were used to assess the Output Indicator. percentage of colleges with effective MIS, including:

1. Effective capturing of appropriate data
2. Effective and timely analysis and use of information
3. Effective and timely analysis and use of information
4. Comprehensive feedback systems in place
5. Effective use of ICT.

Each of the elements were scored between 0 and 1 point and the total was aggregated for the elements to find the overall score for each college. The expected maximum score is 5 points and a score of 4-5 represents fully met for a college, 2-3 represents partially met while 0-1 represent not met. The target for Year 6 was nine of the colleges with effective MIS.

In arriving at the score, a few of the scores were rounded up. Results of the assessment (Table 4) show that the two colleges in Jigawa (CoE, Gumel and CILS, Ringim), FCT, Gusau, KCoE Gidan Waya, FCE Kano and AKCILS, Kano had effective MIS s at the close of Programme Year 6. While both CoE, Gumel and CILS, Ringim scored 4.1 points indicating fully meeting the criteria established for the indicator, FCE Gusau, KCoE, Gidan Waya, FCE, Kano and AKCILS, Kano scored 3.5 points (rounded up to 4 points).

Most of the colleges are effectively using ICT especially for the CPD courses and are effectively capturing appropriate data through the MIS system. However, one of the assessment criteria that the colleges have to work on is timely reporting to NCCE. It is important to note that this could be fully achieved if NCCE established a centralised server with the colleges of education portal through which essential educational data required by NCCE from all the colleges can be obtained. All the colleges are also on the path of fully using the existing system to provide feedback. It is anticipated that the training on use of data for decision making conducted for the MIS officers and the Quality Assurance Coordinators of the colleges will facilitate using the system to communicate feedback to stakeholders especially those with decision making responsibility within the colleges. FCE (Technical), Bichi formally indicated lack of interest in continuing with the implementation of the programme in the College because of initial similar agreement with another provider. For this reason, the implementation of the portal was not assessed for the college during the last assessment.

Table 4: CMIS effectiveness scores per college

State	College	2018	2019
Jigawa	CoE, Gumel	2.0	4.1
	CILS, Ringim	2.0	4.1
Katsina	FCE, Katsina	1.5	2.1
	IKCoE, D/Ma	1.5	2.7
Zamfara	FCET, Gusau	1.5	3.5
	CoE, Maru	1.5	1.8
Kaduna	FCE, Zaria	2.0	3.1
	KCoE, Gidan Waya	1.5	3.5
Kano	FCE, Kano	1.5	3.5
	FCET Bichi	1.5	N/A
	SRCoE, Kano	1.5	2.5
	AKCILS, Kano	1.5	3.5

Output Indicator 3.2: % of SUBEBs with effective reporting systems

Period	Target	Achieved	% Achieved	Comment
Year 6	5	5	100%	Achieved
Programme	5	5	100%	Achieved

This indicator measures the number of SUBEBs reporting and demonstrating that their reporting systems are effective against the criteria set out in the NTEP framework. To arrive at the scores for the criteria, TDP organised stakeholder meetings across the Programme states to discuss SUBEB performance. Participants at the stakeholder meetings were SUBEB Chairmen, SUBEB Directors and EMIS Officers and other stakeholders from the SMoEs, LGEAs and the CoEs that TDP is supporting in the states. Participants discussed each of the criteria extensively and agreed on appropriate scores with justifications and evidence to back up the scores. Considering the indicator definition, 10 criteria were set to measure performance relating to this indicator and performance relating to each of the 10 elements were scored between 1 (maximum) and zero (least) to arrive at total performance score for each SUBEB. SUBEBs with a total score in the range 8-10 would be judged to have fully met the indicator; 4-7 (partially met) and 0-3 (not met).

The TDP target for this indicator is that at the end of Programme Year 6, was that all the five SUBEBs of the Programme states would have effective EMIS. The stakeholder meetings held in the states were therefore aimed at assessing the extent to which this target was achieved by measuring actual performance. It was seen that all the five SUBEBs had an effective reporting system by the end of Programme Year 6 compared with the previous year when only three had effective systems. Kano scored the highest with 9 points while the lowest was Katsina scoring 7.5 points which also is within the range of effective EMIS based on the scoring used for this assessment. Considering the results for 2018 and 2019, there was also tremendous improvement in the filing system for the lesson observation form. The results show that four of the five SUBEBs representing 80% had improved the filing of lesson observations forms in schools. This is an indication that head teachers and the SSOs can now easily refer to documents and use the information in the files to make relevant decisions to improve the management of the schools. This process however needs to be improved on in Zamfara state where the lesson observation forms filing system was scored ½ by stakeholders compared with other states. The reporting system for the status of infrastructures in Kaduna and Katsina also needs to be upon worked improved upon improve the teaching and learning environments of schools in the states.

Results from the analysed data (Table 5) shows improvement in the record keeping system in the schools as stakeholders in three of the five states scored the record keeping system for PTA/SBMC meetings at the school level to be good. For the two SUBEBs which scored ½ for this criterion, it was asserted that records are not always available for review during SSOs' supervisory visits to the schools in the states; thus the full point could not be awarded. The results also show improvement in the different areas of the SUBEB EMIS with reference to the record keeping system for lesson observation forms and feedback mechanism which has improved. This might be attributed to the introduction of BEPDD which ease the process of data collation and feedback. Other areas that has improved greatly are the number of head teachers who submit reports on teachers' and pupils' attendance on a monthly and regular system of reporting from LGEAs to SUBEBs and from SUBEBs to state level.

Table 5: SUBEB reporting effectiveness scores per state

Standards	Jigawa		Kaduna		Kano		Katsina		Zamfara	
	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
At the school level: records of PTA, SBMC and pupils' meetings of activities	1	1	1	½	1	1	1	1	½	½
Lesson observation file kept in the school and copies used to update LGEA database	½	1	½	1	½	1	½	1	½	½
Monthly school reports by HT that include number of pupils & teachers	1	1	½	1	1	1	1	1	½	½
Monthly school reports by HT that include attendance of pupils & teachers	1	1	0	½	1	0	1	½	½	1
Regular reports on infrastructure status	½	1	½	½	1	1	1	½	1	1
Regular reports on qualifications of teachers	1	1	1	1	1	1	1	½	½	1
SIP/SOP reports	1	1	1	1	1	1	1	½	½	1
SSO at cluster level compiles reports summarizing information from schools and forwards to LGEA for data capture at EMIS Centre using LGEA database	1	½	½	1	½	1	½	1	1	1
LGEA compiles reports summarizing information from SSOs and submits printed report to SUBEB	½	1	1	1	1	1	½	1	1	½
SUBEB compiles State reports for all LGEAs and forwards to the State Ministry	0	0	1	1	1	1	1/2	1	0	1
Key 8-10: fully met 4-7: partially met 3-0: less: not met	7.5	8.5	7	8.5	9	9	8	7.5	6	8.5

3.4. Lessons Learnt

Political will is needed to transform broken systems. Education is in crisis in Nigeria. Radical reforms are needed to transform the teacher workforce as training alone cannot solve the existing teacher quality issues. Preparation of teachers, recruitment and deployment processes need to be overhauled so that more competent NCE graduates can be selected and employed to bridge the teacher gap and to encourage better quality students to enter the teacher profession. This requires substantial state-level commitment to increase funding of education.

Basic levels of classroom readiness are essential for teaching and learning to take place. More classrooms need to be built to meet the needs of the growing population. If class sizes are too large and there are no basic learning materials available for pupils, teaching and learning will not be effective. There is no magic that will change this. States have to invest in

sufficient classrooms and teachers as well as ensure that pupils and teachers have minimum materials to use in the learning process.

Proof of concept in a participatory manner is a powerful way of engendering reforms. When colleges and states see the positive changes brought about when existing systems begin to function more effectively, new concepts are accepted more readily. Their involvement in the process of developing and testing new reforms engenders a learning culture, which identifies existing system challenges and creates space for realistic and implementable solutions.

Reforms need to be contextualised as roll-out is a gradual process which must meet the needs of each individual state. Government commitment and funding are key to the continuing implementation of any intervention programme. This will be forthcoming when the interventions are strengthening existing systems, rather than working in parallel. Continuous political engagement with management ensures buy-in and continuous support of the intervention. Successful institutionalisation and sustainability of the reforms is dependent on the extent to which the states and colleges are able to modify key aspects of the implementation model to suit the financial and human resources available to them.

While the teaching profession has low status and teachers are not adequately or regularly paid, the quality of intake will continue to be low in the colleges of education. States that raise the status and remuneration of teachers, and regularly recruit new graduates based on competency will in the longer-term have better quality teachers.

Improving pre-service though long-term, is essential and indeed the foundation to solving the in-service challenges. The cost of training an effective student teacher is far lower than the cost of re-training an in-service teacher. Two key elements need to be in place for pre-service to be effective. First the colleges need to admit high quality students and secondly, the college needs to implement the NCCE reforms. Institutional capacity including competent leadership is key to successful implementation.

The quality of teachers in the system affects the uptake of training. Due to the poor quality of pre-service training and ineffective recruitment practices, there are many teachers in the system who do not have the basic literacy and numeracy skills needed to teach or to be trained. While it is important to ensure that training is developed at the right level so that teachers subject content knowledge and pedagogical skills can improve, it is equally important that "untrainable" teachers are identified and removed from the classroom. This means that targets for improvements in teacher competency need to be realistic and based on the readiness of states to address the trainability issues of their workforce.

Change cannot take place at the school level without strong school leadership. It is essential for head teachers and their assistants to be empowered to manage the schools. They should have a say on how teachers are posted to their schools this will help in addressing absenteeism of teachers and pupils. To improve school leadership, states need competency-based appointment processes and effective school support and monitoring systems. SUBEB's commitment to sustain SSVs is closely tied to their understanding of their impact on the performance of head teachers and teachers.

Foundational reading skills are critical to learning outcome improvements. Children learn more effectively when the mother tongue is used for early grade reading and in the classroom as the medium of instruction. Teachers therefore need the skills and knowledge required to teach in the mother tongue.

The blended approach provides ample opportunity for teachers, student teachers and teacher educators to improve their skills and knowledge. The key to successful CPD is ensuring effective follow up support and mentoring and incentives for self-study. For example, conducting assessments during training programmes encourages participants to engage more with the self-study materials as they can only participate in future CPD if they pass the assessments. Training of mentors in their respective schools provides more opportunities for practical application of what is learned and is more cost-effective. The availability of more female mentors has continued to give more confidence to female student teachers to benefit maximally during the teaching practice exercise.

Technology is a great tool for stimulating education development. Many of the participants during Ed Tech training confirmed that they are more attracted to using technology in teaching and learning in the class. Effective and relevant technology use creates so much excitement in the classroom – from revitalising existing ICT labs to introducing low-cost technology in other forms. In addition, the use of technology can enhance monitoring and compliance with process and procedures. With the introduction of BEPDD in three pilot LGEAs, there has been an improvement in the compliance level and SSSOs and other stakeholders are able to monitor progress in the field.

Introducing new data and reporting systems effectively is a complex process. There needs to have clarity on what data should be collected, by whom and when and this should be based on what decisions need to be taken on teacher effectiveness. There needs to be involvement of a wide range of stakeholders and institutions and for data to be reliable, feedback mechanisms where data is used at the point of collection is vital. Using technology for data systems provides real-time information and flexibility to adapt based on data needs. All of this needs to be planned and budgeted for. There is also the need for minimum standards for systems and vendors and agreement on continuity. State/college level systems need to be harmonised with national systems by harnessing the potential of technology.

To run a complex programme like TDP, there is a need for sufficient staffing levels to support strategy development, reflection, monitoring and support functions. TDP was a small Programme in terms of funding but had a wide mandate. This put a lot of pressure on available staff and meant that in some cases, activities were not fully followed up on and opportunities for reflection were insufficient. Combining key roles also meant that some staff were over-worked.

3.5. TDP Legacy

TDP has changed attitudes and behaviours to teacher quality:
- Changes in policy: competency-based recruitment and appointment, teacher standards, head teacher standards, career path
- Structural changes: UBEC creating a TPD department and reforming TPD
- Linkages, aligning supply and demand, relevance of graduates, data availability and capacity to use it for decision making.

TDP demonstrates value for money

TDP has reformed and strengthened systems and processes resulting in improved implementation and outcomes
- CPD and TP systems (Models, Materials and Master Trainers)
- QA and Monitoring systems (reporting system, MIS system)
- Competency-based recruitment and appointment

TDP has introduced innovations to improve teacher effectiveness:

Ed Tech, CPDC, BEPDD and lesson observation apps

Power of Action Research by teachers on Safeguarding

Section 4: Programme Management

4.1. Internal Programme Coordination

Management and Staffing
The Programme was managed by a senior management team which included a Project Principal and Project Director as well as full-time management staff: National Programme Manager, Deputy National Programme Manager and Project Manager; and State Team Leaders at the state level. Technical direction was provided by Technical Leads at the national level and output coordinators at the state level. At various points in the Programme these roles were combined. From the experience at state and national level, it became clear that combining these roles was not ideal as each role was a full-time job. The Programme was supported by short term technical experts in each output area. In addition to the management and technical staff, the Programme was supported by a Business Support Team made up of Human Resources, Finance and Operations staff. These team members were located at national level and in the states and helped to enforce anti-corruption practices and procedures and implement risk management practices and procedures.

Office Location
The Programme began with an office in Abuja at the national level, and three Phase 1 states: Jigawa, Katsina and Zamfara. Offices were established in Katsina and Zamfara, and offices were shared with the sister programme Education Sector Support Programme in Nigeria (ESSPIN) in Abuja and Jigawa. When the two Phase 2 states (Kaduna and Kano) came on board, these offices were also shared with the ESSPIN offices until ESSPIN closed in 2017.

Coordination and Reporting
Staff met weekly and monthly in their various offices, and every quarter, a Technical Team Meeting would take place in Abuja for all staff. This was an opportunity to reflect on work done and amend workplans for the next quarter. The Programme management also had quarterly Programme Management Committee (PMC) meetings with DFID to track progress, discuss direction and ensure Value for Money (VfM). Each state prepared monthly progress reports, which every three months, were included in the Programme's Quarterly Reports. to the client, DFID. The Quarterly Reports also included key achievements, progress on deliverables, updates on each Output, lessons learnt, challenges and the way forward. Each Output was responsible for submitting agreed deliverables each quarter. All reports and deliverables went through a rigorous internal quality assurance process before being approved by DFID.

4.2. External Programme Coordination

Coordination with government partners at the national and state levels
Committees were established with government during the Inception Phase to coordinate and manage the teacher education reforms. This was to ensure that progress and challenges were shared on a regular basis with government and lessons were being fed back into the system. These committees met quarterly, bi-annually or annually and were hosted by the relevant government agency.
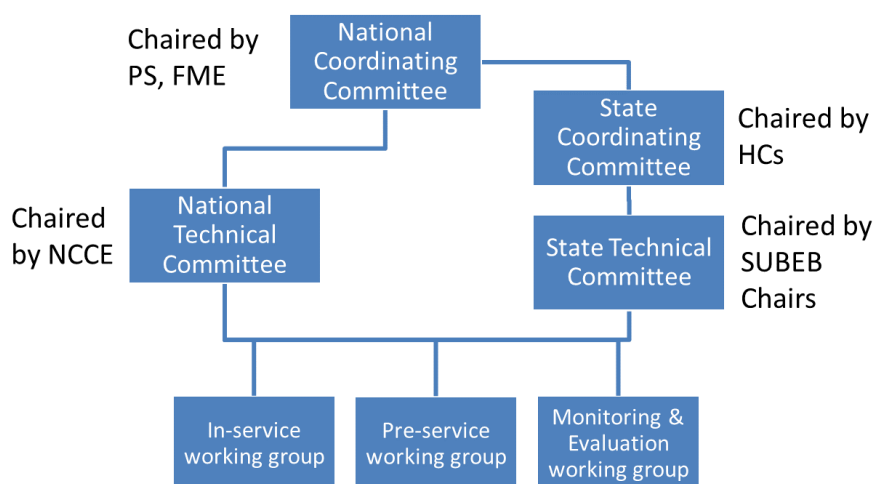
Engagement with other programmes and stakeholders

The Programme has worked closely with other donor programmes working on teacher education including the British Council, UKAid's Girls Education Programme (GEP2) and its Hausa programme Reading and Numeracy Activities (RANA) as well as USAID's Northern Education Initiative Plus (NEI+). This cooperation has involved layering activities at the state level and coordination of engagement with UBEC and NCCE at the national level, as well as partnership on the Language Policy Group.

4.3. Cross-cutting themes

Although the three Programme Output areas went a long way in strengthening teacher development, they were not in themselves sufficient to bring about the systemic changes required for the reform of teacher education that would lead to more effective teachers and better learning outcomes. TDP therefore implemented a number of cross-cutting activities:

a) organisation development which involved:
    i)   strengthening the political will of the relevant federal and state MDAs to reform the teacher professional development process in a sustainable way; and
    ii) building the capacity of the system to utilise available recourses in an efficient and transparent manner;

b) improving the level of morale and motivation of teachers to behave in an acceptable manner as professional teachers;

c) engaging with relevant MDAs for the opportunity to influence national policy discussions;

d) working with communities to support teacher motivation, teacher attendance, increase pupils' enrolment and create demand for better quality of education provision; and

e) communication with stakeholders to make available clear, accessible, timely and relevant information that will help shape the perception of policy makers, managers and beneficiaries of TDP.

4.4. Communication and Knowledge Management

Objective	Activities
Objective 1: Promote, disseminate and discuss teacher education policy, its effective implementation and the processes and standards designed to guide teacher development in Nigeria, linking these to key, best-practice reform approaches	This was done by identifying key decision makers as targets for advocacy and develop a comprehensive database of contacts at all levels. This included: • Seizing the Opportunity – Teacher Education Reform Communication and Advocacy Strategy • Planning a series of learning conferences and roundtables at federal and state levels to share reform insights and support sustainability • Producing and disseminating policy briefs and concise analysis, including via social media, describing effective implementation, progress and impact.
Objective 2: Communicate the required skills, tools and concepts for effective teacher development	This involved the development of a suite of communication materials promoting key TD concepts, stakeholder roles and responsibilities to describe effective teaching through: • Developing animated films explaining clearly explaining the reform approaches in the context of national policy • Planning for the development of a legacy website and for the effective migration of resources, tools to federal agencies' websites by 2019.
Objective 3: Amplify and promote role models, leaders and innovators as powerful advocates for changed practise in teacher education	Developed a powerful, regular stream of short people-focused case studies and stories of change as documents, films and graphics for use in social media, presentations, reports and websites. Activities here include: • Creating and promoting Learning Ambassadors, innovators and change-agents at national level and for each State
Objective 4: Strengthen the communication capacity of institutions to promote policy, effective teaching standards and positive outcomes	This entailed delivering institutional capacity building and training in story capture, writing, use social media and web development through: • Supporting and amplifying state teacher awards, prizes and incentives – and including practice teachers where possible • Supporting media engagement (journalist field visits, briefings and promotion via radio) state by state.
Objective 5: Present and share data and evidence of the impact of interventions in	This involved developing federal and state Learning and Impact Reports capturing

accessible and engaging formats	outcome data and lessons for sustainability by: • Creating visual state dashboards for SUBEBs and CoEs to communicate progress and impact on teacher development • Developing series of infographics based on Programme data for use in presentations, website and social media to promote TD concepts and impact.
Objective 6: Increase Programme visibility for results and adaptive Programme learning to funders, senior stakeholders and development partners	This included improving and enhancing websites and social media output to focus clearly on teacher development skills, key concepts and impact by: • Improving quarterly reporting • Creating e-bulletin (newsletter) as a compelling, quarterly high-impact publication for all stakeholders. • Seizing the Opportunity – Teacher Education Reform Communication and Advocacy Strategy

Section 5: Financial Section

5.1. Financial performance

The total contract value for TDP is £32,147,359 of which 95.5% had been spent to the end of June 2019 (Table 6). It is anticipated the remaining 5% will be utilised in the final two months of the Programme, to August 2019. Table 7 sets out the breakdown by output.

Table 6: TDP Financial Performance, Programme Lifetime to June 2019 (millions)

Area of Spend	Budget	Expenditure	Utilisation
Fees	£17.9	£16.9	94.5%
Reimbursables	£5.7	£5.5	96.5%
PSA	£8.5	£8.2	96.7%
TOTAL	**£32.1**	**£30.6**	**95.5%**

Table 7: PSA Completion against budget (CA7) by output (millions)

	Output 1	Output 2	Output 2 (IAS)	Output 3	PM & COMMS	TOTAL
Lifetime spend to June 2019	£4.79	£1.21	£0.77	£1.13	£0.33	**£8.24**
Lifetime budget	£4.83	£1.26	£0.85	£1.18	£0.39	**£8.52**
% completed by output	**99.3%**	**95.7%**	**91.0%**	**95.9%**	**83.6%**	**96.7%**

5.2. Value for Money

This section contains an overview of the Programme's Value for Money (VFM) Self-Assessment Report 2019 and provides an assessment of economy, efficiency, cost efficiency, effectiveness and cost effectiveness of the intervention support to the five states in Year 6. It contains the outputs, outcomes and impact achieved as well as the unit cost of input (economy costs), output (efficiency cost) and outcome (effectiveness cost) of the intervention strategies of the Programme. It also contains benchmarks and judgements about VFM of the Programme. A summary of key findings under the VFM indicators are outlined below.

Economy
TDP has performed well on economy. Overall, the unit costs of the Programme show a declining trend over the years as TDP has gone to scale. TDP's unit costs are competitive with standards set in the Business Case and with achievements of comparable programmes.

Programme costs to date amounted to £29.2 million which were expended on support for rollout activities in the five intervention states. Programme expenditure by input categories are shown in the pie chart. The Programme strategy of a low-cost approach for implementing teacher training has resulted in estimated economy savings of over £1.2 million in Year 6. The input costs have generated savings of over 29% when compared to higher unit costs of similar programmes.
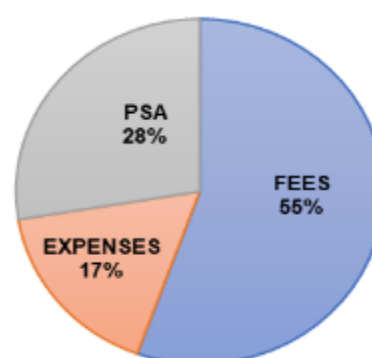

Unit cost of inputs over the Programme

consultant	developing and printing materials for a teacher	developing a pre-service master trainer for CPDC
£583.42	**£19.37**	**£97.68**

TDP Staff	a teacher having access to technology	training a school-based mentor teacher
£294.31	**£13.22**	**£51.45**

Efficiency and cost efficiency

TDP has performed well on efficiency and cost efficiency. All targets for conversion of inputs to outputs were surpassed and unit costs of key outputs compared favourably with those of benchmarked programmes. The strategy for using low-cost school support resulted in estimated efficiency gains of over £2 million per year because of increased rollout rates, when compared with the conventional process for conducting teacher training. Efficiency gains from Output 1 rollout and costs for key Programme Outputs are presented below. Efficiency gains for pre-service are considerable as 56% of all teacher educators in the Phase 1 colleges have completed CPDC - three cohorts - while 12% of all the teacher educators in the Phase 2 colleges completed the CPDC as they joined the Programme later and only one cohort have undergone the training.

Efficiency gains through rollout: proportion trained and supported in each state
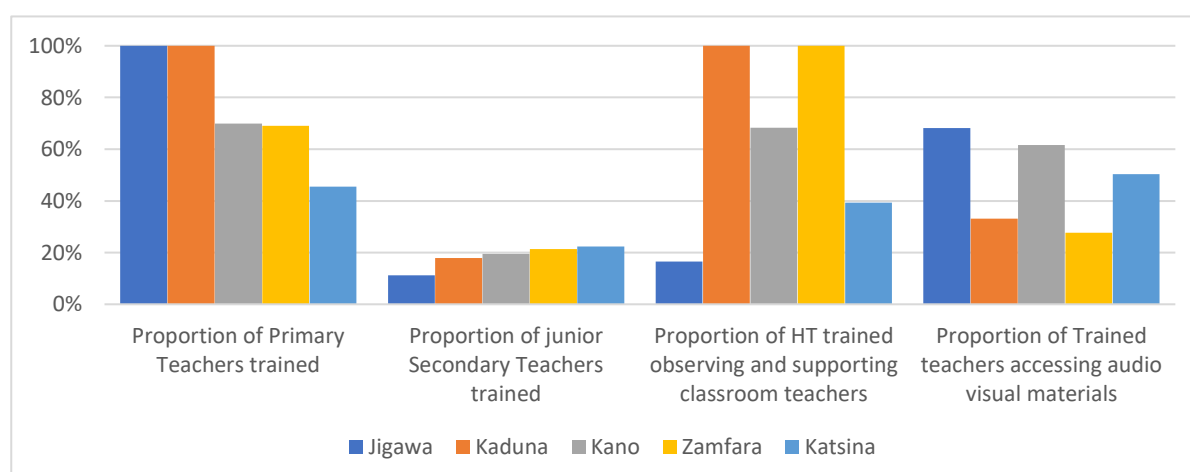
	Teachers	Head Teachers	Teachers using AV materials	Teacher Educators completing CPDC	Student teachers trained
Target	62,000	10,966	89%	816	4,000
Achieved	102,294	11,337	58%	1,041	41,042
Unit cost	£32.09	£41.39	£9.51	£907.13	£7.74

System level efficiency gains	Target	Achieved
% of states with effective CPD	100%	100%
% of colleges with functional QA systems	100%	100%
% of colleges with effective TP systems	100%	100%
% of colleges with effective CMIS	75%	75%
% of SUBEBs with effective reporting systems	100%	100%

Effectiveness and cost effectiveness

TDP has performed well on effectiveness and cost-effectiveness. The cost effectiveness of key Programme outcomes compares favourably with unit costs in similar programmes. Effectiveness data from Endline Evaluations of in-service and pre-service show significant progress made by the Programme towards achieving its objectives. It showed that teachers in the intervention states are now adopting learner-centred teaching methods (from 24% of lesson time spent in positive interaction at baseline, to 29% at endline) and that there have been significant reductions in the proportion of primary pupils in the lowest learning band in the three core subjects. In pre-service, more teacher educators are delivering effective lessons. The CPDC endline report for Phase 1 colleges showed that 76% of lecturers in the colleges were observed using activity-based learner-centred approaches while delivering lessons compared to the baseline of 44%. Significant improvements were observed in the way student teachers deliver lessons during teaching practice which can be attributed to the pedagogical training received by the students, more effective supervision and the on-going mentoring in the associate schools.

Unit effectiveness costs of outcomes for the Programme

| Primary pupil performing at pre-grade level in 3 core subjects	Additional learner completing primary school
£7.11	**£12.21**

Teacher involving pupils in positive interaction **£36.95**	Teacher demonstrating sufficient professional knowledge in core subjects **£254.84**	Teacher educator delivering effective lectures **£1,042.24**	Student teacher delivering effective lessons during teaching practice **£19.23**

Equity

TDP has achieved good results in respect of participation by female teachers and female college staff and primary completion rates among girls. Also, strong learning gains were found in the pupils from poor families across all three core subjects. The completion rate for girls in 2018 increased by 14% across the five states. This means that 58% of pupils who complete Primary 6 are girls and **an extra 43,146 girls have completed primary school during the period of the Programme**. A significant proportion of female teachers in the intervention states (about 31%) received one round of in-service training during the period of the Programme, which is higher than the proportion of females in the teacher workforce in the intervention states (26%). Under the Incentive Awards Scheme (IAS) 62% of female student teachers supported by the Programme improved in their teaching practice score compared to 61% of their male counterparts, and 97% of female student teachers passed teaching practice both in the associate schools and the non-associate schools compared with 95% of male student teachers. There was ample evidence of female students and female lecturers responding positively to their additional IAS awards, with female students feeling more confident to teach and female lecturers feeling highly motivated, encouraged and confident about participating actively in teaching practice (TP) supervision. These results are indications of significant impact of the Programme on female learners and teachers and learners from poorer families in the five intervention states.

Leverage

TDP has been highly successful in leveraging additional funding. The TDP model is gaining increased patronage especially for the in-service training in the intervention and non-intervention states as UBEC has rolled out the school support model to all 36 states in the country. On average, the Programme leveraged NGN232 million (£500,000) per state per year. Over 72% of the total number of teachers trained by the Programme was through funding provided by the state or other donor partners. **Thus, for every teacher trained using TDP funding, the states were able to train three additional teachers and for every student teacher trained using TDP funding, the colleges were able to train 32 additional student teachers.**

Teachers trained by TDP and the states
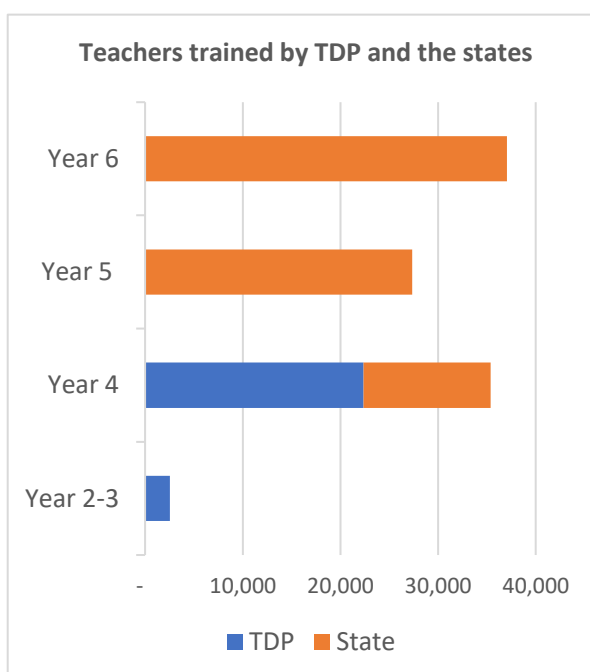
Impact

TDP has had a significant impact on children's learning and a very significant impact on the numbers of children completing primary education. The impact of the Programme was seen in the learning outcomes of pupils which improved in the three core subjects between baseline and endline for all three indicators: pupils operating at grade level, poorest 20% of pupils operating at grade level and pupils operating at pre-grade level. The Endline study did not observe any significant difference in improvement between the treatment schools and the control schools. However, the Endline study's definition of 'contamination' was limited[3]. The TDP model almost certainly impacted on control schools through government leverage and other education programmes in the States. The Programme targets were met for all three indicators in Maths. Significant progress was made in English and Science, but Programme targets were not met for three indicators). The completion rate of pupils in the intervention states increased by 5.8%. This means that almost 75,000 additional pupils stayed in school to complete primary education.

Are children learning more?	English	Maths	Sci & Tech
% of pupils operating at grade level	✓	✓	✓
% of poorest pupils operating at grade level	✓	✓	✓
% of pupils operating at pre-grade level	✓	✓	✓

Key: targets exceeded ✓   improvement seen but target not met ✓

5.3. Procurement:

The total value of the TDP procurement is £1.3 million through DFID contractors and £238 thousand through direct purchase. 78% of procurement was destined for the Teacher in the Pocket Hardware (TiPH) initiative which went straight to the beneficiary. 22% of procurement was used to set up the TDP offices and purchase vehicles, however the majority of TDP office assets were transferred from the ESSPIN programme. Table 8 details the type of hardware purchased as well as the software developed for hardware content. Table 9 details the quantities purchased, the distribution of these materials was the responsibility of the State Team Leader (STL), office managers and STLs worked in collaboration with SUBEB to ensure that all TiPH inventory was distributed to the schools as well as supporting SUBEB with the development of a asset register for monitoring. All assets were signed as officially handed over to SUBEB who were asked to write a commitment letter stating that schools will be responsible for the repair and maintenance of all inventory with the sole use for educational purposes.

---

[3] the Endline evaluation definition of contamination was limited to whether at least one teacher in the school had received TDP training.

Table 8: Hardware and software content provided for in-service teacher training

Teachers	Head Teachers	Teacher Facilitators	Teacher Development Team
Technology (hardware	Mobile Phone SD card	Mobile Phone SD card Amplifiers (2 per school, to be given to Teachers when required)	Tablet SD card
Content (software)	Videos on Classroom Practice Letter Sounds Audio Stories	Videos on Classroom Practice Letter Sounds Audio Stories	Videos on Classroom Practice Letter Sounds Audio Stories

Table 9: Quantities of TiPH purchased

Item	Quantity
Tablets	3157
Phones & Accessories	3276
SD Cards	3519
SD Card Duplicator	1
Amplifiers	3646
Amplifier batteries	50
Solar chargers	50
Projectors	130
Server for e-Learning Resources	130
TV Box (SD card connection to Projectors)	130
Wireless Router	130

In addition, TDP printed the following materials in Table 10. Materials distribution was done in collaboration with SUBEB and the headteachers of each associate school. SUBEB took ownership of the distribution between schools in the presence of TDP. On average each associate school was given sufficient printed materials for each classroom. Schools retained the ownership of the printed materials to ensure continuity of the availability of materials for new teachers.

Table 10: Quantities of materials printed

SN	Description of items	Total Quantity	Abuja	Jigawa	Kaduna	Kano	Katsina	Zamfara
1	LPI Jigawa State NumP4 Term 1	600	0	600	0	0	0	0
2	LP Jigawa State NumP4 Term 2	600	0	600	0	0	0	0
3	LP Literacy P5 Term 2	4300	20	1040	1000	0	1200	1040
4	LP Literacy P6 Term 1	4300	20	800	700	1180	800	800
5	LP Numeracy P5 Term 1	4300	20	1040	1000	0	1200	1040
6	LP Numeracy P5 Term 2	4300	20	1040	1000	0	1200	1040
7	LP Literacy P4 Term 1	4300	20	1040	1000	0	1200	1040
8	LP Literacy P4 Term 2	4300	20	1040	1000	0	1200	1040
9	LP Literacy P5 Term 1	4300	20	1040	1000	0	1200	1040
10	English Forum Guide	2000	20	430	210	480	430	430
11	Science primary 4	1400	11	443	60	0	443	443

12	Science primary 5	1400	10	460	10	0	460	460
13	Ina San Karatu	7500	0	1,800	1,100	1,000	1,800	1,800
14	Kudayar Dabbobi	7500	0	1,800	1,100	1,000	1,800	1,800
15	Mulanata	7500	0	1,800	1,100	1,000	1,800	1,800
16	Yada Kunkuru Ya Sanna	7500	0	1,800	1,100	1,000	1,800	1,800
17	Laban Biri Da Kadda	7500	0	1,800	1,100	1,000	1,800	1,800
18	Sami Yarimu Dando	7500	0	1,800	1,100	1,000	1,800	1,800
19	English STEPIN programme Note	2000	170	220	220	950	220	220
20	STEP Self Study Guide for English Teachers	5000	200	650	650	2,100	700	700

Section 6: Conclusion

6.1. Sharing the lessons

At the end of the Programme two Learning and Dissemination events were held – one for in-service and one for pre-service. The events were hosted by UBEC and NCCE respectively and all SUBEBs and colleges in the country were invited. The turnout was very encouraging (with 27 out of 36 states attending the in-service event), and feedback from the participants was positive. The programmes were entirely facilitated by stakeholders from the five states and 12 colleges, which enabled lessons to be shared in a peer-to-peer format that worked well. In addition to sessions by the facilitators explaining why and how they carried out the reforms, how-to-guides, case studies and policy briefs were shared with participants along with samples of materials. Every participant was given a flash drive full of materials. At the end of each event, a communiqué was developed which will be shared more widely.   The communiqué includes recommendations for next steps by states, colleges and at the federal level.

6.2. Sustainability

As mentioned earlier, one of the key tenets of the Programme has been to work through government systems – strengthening what is already there and supporting government to reform systems were required. As a result, the sustainability of the Programme is more to do with effective implementation of agreed reforms and policies going forward rather than government being expected to adopt programmatic content and methods. Each college and SUBEB has developed a clear framework for how they will continue to implement the reforms, and this has been institutionalised through both pre- and in-service policy and guidelines at the national level.

6.3. Way forward for DFID and Nigeria

The lessons learnt from TDP have fed into the development of future DFID education programmes, most explicitly PLANE (Partnership for Learning for All in Nigeria) which will work in the same geographical area as TDP (north-western Nigeria). In addition, the lessons learnt from the Programme have fed into policy and implementation guidelines at state, college and national level resulting in changes to the way government thinks about, plans, manages and monitors teacher education in Nigeria.