



The Impact Assessment of the Untrained Teacher Diploma in Basic Education (UTDBE) in Ghana

Endline Study¹

Final Sept 15, 2016

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¹ The Impact Assessment included a Baseline (2014) and Midline Assessment (2015) of the UTDBE programme which are available on the Associates for Change web site.

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Acknowledgements

Associates for Change would like to thank Mr. Jacob Kor, Director General Ghana Education Service, Mr. Stephen Adu, Deputy Director General, Dr. Evelyn Oduro, Director of Teacher Education Division, Mrs. Zalia Ali, Head of Logistics and Supply, Mr. Chris Koramoah, Finance Controller, Mr. Kwame Agyepong, GPEG Coordinator, and Deborah Newitter Mikesell Senior Education Specialist, World Bank for their support and oversight to the UTDBE Endline Impact Assessment. We would also like to thank the GPEG monitoring and evaluation team under the Planning, Budget, Monitoring and Evaluation Division of MOE. Special thanks go to Dr. Abby Riddell for reviewing this report and providing ongoing support throughout the Midterm and Endline Assessments. Special appreciation also goes to the Associates for Change and GES field research team³ who conducted the data collection across the five sampled regions.

In addition, we wish to acknowledge the staff of the Teacher Education Division and the Ghana Education Service at national and district levels for their invaluable support. We also acknowledge the World Bank team for its support to the UTDBE programme in Ghana. We thank the many Colleges of Education Principals, Head teachers, teachers, trainees, school community members and pupils who gave their time and provided important information that informed this survey.

³ Full list of field teams is contained in annex 7.

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List of Acronyms

AD	Assistant Director
AfC	Associates for Change
AIPR	Annual INSET Progress Report
B. Ed	Bachelor of Education
BA	Bachelor of Arts
BECE	Basic Education Certificate Examination
CAMFED	Campaign for Female Education
CBI	Cluster Based In-service Training
CL	Curriculum Leader
CoE	College of Education
CPD	Continuing Professional Development
CS	Circuit Supervisor
CSV	Community Service Volunteer
DA	District Assembly
DBE	Diploma in Basic Education
DBI	District Based In-service Training
DDE	District Director of Education
DEO	District Education Office
DIC	District Implementation Committee
DMT	District Master Trainer
DTST	District Teacher Support Team
EA	English and Arabic
EMIS	Educational Management Information System
FCUBE	Free Compulsory Universal Basic Education
FGD	Focus Group Discussion
GER	Gross Enrolment Ratio
GES	Ghana Education Service
GPEG	Global Partnership for Education Grant

GYEEDA	Ghana Youth Employment and Entrepreneurial Development
HND	Higher National Diploma
HRM	Human Resource Manager
HRM.D	Human Resource Manager - Director
HT	Head Teacher
IA	Impact Assessment
ICT	Information Communication Technology
INSET	In-service Training
ISODEC	Integrated Social Development Center
IT	Information Technology
JHS	Junior High School
JICA	Japan International Cooperation Agency
JSS	Junior Secondary School
KG	Kindergarten
L1	Ghanaian Language
L2	English Language
LoI	Language of Instruction
LOS	Lesson Observation Survey
LP	Lower Primary
MDG	Millennium Development Goal
MoE	Ministry of Education
NER	Net Enrolment Ratio
NGO	Non-Governmental Organisation
NIU	National INSET Unit
NSP	National Service Personnel
NSV	National Service Volunteer
NYEP	National Youth Employment Programme
ODL	Open and Distance Learning
P1	Primary One
P2	Primary Two

P3	Primary Three
P4	Primary Four
P5	Primary Five
P6	Primary Six
PhD	Doctor of Philosophy
PTA	Parent Teacher Association
PTR	Pupil Teacher Ratio
PTTR	Pupil Trained Teacher Ratio
RC	Roman Catholic
RPK	Relevant Previous Knowledge
SBI	School Based In-service Training
SDA	Seventh Day Adventist
SEN	Special Education Need
SHS	Senior High School
SMART	Specific Measurable Achievable Realistic Time bound
SMC	School Management Committee
SSSCE	Senior Secondary School Certificate Examination
TED	Teacher Education Division
TENI	Tackling Educational Needs Inclusively
TLM	Teaching Learning Materials
UCC	University of Cape Coast
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UP	Upper Primary
USAID	United State Agency for International Development
UTDBE	Untrained Teacher Diploma Basic Education
VSO	Voluntary Service Overseas
WASSCE	West Africa Senior School Certificate Examination

Executive Summary

The Millennium Development Goals (MDGs) were aimed at helping developing countries to achieve universal primary education by 2015, while the new Sustainable Development Goals (SDGs) place even more focus on ensuring inclusive and quality education for all and promoting lifelong learning (UNESCO, 2015). Ghana's MDG Report (NDPC/UNDP, 2015) states that Ghana has achieved the targets for the MDG 2 on universal primary education. The report attributes the success to the Government's introduction of a number of policies and initiatives, particularly the capitation grant and the school feeding programme in basic schools. These policy initiatives resulted in 107% Gross Enrolment Rate and 97.5% Completion Rate, while Net Enrolment stood at 89.3% in 2014 (Ghana MDG Report, 2015:9).

Notwithstanding these successes, Ghana's educational sector is still faced with several challenges. Among the key challenges is the growing number of untrained teachers especially in the deprived rural areas of the country. In an attempt to address the challenge of untrained teachers, the Ministry of Education (MoE) secured funding of US\$15.06 million from the Global Partnership for Education Grant (GPEG) to help re-launch the Untrained Teachers Diploma in Basic Education (UTDBE) programme and to train over 8,000 untrained teachers in remote areas of Ghana.

The UTDBE Programme is a distance learning programme which is aimed at improving the quality of education at the basic school level in Ghana by advancing the personal and professional qualities of untrained teachers serving in basic schools and not on the regular DBE training programme. The UTDBE course is aimed at academically qualified teachers providing them with self-instructional modules, residential courses in CoEs and mentoring support during academic term. The overall purpose of the programme was to produce well-trained and qualified basic education teachers who will inspire learners to realise their full potential.

The programme was intended to:

- Assist all serving untrained teachers to have access to professional teacher training;
- Improve the quality of teaching and learning especially in the underserved communities;
- Increase the number of trained teachers by training the untrained so that the percentage of untrained teachers will be reduced from the current 21% in the Primary Schools and 12.6% in the JSS to a single digit of not more than 5% at each level;
- Produce teachers who have a clear grasp of intended outcomes of their teaching activities and are skilled in monitoring, diagnosing and in providing appropriate equal opportunities to all pupils;
- Promote close working relationships between colleges of education, local schools, district offices and other areas of the teacher education system.

The UTDBE Programme is a 4-Year Teacher Training Programme offered through distance learning is based on the same curriculum as that approved for the pre-service training model offered in the Colleges of Education. The courses, forms of assessment and outcome standards for the programme are equivalent to those used for the pre-service teacher education programme.

The only significant difference is that the teacher trainees on the UTDBE programme remain in the schools they serve while studying by distance over a period of 4 years part-time instead of 3 years full-time for Pre-Service training at the CoEs. UTDBE trainees are expected to be supported in their distance study by a combination of these methods:

- Distance Learning modules;
- School-based professional development; and
- Periodic residential/face-to-face meetings at the CoE.
- Cluster meetings and tutorials

The programme builds on the existing human resource support structures already existing in the districts. These consist of District Teacher Support Teams (DTST), Circuit Supervisors, School Mentors and College of Education Tutors. Through a more integrated model, the role of the Districts, Circuit Supervisors, School Mentors and College of Education Tutors have been harmonised to enable each to play the most appropriate role in the provision of professional support to the teacher trainees. It is the responsibility of the District Education Office with support from Global Partnership for Education (GPE) and in close collaboration with the other local stakeholders including the District Assembly and colleges of education to provide support to the trainees and to take ownership of the programme. This approach sought to harmonise pre-service and In-service training in teacher preparation and development. The training and support system consists of the induction of trainees, cluster-based training (study circles), circuit-based tutorials, and residential face-to-face sessions.

This report is the endline phase of a two year longitudinal study. The baseline was carried out in June, 2014 across nine districts in 5-regions. In all, 405 UTDBE trainees were interviewed and observed during the baseline stage and the same 405 trainees were revisited during the endline in June 2016. The survey set out to investigate the skills gained by student teachers in lesson planning/preparation; teaching methodology; and classroom organization and management. The Lesson Observation Survey (Midterm) also tracked the same trainees that were observed and interviewed during the baseline. In addition, the midterm assessment measured changes or improvements that had occurred in student teachers' content knowledge and began to make comparisons between the UTDBE teachers with other teachers trained on the traditional pre-service model. The endline phase of the assessment also set out to measure the level of improvement in trainee teachers in terms of lesson planning and preparation, classroom methodology and delivery and class management and organisation.

The main purpose of the GPEG impact assessment of the UTDBE programme was to assess the extent to which the new modality of distance learning for teacher training has achieved its objective of upgrading the quality of teaching skills among untrained teachers in the deprived districts and the extent to which this has impacted on quality of lesson delivery in the classroom. In particular, the study assessed the knowledge and skills gained by trainees in lesson planning/preparation, teaching methodology, and classroom organization and management. The assessment also examined improvement in the student teachers' content knowledge. In addition, the assessment draws comparisons between the UTDBE teachers and teachers trained on the traditional pre-service model (i.e. DBE teachers who are resident for three years at the College of Education) and how they compare in terms of the quality of teaching, lesson

planning/preparation, teaching methodology, along with classroom organization and management. The IA also conducts a comparison of the cost of the two training modalities (i.e. UTDBE and DBE) at baseline and end line to determine which is more cost effective. Other aspects of the Impact Assessment (IA) included assessing the level of retention, expectations and ambitions of the UTDBE teacher trainees, and their satisfaction levels in relation to the programme course work. The IA also explores whether training whilst teaching results in teacher retention in deprived districts.

The impact evaluation was carried out over a two year period – between 2014 to 2016. The baseline phase was conducted in June 2014 – November 2014. The baseline study explored the GPEG sponsored UTDBE programme based on the key indicators in the Lesson Observation Instrument (LOI) designed by GES and the general effect that the programme was having on teacher trainees’ knowledge and instructional practice. Subsequently, a midline assessment was conducted between March 2015 and July, 2015. The midline assessment compared classroom practices of UTDBE trainees who benefited from GPEG sponsored INSET programmes at district, circuit and school levels with DBE trained teachers who had completed their teaching practice.

This endline assessment focused on comparing the targeted UTDBE trainees in their final year with teachers who had graduated with a Diploma of Basic Education (DBE) within the last two years from the traditional mode of teacher training. The endline was conducted between October 2015 to April, 2016. The endline report presents findings on the content knowledge and skills gained by UTDBE trainees compared to the trained DBE teachers across the core areas of lesson planning/preparation, teaching methodology, classroom organization and management. It highlights the observed changes and improvements that have occurred in the UTDBE trainees’ content knowledge, and the cost effectiveness of the UTDBE programme with the traditional mode of training DBE teachers. The endline assessment also explored the retention status of teachers and the factors which promote retention in rural deprived areas of Ghana.⁴

The UTDBE Impact Assessment was based on a cross-sectional survey design in which data collected reflects the views and observations of participants regarding the UTDBE programme at different points in time. The study used both qualitative and quantitative approaches to evaluative research and included single face-to-face interviews and questionnaires. However, the main data collection instrument was the Classroom Lesson Observation Schedule (LOS) originally designed by the Teacher Education Division (TED) and used extensively for INSET assessment. The LOS is a well-tested instrument used at all three stages of the IA to assess the teaching, lesson notes planning/preparation as well as observe the classroom instructional practice to determine the quality of methodology, classroom organization and management, and the content knowledge of teachers. Quantitative data was analysed using SPSS and STATA. The qualitative data gathered through interviews and observation was analysed using narrative and thematic approaches to the qualitative data.

⁴ Extremely Deprived, Deprived and Less Deprived areas of the districts were categorized based on distance from social and economic amenities and also their access to basic services within the communities including trained teachers and schools.

The key participants who provided data throughout the impact assessment included the UTDBE trainees, DBE teachers, CoE Principals and Tutors, UTDBE Coordinators and “other” teachers (both trained and untrained teachers who had benefited from National INSET UNIT INSET training), Head Teachers, District Directors of Education, Circuit Supervisors, District Training Committees, District Teacher Support Teams, District Training Officers, and SMCs/PTA members. Nine (9) districts were selected from five (5) regions for the conduct of the UTDBE impact evaluation: Western (Wassa Amenfi), Brong-Ahafo (Atebubu and Nkoranza North), Northern (West Mamprusi and Bunkpurugu Yunyoo), Upper East (Talensi Nabdam and Bongo), and Upper West (Jirapa and Lawra). Endline data collection involved **193 schools** out of the baseline figure of 197. The endline survey tracked 400 UTDBE trainees out of 407 who were observed and interviewed during the baseline survey. The endline survey also observed and interviewed an additional 185 DBE teachers. In addition, 570 “other” teachers of all categories, who were present but not sampled, filled out questionnaires at the school.

Key findings

Trained Teacher Supply Situation

The key endline findings revealed that Upper East Region has the highest proportion of trained teachers. It also shows that the Upper West, Northern and Western Regions, which did not obtain adequate teachers to meet their supply needs had a high proportion of untrained teachers. In spite of this, several classrooms in schools in the sampled districts were without teachers. It is estimated that if all the schools in the nine study districts were to be staffed with trained teachers, about 52% of trained teachers will be needed to compliment existing trained staff. These districts have mainly untrained teachers staffing their schools; it is estimated that about 52% of trained teachers will be required to close the trained teacher gap across the nine study districts in the Upper West, Northern and Western Regions. District Directors of Education interviewed indicated that most of the trained teachers posted to their districts refused to report owing to the deprivation status of the communities where they were to reside and teach. In all the nine districts sampled for the study, the KG level had the highest rate of untrained teachers estimated to be 68.1% followed by Primary level with a rate of 51.4%. Junior High School had 28.6% of untrained teachers. The data indicates that between 2011 and 2014 the percentage of untrained teachers increased across the nine sampled districts at 7.3%. This suggests that, despite the UTDBE programme, there continues to be a growing number of untrained teachers and that districts continue to need more trained teachers in order to close the trained teacher gap

The findings also suggest that available training opportunities to transform the status of untrained teachers has not been equitable across the districts. Poor targeting and inadequate information and data undermined the potential of the UTDBE programme to be allocated on a need basis with regard to training opportunity disbursement to the most needy districts across the overall districts targeted for the programme.

All the District Directorates of Education have appointed UTDBE Coordinators to ensure efficient and effective programme implementation. The District Coordinators visit and supervise their trainees at the Colleges of Education. The Colleges also have Coordinators to supervise the work of the trainees and address any challenges they may be facing. The Colleges of Education coordinators are expected to report on the performance of the trainees to the Directors of Education. Unfortunately several of these roles and responsibilities were not fully implemented. Directors complained of the lack of information regarding the UTDBE programme and Colleges complained of the lack of information regarding their trainees once they have left the CoE. Findings from the endline suggest that the UTDBE programme has recorded a drop-out rate of 19.4% over a three year period (2012/13 to 2014/15), with more male trainees dropping out of the programme than female trainees. The cause of the drop-out was attributed to the UTDBE trainees having financial challenges, difficulty in combining work and study required by the programme, poor academic performance and family/personal challenges. Other reasons for early drop out was related to poor trainee selection on the programme.

District Directors affirmed that the trainees have had their knowledge and experience deepened as a result of the UTDBE programme. They claimed that before the programme, trainees engaged as pupil teachers were unable to plan and prepare acceptable lesson notes and subject content knowledge was low. They also observed that teacher trainees could not differentiate between core points and teacher/learner activities, neither did they understand the concept of lesson objectives and they were not aware of the strategic importance of Relevant Previous Knowledge (RPK) of pupils to be used to teach concepts.

Performance of UTDBE Trainees

The lesson observation of the UTDBE trainees was carried out using 19 indicators broadly classified into three groups: lesson planning and preparation; teaching methodology; and classroom management and organization. Trainee performance comparisons during the baseline and endline indicate that UTDBE trainees had improved remarkably. The findings also suggest that there was not much difference between UTDBE and DBE instructional performance in the classroom.

The UTDBE trainees had satisfactory performances in six indicators during the baseline compared to sixteen at the endline stage. Performance of the 400 UTDBE trainees observed in only three indicators was rated as ‘unsatisfactory’. These three indicators were the preparation of teaching learning materials, sensitivity to diverse learner needs and usage of TLMs. In addition, there was remarkable improvement on all 19 indicators even on the three indicators (i.e. preparation of teaching and learning materials, sensitivity to diverse learner needs, and use of TLMs) in which they did not achieve a ‘satisfactory’ rating during the endline.

In terms of gender, both male and female UTDBE trainees demonstrated satisfactory performance at endline over the baseline results. Female UTDBE trainees’ performance improved between the baseline and endline assessments; Female trainees performed slightly better than their male colleagues during the endline on the majority of assessment indicators.

Comparative Analysis of UTDBE and DBE Teachers

Overall the findings from the examination scores of UTDBE and DBE trainees suggest that DBE teachers tend to perform better on core subjects while the UTDBE trainees perform better on practical course work. A comparison of DBE and UTDBE examination results in “Trends in Education, and School Management” found that at the lower grades (E, D, D+, C, C+), there is a higher percentage of DBE students, whereas at the higher grades, (B, B+, A), there is a higher percentage of UTDBE students. The findings for content knowledge reveal that the UTDBE students performed better than the DBE students since the average grade for the DBEs is B compared to the average score for the UTDBEs is B+. Similarly, analysis of the statistical test of two independent samples t-test results show that the UTDBE group’s mean was 72.1% as against the DBE mean of 68.8% suggesting that UTDBE trainees performed better than the DBE trainees in Trends in Education, and School Management.⁵

The general findings on the comparison of examination results shows that, while the DBE trainees performed better in the core subject area of Integrated Science, the UTDBE trainees performed better in the professional field course of Trends in Education and School Management. Thus, the UTDBE trainees demonstrated a higher degree of competence in the practical courses since most of them had more experience in direct classroom teaching compared to the DBE. The UTDBE trainees had difficulties with the core subjects which required rigorous calculations.

In terms of subject knowledge and content accuracy, many more DBE teachers scored “satisfactory and above” compared to the UTDBE trainees. The overall findings on language of instruction show that both UTDBE and DBE teachers follow the Language of Instruction (LOI) policy which advocates the use of Ghanaian Language in KG and Lower Primary and the use of English in the Upper Primary and JHS. The endline findings show that more DBEs performed at a “satisfactory” level compared to the UTDBEs in relation to the use of generic skills. However, the UTDBE trainees performed better in relation to the use of TLMs compared to the DBE teachers.

Cost Effectiveness and Efficiency

The endline study has revealed that the UTDBE programme is more cost effective relative to the DBE model of training. The major cost component of the DBE model of training is the College of Education student allowances which made the training more expensive. Thus training a DBE teacher costs the government 60% more than training the UTDBE teachers. Even when a major cost component (which was 63% of the total cost) in the DBE model has been removed from the

⁵ An analysis of the tracked performance of the trainees based on examination results in terms of subject content knowledge and accuracy rejected the null hypothesis that “there is no improvement in trainees’ performance in English Language’ over the three year period ($t_{0.05, 2859} = -12.88$; $p < 0.05$).

total cost due to the withdrawal of teacher trainee allowances at the CoE by GOG. Thus, training a teacher on the conventional mode (DBE) cost the government 60% more than the cost of training a teacher trainee using the UTDBE modality. The total cost of training one UTDBE trainee over the four year period is GH¢13,048 (US\$3,441) per trainee. UTDBE trainees bear GH¢6,552 (US\$1,728) of the cost, representing 50.2% of the overall cost of the training, while GPEG supported approximately 49.8% of the cost (GH¢6,496 (US\$1,713)) over the four year period. The average cost of training a DBE teacher over the three-year period was GH¢17,787 (US\$4,691). DBE trainees bear GH¢7,389 (US\$1,951), representing 42% of the cost while the Government of Ghana (GoG) bears GH¢10,398 (US\$2,742) representing 58%.

Trained Teacher Retention in Deprived Districts

Trained teacher retention in deprived areas or communities is the prime objective of the UTDBE programme. Endline findings suggest that 18.9% of the UTDBE trainees dropped out of the programme. Proportion for male is estimated to be 18.1% and their female counterparts is 19% out of 1876 trainees engaged on the programme in 2012/13. Thus, out the number of trainees that started the programme, only 1,522 are still perusing the course and working in deprived areas as at 2014/15 academic year across the sample districts. The drop-out rate tends to be higher among the females than their male counterparts. Generally, the dropout rates were higher at the end of the first year of the course than the second year. Male drop-out rate throughout the third year was higher than that of the females. Comparatively findings from interviews with teachers and directors suggest that the incidence of drop-out is attributed to financial challenges, marital issues, poor academic performance, mid-stream career change and inability to effectively combine school schedules with distance learning.

The Endline findings suggest that a higher proportion of UTDBE trainees compared to DBE teachers are willing to stay in rural deprived areas due to community affiliation and the desire to serve their communities. In some cases, the lack of access to basic social amenities such as potable water, electricity and accommodation in the communities had a negative impact on the retention of teachers in the community (both UTDBEs and DBEs). Most of the UTDBE trainees (72%) were natives of the communities and districts where they served as teachers and 46% resided in their communities. They therefore had less challenge with accommodation and community relations/ integration. The Endline survey shows that the retention of UTDBE trainees after the course completion is largely based on factors including: good school/community relations; personal reasons; and general efforts made towards retaining them such as the education authorities providing incentives. It further suggests that community affiliation --- whether the UTDBE trainee is from the community-- is an important determinant of teacher retention particularly in the rural communities. In addition, parents, chiefs as well as the SMC/PTAs in the communities played a critical role to ensuring the wellbeing and retention of teachers within the communities.

Location of training sites

The IA revealed that the location of the CoE training sites for the UTDBE programme increased the financial burden of trainees who sometimes had to travel for up to two days to get to their respective colleges for face-face sessions. Trainees in Upper East, West and Northern Regions

traveled to Jasikan in the Volta region and often took one to two days. Many of the trainees find difficulties in raising funds to meet their travelling expenses. It was also observed that in view of the distance, trainees left their schools before the approved departure date to arrive at the CoE on time but returned to their respective schools late. Interviews with College UTDBE coordinators and Principals indicated that lateness was very frequent among trainees from the three northern regions.

District cluster meetings and mentoring

The DEOs are expected to support the trainees in their effort at acquiring the requisite knowledge to be professional teachers. The DEO is expected to organize study circles and cluster meetings for trainees where resource people from the training colleges and districts were expected to explain concepts, coach and mentor trainees in their study modules. Interviews with trainees revealed that the cluster meetings are not frequently organized by the DEO due to financial difficulties although GPEG was providing direct funding for these activities. Location of study centers has always been seen by trainees to be far away from their location of work; trainees also reported the absence of tutors and competent resource people who failed to attend the meetings because of non-payment of the allowances.

The UTDBE programme was also designed such that the DEO was to establish mentors/cadres to support trainees while they were at their schools. The cadres are to prepare and present module lessons for trainees to observe. The field support cadres consisted of circuit supervisors, district teacher support officers, district guidance and counseling coordinators and other professionals including COE tutors if the district had a College of Education serving the UTDBE programme. The Tutors are expected to monitor the performance of trainees and assist them. The UTDBE programme also depends on dedicated and certificated head teachers to act as mentors to the trainees in their schools. They are to provide on-the-job training to the trainees. This arrangement was not observed during the field work and was a key gap in the programme implementation.

UTDBE candidate selection

The fluid nature of admissions qualification into the programme should be carefully examined. It has created an opportunity for Directors to interpret requirements as they find convenient. Some of the trainees on the programme have qualifications far below what is generally accepted for admission to the Colleges of Education. Consequently, tutors complained of the low content absorption rate of the trainees as compared to the traditional DBE students. UTDBE trainees also complained of the short time frame for the face- to- face sessions and poor preparation by some tutors. Tutors spent more time on adapting remedial teaching methods to bring the trainees up to an acceptable level upon which new concepts in core subjects could be built.⁶

⁶ UTDBE applicants were expected to have passes (E8) in five subjects including 3 core subjects and at least two electives; DBE applicants are expected to have passes in six subjects---3 core subjects and 3 electives.

Key Recommendations

- With regard to cost effectiveness and efficiency of the UTDBE programme, the government should adopt the UTDBE training mode in order to increase teacher retention and assume a less expensive approach to teacher training compared to the current DBE programme. The programme would assist in increasing teacher retention in rural deprived communities compared to the conventional approach to the DBE programme and ensure that teachers are in place throughout the training period of upgrading.
- The MOE and GES should present the findings of the study to the Ministry of Finance to ensure that future programmes are supported in targeted areas of the country. Targeting of the programme should be conducted by PBME to identify the districts with the lowest PTTR particularly at primary level and use deprivation criteria developed by the MOE. Female trained teacher ratios in these districts should also be taken into account in targeting.
- The course content or modules for the UTDBE programme should be revised by Teacher Education Division in collaboration with the CoEs and Cape Coast University to ensure that the content is more focussed on relevant subjects being taught at the basic school level. This would include a focus on literacy and numeracy for early grade and primary level students. The course content should also be reviewed in terms of the course structure reducing the duration for face-to-face sessions at the CoEs and content of modules.
- The IA suggests that TED needs to restructure the modules to be more user friendly and relevant to teaching at primary level; this might mean focusing the programme at the primary level alone and not include the KG and JHS which demands more specialisation in course content and practice which is available on the conventional mode at the CoE; the tutors also need to be oriented in order that the modules are delivered using a self directed distance learning approach.
- The IA study suggests that the Colleges of Education need to spend much more time preparing for the face- to- face sessions with UTDBE trainees such as preparing their content relevancy, ensuring tutors use more participatory approaches in the classroom and ensuring that the logistical arrangements for the trainees are well organised. Tutors should be encouraged to stay and teach the UTDBE sessions and not “pass” these sessions to non-teaching personnel at the CoE or rely solely on the usage of handouts. Tutors should also be motivated sufficiently to ensure high quality teaching and commitment towards the UTDBE trainees.
- The high incidence of drop-out has high financial implications for the UTDBE programme. It is recommended that GES/MOE should initiate relevant policies to help reduce the drop-out rate for the deprived districts to adequately benefit from the programme. Direct financial burden of trainees with respect to cost of transportation (travel distance) to the CoE should be subsidized while reducing the number of days at

the colleges of education. It is also recommended that CoE in the key target regions where trainees are enrolled should be used as training centers for the training of UTDBE in order to reduce the cost and also increase the supervision and mentoring by qualified tutors.

- More work is needed to ensure compliance by DEO's in order to ensure that the district cluster meetings are implemented to supplement the face to face programme; that resource persons are carefully selected to ensure quality and that much more supervision and support is provided by the CoEs to ensure district cluster based meetings are held not leaving these to the District Education Office alone.
- UTDBE applicants who fail to meet the minimum requirements for UTDBE should be given an "access" course to prepare them for enrolment in the UTDBE.
- The Teacher Education Division and Regional/District Education Officers should ensure that all Head teachers are oriented to their role in mentoring and coaching UTDBE trainers. Circuit Supervisors and UTDBE Coordinators should also be given further refresher training on how to conduct mentoring and coaching of UTDBE trainees and be resourced to intensify their monitoring and supervision of UTDBE trainees at school level.
- In view of high demand for training opportunities against scarce financial resources, TED should ensure their equitable distribution making adequate provision for female teachers in the UTDBE programme in order to improve gender parity index
- The remaining trainees who are still not on the government payroll should be migrated onto the Government payroll as major priority for GES /MOE, and the Controller and Accountant General).

Chapter 1: Introduction

1.1 Introduction and Background

An important objective of education reforms in Ghana has been to improve access and participation in basic education, and enhance the quality of teaching and learning outcomes (MOE, 2013). The reforms have had implications for teacher training by focusing on the improvement of the trained teacher ratio and instructional quality through more effective training. The evidence produced by the MUSTER studies⁷ suggests that Ghana needs to rethink its teacher training policies if the goal of improving quality in basic education is to be met. Conventional practices of teacher education have not met the trained teacher demand particularly in rural deprived areas of Ghana; they have also not ensured that teachers stay in the teaching field for more than four years after teacher training college. The evidence gathered by the MUSTER studies pointed to the need for the Ministry and GES to review its methods for teacher recruitment, and incentives for making teaching an attractive profession particularly at the primary level. These and other studies through the EdQUALL and CREATE research programmes pointed to the need for greater emphasis on Continuing Professional Development (CPD) provided through structured and more institutionalised INSET such as mandatory practical teaching sessions as part of the teacher training programme.

Teacher supply and demand in any education system requires that school expansion is accompanied by expanded teacher training in order to meet the demand for teachers (UNESCO, 2014)⁸. To meet the goals of education for all, the educational system must be capable of producing sufficient numbers of qualified teachers to keep up with population growth. The basic parameters that determine the demand for new teachers at primary and JSS level are: the growth in the school age cohort; the need to increase participation rates to levels that ensure all children complete the basic cycle; the attrition rate of teachers; and the need to limit increases in the pupil-teacher ratio to maintain quality. In addition, those who are currently untrained will need upgrading to a minimum level of qualification in order to ensure that all teachers are trained.

The 2014 Education Sector Performance Report reveals year-on-year increases in both Net Enrolment Rate (NER) and Gross Enrolment Rate (GER) at Kindergarten (KG) and Primary school levels over the past five academic years. For instance, GER at the KG increased from 92.9% in 2008/09 to 113.8% in 2012/13 representing a 22.5% increase over the period. NER (which measures the age-specific cohort) reveals similar trends of enrolment increase from 63.6% in 2008/09 to 74.8% in 2012/13. At Primary level, while GER increased from 94.9% in 2008/09 to 105% in 2012/13 (representing an increase of 10.6%), NER dropped from 88.5% in 2008/09 to 81.7% in 2011/12, though increasing slightly to 84.1% in 2012/13 (MoE, 2013).

However, it is important that increases in enrolment are accompanied by increases in the trained teacher to pupil ratio. Evidence from the EMIS Data, 2013/14 and 2014/15 show an increase in the supply of trained teachers across all levels of basic education. The percentage of trained teachers in public Kindergartens is 61.7%, revealing an increase of 12.7% over the 2013/2014 figure of 54.8%. The percentage of trained teachers in public Primary Schools is 75.0%, showing an increase of 6.8% over the 2013/2014 figure of 70.2%; whereas the percentage of trained teachers in public Junior High

⁷ Multi-Site Teacher Education Research, www.sussex.ac.uk

⁸ UNESCO (2014) Global Monitoring Report.

Schools is 87.8%, showing an increase of 4.0% when compared to the 2013/2014 figure of 84.5%. The situation is much worse in deprived districts where only 34.3%, 49.7% and 72% of teachers at KG, Primary and JHS are trained. Despite these increases, there are still high Pupil Trained Teacher Ratios (PTTR) across most regions in the country.

In all the sampled regions and districts for the UTDBE Impact Assessment (IA), there continues to be a high demand for trained teachers. The PTTR across all five regions is 80; the PTTR for the Upper East is 64. Ratio for KG is 169, Primary 75 and JHS 30. In the Upper West, the PTTR was 70 at KG having 206, primary 84 and JHS 35. Northern Region had a PTTR of 86. KG has PTTR of 234, Primary 96 and JHS 39. Brong Ahafo Region has a PTTR ratio of 52 with KG having 134, Primary 62 and JHS 19. The Western Region has the highest PTTR at 126. The ratio at the KG level is 594 while the Primary has a ratio of 145 and JHS 43.

Thus, although the number of trained teachers in all the sampled regions and districts has increased, this has not led to significant reduction in the trained teacher to pupil ratio, which may suggest that increased access to primary education may have outstripped the government's ability to produce sufficient numbers of qualified teachers. (It is important to point out that, in general, large pupil-teacher ratios (PTR) are found in urban areas and low PTRs in the more rural areas of the country). Producing sufficient numbers of qualified teachers, as Free Compulsory Basic Education (FCUBE) envisages, requires that we examine two critical issues – are sufficient numbers of teachers being trained to meet the demand (of enrolment increases), and are traditional routes the most cost-effective and productive ways to increase teacher supply? Secondly, what conditions of training and of the beginning teaching phase might be undermining greater interest and longer-term commitment to primary and JSS teaching? Several learner assessments conducted over the last ten years in Ghana suggest that there is a challenge in the effectiveness and quality of teacher education (ESP, 2014)

The UTDBE endline study has been commissioned as part of an evaluation of the 2012 GPEG-sponsored cohort of what was originally 8000 intended trainees from the 57 most deprived districts of Ghana. This report presents the key findings from the endline survey which seeks to measure the changes in performance of the UTDBE trainees and DBE teachers; it also presents the findings using the baseline (June, 2014) and midterm (March, 2015) surveys in terms of lesson planning and preparation, methodology and lesson delivery as well as classroom management and control. The baseline study as well as the midterm assessment (Impact Evaluation) focused on evaluating UTDBE trainees' classroom practices as well as an assessment of teachers' participation in the GPEG sponsored National Inset Unit (NIU) programme.

1.2 Research Questions

The Impact Assessment of the UTDBE component is aimed at assessing the extent to which the programme has achieved its objective of upgrading the skills of the untrained teachers in the deprived districts and the extent to which that has impacted on learning outcomes. The evaluation also investigated trainees' satisfaction and career ambitions along with their retention in the profession.

To achieve the objectives of the UTDBE evaluation programme, the following research questions were formulated:

1. What improvement has occurred in the student teachers' quality of teaching as a result of their participation in the training programme?

2. What skills have the student teachers gained in lesson planning/preparation; teaching methodology; and classroom organization and management?
3. What improvement has occurred in the student teachers' content knowledge?
4. How do UTDBE teachers compare with teachers trained in the traditional pre-service programme in the quality of their teaching in terms of lesson planning/preparation, teaching methodology, and classroom organization and management?
5. How do the costs of the two modalities (UTDBE and DBE) of provision compare?
6. Does training whilst teaching result in teachers staying on in the deprived districts?
7. What expectations and ambitions do the teachers from the UTDBE programme have for the future?
8. What is the level of the trainees' satisfaction with the course work of the UTDBE programme?
9. How can the current UTDBE programme be improved?

1.3 Research Methodology and Sampling Framework

A cross-sectional survey design in which data collected reflects the views and observations of participants regarding the UTDBE at several points in time was employed. The design of the study uses both qualitative and quantitative approaches to evaluative research. In line with the design, data collection instruments included face-to-face interviews and summated closed and open-ended Likert scale self-reporting questionnaires. The major data collection instrument used for the endline evaluation included in-depth interviews for the UTDBE trainees and DBE teachers, a lesson observation schedule (LOS) for both UTDBE and DBE teachers, along with a follow up interview. Cost effectiveness questionnaires were administered to both the DBE and UTDBE trainees as part of the research. Other instruments included a school observation checklist, interview questionnaires for other teachers working at the school but were not observed and a headteacher interview. Instruments were also designed for district level data collection including interview schedules for: district education directors, circuit supervisors and the UTDBE District Coordinator. Tools were also designed for

A variety of analytical techniques including inferential, descriptive and narrative analysis have been used in analysing data collected from the field. In order to ensure that sampled trainees were representative of the GPEG sponsored cohort as a whole, trainees were drawn from less deprived, deprived and extremely deprived areas across the nine sampled districts. All the nine districts selected for the study were part of the MOE's Deprived Districts and fell under the overall GPEG targeting for deprived districts. Within the districts the study team was also able to identify "deprived, less deprived and extremely deprived school/communities based on criteria developed and administered during the baseline and endline phase of the research.

In our quest to understand the spread of UTDBE trainees within the districts, the evaluation team with support from Statistical officers across all 9 sampled districts adopted a three tier categorization of trainees based on the location and availability of social amenities in the district. Based on this, circuits where UTDBE trainees are located were categorized as Less Deprived, Deprived and Extremely Deprived (see Table 1.6 below on the characteristics used for the categorization). This approach has been adopted by studies such as the Female Teacher study by Casely-Hayford with Wilson in 2001 and the Teacher Incentive Scheme Study by GES in 2001.

According to these reports, the categorization was done using characteristics such as the availability of social amenities, access roads and proximity to the district capital. The Female Teacher study by AFC in 2001 posits that few teachers are likely to accept postings to extremely deprived areas. The research

wanted to ascertain whether the UTDBE programme was actually addressing the acute shortage of trained teachers in the extremely deprived areas of these districts.

The sample for the endline evaluation was the same sample as used in the baseline and the midline in order to enable the research team to conduct a comparative analysis of what improvements have been made since the baseline in terms of lesson planning and preparation, methodology and classroom organisation and management. The research team used an existing Teacher Education Division/National INSET Unit (TED/NIU) lesson observation instrument (LOS) with some modifications to capture the more qualitative aspects of the research and ensure validity in the observation scoring; this approach was based on Associates for Change own lesson observation schedule. The LOS was a well-tested instrument used in the baseline and midline surveys, which assisted the research team assess the teaching quality, lesson notes planning/preparation as well as observe the classroom teaching so as to determine the relevance of the methodology, classroom organization and management, and the content knowledge of teachers.

The same approach was used during the final evaluation in order to assess the performance of the UTDBE trainees after they were exposed to six more sessions of face-to-face tutoring which introduced them to key instructional methods of teaching. The lesson final assessment took the form of classroom observations using the same adjusted lesson observation instrument/schedule (LOS) as used in the baseline and midterm assessments (Refer to Annex 1 for a full summary of the instrumentation used in the endline assessment).

1.4 Sampling Framework and Site Selection for UTDBE Evaluation

For the UTDBE trainees, the research team used the same sample (the same student teachers) as was used in the baseline and midterm. Other types of teachers, including trained teachers, were added to the sample in order to assess the level of teachers' improvement in lesson planning and preparation, teaching methodology, classroom management and organization as a result of their participation in the National INSET Units programmes sponsored by GPEG. Both purposive and simple random sampling techniques were used to select targeted samples. Key participants who provided data at the endline stage of the evaluation included the UTDBE trainees, DBE teachers and other teachers (both trained and untrained teachers who had benefited from NIU INSET training), Head teachers, District Directors of Education, Circuit Supervisors, District Training Committees, District Teacher Support Teams, District Training Officers, SMCs/PTA members.

In each district, the number of schools visited ranged between 17 and 27 schools with an average of 24 schools being visited during the endline survey. The baseline study involved observation and interviews with 407 UTDBE trainees; at the midline a total of 399 UTDBE trainees were observed and interviewed of which 357 were from the baseline survey plus 43 additional UTDBE trainees across the nine districts. The endline survey tracked 400 UTDBE trainees that were observed and interviewed during both the baseline and the midterm surveys. The endline survey also observed and interviewed an additional 185 DBE teachers. In total, there were 570 "other" teachers who completed questionnaires at the school level and these included DBE and UTDBE teachers who were not observed but were present at the school sites (the findings are contained in chapter ten (10) of the report). Overall, 57% male and 43% female UTDBE trainees were observed and interviewed during the endline phase.⁹ Out of this number, 23%, 38% and 39% of these trainees were in less deprived, deprived and extremely deprived schools respectively (Table 1.1). This can be compared to 26% (less deprived), 37% (deprived) and 37% (extremely deprived) during the baseline study. Out of the 197

⁹ Out of the total of 7043 UTDBE teachers in the programme 60.9% are male and 39% are female

school sites observed in the baseline study, 193 school sites were observed in the endline study with only four schools not reached. This was consistent with the number of schools covered during the midterm survey.

Table 1.1 Number of Trainees Observed and Interviewed Across Deprived, Less Deprived and Extremely Deprived Areas

District	Number of Trainees	Number of Trainees in Less Deprived Schools		Number of Trainees in Deprived Schools		Number of Trainees in Extremely Deprived Schools	
		Number	Percentage	Number	Percentage	Number	Percentage
Atebubu Amantin	47	12	26%	21	44%	14	30%
Nkoranza North	44	4	9%	23	52%	17	39%
Bunkpurugu Yunyoo	36	10	27%	20	56%	6	17%
West Mamprusi	40	11	28%	17	43%	12	30%
Bongo	45	8	18%	12	27%	25	56%
Talensi Nabdam	43	9	21%	8	19%	26	60%
Jirapa	48	10	21%	9	19%	29	60%
Lawra	53	9	17%	23	43%	21	40%
Wassa Amenfi	44	19	43%	19	43%	6	14%
Totals	400	92	23%	152	38%	156	39%

Source: (UTDBE Endline Survey, 2016)

1.5 UTDBE Trainees Interviewed across KG, Primary and JHS Levels

Adequate teacher supply at the various levels of the educational system is critical in improving the quality of education, especially in hard to reach communities. Table 1.2 shows the number of trainees across the sampled schools in the nine districts by classes taught. Analysis of the endline data indicates that most of the UTDBE trainees observed teach at the Primary level (74%). This result declined slightly compared to the baseline results, which revealed that 77% of trainees were at Primary schools. Across the nine sampled districts, 14% of the UTDBE trainees observed were teaching at the KG level while 12% of the trainees were at the JHS level. This result shows a 2% increase in the number of trainees at the KG level and a 2% increase in the number of trainees at the JHS level as observed in the baseline study. This is fairly consistent with the figures in the baseline study and does not deviate much from the national picture of trainees working at these levels. At the district level, there were no UTDBE trainees interviewed at the KG level in the Bunkpurugu-Yunyoo District in the Northern Region nor were there any UTDBE trainees observed at the JHS level in the Atebubu Amantin District in the Brong Ahafo Region (Figure 1.1).

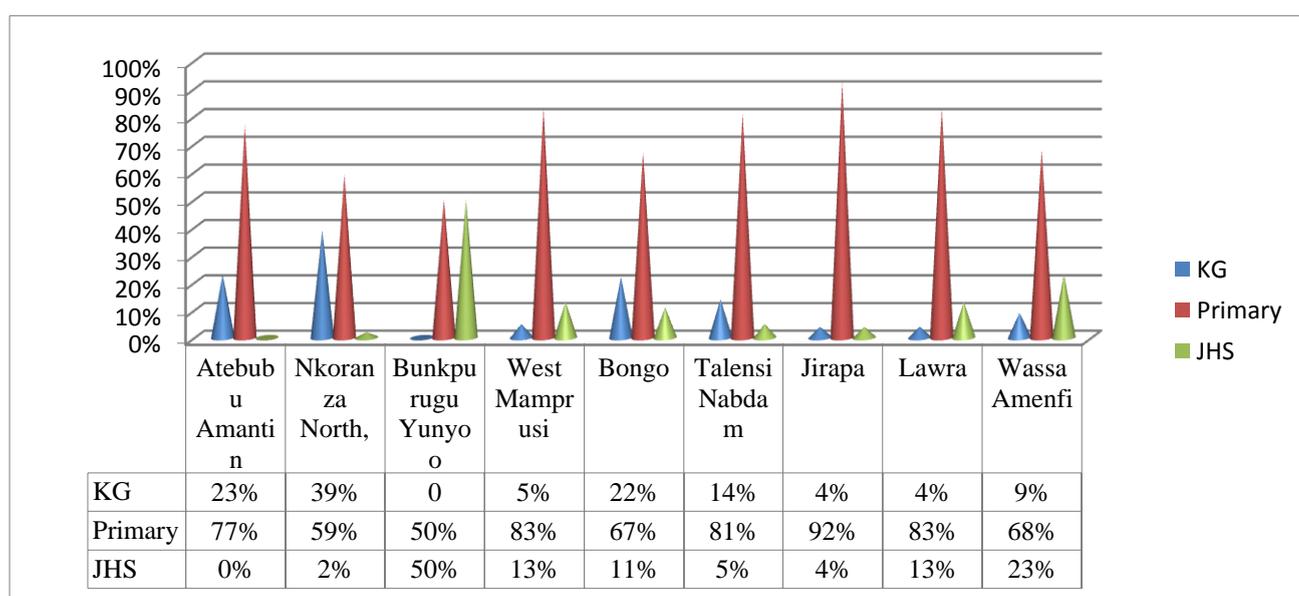
Table 1.2: UTDBE Trainees Interviewed across KG, Primary and JHS Levels

Name of Sample District and Region	Number of KG trainees		Number of Primary trainees		Number of JHS trainees	
	Number	Percentage	Number	Percentage	Number	Percentage
Atebubu Amantin, Brong Ahafo	11	23%	36	77%	0	0%
Nkoranza North,	17	39%	26	59%	1	2%
Bunkpurugu Yunyoo	0	0	18	50%	18	50%
West Mamprusi	2	5%	33	83%	5	13%
Bongo	10	22%	30	67%	5	11%
Talensi Nabdam	6	14%	35	81%	2	5%

Name of Sample District and Region	Number of KG trainees		Number of Primary trainees		Number of JHS trainees	
	Count	Percentage	Count	Percentage	Count	Percentage
Jirapa	2	4%	44	92%	2	4%
Lawra	2	4%	44	83%	7	13%
Wassa Amenfi	4	9%	30	68%	10	23%
Totals	54	14%	296	74%	50	12%

Source: UTDBE Endline Survey, 2016

Figure 1.1: Percentage of UTDBE Trainees Teaching at Different School Levels



Source: UTDBE Endline Survey, 2016

1.6 Number of UTDBE Trainees by Gender

Studies in Ghana (Associates for Change, 2011; Casely-Hayford, 2006) suggest that there is generally a very low representation of trained teachers in rural deprived schools in Ghana, particularly female teachers. The endline survey aimed at obtaining a sample that would allow a higher representation of female teachers in order to fully investigate the special circumstances that women face in these deprived areas. Data gathered from the Teacher Education division revealed that the total enrolment of UTDBE trainees by sex in the Colleges of Education as of 2012/13 academic year was 8367, comprising 4961 males (59.3%) and 3406 females (40.7%). In 2013/14, only 7043 UTDBE trainees registered to continue with the training programme indicating a 16% drop in enrolment across the Colleges of Education. The number comprised 4,265 males (60.6%) and 2,778 females (39.4%). The total enrolment of UTDBE trainees further declined to 6,744 during the 2014/15 academic year, marking a 4% reduction. The UTDBE enrolled trainees comprised of 4,026 (59.7%) males and 2,718 (40.3%) females. More details related to the gender breakdown of UTDBE trainees is provided in chapter 3 of the report.

The gender analysis of the sample in Table 1.3 shows that out of 400 observed, 226 (57%) of the UTDBE trainees observed were males whilst 174 (43%) were females¹⁰. This result is consistent with the figures obtained in the baseline, which recorded 59% males and 41% females (Table 1.3; Figure 1.2). The increase in the number of female trainees observed could be attributed to the higher number of females who were on maternity leave during the baseline survey but had returned to work by the endline survey period. Nkoranza North (Brong Ahafo) and Lawra District (Upper West) recorded the highest representation of female UTDBE trainees with 61% and 55% female teacher trainees respectively, whilst the Bunkpurugu Yunyoo District (Northern Region) had the lowest female representation (17%). These figures are reflective of the gender representation of the UTDBE trainees in the programme across the sampled regions and are consistent with the results in both the baseline and LOS surveys.

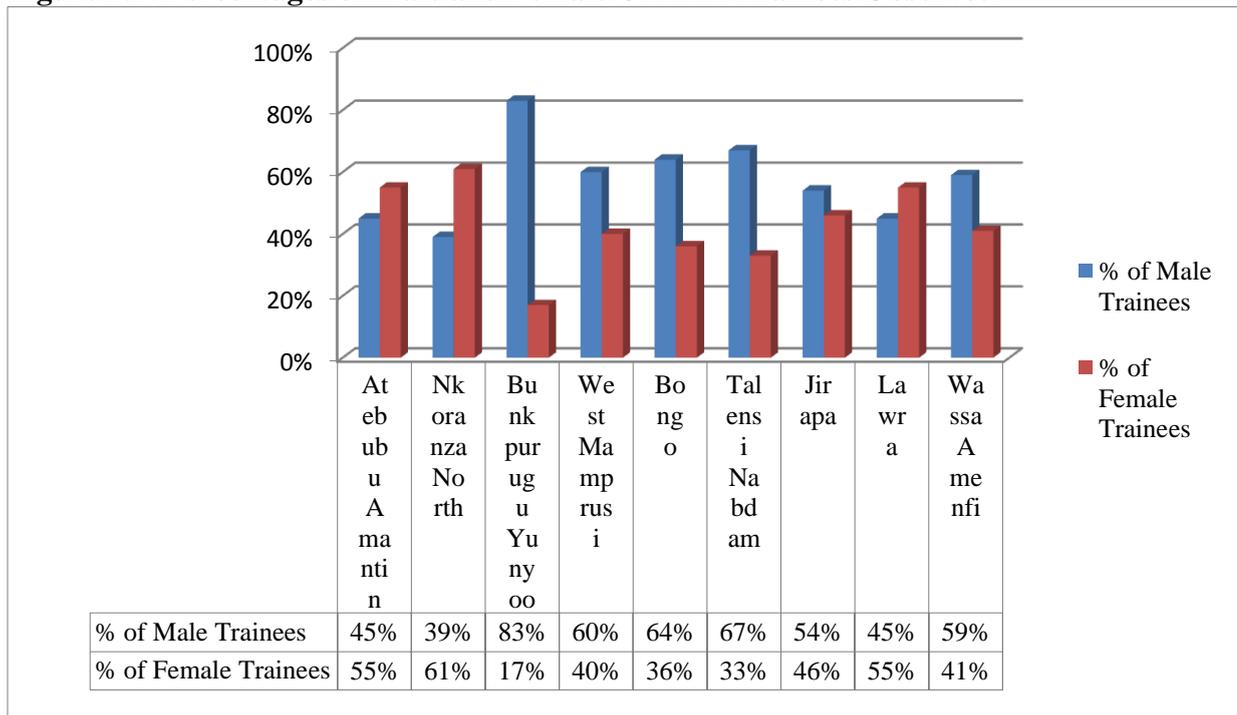
Table 1.3: Number of Male and Female UTDBE Trainees Interviewed Across the Nine Sampled Districts

	Number of Male trainees		Number of Female trainees		Total number of trainees
Atebubu Amantin	21	45%	26	55%	47
Nkoranza North	17	39%	27	61%	44
Bunkpurugu Yunyoo	30	83%	6	17%	36
West Mamprusi	24	60%	16	40%	40
Bongo	29	64%	16	36%	45
Talensi Nabdam	29	67%	14	33%	43
Jirapa	26	54%	22	46%	48
Lawra	24	45%	29	55%	53
Wassa Amenfi	26	59%	18	41%	44
Totals	226	57%	174	43%	400

Source: UTDBE Endline Survey, 2016

¹⁰ Data from Teacher Education Division, GES indicates that the total number of trainees admitted to the programme from all the 75 deprived districts was 8367 comprising **4961 males and 3406 females** (across 11 CoEs). This is further explored in section 2.4 of the report.

Figure 1.2: Percentages of Male and Female UTDBE Trainees Observed



Source: UTDBE Endline Survey, 2016

1.7 Data Quality Assessment

A thorough data quality analysis was carried out before the analytic phase of the research began. There were 21 instruments used in the endline data collection phase. Following data entry, each file was cleaned and checked for data entry errors. A few data entry errors were detected and corrected during this phase. In terms of validity, data was collected by a qualified team of trained researchers, most of whom were familiar with the lesson observation method and had worked in educational research teams with AfC on previous studies. The same GES officers who had been part of the lesson observation during the baseline and midterm phases were also engaged. The majority of the data collectors had a first degree qualification with a few second degree and PhD holders. Data collectors were in groups of ten accompanied by a supervisor who was an AfC senior researcher/consultant. Before data collection began, a two day training event was organized for all data collectors-one day was used as a full team to review the instrumentation and practice the approach to lesson observation and another day was used for training/preparing for fieldwork at the regional level. On the whole, the quality of the data collected showed that the training provided the data collectors with the necessary skills and competencies needed to conduct the research.

For reliability, the data collection process was supervised and monitored across all the field research teams in order to ensure consistency across the locations and data source. Data were properly stored and backed up for easy retrieval for future reference. In terms of integrity, data entry clerks were professionals with several years of experience in data entry; they were also closely supervised by the AfC senior research manager. No evidence of data manipulation or complicity was found. Based on the assessment, the overall quality of the data was high.

1.8 Limitations of the Study

Transfer of some UTDBE trainees by the District Education Offices (DEO) resulted in some of them moving to new schools often within the same district. This resulted in the research teams having to travel to the new schools often situated in extremely deprived areas of the same district to meet the UTDBE trainee teacher who was part of the initial baseline study; sometimes these trips to new schools did not allow the possibility of interviewing or observing the same teachers. This was the case in some of the districts across the three Northern Regions where teachers had been moved to extremely deprived communities (as part of the GES deployment exercise) to enable teachers from the southern part of the country to be posted to schools in less deprived and deprived communities of the north.

1.9 The Characteristics of the Sample

In total, 193 schools were visited across the nine sampled districts over the stipulated data collection period of the endline study. The number of schools was slightly lower than the number of schools visited during the baseline study, which was 197 schools. This is likely a result of some UTDBE trainees having been transferred to other schools, who although followed, were not met in their new schools. Table 1.4 shows that 25% of the schools visited were in less deprived areas while 40% and 35% of the visited schools were in deprived and extremely deprived areas respectively, which was also the case in the baseline stage (Table 1.4 and Figure 1.3). The result shows a slight increase in the number of less deprived (1% increase) and deprived (3%) schools visited during the endline. The Wassa Amenfi District recorded the highest number of schools in the less deprived areas whilst Nkoranza North District and Talensi Nabdam had the highest number of schools classified as deprived and extremely deprived respectively (see section 1.4). Jirapa District (Upper West) and Bongo Districts (Upper East) had the second highest number of extremely deprived schools with each district accounting for 50% of the schools across the levels of deprivation. Criteria for school selection included enrolment, drop-out rate, numeracy and literacy attainment, teacher supply and accessibility and social infrastructure. All these sites were used for the research over the two year period of the Impact Assessment (IA).

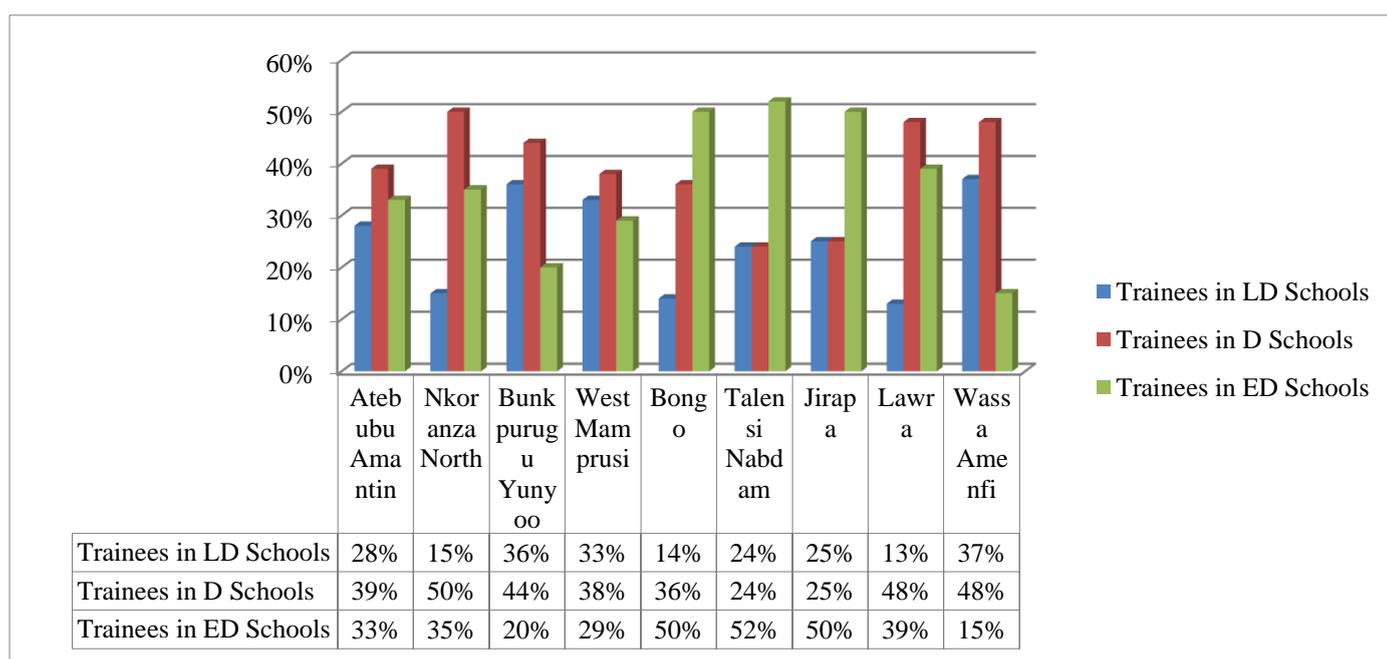
Table 1.4: Number of Schools Visited by District and Proportion by Level of Deprivation

	Number of Schools visited	% of Less Deprived Schools	% of Deprived Schools	% of Extremely Deprived Schools
Brong Ahafo Region				
Atebubu Amantin	18	(5) 28%	(7) 39%	(6) 33%
Nkoranza North	20	(3) 15%	(10) 50%	(7) 35%
Northern Region				
Bunkpurugu Yunyoo	25	(9) 36%	(11) 44%	(5) 20%
West Mamprusi	21	(7) 33%	(8) 38%	(6) 29%
Upper East Region				
Bongo	22	(3) 14%	(8) 36%	(11) 50%
Talensi Nabdam	21	(5) 24%	(5) 24%	(11) 52%
Upper West Region				
Jirapa	16	(4) 25%	(4) 25%	(8) 50%

	Number of Schools visited	% of Less Deprived Schools	% of Deprived Schools	% of Extremely Deprived Schools
Lawra	23	(3) 13%	(11) 48%	(9) 39%
Western Region				
Wassa Amenfi	27	(10) 37%	(13) 48%	(4) 15%
Totals	193	(49) 25%	(77) 40%	(67) 35%

Source: UTDBE Endline Lesson Observation Survey, 2016

Figure 1.3: Percentages of UTDBE Trainees from Schools in Areas of Each Level of Deprivation



Source: UTDBE Endline Survey, 2016

*Note: Less Deprived (LD), Deprived (D) and Extremely Deprived (ED)

Length of Service of UTDBE Trainees

All the UTDBE trainees who were selected were expected by GES condition of service, to be pupil teachers with at least senior high school education background. Table 1.5 presents data on the number of years teachers had been in the teaching field. This was to determine the level of experience of teachers since there is a direct correlation between number of years taught and experience in terms of lesson planning and preparation, delivery and classroom management. Overall, 80% of the UTDBE teacher trainees had taught not less than 2 years while 77% had between 3-6 years of teaching experience. Only 1% of the trainees had been in the teaching field for a year or less while 9% of the UTDBE trainees had taught for 7 years and above. Findings indicate that only Atebubu (Brong Ahafo), Amantin and Jirapa Districts (Upper West) had teachers who had been in the service for a year or less (3% each). The Lawra District (Upper West) had 94% of its teachers being in the service for 3-6 years. Additionally, the Talensi-Nabdham District (Upper East) happened to have the largest pool of trained teachers who had been in the teaching profession for 7 years and above. This accounted for 27% of the total teacher-pool in the district. The overall findings suggest that the

majority of the UTDBE teachers in the sample of schools were fairly young teachers with 3-6 years of teaching experience, while very few teachers had more than 7 years' experience.

Table 1.5: Percentage of Trainees According To Length of Service

District	Number of Years			
	1 year	2 years	3-6 years	7 and above
Atebubu Amantin	1	8	20	5
	3%	24%	59%	15%
Nkoranza North	0	7	20	0
	0%	26%	74%	0%
Bunkpurugu Yunyoo	0	2	34	1
	0%	5%	92%	3%
West Mamprusi	0	7	20	5
	0%	22%	63%	16%
Bongo	0	2	31	1
	0%	6%	91%	3%
Talensi Nabdam	0	2	25	10
	0%	5%	68%	27%
West Mamprusi	0	7	20	5
	0%	22%	63%	16%
Jirapa	1	1	35	2
	3%	3%	90%	5%
Lawra	0	2	44	1
	0%	4%	94%	2%
Wassa Amenfi	0	10	20	8
	0%	26%	53%	21%
Total	2	41	249	33
	1%	13%	77%	9%

Source: UTDBE Endline Survey, 2016

1.10 Conclusion

The sample was achieved across the baseline to endline with 25% of the schools in less deprived areas while 40% and 35% of the visited schools were in deprived and extremely deprived areas respectively across the nine districts. All these sites are largely consistent with the baseline, midterm and endline phases indicating a high level of consistency over the two year period of the IA.

The findings from the IA suggest that the vast majority of UTDBE teachers in the sampled schools were teachers with 3-6 years of teaching experience, while very few (less than 7%) of teachers had more than 7 years of experience. The gender analysis of the sample shows that 57% of the UTDBE trainees observed were male whilst 43% were female which was consistent with the baseline and is consistent with the overall population of UTDBE trainees. Across the nine sampled districts, 14% of UTDBE trainees observed were teaching at the KG level, 74% at Primary level while 12% were at the JHS level.

Chapter 2: District Context: Trained Teacher Supply, UTDBE Admission and Drop Out

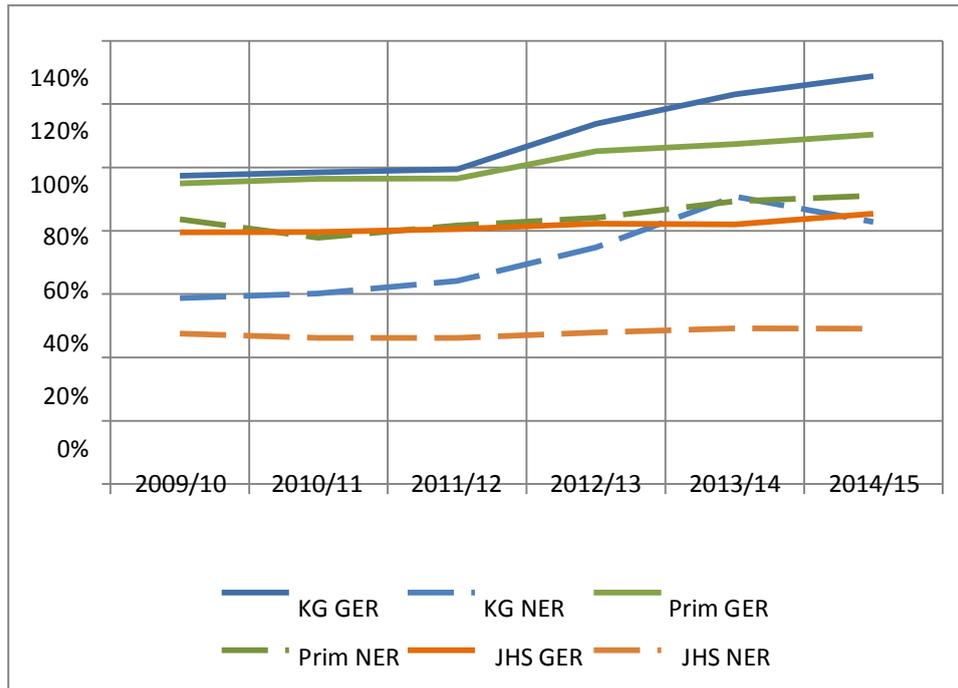
2.0 Introduction

Ghana has made great strides in access to basic education following the 1992 Constitution, which provides the mandate for free compulsory basic education for all children of school going age. The Government of Ghana has also adopted the Education for All (EFA) and MDG Goals and strategies for bringing about Universal Primary Education that placed particular emphasis on improving the competencies of the teaching force. Several key policy interventions have contributed to significant increases in Ghana's basic education enrolment growth, including school infrastructure improvement, the school feeding programme, free supply of school uniforms to the needy and the Capitation Grant.

Analysis of the ESPR, 2015 reveals that primary net enrolment increased from 30% in 1999 to 89.3% in 2014 while gross enrolments of Pre-primary rose from 47% to 128% and a net of 90.8% over the same period, with a GPI of 1.03 in favor of girls. Overall, at the basic level, an increase in enrolment was recorded between 2013/14 and 2014/15 for all levels of education from Kindergarten (KG), to Primary and Junior High School (JHS). Figure 2.1 which shows the gross and net enrolment ratios for basic schools demonstrates that the gross enrolment rate at all three levels has continued to rise, with the steepest increase recorded for KG, then Primary, and finally JHS. While net enrolment rates increased for Primary, they declined slightly KG and remained relatively constant at JHS as compared to 2013/14. Both KG and Primary net enrolment rates are above 80%, while this figure is much lower for JHS, indicating that greater effort needs to be made in this area.

Between 2009 and 2014, KG enrolment increased from 1,440,732 to 1,760,715 registering a growth rate of 4.2%. At the primary level enrolment rose from 3,809,258 to 4,342,315 recording a 2.7% increase. Junior High School records enrolment increases were from 1,301,940 to 1,591,279 representing a growth rate of 4.1% (ESPR 2015). GER for KG was 128% with deprived districts recording 148.8% (ESPR, 2015). Primary level had a GER of 110.4% with deprived districts recording a GER of 112.2% (ESPR, 2015). Junior High Schools recorded a GER of 85.4% with a GER in deprived districts of 73.7 % (ESPR, 2015).

Figure 2.1 Gross and Net Enrolment Ratios for Basic Schools



(Source: EMIS Data 2009/2010 to 2014/15, MOE)

Unfortunately, the supply of teachers – especially trained ones - has not kept pace with the rapid and extensive enrolment growth. Between 2010 and 2014, teacher numbers increased from 31,595 to 37,147 with a growth rate of 4.1% at KG level. At the primary level, the number of teachers rose from 94,927 to 96,715 recording a growth rate of 0.5%. Teacher numbers at Junior High School increased from 65,186 to 77,239 with a growth rate of 4.3%. The high demand for trained teachers is demonstrated by the Pupil Trained Teachers Ratio (PTTR). Across all three levels of basic education trends PTTR between 2009 and 2014 showed a gradual decline. At the KG level, ratio declines in PTTR went from 105 to 56 indicating a positive trend in relation to quality. In deprived districts the PTTR also reduced from 159 pupils per trained teacher in 2012 to 112 in 2014. PTTRs at Primary level also fell from 53 to 45. In deprived districts, the PTTR dropped from 78 to 72. Junior High School levels also showed improvement in PTTR moving from 20 pupils per trained teacher to 18. The PTTR at JHS level in deprived districts dropped from 27 to 26 (EMIS, 2015). The decline in PTTR indicates the gradual increase in the number of trained teachers. Comparatively the demand for trained teachers remained very high particularly in deprived districts.

For the past ten years, rapid enrolment growth at basic school level has not kept pace with the high demand for trained teachers. Schools in deprived areas experience high levels of untrained teachers. Studies reveal that the trained teachers often refuse postings to rural deprived areas across the country and within districts (Associates for Change, 2014). While deprived communities often lack trained teachers, the less deprived or non deprived communities often have an over abundance of trained teachers. At KG level the percentage of trained teachers in deprived areas slightly increased from 34% in 2012 to 47% in 2014. The number of trained teachers at primary level also marginally increased from 50% to 56% and at JHS from 72% to 78% over the same period. Conversely, the non deprived areas and districts experienced a decline in trained teachers over this period: from 66% to 53% at KG level, 31% to 25% at primary level (EMIS/ESPR, 2015).

Low Proficiency and Achievement in Basic Education

Poor teaching and learning has been an on-going challenge in Ghana since the early 80's. With exponential participation rates accompanied by high demand and cost, the ability of the government to provide quality education has become even more challenging especially in deprived rural districts where there is a high prevalence of untrained teachers. The National Education Assessment (NEA) Report of 2012 indicates that between 24.2% and 12.3% of P3 pupils were proficient in English Language and Maths respectively. In P6 the proficiency level was 35.3% in English and 16.1% the Maths. Primary 3 English scores fluctuate between 16.4% and 20%, Maths scores fall between 18.6% and 25.2%. Comparatively, P6 English scores showed a consistent improvement from 23.6% to 26.1% and 35.6%. There is also a marginal improvement in scores for Maths rising from 9.8% to 10.8% and 13.8%. The worst performing regions are the Upper East, Western and Northern where there remain a very high proportion of untrained teachers and a high number of deprived districts and educational deprivation. Data analysis indicates that BECE results over the period in deprived districts where there are a disproportional prevalence of untrained teachers, a considerable number of pupils performed below average in Maths, English, Science and Social Studies. The 2014 BECE results indicate that 31% of pupils in deprived districts performed below average compared to 20% of pupils from non-deprived districts (ESPR, 2015).

The Government of Ghana's policy of providing more trained teachers has been chosen as a means of raising pupil performance. The Education Sector Strategic Plan (ESSP) lays out a policy target of reaching 95% trained teachers in public schools by 2020 as a means of improving the quality of teaching and learning. Indeed, the training of untrained teachers on the job through distance education complements the Colleges of Education's efforts at producing professional teachers and supports the strategies for achieving the target.

2.1 Trained Teacher Supply

The greatest challenge for Ghana in the regions and districts sampled for the study is the prevalence of untrained teachers. The percentage of untrained teachers is estimated to be 50.6% in the sampled districts. Trained teacher supply is a key to quality education delivery ensuring pupils' cognitive development. Teacher type has a direct correlation with pupil learning outcomes. Poor pupil performance can be traced to teachers' deficiencies in subject content knowledge, lack of professional commitment and updated/relevant teaching skills. The Annual Education Sector Performance Report for 2015 indicates that the percentage of pupils performing below average in English, Maths, Science and Social Studies is higher in deprived districts than the non-deprived districts. The 2014 BECE results indicate that 31% of pupils in deprived districts performed below average while only 20% of pupils performed below average in non-deprived districts (ESPR, 2015). The NEA Report (2012) also indicates that proficiency in English and Maths is worse in under resourced/deprived regions such as the Upper East, Northern and Western Regions where there is a disproportionate prevalence of untrained teachers.

The lack of trained teachers is also compounded by the rapid pupil enrolment growth at Basic level. The trained teacher supply has not kept pace with the enrolment growth which has resulted in a poor quality of educational provision across the country but most exacerbated in the three northern regions and Western Region (Associates for Change 2013). PTTR at all levels are very high having regard to approved norms (1:25 for KG 1:35 for Primary and 1:25 for JHS). Data gathered suggests that there is a high demand for trained teachers particularly in deprived districts. Available trained teachers are more concentrated at the higher levels of the sub-sector. Consequently, there are more trained teachers at Junior High School than Primary and less at KG. Annual performance reports (MOE, 2010-2013) indicates that as a result of inadequate supply of teachers, a higher proportion of the available trained teachers are supplied to the JHS than to the Primary and KG levels. EMIS report (2012) indicates that KG level has only 44.8% trained teachers while the Primary and JHS have 66.3% and 82.9% respectively. Data collected from the nine sampled districts implementing the UTDBE programme show the same trend. The supply of trained teachers tilts in favour of higher levels of basic education.

The early grade level of basic education where the foundation is expected to be laid is often the most neglected level in relation to trained teacher availability. The districts have a problem of poor teacher deployment. Most of the districts have a problem of overstaffing at the Junior High School level and trained teachers unwilling to work in remote rural areas outside the district capital (Associates for Change 2013; 2014). To meet the high demand for trained teachers, available community youth are being utilized as pupil teachers or volunteer teachers to close the trained teacher gap as a result of the trained teachers' unwillingness to accept posting to deprived districts and communities. The Government has also deployed a large number of National Youth Employment Volunteers as teaching assistants and the National Service Secretariat have deployed National service personnel as teachers. Improving the competence of pupil teachers and community volunteer teachers through distance education for teacher training could improve trained teacher distribution, teacher quality and allocation particularly in the deprived districts.

2.1.1 Regional Level Trained Teacher Supply

Across all the regions and districts sampled for the IA study, data gathered suggest that there is a preponderance of untrained teachers. Consequently, there is a high demand for trained teachers. Analysis of data covering the last four years (2010-2014) is presented in Table 2.1. The table shows that, on average, the PTTR for the Upper East was 67 at KG level. Primary had a PTTR of 1: 65 and Junior High School had a PTTR of 1: 27. The PTTR for all the three levels of basic education was 50 indicating a high demand for trained teachers. The percentage of trained teachers across the three levels is 61.5% of which KG has 39.7%, Primary 58.7% and Junior High School 74.6% (Table 2.1).

Table 2.1: Regional Summary of Trained Teacher Supply in Sampled Districts (2010-2014)

Region	Level	Ave. Enroll	Ave. No Teachers	Ave. Trained	%	PTTR	Ave. Teacher Demand	TR Short Fall
Upper East	KG	3,731	141	56	39.7	67	149	8
	PRIMARY	19,937	520	305	58.7	65	575	55
	JHS	6,972	346	258	74.6	27	279	-67
	TOTAL	30,640	1,007	619	61.5	50	1,003	-4
Upper West	KG	6,226	123	34	27.6	183	249	126
	PRIMARY	17,050	378	224	59.3	76	487	109
	JHS	6,074	259	169	65.3	36	243	-16
	TOTAL	29,352	760	427	56.2	69	979	219
Northern	KG	9,740	103	43	41.7	226	390	287
	PRIMARY	25339	542	259	47.8	98	724	182
	JHS	7754	272	193	71	40	310	38
	TOTAL	42,833	917	495	54	87	1424	507
Brong Ahafo	KG	6,283	244	58	23.8	108	251	7
	PRIMARY	12,141	507	193	38.1	63	347	-160
	JHS	3,529	266	197	74.1	18	141	-125
	TOTAL	21,953	1017	448	44.1	49	739	-278
Western	KG	16,664	290	45	15.5	370	667	377
	PRIMARY	34,942	754	292	38.7	120	998	244
	JHS	9,910	341	248	72.7	40	396	55
	TOTAL	61,516	1385	585	42.2	105	2061	676

Source: EMIS/GES 2013/2014

The Upper West Region records, on average, PTTR of 183 for KG, 76 for Primary and 36 for Junior High School. The regional PTTR is 69 for all the three levels. The region has an average of 56.2% trained teachers with KG having 27.6%, Primary 59.3% and the Junior High School 65.3%. The Northern Region has a similar trend with a very poor trained teacher ratio of 1: 226 at KG level, 1:98 at Primary and 1:40 at Junior High School. The percentage of trained teachers in the region is 54%. KG has 41.7% trained teachers while Primary level has 47.8% and Junior High School has 71%.

Similarly, Brong Ahafo records an average high ratio of 49. The ratio for KG is 108 with primary having 63 and Junior High School 18. The percentage of trained teachers is estimated to be 44.1%. The proportion of trained teachers at KG level is 23.8%, Primary has 38.1% and Junior High School 74.1%. Western Region records a high ratio of 105. KG has a ratio of 370,

Primary has 120, and Junior High School 40. The percentage of trained teachers for the region across all the three levels is 42.2%. KG has 15.5%. The Primary share is 38.7% and Junior High School 72.7%.

The highest proportion of trained teachers is recorded Upper East followed by Upper West, Northern, Western and Brong Ahafo. The regions that continue to need many more trained teachers (in descending order) are Western, Northern and Upper West. The MOE data suggests that three (3) regions in particular -- Upper West, Northern and Western-- have not obtained an adequate teacher supply over the last ten years. There are several classrooms in these regions without enough trained teachers with shortfalls as high as 219 (Upper West), 507 Northern Region and 676 in the Western Region.

2.1.2 District Level Trained Teacher Supply

All the nine districts sampled for the study are among the 75 GPEG designated deprived districts that have been identified by the MOE/GES for attention because of their rural and deprived nature. These districts have communities that lack social infrastructure and amenities, access roads, limited access to JHS and SHS and decent rental accommodation for teachers. Most of their schools are located in remote, rural and hard-to-reach areas where trained teachers are unwilling to serve. Studies have revealed that untrained teachers are assigned to these districts because of the difficulty of posting trained teachers due to lack of basic social amenities. This was confirmed during the impact assessment interviews with Directors during the baseline study. Directors of Education claimed that most of the trained teachers posted to their districts refuse to report based on the deprivation status/lack of basic amenities of communities where they are posted to reside and teach. In all the sampled districts, the KG level had the highest rate of untrained teachers estimated at 68.1% followed by Primary level with a rate of 51.4%,. Junior High School had a rate of 28.6% untrained teachers. Poor quality teacher resources at KG and Primary levels has an adverse effect on efforts to lay a solid educational foundation for cognitive development of pupils. (A full statistical annex is contained in annex 5). All nine District Directors interviewed confirmed that untrained teachers were used as the main strategy for closing the trained teacher resource gap in their schools. Trained teacher supply to the districts could only be improved when untrained teachers are trained to be professional teachers. Directors reported that the UTDBE programme was expected to address the issue of trained teacher scarcity in deprived districts.

In these districts, data spanning a period of four years (2010-2014) collected and analysed suggests that the districts have a predominance of untrained teachers (Table 2.2). There is a very high demand for trained teachers, however only 50% of teachers in these deprived districts are trained. Districts with poor teacher resourcing are Nkoranza North, Atebubu and Wassa Amenfi which have about 43% trained teachers. All other districts have slightly over 50% trained teachers. This trend has a direct effect on the quality of teaching and learning (see Table 2.2 below).

For instance, the Nkoranza North District in the Brong Ahafo Region has a trained teacher supply problem similar to other sampled districts with only 45.4% of its basic teachers being

trained. Trained teachers in the district are concentrated at the Junior High School level with an estimated 73.3% of trained teachers compared to 41% at the Primary level and 19.8% at the KG level. The PTTR for KG is 1:107 and 1:63 PTTR for Primary which far exceeds the approved norms. However, Junior High School has overstaffing of trained teachers.

The Atebubu District also in the Brong Ahafo Region shares the experience of teacher supply with the Nkoranza North District. There are more untrained teachers with the overall percentage of trained teachers in the district at 43.3%. Junior High School has the most trained teachers at 74.8%; Primary level has only 36.7% trained teachers and KG has only 25.9%. The research team observed that the basic schools in Atebubu District are visibly overstaffed with teachers but most of them are untrained sometimes up to six UTDBE trainee teachers. With an exception of the KG level which has a 1:43 teacher ratio, all other levels are overstaffed. Primary has been overstaffed by 242 teachers and Junior High Schools are overstaffed by 138.

Wassa Amenfi District in the Western Region also shares the teacher supply experience of other districts with low trained teacher ratios particularly at the early grade levels. The percentage of trained teacher across the three levels of KG to JHS is 42.2%. Trained teachers are concentrated at the Junior High School level with primary level having 38.7% trained teachers, KG having 15.5% trained teachers and Junior High School 72.7%. The district teacher ratios are overall 1:105, with KG having a ratio of 1:667 and Primary 1:120. The Junior High School ratio is 1:40. The district continues to have classrooms without teachers with most trained teachers refusing postings to rural deprived areas. The teacher shortfall recorded for the District overall is 676 with the teacher shortfall for KG at 377, Primary having a 244 shortfall and Junior High School at 55.

Table 2.2: District Summary of Trained Teacher Supply in Sampled Districts (2010-2014)

District	Level	Ave. Enroll	Ave. No Teachers	Ave. Trained	%	PTTR	Ave. Teacher Demand	TR Short Fall
Talensi-Nabdam	KG	8441	155	62	40	136	338	183
	Primary	19500	534	346	64.8	56	557	23
	JHS	6559	397	286	72	23	262	-135
	Total	34500	1086	694	63.9	50	1157	71
Bongo	KG	6484	126	50	39.7	130	259	13
	Primary	20374	505	264	52.3	77	582	77
	JHS	7385	295	229	77.6	32	295	0
	Total	34,243	926	543	58.6	63	1136	210
Jirapa	KG	5569	90	45	50	124	223	133
	Primary	16354	344	184	53.5	89	467	123
	JHS	4610	202	136	67.3	34	184	-18
	Total	26533	636	365	57.4	73	874	238
Lawra	KG	6882	155	22	14.2	313	275	120
	Primary	17746	411	224	54.5	79	507	96
	JHS	7542	316	201	63.6	38	302	-14
	Total	32170	882	447	50.7	72	1084	202
B'Yunyoo	KG	8152	87	33	37.9	247	326	239
	Primary	23615	548	258	47.1	92	675	417
	JHS	7021	243	150	61.7	47	281	-38
	Total	38788	878	441	50.2	88	1282	404
West Mamprusi	KG	11328	119	52	43.7	218	453	334
	Primary	27063	535	259	48.4	104	773	288
	JHS	8487	301	235	78.1	36	340	39
	Total	46878	955	546	57.2	86	1566	611
Nkoranza	KG	3972	187	37	19.8	107	159	-28
	Primary	8183	351	144	41.0	63	234	-78
	JHS	2655	217	159	73.3	17	106	-111
	Total	14810	716	325	45.4	46	499	-217
Atebubu	KG	8594	301	78	25.9	110	344	43
	Primary	16098	701	257	36.7	63	459	-242
	JHS	4402	314	235	74.8	19	176	-138
	Total	29094	1316	570	43.3	51	979	-337
Wassa Amenfi	KG	16664	290	45	15.5	370	667	377
	Primary	34942	754	292	38.7	120	998	244
	JHS	9910	341	248	72.7	40	396	55
	Total	61,516	1385	585	42.2	105	2061	676

Source: EMIS/GES 2013/2014

The Lawra District in the Upper West reveals similar trends to that observed in the Jirapa District also in the Upper West. Lawra records 50.7% of trained teachers across all the three levels. Lawra District also has the lowest percentage of trained teachers at the KG level with only 14.2% trained teachers. Primary level has 54.5% trained teachers, and Junior High School has 63.6% trained teachers. The teacher ratio is 1:313 at KG, 1:79 at Primary and 1:38 at Junior High School level. The teacher shortfall is correspondingly high at KG at 120 and 96 for Primary level with overstaffing of 14 at the Junior High School level.

Demand for more trained teachers is also observed in Bumpurugu Yunyoo. The percentage of trained teachers in the district across all the levels is estimated to be 50.2%. KG level has poor trained teacher supply estimated to be 37.9% followed by Primary with 47.1% and 61.7% at Junior High School. However, like other districts, the PTTR is very poor at KG level with 1:247 and 1:92 at Primary and 1:47 at the Junior High School level. The trained teacher demand is highest at the KG level, followed by Primary. Teacher shortfalls in the district are 239 at the KG level and 417 at the 417 level.

The West Mamprusi District (Northern Region) has experienced shortages in trained teachers over the last ten years. The district has 57.2% trained teachers at basic level. The shortage of trained teachers is felt mostly at KG and Primary levels with only 43.7% trained teachers at KG level, and 48.4% at primary level; there are 78.1% trained teachers at Junior High School level. KG level has the worst PTTR ratio of 1:218. Primary has a ratio of 1:104 and Junior High School 1: 36. The district records a 611 trained teacher shortfall across all the three levels. At KG level the shortfall is 334, at Primary the shortfall is 288 and Junior High School 39.

All the districts in the sample are classified as deprived and most of the school communities are rural, remote and hard-to-reach areas where trained teachers have been unwillingness to serve. District Directors of Education interviewed claim that most of the trained teachers posted to their districts refuse to report owing to the deprivation status of communities where they are to reside and teach. In all the districts, the KG level has the highest rate of untrained teachers estimated to be 68.1% followed by primary with a rate of 51.4% untrained teachers. Junior High School has only 28.6% of untrained teachers.

Poor quality teacher resourcing at KG and Primary levels has an adverse effect on efforts to ensure early grade literacy which is one of the key milestones for cognitive development of pupils. All the District Directors of Education interviewed confirmed a high prevalence of untrained teachers which had persisted for several years due to deployment limitations at national and regional levels. Directors explained that the UTDBE programme is expected to address the issue of trained teacher scarcity in their deprived districts.

2.2 GPEG-Sponsored UTDBE Cohort: Programme Admission Patterns by Region

The UTDBE programme is used by District Directors of Education as a means of improving the numbers of trained teachers particularly in areas of the district where traditionally trained teachers refuse postings. Directors of Education also explained that they use the services of local residents to serve as untrained teachers or pupil teachers in schools where they are unable to post teachers. An analysis of sampled district data on the teacher types as of 2011 when the UTDBE trainees were admitted to the programme suggests that 47.2% teachers in schools were untrained across the country. The total number of untrained teachers in the sampled regions and districts was 4,246 of which 1,876 (44.2%) were admitted to the programme. Out of this, 1,087 (57.9%) were males and 789 (42.1%) were females.

Table 2.3 illustrates the admission pattern of the trainees to the UTDBE programme, showing the numbers per district by gender. The data reveals that training opportunities on the UTDBE programme were not matched with the level of need by a district. Interviews at the national level during the baseline study revealed that poor targeting and inadequate information limited the equity in distributing the training opportunities on the UTDBE programme across the districts. Patterns of admission across all the five regions and nine sampled districts confirm similar patterns to those noted above and presented in Table 2.3. The distribution of the UTDBE teacher trainees across the five sampled regions was as follows: Upper East has 178 (9.3%), Upper West 309 (16.5%). Northern 247 (13.2%), Brong Ahafo 938 (50%) and Western 206 (11%). The sampled districts also received the following in terms of UTDBE trainees: Talensi-Nabdam has 87 (4.6%) trainees, Bongo 89 (4.7%), Jirapa 137 (7.3%), Lawra 172 (9.2%), B'Yuyoo 106 (5.7%), West Mamprusi 141 (7.5%), Nkoranza North 290 (15.5%), Atebubu 648 (34.5%), and Wassa Amenfi 206 (11%).

Table 2.3: Admission and Distribution Pattern of Untrained Teachers to the UTDBE Programme by Region District and Gender 2012/2013

DISTRICT	Total Teachers within district (2011)	Untrained teachers (2011)	%	Admission Pattern for Untrained onto the UTDBE programme						Distribution Pattern for Untrained			
				M	%	F	%	T	%	Untrained %	M %	F %	T %
Talensi-Nabdam	1157	540	46.7	58	10.7	29	5.4	87	16.1	17.7	5.3	3.7	4.6
Bongo	963	432	44.9	59	13.7	30	6.9	89	20.6	10.2	5.4	3.8	
Upper East	2120	972	45.8	117	12	59	6.1	176	18.1	22.9	10.7	7.5	9.3
Jirapa	575	204	35.5	89	43.6	48	23.5	137	67.1	4.8	8.2	6.1	7.3
Lawra	810	348	43	102	29.3	70	20.1	172	49.4	8.2	9.4	8.9	9.2
Upper West	1385	552	40	191	34.6	118	21.4	309	56	13	17.6	15	16.5
B'Yunyoo	922	479	51.4	82	17.1	24	5	106	22.1	11.3	7.5	3	5.5
West Mamprusi	982	416	42.4	96	23.1	45	10.8	141	33.9	9.8	8.8	5.7	7.5
Northern	1904	895	47	178	19.9	69	7.7	247	27.6	21.1	16.4	8.7	13.2
Nkoranza	783	406	51.9	134	33	156	38.4	290	71.4	9.6	12.3	19.7	15.5
Atebubu Amanten	1388	693	49.9	328	47.3	320	46.2	648	93.5	16.3	30.2	40.6	34.5
Brong Ahafo	2171	1099	50.6	462	42	476	43.3	938	85.3	25.9	42.5	60.3	50
Wassa Amenfi	1408	728	51.7	139	19.1	67	9.2	206	28.3	17.1	12.8	8.5	11
Western	1408	728	51.7	139	19.1	67	9.2	206	28.3	17.1	12.8	8.5	11
TOTAL	8988	4246	47.2	1087	25.6	789	18.6	1876	44.2	100	100	100	100

Source: EMIS/GES 2013/2014

Districts which have the highest allocation of trainees are Atebubu and Nkoranza North Districts which are both in the Brong Ahafo Region. The Wassa Amenfi District in the Western Region follows with 11% of UTDBE teacher trainees. Data analysed suggest that regions and districts with a low proportion of untrained teachers tended to have the highest admission rates to the UTDBE programme. Unfortunately districts with high rates of untrained teachers were found to have very low rates of admission onto the UTDBE programme. This trend confirms what is

observed in data related to district admission. It was observed that regions which have a rate of more than 20% of untrained teacher do not have corresponding or commensurate admission rates except Brong Ahafo which records 25.9% untrained teachers and has a 50% admission rate.

The trends observed at the district level regarding the UTDBE programme admission rates were also observed across other districts and regions. Both Jirapa and Lawra (both in the Upper West Region) have low untrained teacher rates but have comparatively high admission rates on the UTDBE programme at 7.8% and 9.2% respectively. Nkoranza North and Atebubu Districts (Brong Ahafo Region) have high rates of untrained teacher at 9.6% and 16.3% respectively and also high admission rates of 15.5% and 34.5%. There are, however, other districts such as Talensi-Nabdam and Bongo (Upper East) with untrained teacher rates of 12.7% and 10.2% with very low admission rates at 4.6% and 4.7% respectively. B'Yuyoo and West Mamprusi (Northern Region) have untrained teacher rates of 5.7% and 7.5%. Wassa Amenfi in the Western Region has 17.1% untrained teachers but an admission rate of 11%. The trend as observed suggests that targetting was not carried out to maximise the efficiency and effectiveness of the programme based on the teacher training needs of districts. Four (4) districts seem to have benefited more than the others. These districts have a relatively high number of trainees on the programme but low untrained teacher rates. Interviews with District Education Offices suggest that non of the nine sampled districts had conducted a school/community needs assessment in order to identify the teacher supply needs of schools in their areas. This is likely to have an adverse effect on efforts to achieve the national ESP policy target of 95%, trained teacher rate in all basic schools by 2020.¹¹

2.3 Programme Quality Assurance

The Teacher Education Division of the Ghana Education Service has put in place administrative structures to ensure the efficiency and effectiveness of the implementation of the UTDBE programme. The area worthy of attention is the process to ensure prospective candidates have the requisite qualifications and calibre to pursue the training programme in the Colleges of Education. The handbooks clearly define the qualifications for programme participation. All candidates to be enrolled on the programme are expected to have either of the following: GCE O/A Level, WASSCE/SSSCE, City and Guilds and any Post-Secondary Certificate. In addition, the candidate must be a pupil teacher on the Ghana Education Service payroll actively teaching in a basic school and must not have reached 50 years of age on the day of application. The District Education Directorate is expected to advertise the training opportunities in all schools for the attention of all pupil teachers. Thereafter an interview panel is established in all the District Education Directorates to select suitable candidates. The interview panel should have two (2) representatives of District Education Office (Deputy Directors HRM and Supervision) a representative of GNAT, DEOC and TED. The interview panel so composed is to ensure transparency of selection of the right calibre of candidates as well as programme ownership. The panel is expected to vet the authenticity of applicants' certificates. Interviews are conducted and

¹¹ Interviews with District Education also reveals that first admission to the programme was focussed on admitting pupil teachers across the nine sampled districts; the second call which was based on the vacancies for UTDBE applicants was opened to any SHS graduates with the requisite qualifications.

applicants are shortlisted and names submitted to the TED for submission to the Colleges of Education.

Interviews with District Directors of Education and their Deputies and front line staff including HR directors indicated that the selection guidelines for UTDBE trainees are not rigidly followed. None of the nine districts sampled, with the exception of Jirapa District in the Upper West, had a five member committee installed to carry out the screening and vetting of candidates during interviews. In Atebubu District, an examination was conducted followed by an interview session. Application procedures identified in all the sampled districts showed that the application forms were sent directly to the District Education Director for consideration. Field interviews during the baseline period and again at the endline revealed that some of the Directors of Education had extended the programme to cover candidates who were not GES pupil teachers in basic schools and therefore not on the GES payroll. Often the selected trainees were from NCCE, NYEP/GYEDA and District Education Office, unemployed Senior High School graduates and volunteer teachers supported by CSOs. With the exception of Talensi-Nabdam District, none of the districts complied with the guidelines for UTDBE selection and application procedures. Field interviews at the district level from Mamprusi indicated that between 30% and 40% of candidates enrolled on the programme had not taught in any school before their selection. The implication is that the competency of the candidates and their retention behaviour cannot be guaranteed as the opportunity offered can be used as a testing ground for career choices, rather than any necessary commitment to teaching. It is not surprising that 18% of trainees dropped out of the UTDBE programme. Directors explained that insufficient numbers of pupil teachers with requisite qualifications meant that the guidelines were not strictly followed.

District Directors of Education (DDEs) interviewed attempted to ensure that a considerable number of trainees were from rural deprived communities. The Jirapa District Director of Education reported that 90% of applicants were from rural deprived areas in his district. Lawra's priority was for applicants teaching in remote rural areas. The Nkoranza North DDE reported that he gave consideration to 30% of applicants from rural and remote areas. Atebubu's DDE indicated that only a few applicants were from rural remote communities because of local interference by powerful elites in the district. In all the districts except for Talensi-Nabdam and Nkoranza no special consideration or quota was given to female applicants. Baseline data established the fact that 72% of applicants engaged in the programme came from rural deprived communities where they taught in basic schools.

All the District Directorates of Education have appointed UTDBE Coordinators to ensure efficient and effective programme implementation. The Coordinators visit and supervise their trainees at Colleges of Education to address their concerns. The Colleges also have Coordinators to supervise the work of the trainees and address any challenges. Colleges of Education are expected to report on the performance of the trainees to Directors of Education. For the purpose of transparency and accountability, financial releases from the Headquarters of the Ghana Education Service for payment of the course fees of the trainees is through the District Education Office for onward transfer to the Colleges of Education. Releases are expected to be sent to the District Education Directorate before the commencement of face-to-face sessions. In spite of this

arrangement, there have been delays in releases from the District Education Offices to the Colleges of Education.

The programme also requires that the selected trainees are given an orientation or induction course on the programme and its requirements. It is expected that the District Education Offices provide adequate support to the trainees in their efforts to acquire the requisite knowledge to become professional teachers. The District Education Office is expected to organise study circles or cluster meetings for trainees where resource people/experts among the field cadres serve as tutors often explaining difficult concepts. Interviews with trainees indicated that this has not been well organised at the district level and very few if any cluster based meetings had taken place over the last year. Factors contributing to such lack of implementation and compliance to the original design of the programme indicate that several of the tutors were not being paid for the cluster meetings; other reasons included the location and long distance of the centres.

In addition, the UTDBE programme was designed such that College of Education tutors were to be invited to work with the cadres if there was a College of Education in the district. The tutors were expected to assist the trainees during the cluster based meetings at district level. The midterm lesson observation also found that this was not happening at district level when the cluster based meetings took place. The field cadres were also to monitor the performance of the trainees and to assist them. The programme endorsed certified and dedicated Head teachers to serve as mentors to support the trainees in the schools. They are to provide on-the-job training to trainees in lesson notes preparation, classroom teaching, professional skills and standard development. The research team observed that these arrangements were not functioning effectively in most of the 197 schools visited and this was affecting the uptake of methods by trainees and the quality of the UTDBE programme delivery.

2.4 Drop-out Rates and Removal from the UTDBE Programme

The UTDBE programme has experienced a minimal level of drop-outs across most of the nine sampled districts except for the Atebubu District in the Brong Ahafo Region; this was confirmed in interviews with DDEs and the UTDBE Coordinators. Some of the reasons behind the drop out from the programme were attributed to financial challenges by the trainees; family and marital issues; poor academic performance; mid-stream career change; and the inability to combine school schedules and distance learning.

Table 2.4 presents the rate of drop-out across the nine sampled districts. Data from Teacher Education Division, GES indicates that the total number of trainees admitted to the programme from all the 75 deprived districts was 8367 comprising **4961 males and 3406 females** (across 11 CoEs). In 2013/14, just one year after the programme start up, their number reduced by 1324 (15.8%) to 7043. The drop outs to the programme comprised 696 males and 628 females. During the 3rd year of the UTDBE programme, the total number of continuing trainees was 6744 of which 4026 were males and 2718 females. The total number of trainees who failed to continue on the programme was 299 of which 239 (5.6%) were males and 60 (2.2%) females. The drop-out rate for the 2012/13 academic year was 4.2%. Data analysis indicates that by the 2014/15 academic year the total number of drop-outs was 1623 (19.4%). This figure consists of 935

(58%) males and 688 (42%) females. It was also observed that rates of drop-out were higher at the end of the first year of the programme compared to the 2nd year.

Generally, female drop-out rates was slightly higher compared to male drop out rates throughout the three years under the IA. During the 2nd year however, the female drop out rate was slightly lower than that of males in five out of the nine districts. This indicates the determination of female UTDBE trainees to complete their training in spite of some significant challenges observed (e.g. rearing of young infants during the face- to face sessions at the Colleges). The benefits the programme offered to women were enormous and included professional development, pay increases, and job security. The education system benefits through the UTDBE programmes' contribution to achieving gender parity in schools and as a boost to girl child education through role modelling of female teachers.

Table 2.4: Drop-out Rates by District and Gender for Sampled Districts

District	Gender	2012/13	2013/14	Drop-out	%	2014/15	Drop-outs	%	Total Drop-outs	%
Talensi	M	58	56	2	3.4	55	1	1.8	3	5.2
	F	29	27	2	6.9	25	2	7.4	4	13.8
	T	87	83	4	4.6	80	3	3.8	7	8.1
Bongo	M	59	59	0	0	56	3	5.1	3	5.1
	F	30	30	0	0	30	0	0	0	0
	T	89	89	0	0	86	3	3.4	3	3.4
Jirapa	M	89	89	0	0	89	0	0	0	0
	F	48	48	0	0	48	0	0	0	0
	T	137	137	0	0	137	0	0	0	0
Lawra	M	102	90	12	11.8	90	0	0	12	11.8
	F	70	61	9	12.9	61	0	0	9	12.9
	T	172	151	21	12.2	151	0	0	21	12.2
Bunkpurugu Yunyoo	M	82	79	3	3.7	77	2	2.5	5	6.1
	F	24	24	0	0	24	0	0	0	0
	T	106	103	3	2.8	101	2	1.9	5	4.7
West Mamprusi	M	96	91	5	5.2	86	5	5.5	10	10.4
	F	45	36	9	2	36	0	0	9	0.2
	T	141	127	14	9.9	122	5	3.9	19	13.5
Nkoranza North	M	134	134	0	0	134	0	0	0	0
	F	156	152	4	2.6	143	9	5.9	13	8.3
	T	290	286	4	1.4	277	9	3.1	13	4.5
Atebubu	M	328	181	147	4.5	180	1	0.5	148	45.1
	F	320	210	110	3.4	203	7	3.3	117	36.6
	T	648	391	257	39.7	383	8	2.1	265	40.9
Wassa	M	139	130	9	6.5	123	7	5.4	16	11.5

District	Gender	2012/13	2013/14	Drop-out	%	2014/15	Drop-outs	%	Total Drop-outs	%
Amenfi	F	67	65	2	2.9	62	3	4.6	5	7.5
	T	206	195	11	5.3	185	10	5.1	21	10.2
Total	M	1087	909	178	16.4	890	19	2.1	197	18.1
	F	789	653	136	17.2	632	21	3.2	148	19
	T	1876	1562	314	16.7	1522	40	2.7	354	18.9

Source: EMIS/GES 2013/2014

Tables 2.4 and 2.5 demonstrates drop-out rates in sampled regions, districts by gender . In 2012/13 a total number of trainees admitted to the UTDBE programme was 1876 comprising 1087 males and 789 females. In 2013/14, 314 trainees or 16.7% dropped out leaving 1562 trainees. The total number of male drop-outs was 178 (16.4%) and females 136 (17.2%) in the 2013/14 academic year. In 2014/15, a total of 40 trainees dropped out of the programme at a rate of 2.7%. This comprised 19 males (2.1%) and 21 females (3.2%). Between 2012/13 and 2014/15 the total number of drop-outs was 354 (18.9%). Male component was 197 (18.1%) and females 157 (19.9%). It was observed that the second year of the programme witnessed a high proportion of drop-outs estimated to be 16.7% comprising 16.4% males and 17.5% females. The third year had a small proportion of drop-outs at only 2.7% which comprised 2.1% males and 3.2% females.

An analysis of data indicates that incidence of drop-out affects more females than males. However, Western and Brong Ahafo Regions record very high rates of drop-out among males and females (over 10%). The Western Region has 11.5% rate and 7.5% for females. Brong Ahafo has 32% for males and 27.3% for females. Upper West has not recorded any drop-out during the third year of the programme. The Northern Region also has not recorded any female drop-outs. The region that records the highest rate of drop-out in the second year of the programme was Brong Ahafo with 27.8%; this comprised 31.8% males and 23.9% females. The Northern Region followed at a rate of 6.5%, comprising 4.5% males and 13% females. The Upper West Region has a drop-out rate of 6.8% comprising 6.3% males and 7.4% females. The Western Region has a drop-out rate of 5.3% with 6.5% male and 3% female drop-out. The Upper East Region recorded the least drop-out at 2.3% with males having 1.7% and females 3.4%.

Similar trends are observed in relation to district data analysis. Generally, drop-out rates are higher among females than their male counterpart. The only exception is Bongo which has 5.1% rate for males and no drop-outs for females. West Mamprusi also has a male drop-out rate of 10.4% and females recording 0.20%. Atebubu also has a higher rate for males than females. The male drop-out rate is 45.1% and females rate is 36.6%. The Amenfi District in the Western Region also has a 11.5% rate for males and 7.5% for females. It was observed that, during the second year when rates were very high among trainees in districts, Bongo and Jirapa did not record any drop-out for either both males or females. Nkoranza North did not have any drop-out for males. During the third year of the programme, Jirapa and Lawra in the Upper West Region

did not record any drop-out rates for males and females. Bunkpurugu Yunyoo and Nkoranza did not have any females dropping out. The retention of female trainees in the programme is important as their presence in schools will promote girls' education programmes since they often serve as role models to the girl child to improve enrolment and retention of girls in schools which promotes the gender parity index. Their rate of retention indicates the determination of female trainees to complete the course in spite of key challenges.

Table 2.5: Drop-out Rates by Region and Gender

Region	Gender	2012/13	2013/14	Dropouts	Rate	2014/15	dropouts	Rate	Total dropouts	Rate
Upper East	M	117	115	2	1.7	111	4	3.5	6	5.1
	F	59	57	2	3.4	55	2	3.5	4	6.8
	T	176	172	4	2.3	166	6	3.15	10	5.7
Upper West	M	191	179	12	6.3	179	0	0	12	6.3
	F	118	109	9	7.6	109	0	0	9	7.6
	T	309	288	21	6.8	288	0	0	21	6.8
Northern	M	178	170	8	4.5	163	7	4.1	15	8.4
	F	69	60	9	13	60	0	0	9	13
	T	247	230	17	6.9	223	7	3	24	9.7
Brong-Ahafo	M	462	315	147	31.8	314	1	0.3	148	32
	F	476	362	114	23.9	346	16	4.4	130	27.3
	T	938	677	261	27.8	660	17	2.5	278	29.6
Western	M	139	130	9	6.5	123	7	5.4	16	11.5
	F	67	65	2	3	62	3	4.6	5	7.5
	T	206	195	11	5.3	185	10	5.1	21	10.2
Total	M	1087	909	178	16.4	890	19	2.1	197	18.1
	F	789	653	136	17.2	632	21	3.2	157	19.9
	T	1876	1562	314	16.7	1522	40	2.7	354	18.9

Source: EMIS/GES 2013/2014

2.5 UTDBE Programme Impact on Proficiency Rates and Teacher Resource Quality

The insufficient trained teacher supply, particularly in all the seventy-five (75) designated deprived districts, has an adverse effect on the delivery of quality basic education. The NEA Report (2011) indicates that 9% of P3 and 11% of P6 pupils in rural areas achieved proficiency in English and Maths respectively. A similar trend was also observed in P6 where 6% and 17% of pupils in rural communities achieved proficiency in English and Maths. ESPR (2015) also provides that 31% of pupils in deprived districts performed poorly in the BECEs. Raising teacher quality is critical in improving pupil teaching and learning outcomes. Availability of trained

teachers has a bearing on pupil learning outcomes (World Bank, 2010). Quality teachers are therefore critical in pupil cognitive development.

The UTDBE programme is designed to equip untrained teachers with the requisite skills/competencies, and increase trained teacher supply in deprived districts, thereby reducing the incidence of untrained teachers. The impact of the programme can be assessed in several ways, namely, in terms of the increase in the numbers of trained teachers and more importantly the use of new methods/skills in the classroom; and the value addition to teacher type since trainees who have completed the UTDBE training for four (4) years have acquired new skills and capacities.

The analysis of data collected on untrained teachers from sampled districts indicates that between 2011 when the programme commenced and 2014, the population of untrained teachers has increased by 7.3% from 4246 to 4558 indicating that the districts are in dire need of trained teachers to close the trained teacher gap. The Upper East has shown a reduction in untrained teachers by 21.3% from 972 to 765; however, the Upper West has shown an increase in untrained teachers by 39.9% from 552 to 722 untrained teachers. The Northern Region has demonstrated a decrease by 8.5% from 895 to 817 untrained teachers. The Brong Ahafo Region shows a rise of 40.7% from 1099 to 1546. The Western Region has shown a decrease in untrained teachers by 9.4% from 720 to 658.

The UTDBE trainees' added value can be derived from their exposure to various teaching techniques and their acquisition of subject content knowledge relevant to the educational level where they are expected to teach. Having completed the training for four (4) years, the value of trainees in terms of subject content knowledge and teaching methods is better than the untrained teacher whose exposure to any form of training are based on school based, cluster and district based INSETs. The midterm lesson observation assessment under the Impact Assessment of the UTDBE programme suggests that these INSETs were not being conducted regularly at district level and not reaching most teachers in the districts; those districts which were conducting INSETs at cluster or district level were organised on an irregular basis---and not accessible to all untrained teachers. Comparatively, the UTDBE trainees have values which placed them higher in terms of performance than the other untrained teachers (pupil teachers) based on lesson observations.

District Directors interviewed during the IA reported that the trainees have had their knowledge and experience deepened as a result of the UTDBE programme. They claimed that before the programme trainees were unable to plan and prepare acceptable lesson notes. They could not differentiate between core points and teacher learner activities, neither did they understand the concept of lesson objectives; they were also not aware of the strategic importance of Relevant Previous Knowledge (RPK) of pupils to be used to teach concepts. The UTDBE trainees also found it difficult to break down major topics into components for ease of teaching and learning. They were also not aware of the strategic usage of methods to engage a variety of generic skills and the use of relevant teaching aids and various methods of teaching to meet learners' needs. The Circuit Supervisors and Frontline Deputy Directors in focal group discussions reported that trainees had now acquired knowledge of pedagogy and they had improved their subject content

knowledge, lesson planning, preparation and delivery as well as management, even though they were not as skillful as the trained teachers (DBEs).

Transition value of trainees reduces the number of untrained teachers in deprived areas. The trained UTDBE teachers remain in their communities for at least 4-5 years after completion of the programme; thus the 3-year bonding by the GES to stay in their districts and an additional year or two to serve their communities. This helps to increase the retention of trained teachers in deprived areas. As trainees complete the four year training programme, their potential value as a result of their exposure and acquisition of teaching skills and knowledge make them comparable to the trained teachers. Consequently they are adding additional value to the teaching force at a lower cost and remain in their teaching stations for a much longer period compared to the DBE trained teachers. From a gender perspective, the Programme is also placing more trained female teachers in the remote rural areas and therefore improving the exposure girls have to female teachers and potential role models.

Figure 2.2 and Table 2.6 demonstrates various transition and potential value addition of the UTDBE trainees to the teaching force. District data indicates that between 2011 and 2014, trained teacher numbers **increased by 12.7%** from 4742 to 5344 across all the 5 sampled regions and districts. However, 1522 trainees who had completed the training programme had a potential value addition to the current number of trained teachers by 28.5% across all. Upper East has 765 untrained teachers with 166 UTDBE trainees reducing their number by 21.6%. However their potential value increased the number of trained teachers by 11.7%. The Upper West with 288 UTDBE trainees reduced the region's untrained teachers by 37.3% but increased its trained teacher numbers by 32.3%. The Northern Region had a transition value of 27.3% by reducing its 817 untrained teachers. However, the region records a potential value addition of 19.9% increase of its 1118 trained teachers by 223. The Brong Ahafo Region reduced its 1546 untrained teachers by 660 registering a transition value addition of 42.7% and increasing its trained teachers of 1112 by 660 recording potential value addition of 59.4%.

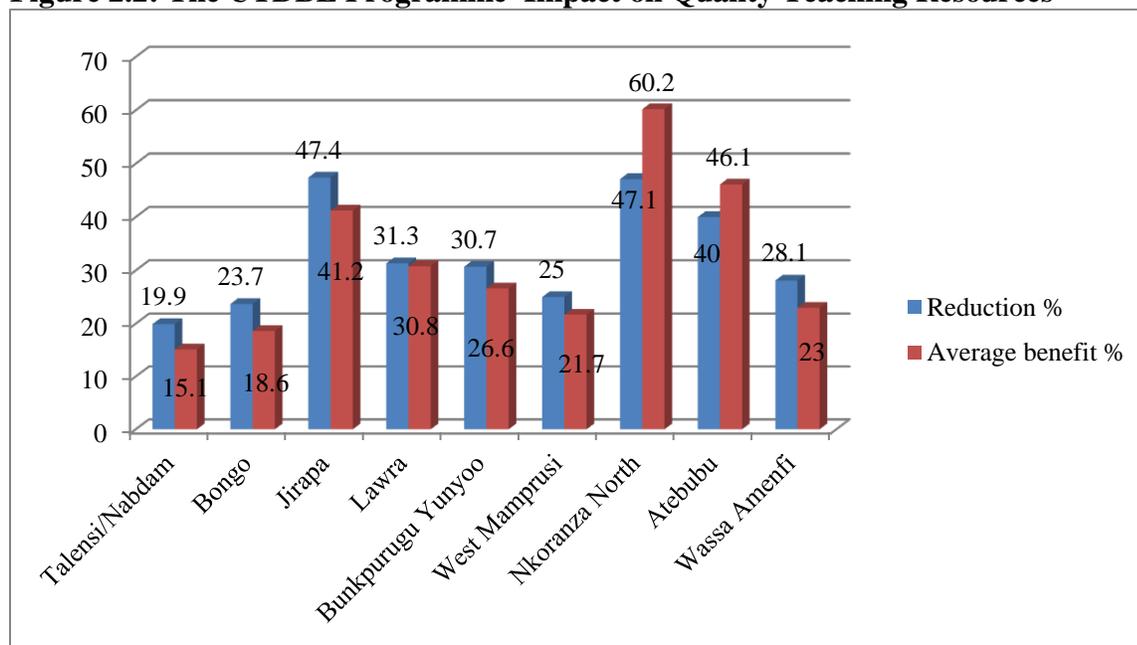
The Western Region also records a reduction of 185 of its 658 untrained teachers over the 2011 to 2014 period, registering a transition value addition of 28.1%. However the region increased its 809 trained teachers by 185 recording a potential value addition of 23%. The region which has the highest transition and potential value addition is Brong Ahafo with 42.7% and 59.4% respectively. This is followed by the Upper West with 37.3% and 32.3% respectively. Western Region is third with a transition value of 28.1% and potential value addition of 23%. The Northern Region has a transition value addition of 27.3% and potential value addition of 19.9%. The last is the Upper East with a 21.7% transition value addition and a 11.7% potential value addition.

The districts also experience various levels of value addition. Between 2011 and 2014 four (4) districts registered a decrease in untrained teacher numbers. Talensi, which has 540 untrained teachers has a reduction of 402 representing 25.6%. Bongo has 432 reduced to 362 making a 16% reduction. B'Yyoo has 479 reduced to 329 representing 31.3%. Amenfi experienced a reduction from 728 to 658 registering 9.6%. On the other hand, five (5) districts have a relative increase in untrained teacher supply. Jirapa has 204 increased to 289 by 41.7%. Lawra 348

shooting up to 483 by 38.8%. West Mamprusi has its untrained teacher numbers rising from 416 to 488 representing 17.3%. Nkwanta has an increase of 44.8% from 416 to 488. Atebubu also has its untrained teacher numbers shooting up to 958 from 693 by 38.2% (see Table 2.6 and figure 2.2 below).

The current enrolment of trainees reduces the number of untrained teachers in real terms as a result of the UTDBE programme and the teacher trainees newly acquired skills. Consequently, the districts experience transition value addition across all the districts even though some of them already had a reduction or increase of untrained teacher numbers. The district which had the highest transition value addition during the period was Jirapa with 47.4%. This is followed by Nkoranza North (Brong Ahafo Region) which has 47.1%. Atebubu registered a 40% transition rate with Lawra district at a 31.3% transition rate and B'Yuyoo with a 30.7% transition rate.

Figure 2.2: The UTDBE Programme Impact on Quality Teaching Resources



Source: UTDBE Endline Survey, 2016

The rest of the districts, Talensi, Bongo and Amenfi West, have their transition values slightly over 20%. All the districts have relative potential value addition as a result of increases in trained teacher numbers. The district which benefitted most from the UTDBE programme support are Nkoranza North with 73.2% and Atebubu with a 52.2% potential value addition. These districts are followed by two other districts, Jirapa and Lawra in the Upper West which have 34.9% and 30.3% potential value addition respectively. B'Yuyoo and Amenfi have slightly over 20% value additions. Talensi, Bongo and West Mamprusi register values over 10%.

On average, districts with maximum benefit from the UTDBE programme are Nkoranza North and Atebubu in the Brong Ahafo Region registering 60.2% and 46.1%, and Jirapa and Lawra

districts follow with 41.2% and 30.8% respectively. The third group of districts is B’Yuyoo and Amenfi with 26.6% and 23% respectively, and West Mamprusi and Bongo have 21.7% and 18.6% respectively. Talensi District in the Upper East had the least benefit from the programme due to the low numbers of trained teacher additions to their workforce. In spite of these differences, benefits being derived from the UTDBE programme are tremendous. DDEs interviewed are of the opinion that the UTDBE programme is expected to have an impact on the quality of educational delivery in their district through transforming the level of untrained teachers operating there. The number of teacher trainees is gradually changing the poor quality status of untrained teachers in deprived areas. The Directors reported that the UTDBE programme was equipping schools with more trained teachers. Trainees were also acquiring the requisite teaching skills to facilitate quality education delivery. DDEs reported that the UTDBE programme was facilitating the gradual reduction of the trained teacher resource gap particularly in remote and deprived areas or communities.

Table 2.6: The UTDBE Programme’s Impact on Quality Teaching Resources

District	Untrained teachers (2014)	Transition value addition	Reduction %	Trained teachers (2014)	Potential value addition	%	Average benefit %
Talensi/Nabdam	402	80	19.9	783	80	10.2	15.1
Bongo	363	86	23.7	636	86	13.5	18.6
Upper East	765	166	21.7	1419	166	11.7	16.7
Jirapa	289	137	47.4	393	137	34.9	41.2
Lawra	483	151	31.3	498	151	30.3	30.8
Upper West	772	288	37.3	891	288	32.3	34.8
Bunkpurugu Yunyoo	329	101	30.7	450	101	22.4	26.6
West Mamprusi	488	122	25	668	122	18.3	21.7
Northern	817	223	27.3	1118	223	19.9	23.6
Nkoranza North	588	277	47.1	378	277	73.2	60.2
Atebubu	958	383	40	734	383	52.2	46.1
Brong-Ahafo	1546	660	42.7	1112	660	59.4	51.1
Wassa Amenfi	658	185	28.1	804	185	23	23
Western	658	185	28.1	804	185	23	23
Total	4558	1522	33.4	5344	1522	28.5	31

Source: UTDBE Endline Survey, 2016

2.6 The UTDBE Policy Impact on Retention

Various policies were put in place by GES at the district level to ensure trainee retention in the districts during the course of the UTDBE training programme at the Colleges of Education. The UTDBE programme guidelines state that the trainee, before selection, should agree to stay in the

district for the UTDBE course duration of four (4) years. In all the districts, the DDEs stated that they followed this policy guideline and that the trainees were asked to stay in their schools for the four year period. The trainees were also expected to stay at post unless peculiar circumstances (as determined by the Director), dictated otherwise. As indicated by Directors, their trainees are selected depending on the deprivation status of the school and the community where trained teachers often refuse posting. Interviews with the UTDBE Coordinators revealed that transfers are not made during the four (4) year course duration. Interviews with DDE's suggest that in exceptional cases transfers were carried out.

The District Directors of Education and UTDBE Coordinators claim that the length of stay in their school and district after the UTDBE trainee graduation varies between the districts. The findings suggest that graduate UTDBE teachers often stay in their school from 3 years to 5 years. In Talensi-Nabdam, Bongo, Lawra, B'Yunyoo, Wassa Amenfi West, trainees are expected to stay in their schools which have supported their UTDBE training after graduation. The situation is not clear with West Mamprusi, Nkoranza North and Atebubu districts. In districts where there are no transfers, a UTDBE trainee can stay in a community school at the time of selection for not less than 8 years. The trainee may be teaching as a pupil teacher for at least one year before selection. The programme takes 4 years within which the district restricts the teacher trainees to serve in the same school where he/she was selected for the programme.

After the UTDBE training course, the GES conditions of service state that the trainee has to report to his/her school and serve at that same school for another 3 years before any transfer can be considered. This policy guideline was found to promote trained teacher retention in the deprived rural schools and was addressing the high demand for trained teachers. The UTDBE endline study also found that in districts where transfers were becoming the norm, the length of stay of the trainee after graduation in a district at the time of selection for the programme was at least 8 years. The overall IA results suggest that the UTDBE programme was having a tremendous impact in the deprived areas by addressing the need for trained teacher retention.

The Ministry of Education targets are for 95% trained teachers in all basic school by 2020. This is a challenging target in a context where trained teachers are unwilling to accept postings to extremely deprived areas of the country due to inaccessibility and lack of basic social amenities including accommodation even for those who demonstrate their eagerness to serve there. Teachers who accept postings to deprived rural areas often commute several miles to their schools increasing their costs for attendance due to transportation. Analysis of data from the sampled UTDBE districts indicates that trained teachers serving in very remote areas often travel over five miles to school. In Talensi-Nabdam District (Upper East), Bongo (Upper East), West Mamprusi (Northern) and Bunkpurugu Yunyoo (Northern) districts for example, teachers prefer staying in the regional or district capital and travel on motorbikes to school each day. Findings suggest that these teachers were often absent from post and/or late for school. Interviews with the teachers themselves indicate that some would like to leave the community at the least opportunity.

Currently there is a high demand for trained teachers in the deprived areas of Ghana. At KG level, PTRR is estimated to be 112, primary is 72 and JHS is 26 (ESPR, 2015). The approved

PTTR norm for KG is 25 pupils per teacher, 35 per teacher at primary and 25 at Junior High School. In all the sampled districts, there is a very high trained teacher demand gap. The pupil to trained teacher ratios across all the KG, Primary and JHS levels in the nine (9) sampled district is estimated to be 70. The demand is reaching critical proportions at the KG and Primary levels and having a negative effect on the quality of education. The PTTR for KG is over 100 and primary over 60 across the nine sampled districts.

Data gathered from the sampled districts indicates that 15% of the UTDBE trainees are resident in district capitals, 25% located in deprived rural areas and 60% in extremely deprived communities. Baseline study data (2014) established the fact that 46% of trainees from sampled districts are natives to their communities where they teach and 26% are citizens of the district. Only 28% of UTDBE trainees were not from the district according to the baseline study. The implementation of the UTDBE policy should therefore be focussed or targeted especially to the extremely deprived communities and districts.

2.7 Conclusion

- The IA findings showed that the Upper East Region has the highest proportion of trained teachers. The study also found that the Upper West, Northern and Western Regions have not obtained an adequate trained teacher supply with several classrooms without teachers. The districts across these regions are characterised by a high proportion of untrained teachers estimated to be approximately 52% (gap). District Directors of Education interviewed claim that most of the trained teachers posted to their districts refuse to report owing to the deprivation status of communities where they are to reside and teach. In all the IA sampled districts, the KG level was found to have the highest rate of untrained teachers estimated to be 68.1% followed by Primary level with a rate of 51.4%. The Junior High School level had a rate of 28.6% of untrained teachers;
- The findings also suggest that available training opportunities such as the UTDBE programme, which had the potential of transforming the status of untrained teachers was not equitably distributed across the districts. Poor targeting, needs analysis and inadequate information were some of the factors which undermined the effective distribution of the programme across the districts;
- All the District Directorates of Education have appointed UTDBE Coordinators to ensure efficient and effective programme implementation. The UTDBE Coordinators were expected to visit and supervise the UTDBE trainees at the Colleges of Education to address their concerns. The Colleges also had coordinators to supervise the work of the UTDBE trainees and address any challenges. The appointed Colleges of Education were expected to report on the performance of the trainees to the District Directors of Education but this was not carried out on a regular basis by some Coordinators at the Colleges of Education;

- The IA endline data revealed that there were higher rates of drop-out among female UTDBE trainees compared to male trainees. The Upper West region did not record any drop-outs during the third year of the programme;
- There has been an increase in the number of untrained teachers across the sampled districts from 2011 to 2014. There has been a 7.3% increment in the population of untrained teachers despite the introduction of the UTDBE programme. This suggests that, despite the UTDBE programme, the districts still need more trained teachers to close the trained teacher gap;
- District Directors interviewed during the endline evaluation affirmed that the UTDBE trainees have deepened their knowledge and experience as a result of the programme. The DDE's reported that, before the UTDBE programme, trainees who were engaged by GES as pupil teachers were unable to plan and prepare lesson notes. They could not differentiate between core teaching objectives and teacher learner activities, neither did they understand the concept of lesson objectives and were not aware of the strategic importance of the pupil's relevant previous knowledge (RPK) in order to more effectively teach concepts;
- The UTDBE end line study found that in districts where teacher transfers had become a normal practice, the length of stay of the UTDBE trainee in a district was at least 8 years. The overall IA results suggest that the UTDBE programme was having a tremendous impact in the deprived areas by addressing trained teacher demand and promoting teacher retention;
- For the purpose of trained teacher retention-- learning on the job through a four-year distance education programme was helping to provide trained teachers to the extremely deprived communities since the UTDBE trainees were mostly natives to the communities and districts; the programme was also addressing the challenges associated with posting newly trained teachers, particularly female teachers;
- The UTDBE programme was found to be an effective measure to assist in closing the trained teacher gap, particularly in the extremely deprived areas.

Chapter 3: Support, Selection and Outcomes for UTDBE at the College of Education Level

3.1 Enrolment Pattern of Continuing UTDBE Trainees (2011-2014)

The UTDBE programme was designed to add value to the performance of untrained teachers in schools in deprived areas and districts to improve the number of trained teachers in the deprived districts. The programme adopts a cost effective and efficient method of training untrained teachers on the job for four years through distance learning, periodic residential face-to-face meetings in selected CoEs and school-based professional development as discussed in chapter two of this report. The trainees are required to study on their own using student packages of study materials. Their self-learning is to be complemented with periodic 4 week face-to-face sessions which are organized three times in a year for four years during which concepts in their study modules are explained in line with other issues to enhance effective use of the modules.

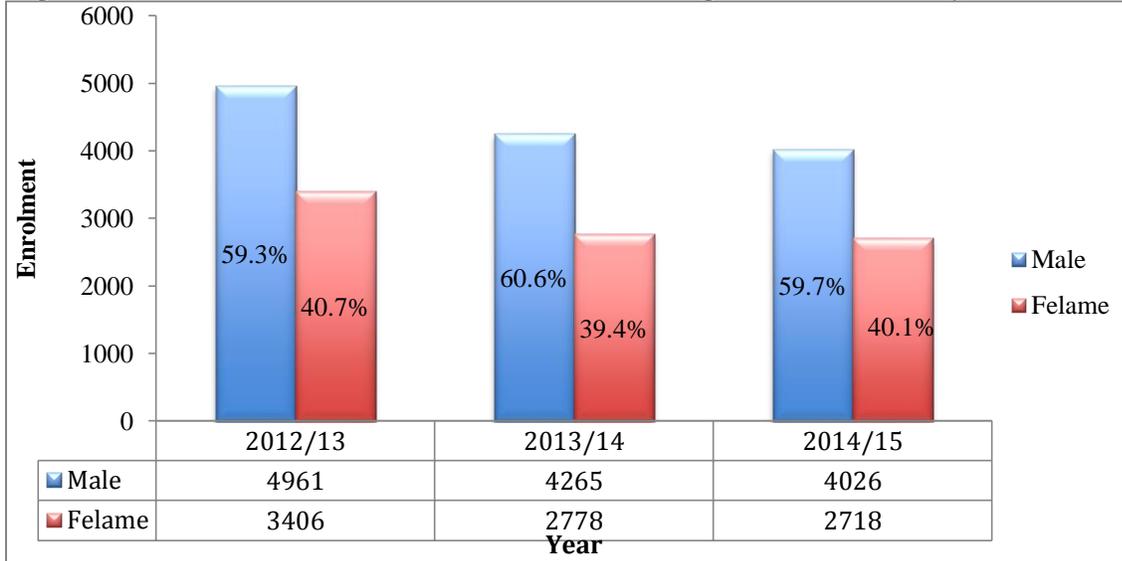
The sessions involved remedial studies to lay a sound foundation for the respective subjects. Trainees were also to benefit from support of District Field Support Cadres who are to be used for study circles in the districts with respect to the study of the modules. Head teachers were also to act as mentors to the trainees to develop their professional skills in classroom delivery. This chapter describes the implementation of the UTDBE programme in Colleges of Education (CoE). Interviews with tutors in the Colleges showed that the College tutors had difficulty in teaching UTDBE trainees because of their poor academic background as compared to the DBE trainees. The tutors do not seem to appreciate the learning needs of UTDBE trainees and the support they have to give to them. This chapter describes UTDBE programme being delivered in the colleges of education.

3.1.1 Enrolment of UTDBE Trainees at Colleges of Education

A total of 11 out of the 48 Colleges of Education in Ghana were running the UTDBE programme¹². Four of the Colleges of Education are in the Ashanti Region while Brong Ahafo had only one CoE serving the UTDBE programme. The Western, Eastern and Volta Regions each had two CoEs involved in the UTDBE programme delivery. The total enrolment of UTDBE trainees in the Colleges of Education for 2012/13 academic year was 8367, comprising 4961 males (59.3%) and 3406 females (40.7%). In 2013/14, only 7043 UTDBE trainees registered to continue with the training programme indicating a 16% drop in enrolment across the Colleges of Education. The number comprised 4,265 males (60.6%) and 2,778 females (39.4%). The total enrolment of UTDBE trainees further declined to 6,744 during the 2014/15 academic year, marking a 4% reduction. The UTDBE enrolled trainees comprised of 4,026 (59.7%) males and 2,718 (40.3%) females. Figure 3.1 illustrates the enrolment trend of trainees on the UTDBE programme from 2012/13 to 2014/15 academic years.

¹² Five Colleges of Education were visited during the over period of the IA (June 2014 and April 2016)

Figure 3.1: Enrolment of UTDBE Trainees at Colleges of Education by Gender



Source: UTDBE Endline Survey, 2016

Between 2012/13 and 2014/15, the enrolment of UTDBE trainees declined by approximately 19%. Even though there was some gender disparities in enrolment, the data suggests that over the three year period, female UTDBE trainees appeared to be consistent in their enrolment despite their often more challenging circumstances in remaining in the programme (e.g. pregnancy and family support); the programme has therefore a very positive potential for increasing the number of trained female teachers in areas which rarely receive trained teachers. (see annex 3.1b that illustrates the enrolment pattern of UTDBE trainees in the Colleges of Education).

3.2 Regional Pattern of Distribution of UTDBE Trainees in Colleges of Education

Analyses of the data revealed that trainees on the UTDBE programme came from eight regions across the country and were placed in 11 CoEs. The enrolment pattern of UTDBE trainees in the Colleges of Education shows that Colleges in the Ashanti Region had the highest number of trainees. At the beginning of the programme in 2012/13, the number of trainees in Ashanti Region was 6,072. This dropped to 3,243 in 2013/14 and further decreased to 2,938 in the 2014/15 academic year. The main reason for these decreases in enrolment in the Ashanti Region was the transfer of some trainees in the region to other Colleges of Education in other regions, such as the Volta Region, due to overcrowding of UTDBE trainees in some CoEs. Colleges of Education in the Volta Region also reached large numbers of UTDBE trainees with 522 in 2012/13 increasing to 1232 in 2013/14 and 1438 in 2014/15. The Brong Ahafo Region in 2012/13 had 711 enrolled UTDBE trainees, rising to 979 (2013/14) and then decreasing to 914 (2014/15). Enrolment in the Colleges of Education in the Eastern Region stood at 186 (2012/13) rising to 991 (2013/14) and then declined to 899 (2014/15). The Western region had trainees in two (2) Colleges of Education with 876 in 2012/13 that dropped to 598 in 2013/14 and fell

further to 561. The Colleges of Education in the Western Region appeared to have had the highest dropout based on sampled data from the Colleges of Education.

The gender disparity was more pronounced in Colleges of Education located in the Eastern Region where female enrolment was as low as 28.9% compared to 71.1% of male participation. The Eastern regions CoE's were mainly serving districts from the Northern Region where the proportions of female UTDBE trainees were also low. The Western Region also records low female enrolment in their Colleges of Education. On the average female participation was 31% compared to 69% male enrolment. Generally 40% females as against 60% males were enrolled across all the Colleges of Education involved with the UTDBE programme.

Interviews with the UTDBE Coordinators and focal group discussions (FGDs) with College Tutors and Trainees revealed that there was over-crowding in some of the Colleges of Education in the Ashanti and Brong Ahafo Regions. In these Colleges, the enrolment capacities are exceeded exacerbating the poor living conditions of the trainees. It is also observed that the female trainees report for face to face sessions at the College of Education with their house-holds and children whom the colleges find difficulty in accommodating. As a result of over-crowding there were trainee transfers to ease accommodation challenges. Colleges affected are mostly in Ashanti Region. This partially accounts for the variation in enrolment figures between 2012/13 and 2013/14.

3.3 Selection Criteria for UTDBE and DBE Students in Colleges of Education

The Teacher Education Division of the Ghana Education Service (GES) approves admission requirements for courses offered at the Colleges of Education and also set selection criteria for the UTDBE programme. The Diploma in Basic Education (DBE) has different requirements from the UTDBE programme. Prospective UTDBE trainees should not be more than 50 years of age at the time of enrolling onto the programme. The UTDBE candidate must also be an untrained teacher serving in one of the public basic schools. The applicant is expected to have at least one year teaching experience and be willing to stay in the District where she/he is teaching. Academic qualifications for admission onto the programme include the following: GCE 'O' or 'A' levels, WASSCE/SSSCE, City and Guilds or any Post-Secondary Certificate. The UTDBE applicants were also expected to be on GES payroll as pupil teachers.

The IA study found that there were variations between districts related to the candidates' requirements for entry onto the UTDBE programme. The District Directors of Education interviewed employed different academic standards with regard to the aggregate subjects that were passed by prospective candidates. While some districts considered candidates if they had attained at least three (3) passes in English, Maths and Science, other districts required that the candidates had at least six (6) passes which had to include English and Maths. Some districts also would only accept applicants who had five (5) passes comprising three (3) core and two (2) elective subjects. Other districts considered a minimum of three (3) passes in English, Math and one (1) elective subject. Some of the Principals of CoE and Tutors complained that the Directors

failed to comply with basic requirements as authorized by the Teacher Education Division because they did not have enough ‘pupil’ teachers with the requisite qualifications but still wanted to achieve the UTDBE trainee enrolment targets set for each district. This was particularly the case in the Northern, Upper East and Upper West Regions.

The UTDBE Baseline study (2014), findings suggest that a considerable number of trainees were not enrolled on the government payroll and were not teachers in any of the Basic School when they enrolled onto the UTDBE programme. Interviews with Directors and Coordinators indicated that the gender dimension of applicant selection was also not considered despite the fact that most deprived districts under the GPEG were having low levels of female trained teachers. School location, teacher supply gaps, and applicants’ commitment levels were considered by some sampled districts in their selection (e.g. Talensi/Nabdam, Bongo and Wassa Amenfi). In line with the Teacher Education Division requirements, advertisements for prospective trainees was made in all schools to solicit participation of all potential untrained teachers along with interviews after short listing of prospective candidates.

Comparatively, entry into the College of Education in order to pursue the DBE course was found to be more rigorous and competitive. The basic qualification for the DBE course at the College of Education level is a minimum of five (5) credits including: English, Math and Science with a total aggregate of not more than thirty (30).¹³ The mode of entry into the College of Education is very competitive, and dependant on the number of applicants with various levels of aggregate scores and the absorptive capacity of the College. However, some of the CoE Principals interviewed conceded that in some cases preference was given to female applicants since their retention trends were better. The 48 Colleges of Education have between 30% and 35% female DBE students. The main difference was that the CoEs admitted the DBE candidates themselves in collaboration with the TED while the Districts identified UTDBE candidates and then submitted their names to the GES for approval before sending their names to the CoE.

Interviews with Principals of Colleges of Education outlined the selection procedure of DBEs applicants as follows:

- Advertisement by the Conference of Principals of Colleges of Education (PRINCOF) inviting eligible candidates to apply for consideration;
- The application process is on line to reduce the incidence of bias selection and ensure that the best qualified candidates are selected and admitted to undertake the programme;
- Successful candidates whose WASSCE/SSSCE results meet the criteria are shortlisted and the results verified by the West African Examination Council (WAEC);
- Names of shortlisted applicants are sent to their first choice College of Education for further processing, interviews and selection.

¹³ It must be noted that the aggregate varied from College to College with some Colleges making aggregate 24 as their cut off point for entry depending on the demand.

Interviews with Principals of CoEs also revealed that, although there were no specific quotas for admitting male and female trainees, females with the requisite qualification are often given priority. Often females are admitted with a lower aggregate to the CoE. Information gathered from some of the Principals interviewed, shows that preference is given to females since once they are admitted their retention rate is higher than that of their male counterparts once they qualify.

Findings from the Baseline Assessment (2015) reveal that a number of the sample district education offices used their own criteria of between 3 to 5 passes in core subjects and electives to enroll the UTDBE trainees. This was quite different from the entry requirements of the DBE trainees at the COE level who were strictly selected by University of Cape Coast criteria and vetting.

Findings from the Endline Assessment confirm Baseline findings related to the selection of DBE trainees into Colleges of Education. Interviews with Principals, Tutors and UTDBE Coordinators of Colleges of Education attest to the fact that most of the DBE trainees had a WASSCE/SSCE background and entered the COEs with “good” scores which met the entry requirements. Most of the candidates came directly from SHS and with no teaching experience. Less than 1% had experience as pupil teachers or volunteer teachers prior to their admission to the CoE. DBEs also came from quite different backgrounds with a cross section coming from urban, peri-urban and rural areas, compared to the majority of UTDBEs who were from rural and often extremely deprived areas.

3.4 Differences Between UTDBE and DBE Trainees Based on College of Education Tutor and Coordinator Interviews

Principals and tutors of four (4) Colleges of Education interviewed indicated that there were marked differences between conventional DBE students and UTDBE trainees. The difference was observed in their entry academic qualifications into the Colleges of Education, the nature of courses being pursued, the practical teaching experience of the students, their level of subject content knowledge, commitment to studies and tutorial techniques. The tutors and UTDBE coordinators at college level reported that the two types of trainees had a wide difference in academic and social backgrounds. They asserted that most of the UTDBE trainees were from rural communities while the DBE students were mostly from urban areas.¹⁴ Tutors also reported that the DBE students often had a better academic background. Even though the two types of trainees had completed secondary education, there were differences in relation to their academic attainment and performance scores. Tutors felt that the process of entry into the College of Education to pursue the DBE programme was more rigorous and competitive than that of the UTDBE, which was managed at the district level. They reported that the large numbers of DBE applicants and the limited number of places also made admission to the Colleges of Education very competitive. Consequently, they believed that students with better academic attainment

¹⁴ This needs further research in order to understand the relationship between background characteristics of teachers, and their retention in rural areas; we will explore this further in the next chapter.

levels were selected to pursue DBE programmes as compared with UTDBE trainees. These beliefs also resulted in their different expectations and their approach to tutelage of the two programmes - a finding we will discuss later.

CoE Tutors also observed differences in the subject content knowledge between DBE and UTDBE students. Tutors reported that the DBE students being “fresh” from Senior High Schools had stronger recall ability in Maths, Science, Social Studies as well as other subject areas compared to their UTDBE counterparts. DBE trainees often demonstrated better understanding and ease of understanding in relation to the content areas and concepts compared to the UTDBE trainees. Tutors explained that in the case of UTDBE trainees, “so many years had lapsed since they completed secondary education” with often poor grades; this was in significant contrast to the DBE trainees. Consequently, the tutors reported that the UTDBE trainees’ subject content knowledge was more limited due to the length of time since they had studied the subject area. Tutors also reported that the UTDBE trainees did not understand the subject units such as Math. Tutors therefore had to focus much more attention on assisting the UTDBE trainees recall their previous knowledge of the subject before they could move ahead on the intended subject to be taught.

Tutors complained that they spent more time in revising topics needed to facilitate understanding of concepts to be taught. Tutors explained that they also had to adopt different tutorial approaches in instructing the UTDBE trainees, using more inclusive and interactive teaching methods. Remedial teaching was often adopted to improve the basic subject content knowledge. In view of the short period of “face to face” time at the College level, tutors found it difficult to cover the contents of the UTDBE training modules. Tutors also reported that UTDBE trainees found the teaching methods as a subject more interesting making more contributions in class than the DBE students due to their experience in the field. In all the four (4) Colleges of Education sampled for study, tutors claimed that the UTDBE trainees were more animated during the teaching methodology periods. Tutors also explained that the trainees often exhibited confidence during the teaching methodology sessions because of their long tenure in the teaching field. In all the four (4) Colleges of Education visited it is estimated that less than 1% of DBE students had any direct experience in teaching children before being enrolled at the College level. Findings from the field work suggest that the Principles of CoE’s and Tutors did not fully understand their roles and how to modify the UTDBE training by assisting UTDBE students with difficulties they were studying the modules and not treat them like DBE students; explanations provided by the Tutors suggest that they did not feel that the UTDBE trainees had the capacity to be coached in studying the modules for self-study and tutorials and therefore reverted to a lecture approach through the face to face sessions.

The tutors also claim that the DBE students are more committed to their studies than the UTDBE trainees. They are punctual and were more regular in attendance at lectures than UTDBE trainees. The tutors also found them to be more disciplined compared to the UTDBE trainees. The UTDBE trainees by contrast often reported late to face to face sessions. The Tutors explained that the UTDBE programme required a high level of concentration and focus. Some of the trainees, particularly the married and the nursing mothers, experienced several distractions.

Comparatively, the DBE students tended to focus more on their studies because they were not distracted with family related issues and obligations.

Apart from the modules, trainees are expected to read a great deal of reference materials contained in the modules.¹⁵ It is observed that trainees have to effectively combine their school working schedules, along with their family and social obligations to enable them to complete the assignments on time. The tutors interviewed across the four sampled CoEs remarked that little time was devoted by the UTDBE trainees to studying the modules. Tutors at the Colleges of Education and the UTDBE Coordinators indicated that the methodology taught for the first two years of the programme was very limited in scope often using only a lecture style. Consequently, trainees were unable to apply what they had learned in the classroom. In view of the limited duration of the programme, there was little modelling of good practice by the tutors. On the contrary, the DBE students spent three months per term on their course work. Tutors had more time to teach and model good practice teaching for the benefit of their students. One full year during the final year is allocated for teaching practice in carefully selected schools under the supervision of the tutors.

Findings of the assessment based on interviews with Principals and Tutors of Colleges of Education and Coordinators of the UTDBE programme indicated that there are identifiable differences between UTDBE and the regular DBE Trainees. Most of these differences relate to the student's background knowledge, the nature of their course and their practical experiences. There were two significant findings from the interviews conducted with Tutors and Principals across the 4 sampled COEs:

- Tutors were of the view that the course content was not always appropriate for the UTDBE Trainees and often beyond their competency level since the UTDBEs were not having the highest academic qualifications. They also spent a longer period of time at home after their graduation from SHS before they entered the programme compared to the DBE students;
- The short duration of the “face to face” sessions did not give trainees enough time to study different teaching approaches and improve on their methodological practice in their classroom. Very little time was spent on teaching ‘methodology’ and this was not taught during the first 2 years of the UTDBE course thus, making it impossible for the trainees to apply what they had learnt in their classrooms.

In view of the challenges the UTDBE trainees experience, tutors are of the opinion that the course content of the UTDBE will have to be restructured in order to allow more time for teaching. Concepts in modules will have to be simplified to be easily understood by UTDBE trainees. Most of the tutors complained of serious mistakes and discrepancies in the course modules that needed to be reviewed.

¹⁵ Unlike the DBE, the UTDBE is not a full time programme. UTDBE is a distance programme based on designed modules. Trainees on the UTDBE programme have 21 days of “face to face” time at the Colleges of Education, while they are expected to read their modules and report to their designated Colleges where the tutors explain the concepts in the modules.

3.5 UTDBE Trainees and District Education Views of their Performance across the Colleges of Education

Findings from interviews conducted with the Circuit Supervisors and other frontline District Education Officers indicate that in the area of lesson note preparation, the DBE teachers are slightly better than the UTDBE trainees. Most of the DBE were reported as having the ability to write more comprehensive lesson notes with clear objectives. Similar observations were made in other areas notably in use of TLMs, teaching methodology, content knowledge and classroom management. UTDBE trainees were, however, described as showing more commitment to their work compared to the DBE teachers, especially where UTDBE trainees were on the payroll. At the school level, the UTDBE trainees were reported by District Education Staff as more punctual and regular in school attendance compared to their DBE counterparts. Similarly, UTDBE trainees were seen to be more integrated with the communities than DBE teachers. This could largely be attributed to the fact that the UTDBE trainees were mostly indigenous to the communities, thus living with them, while DBEs tended to live outside the communities, especially where the school is located in a deprived community.

In assessing the differences between UTDBE trainees and DBE graduates in their commitment to their work, the majority of DDEs and District UTDBE Coordinators interviewed, were of the opinion that UTDBE trainees were more committed to their teaching work in comparison to DBEs because the UTDBE trainees' are more regular and punctual at school. They also observed UTDBE trainees giving more class exercises to pupils than the DBEs. While some DBEs are often late to school and fail to stay in school until classes are over, the UTDBEs take active interest in co-curricular activities. For instance, the UTDBE trainees explained that "their retention on the programme depends on their good conduct and excellent academic performance". DBEs, on the other hand, considered themselves to be part of the established GES staff and tended to be more "arrogant" (Talensi Nabdam District Field Interviews, 2015).

With regard to the problem of absenteeism and punctuality, the majority of District Education Staff interviewed reported that UTDBE trainees were rarely absent or late for school compared to high rates of absenteeism among DBE trained teachers. This was explained by the fact that the UTDBE trainees stay within the communities and therefore are closer to the schools while the DBE teachers often stay far from the school community.

3.5.1 Key Challenges of the UTDBE Trainees Prior to the Programme

The interview findings with the UTDBE trainees and key District Education Officers reveal that prior to the UTDBE training programme a number of the untrained teachers were not on salary and faced financial difficulties. Some even had to borrow to pay for their transportation to school. As such, irregularity, lateness and poor attitude to work was high amongst the trainees.

With regard to professional competence, the findings show that prior to the UTDBE programme, most trainees had no orientation in teaching skills. They lacked knowledge about pedagogy and their lesson notes were poorly prepared. They also lacked knowledge of how to prepare and use

TLMs, lesson delivery was poor and they lacked knowledge of the application of child-centred methodologies to facilitate the teaching learning process. Similarly, they lacked skills in classroom management and control and could as such not handle large classes. In addition, they had no skills in identifying and dealing with children with special education needs. Furthermore, most of the trainees prior to the UTDBE programme lacked knowledge in interactive questioning and gender sensitive skills.

3.5.2 The Importance Districts Attach to the UTDBE Programme

All DDEs and UTDBE Coordinators interviewed attested to the fact that the UTDBE programme had impacted very positively on the quality of education delivery. According to these district officers, the UTDBE trainees, who prior to their training could not prepare lesson notes, have now acquired the requisite skills to prepare lesson plans and comprehensive lesson notes.

They can also impart knowledge to the pupils using effective methodologies that are child centered such as group work, role play, drama among others, resulting in effective lesson delivery. Trainees at the lower primary level are imparting skills of reading to their pupils. This shows that the training at the Colleges of Education has equipped trainees with modern techniques for effective teaching and learning, hence this could have a positive impact on pupil learning outcomes.

All the District Directors and UTDBE Coordinators interviewed held the UTDBE programme in high esteem for the following reasons:

- The programme, according to them, had the potential of becoming the source of trained teacher supply to remote, hard to reach and deprived areas where trained teachers usually refuse postings;
- The programme had also helped them build the capacity of untrained teachers and had the potential to help increase the number of trained teachers in the districts and the number serving in remote hard to reach deprived communities;
- It has brought about improved quality education delivery in remote communities as reflected below in the views of districts officers.

3.5.3 Impact of UTDBE Trainee Teachers in the Classroom

Findings from the study shows that the UTDBE trainee teachers are assisting in promoting quality teaching and learning since their work output has positively affected the learning process in classrooms and the ability of pupils. Some of the District frontline Officers of Nkoranza District made the following observation during the interview:

Trainees' professional competence has improved significantly. They are now able to prepare their lesson notes well and are able to deliver their lessons effectively. Reports

from Circuit Supervisors indicate that their confidence level has also improved during lesson delivery (Nkoranza North District).

UTDBE trainees are reported to be using various methods which are child centered such as role play, drama, group work, mixed ability grouping and discovery method. There has also been an improvement in literacy and numeracy skills of pupils. GES District personnel interviewed noted that:

The performance in the BECE has improved and once they are part of the system, I believe they have contributed to the improvement (Jirapa District).

Their (the UTDBE trainees) output of work has positively affected the learning ability of the pupils (Amenfi West District, Western Region).

The presence of the trainees in schools has boosted the enrollment of pupils. Parents are eager to send their children to school because there will be teachers to teach them. Pupils' school attendance has improved in the district (Bongo District, Upper East)

There has been an improvement in pupil enrolment as teacher supply situation improves. Parents are happy to find teachers in their schools as their children will be taught (Talensi Nabdram District, Upper East).

3.5.4 Collaboration between Colleges of Education and the District Education Offices

Interviews across the Colleges of Education with the Principals during the Baseline Assessment suggest that there was a cordial relationship between the District Education Offices and the Colleges of Education but very limited information was shared between the two agencies. There is interaction on the programme between the UTDBE Coordinators at the College level and the District Education Offices. The Principals also said that reports on trainees' behaviour at the Colleges are sent by the Colleges to the District Education Offices. Findings from interviews with the District Directors of Education and the District UTDBE Coordinators during the Endline Assessment confirm that there was a cordial relationship between the District Education Offices and the Colleges of Education but very limited interaction and information flow.

The collaboration is demonstrated by the fact that the District UTDBE coordinators pay regular visits to the Colleges of Education to meet their counterparts for discussions on the progress of the trainees and problems raised are discussed and solutions found with the help of the Principals. The Colleges of Education also submit reports on trainees to the District Education Offices and issues are resolved amicably.

The only occasion when the Colleges of Education have a problem with the District Education Offices is the delay in the release of funds to defray College expenses on trainees. This challenge, according to the CoEs, comes when grants from GES Headquarters are not released on time to the District Education Offices for disbursement to the CoEs.

3.5.5 Key gaps in Content Knowledge of Teachers on UTDBE and the DBE Programmes

During the Baseline assessment it came to light that there were very few differences between the course content offered in the three year DBE programme at the Colleges of Education and the Distance Education Programme offered under the UTDBE programme. The first year of both programmes are focused on subject knowledge particularly in English, Maths and Science Education with some very limited courses on methodology.

Several of the courses taught related to subject knowledge geared towards SHS teachers and are far too advanced for primary school or KG to P3 levels which are the core needs at these levels for primary children.

Interviews with District Directors of Education and District UTDBE Coordinators during the Endline assessment indicate that since the DBE course has a longer duration and therefore more contact hours to enable students to assimilate fully content knowledge, the DBEs have an edge over the UTDBEs with regard to content knowledge. The content of the modules used by the UTDBE is too sketchy to be used alone. This has to be supplemented with textbooks to improve the subject knowledge. The findings also indicate that, although there is a lot of emphasis on the teaching of citizenship education at the COEs, both categories of teachers have difficulty in the teaching of English particularly in pronunciation and grammar. Trainees have a lot of challenges in the teaching of literacy especially reading and comprehension. The curricular content of KGs is not taught at the Colleges of Education.

In addition to this, although both categories of trainees are expected to handle all subjects competently at the basic level, trainees have problems in teaching specific areas such as Maths like fractions, percentages, and measurement. Similar difficulties are encountered by trainees in science.

3.6 Academic and Professional Needs of UTDBE Trainees

Interviews with Principals, Tutors and UTDBE Coordinators of COEs identified a number of academic and professional needs of UTDBE trainees, which included subject content knowledge, pedagogic skills, the development and competent use of TLMs and lesson delivery. The UTDBE trainees were in most cases having a lower academic background and challenged by the pressures of their family situation, which did not enable them to focus fully on their studies: guidance and counseling strategies need to be deployed to enable them to focus on their studies.¹⁶

According to the interviewees, various methods are being used by the Colleges of Education to address some of the above-mentioned needs and include:

- i. Trainees are regularly encouraged and engaged to undertake class assignments in order to enable them to catch up;

¹⁶ Findings suggest that the UTDBE entry requirements were lower compared to the DBE requirements.

- ii. Tutors often used mixed ability grouping strategies for classroom activities to enable the weak students to learn from the more competent trainees;
- iii. A remedial teaching strategy was often used to lay a solid foundation upon which concepts could be taught more effectively;
- iv. Trainees are taught how to improvise to secure their required teaching and learning materials. This is given high priority because of the resource constraints in most institutions and schools;
- v. Activity based classroom teaching such as demonstration, drama, group work was used; and
- vi. Identification of students' previous knowledge to enable tutors to build on it.

Tutors reported that they adapt their methods in the classroom to suit UTDBE trainees' rate of absorption by organizing tutorials for the weaker trainees as reflected in the views below:

"Tutors have to adapt in order to accommodate the trainees' learning needs because the trainees do not read their modules before coming to the COE (face to face sessions)" (Offinso College of Education Tutor's Interview, November 2015)

It was expected that after the "face to face" sessions, cluster tutorials were to be organized for the UTDBE trainees at the district level and tutors were to participate in these district level tutorials in order to help trainees reflect on what they have learned. However, the endline assessment showed that the organization of cluster meetings was not effective in most of the districts visited, while the few districts that managed to organize it did not do so regularly. With regard to subject content knowledge, Tutor's reported that many trainees had a poor subject content knowledge especially in English and Maths. Tutors reported spending a great deal of extra time assisting the UTDBE trainees understand basic math and English concepts.

In relation to the acquisition of teaching skills, Principals and Tutors reported that the UTDBE trainees needed to improve on their standard of spoken and written English in order to use it as a language of instruction. Tutors across the four training colleges visited said that some of the UTDBE trainees did not speak English, nor were they able to read, understand and answer questions.

Tutors also reported that the competency in the L1 or mother tongue language was also limited especially in reading and writing across both DBEs and UTDBEs because most of them did not take the subject at the Senior High School (SHS) level.¹⁷ Both categories of teacher trainees lacked in their subject content knowledge of Environmental Studies and Social Studies because these subjects were not treated in detail at the SHS level. *"The current teacher training programme has therefore not been designed to meet the needs of the Basic School teachers in the classroom. This is why Tutors have to adapt the old teacher training programme to suit the needs of the teacher in the classroom"* (Enchi Tutors Interviewed at the College of Education).

¹⁷ Local language (L1) is an elective subject at SHS level not a core subject.

Tutors mentioned the use of discussions, group work, role-play, activity based methods and interactive approaches to teaching UTDBE trainees. Although trainees confirmed the use of some of these methods by tutors, the majority of UTDBE trainees reported that tutors most often use the lecture method in their interactions at the Colleges of Education. Tutors recognized that the interactive method, participatory and friendly approaches made lessons more interesting and enjoyable, which led to better retention of concepts being taught. Tutors also reported that they employed gender sensitive strategies especially in revising subjects such as Math where female trainees experienced difficulties. Again, the trainees themselves did not validate this during interviews and instead reported that they had very limited support in terms of their interactions with tutors.

3.7 The Impact of the Duration of the DBE and UTDBE Programmes on Quality of Training

The time and duration of various forms of teacher training programmes in Ghana play a key role in determining the quality of teaching and training received by trainees in the course of their study. In assessing how the schedule and duration of the DBE and UTDBE programmes impact on quality delivery of training, there is the need to have a careful look at the entry requirements for both programmes.

The DBE teacher trainees have two residential semesters a year with each semester lasting 16 weeks (112 days). Therefore, in a year the DBEs have a total of 224 residential days of contact hours as compared to UTDBE trainees who have a total of 70 days or 10 weeks per year for face to face contact hours (i.e. 21 days in January, 21 days in March and 28 days in August). It is expected that the cluster and district based face-to-face sessions would also support the UTDBE trainees while they are back at their respective schools, but findings from the baseline and midline studies indicate that there was very little, if any, involvement by the Principals and tutors from the Colleges of Education in these cluster based meetings. The findings from interviews with the Principals suggest that these cluster meetings were organised solely under the jurisdiction of the District Education Offices, and they did not take any responsibility for the quality of what was done since it was “outside their responsibility at a Colleges of Education”. The UTDBE programme design envisaged that Colleges would collaborate with the District Education Offices in the implementation of the programme and ensure quality assurance at the cluster based meetings.

3.8 Collaboration between Colleges of Education and District Education Offices on the UTDBE Programme

The baseline survey findings show that there was very limited communication between the Colleges of Education and District Education Offices in the implementation of the UTDBE programme. During the Baseline Assessment, Principals of Colleges of Education asserted that there was a cordial relationship between the District Education Offices and the Colleges of Education but limited information was flowing with respect to the implementation of the UTDBE programme. UTDBE Coordinators both at the College level and their counterparts at the District Education Offices served as liaison officers to facilitate collaboration. The District

Education Office UTDBE Coordinators monitored the presence of the trainees during the face to face residential meetings at the colleges but this was only for three days at a time and not enough to fully address the challenges that trainees were experiencing with overcrowding etc.

The Coordinators to monitored and reported on the conduct and behaviour of the trainees to the District Education Offices though this was not very consistent and frequent. They also submitted examination reports on the trainees to the DEOs but these often arrived late and were not regular in order to help support the trainees.

The findings during the Endline survey suggest that there was very limited collaboration between the District Education Offices and the Colleges of Education in monitoring trainee performance during teaching practice with CoEs, with tutors rarely participating in the cluster based meetings. A similar situation was observed by the team during the midline study. The only major challenge that militates against this cordial relationship is the late or non-release of GPEG funds by the District Education offices to the Colleges of Education to cover costs incurred by the colleges on trainees. This creates serious financial constraints for the COEs in the implementation of the UTDBE programme.

3.9 Collaboration between UTDBE Stakeholders on UTDBE Programme implementation

In order to ensure the smooth implementation of the UTDBE programme, effective communication and collaboration among stakeholders is vital. Key stakeholders involved in the effective implementation of the UTDBE programme include the National Council on Tertiary Education (NCTE), representing the Ministry of Education, Institute of Education of the University of Cape Coast (UCC) and Teacher Education Division (TED) representing the Ghana Education Service.

Interviews conducted with key stakeholders across these institutions reveal that there is collaboration among them. Interviews at the national level suggested that the NCTE oversees activities of the Colleges as Tertiary Institutions. Feedback on performance of trainees is given to the Teacher Education Division.

Findings suggest that there was constant communication between TED and CoEs regarding issues of examination results, behaviour patterns of trainees, provision of TLMs, discipline and issues of feeding grants for trainees. The Professional Board, which includes representatives from CoEs, TED, and UCC, meets periodically to review teacher training programmes. The Institute of Education at the University of Cape Coast serves as the examining body for all the Colleges of Education. It is the institute that awards diplomas to the trainees on completion of their course.

The institute also serves as the mentoring body of the CoEs and organizes workshops for administrators at the Colleges on how to conduct examinations and assessments.

It is pertinent to note here that the relationships and levels of communication among the key stakeholders mentioned above during the early stages of the UTDBE programme implementation based on the Baseline Assessment remained the same over the course of the programme.

3.10 Challenges of CoE in the Implementation of the UTDBE Programme

The challenges that the Colleges of Education reported in the implementation of the UTDBE programme were similar across most of the colleges with a few exceptions which were peculiar to some colleges. The challenges included overcrowding and the poor accommodation/sanitation conditions; trainees non-adherence to college regulations; the challenges of female trainees bringing their young children and caregivers; poor and inadequate feeding of participants; limited time; and indiscipline among some trainees.

With regard to the challenge of overcrowding, the Atebubu COE during the Baseline Assessment reported that the college's capacity was over stretched so much that it had to convert classrooms into dormitories and uncompleted structures into lecture theatres. While the college had an accommodation capacity of 400 students, the total enrolment of UTDBE trainees at the college as of December 2012 was 1,382. There was a severe overcrowding problem in the dormitories compounded by lack of water and sanitation facilities. Although by the end of the 1st semester exams in April 2013, the number of trainees had drastically diminished, the College was still overcrowded, since it still had to accommodate 914 students, double its normal intake. The remaining 468 trainees were withdrawn on account of poor academic performance. During the Endline Assessment, the findings showed that the overcrowding persisted as 900 UTDBEs trainees continued to attend the "face to face" sessions regularly.

The challenge emanating from the inconvenience of nannies of female trainees has also not changed. Some trainees were still nursing mothers who came to campus with their babies and were obliged to use the services of these caregivers while they attended class. These unofficial visitors shared in the limited accommodation facilities and sometimes feeding, further compounding the pressure on accommodation.

As with the baseline study, the endline findings show that the challenge of insufficient food (i.e. the lack of three square meals a day) no longer persists, there is still the challenge of sharing the little they have with the nannies and the quality is still below standard as trainees complain of the poor quality of meals served.

The midline and endline observations and interviews suggest that the trainees had to cover the greater part of the UTDBE subject content through self-study of the modules. Unfortunately the self-study was not supported by the participation in cluster meetings nor mentoring and coaching by head teachers and DEO staff. Findings of the Baseline Assessment indicated that, since the organization and supervision of the cluster meetings were solely under the purview of the District Education Offices, the quality was very limited for most of the 4 year period of the course due to the limited involvement of the COE.

The Colleges of Education Principals and Tutors did report on the problem of indiscipline by some trainees such as not obeying the instructions, rules and regulations and failing the subjects at the CoEs. Information gathered from UTDBE Coordinators indicates that trainees who failed to comport themselves were reported to the DEOs who often disciplined them and reminded them of the fact that their continued participation in the programme depended on their good conduct and academic performance.

Another major challenge emanating from the implementation of the UTDBE programme was the challenge to trainees from districts in the three northern regions participating in the programme at COEs located in the south of the country. This led to a loss of contact hours because trainees arrived very late at the colleges (sometime two days after the start of the sessions) and were sometimes leaving before the end of the sessions. With trainees having to travel too far from their home districts, apart from the strain and fatigue, there was significant financial constraints that trainees had to contend with (this is discussed further in the next chapter).¹⁸

During the Endline Assessment, District Directors of Education and District UTDBE coordinators recommended that, in future, trainees will attend the “face to face“ sessions at Colleges of Education within their own regions to facilitate access to the COE and cut down on expenditure for travelling outside the trainees’ region.

A major challenge experienced in the implementation of the programme was the non-release or late release of funds by the District Education Offices to cover costs incurred by the COE. This problem created significant financial constraints for the COE. Sometimes, the financial arrears were for two sessions according to UTDBE Coordinators at College level. Moreover, findings from interviews with CoE Principals indicate that trainees whose names are not on the payroll often fail to pay the extra fees charged by the COE for the UTDBE programme (e.g. Course notes/handouts etc.). This had a significant impact on the quality of programme delivery and the commitment of the Colleges to the programme.

3.11 Strategies to Ensure Transfer of Knowledge from CoE to the Classroom

During the Baseline Assessment, the principals, UTDBE coordinators and tutors at the College level outlined a number of strategies that they suggested could be used to ensure the transfer of skills and knowledge learnt at the COE to the classroom. The principals interviewed admitted that it was their duty to check on the UTDBE trainees to see whether they are able to transfer what they learn at the College to the classroom. Unfortunately, they had a problem of transporting their tutors to the classrooms due to the distance from most colleges to the locations where the trainees were teaching. They reported relying on the District Education Offices to use their Circuit Supervisors and the District Teacher Support Teams to ensure that such a transition took place.

¹⁸ The study found that the three Northern CoEs set up an independent UTDBE course which was the main reason that GES had to select Colleges outside the three northern regions. This was done one year before the GPE support for UTDBE began. Because it wasn’t sanctioned GES would not support those CoEs. Accordingly, enrolled students from the North had to go to CoEs elsewhere.

Interviews conducted with Principals, UTDBE coordinators and tutors at the Colleges of Education during the Endline Assessment indicated that the District Education Offices played an important role in supporting the trainees. In some cases, the CoE tutors teamed up with the District offices to monitor the performance of the trainees.¹⁹ In just a few cases, tutors also visited the UTDBE trainees at the cluster level in their district for remedial teaching. Furthermore, tutors visit schools to observe trainees and produce reports for the Colleges of Education. However, there were significant financial constraints in supporting students from the Northern sector on the programme who did their “face to face” sessions at COEs located in the south. The distance from their classrooms to the colleges would require more than one day of travel. This was in sharp contrast to the DBE programme where the tutors were able to visit schools where the student teachers are placed on a regular basis because the schools were near to the Colleges of Education. The tutor observation is conducted during teaching practice, project work and during the last year’s “out” programme where the DBEs are full time in the classroom.

While in training, tutors explained that they were able to assess the trainees’ performance and competencies. Tutors explained that they were able to use certain strategies to assess whether trainees are able to apply the knowledge acquired during the face-to-face sessions, assignments and group work. From the end of the semester when exams are conducted, tutors were able to appraise students’ performance at the end of every semester. When the Chief Examiner’s Report is released, its contents are discussed at departmental level to see whether there are deficiencies and strategies are mapped out to address them.

3.12 Key Recommendations for the UTDBE Programme Based on Interviews at the CoE and District Education Levels

Principals, tutors, UTDBE Coordinators at the College and District Education Officers at the district levels made a number of recommendations to improve the UTDBE programme during the Endline Assessment.

1. Principals and tutors of the Colleges of Education recommended that the entry requirements or selection criteria to pursue the UTDBE programme are too low compared to those of the DBE programme. This makes the academic background of the UTDBE trainees very weak resulting in the tutors having to conduct extensive revision sessions before the commencement of the actual course work. It is therefore imperative to review the selection criteria to bring these in line with the requirements of DBEs. Principals and tutors even recommend that prospective UTDBE trainees be made to take an entrance exam before they can enroll on the programme. It is pertinent to note here that a similar recommendation was made during the baseline assessment.

¹⁹ Although the Colleges of Education tutors were expected to partner with the District Education Offices to organise effective cluster meetings for UTDBE trainees, they were unable to discharge this duty, largely as a result of the distance between Colleges and districts where trainees were resident and the financial implications. The research team found that in some districts, the District Education Offices often contract the services of tutors in nearby Colleges of Education and Senior High Schools to carry out this assignment.

2. Distance Education modalities for improving teacher education requires that Colleges of Education are fully oriented to innovative approaches to instructional delivery and support for UTDBE trainees in future. This would require much more orientation and compliance by Colleges of Education and the districts in areas of mentoring and coaching to the trainees. There must be much more compliance to ensuring that SBIs and CBIs are used to support the teacher trainees along with head teacher coaching.
3. Other recommendations of principals and tutors are that the UTDBE modules being used should be revised to meet current needs of basic school teachers particularly at the primary level. According to the principals and tutors, some of the information in the modules are not accurate. They also reported that the UTDBE course structure and course content must be reviewed to better suit the needs of basic school teachers. Subjects should be better tailored to meet the different requirements of the KG, Primary and JHS levels. That subjects like Ghanaian language, environmental and social studies should be tailored to suit the needs of the subject teachers at the different levels of basic education. For example, trainees are not exposed to the methodology for the handling of KG classes. Furthermore, the principals and tutors are of the opinion that the course content in Maths, Science and English should be reviewed to better reflect the needs of primary school teachers and in some cases include more practical aspects. They also recommend that the early grade reading strategies be emphasized more with the introduction of the phonic method for the teaching of reading.
4. With regard to the timing and duration of the programme, trainee performance monitoring and supervision at the CoE and school levels, District Directors of Education and District UTDBE Coordinators interviewed were of the opinion that the timing of the UTDBE course was all right because it took place during the holidays and did not interfere with basic school calendar. However, they also agree that the duration of 4 years was alright but the period spent on the residential face-to-face sessions was too short leading to a situation where tutors rushed through the syllabus. They therefore recommend that contact hours be increased through the organization of cluster meetings at the College level. Principals and Tutors and UTDBE Coordinators at the College Level on the other hand, recommended that the teaching practice aspect of the course be intensified. According to them, although the UTDBE trainees are already on the job teaching, they were not fully observed during their teaching time. They recommended that micro teaching sessions during the face- to- face at the COE would enable the trainees to acquire the necessary instructional skills;
5. The Principals and Tutors recommended that teaching practice be incorporated into the face - to - face sessions to enable tutors to assess the performance of trainees for remedial measures. In addition to this, the tutors recommended that, while trainees are in their schools, circuit supervisors must visit them regularly to supervise them during teaching and learning sessions to give them the necessary pedagogic support;

6. With regard to mentorship, principals and tutors recommended that UTDBE trainees be provided with mentors at school level. They suggested that Head teachers and trained teachers be given refresher training to effectively mentor trainees at school level. The Tutors also suggested that Colleges of Education be given the mandate to monitor the performance of trainees in their schools between the face- to- face sessions to ensure that the methods taught are being applied;
7. The DEO should release the grants meant for the CoE on time in order to cater for the trainees feeding and other key costs. Some of the Colleges recommended that the release of GPEG funds come from GES Headquarters directly to the CoEs and not pass through the Districts. Although trainees are currently being served three meals a day, it was recommended that feeding fees be increased to enable the CoEs to improve on the quality of food served;
8. To solve the problem of trainees arriving late at the COE for their “face to face” sessions and having to leave before the sessions end because of the long distances covered, the College of Education should be located in the trainees’ region of residence where they are employed as teachers. This will help reduce the cost trainees incur as well as fatigue endured in traveling to and from the Colleges.

Chapter 4: Teacher Content Knowledge and Examination Results

4.0 Introduction

In this section, the course content for the 4-year UTDBE programme is compared with the course content for the 3-year DBE programme. This chapter compares the conventional DBE and the UTDBE modes of teacher training in the areas of course content, content knowledge of trainees, as well as the examination results of teacher trainees.

The end-of-semester results for Year 1 and Year 2 for both the UTDBE and DBE students have been obtained from the Institute of Education, University of Cape Coast (UCC) which is responsible for UTDBE examinations across all the CoEs. This chapter gives further insights into the extent to which student content knowledge has improved and was relevant based on lesson observations across the nine sampled districts and in-depth interviews with teacher trainees. The chapter then examines whether the UTDBE trainees felt that course content meets their needs both in terms of subject knowledge and their ability to use the prescribed classroom management techniques.

The current cohort of UTDBE students began their programme in 2012/2013 and will complete in 2015/2016. Improvement in UTDBE trainees' content knowledge was evaluated through a study of the differences in the UTDBE and conventional DBE course structures, a comparison of performance in English Language over a three-year period and a further comparison of the performance of UTDBE and DBE trainees in a final end-of-semester examination in 2015.

4.1 Differences in the UTDBE and Conventional DBE Course Content

The UTDBE programme takes four years and includes eight semesters while the DBE programme involves three years with two years at the College of Education and one year "out" on teaching practice. Table 4.1 below outlines the comparative course details and are based on the General Programme of the DBE.

Table 4.1: Course Structure of UTDBE and DBE Programmes

Code	Course Title	UTDBE	DBE
FDC 111	English Language Studies	√	√
FDC 112	Mathematics (Number and Basic Algebra)	√	√
FDC 113	Ghanaian Language and Culture (Language and Language Teaching)	√	√
EPS 111	Principles and Practice of Education	√	√
PRA 111/122	Physical Education (Principles, Foundations and Methods)	√	√
FDC 114	Integrated Science I	√	√
FDC 118	Environmental and Social Studies	√	√
AGN 111	*Agricultural Science		√
FDC 119	Religious and Moral Education (Gen Intro. & Meth)	√	√
EPS 121	Child and Adolescent Development and Learning	√	
PRA 121	Music and Dance (Elements and Methods)	√	√
FDC 121	English (with Elements of literature) I	√	√
FDC 124	Integrated Science 2	√	√
EPS 211	Principles and Methods of Teaching in Basic Schools	√	√
GNS 121	HIV/AIDS	√	√**
FDC 112/FVA 111	Pre-Vocational Skills (Art related)	√	√
FDC 122	Mathematics 2 (Trigonometry & Geometry)	√	√
FDC 123	Ghanaian Language and Culture 2 (literature & Culture Studies)	√	√
FVA 121	Pre-Vocational Skills (Sewing)		√
FVA 122	Pre-Vocational Skills (Catering/)		√
FDC 128	Environmental and Social Studies 2	√	√
FDC 211/ FDC 221	Methods of Teaching English (with Elements of Literature)	√	√
FDC 213	*Methods of Teaching Ghanaian Language and Culture		√
FDC 214/PFC 212	Methods of Teaching Integrated Science	√	√
PRA 221	*Methods of Teaching Music and Dance		√
PRA 122	*Methods of Teaching Physical Education		√
FVH 122	*Methods of Teaching Vocational Skills (Catering)		√
FVH 121	*Methods of Teaching Vocational Skills (Sewing)		√
FVH 221	*Vocational Skills (Art-Related)		√
EPS 221	Educating the Individual with Special needs	√	√
EPS 222	Assessment and Research in Basic Schools		√
PFC 211	Methods of Teaching English (Primary)	√	
PFC 212	Methods of Teaching Primary School. Mathematics	√	√
PFC 218	Methods of Teaching Environmental and Social Studies 2	√	√
EPS 301	Trends in Education and School Management	√	√
FDC 212	Statistics and Probability	√	√

Code	Course Title	UTDBE	DBE
GNS 221	Information and Communication Technology	√	√
ETP 390	Teaching Practice (1)	√	√
PFC 211J	Methods of Teaching English (Junior Secondary)	√	
PFC 222	Methods of Teaching JSS Mathematics	√	√
EPS 123	Principles and Methods of Early Childhood Teaching	√	
FDC 224	Integrated Science 3	√	√
FDC 228/PFC 228	Environmental and Social Studies 3	√	√
FDC 222	Further Algebra	√	√
FVH 222	*Pre-Vocational Skills (Catering)		√
FVH 221	*Pre-Vocational Skills (Sewing)		√
ETP 390	Teaching Practice (2)	√	√
EPS 302/312	Introduction to Guidance and Counselling	√	√
AGN 112	*Agricultural Science		√
FDC 219	*Religious and Moral Education		√
EPS 321	Project Work		√

Source: UTDBE Impact Assessment Endline, 2016

* Elective Courses for DBE students

** DBE students take this course twice.

Table 4.1 reveals that the DBE and UTDBE programmes are very similar in content and that there are very few courses which the UTDBE students do not study. The UTDBE programme has four courses which the DBE programme does not have, which include: (1) Methods of Teaching English (Junior Secondary); (2) Principles and Methods of Early Childhood Teaching; (3) Child and Adolescent Development and Learning; and (4) Methods of Teaching English (Primary). On the other hand the General DBE programme has two core courses not offered in the UTDBE programme. These are: (1) Assessment and Research in Basic Schools; and (2) Pre-Vocational Skills (Sewing and Catering). In addition, the DBE students are required to submit a final project.

A major difference between the two programmes is in relation to the 10 elective courses for the DBE students which are not available for the UTDBE students. One elective course which has been overlooked in the UTDBE course content is FDC 213--- Methods of Teaching Ghanaian Language and Culture which is offered to DBE students. Though FDC 113 [Ghanaian Language and Culture (Language and Language Teaching)] and FDC 123 [Ghanaian Language and Culture 2 (Literature & Culture Studies)] are offered to both UTDBE and DBE students, the DBE students have FDC 213 as an elective course.

The comparison of the courses available on both programmes reveal that teachers are offered similar course content knowledge on both programmes but much more tutor time, coaching and observation is provided on the DBE programme compared to the UTDBE programme.

4.2 UTDBE Trainee Content Knowledge Based on Examination Results

UTDBE trainees' improvement in Content Knowledge was assessed by tracking performance based on their examination results in English Language over a three year period (2012/2013, 2013/2014 and 2014/2015). The English Language subject was selected for analysis because it is studied over a three-year period and has provided the opportunity to evaluate improvement over the first three years of the cohort of UTDBE trainees. In the first year, 2012/2013, the trainees took the FDC 111 [English Language Studies] course and were examined in May 2013. In the second year, 2013/2014, they took the FDC 121 [English I with Elements of Literature] and were examined in May 2014. In the third year, 2014/2015, they studied PFC 211 [Methods of Teaching English (Primary)] and were examined in May 2015.

The structure of the courses is such that the content of the second year course (FDC 121) demanded the first year course (FDC 111) content as a prerequisite. A good understanding of the first year content was necessary for good performance in the second year. FDC 121 is therefore of a higher content than FDC 111. Likewise, the content of PFC 211 requires knowledge of FDC 111 and FDC 121. Improvement in content knowledge is shown by obtaining the same or a higher grade in the following year's course. For example, a trainee who obtains a B in FDC 111, a B in FDC 121 and a B in PFC 211 has improved in content knowledge because the content for subsequent years is higher and requires more skill and competency.

This analysis is based on raw examination scores obtained by teacher trainees from four Colleges of Education (Atebubu, Enchi, Jasikan and Offinso) with a total of 2,680 teacher trainees. These are the same Colleges of Education where the baseline and endline field work was carried out. Tables 4.2 – 4.4 provides data on results (performance) of UTDBE trainees in English Language Studies, Methods of Teaching English, and Elements of Literature.

Table 4.2: Descriptive Statistics/Results for UTDBE Trainees Taking FDC 111 – English Language Studies

College	Number	Mean (%)	Standard Deviation
Atebubu	891	55.0	6.46
Enchi	480	58.6	6.47
Jasikan	654	55.5	8.08
Offinso	835	55.1	7.72
Total	2860	55.8	7.05

Source: UTDBE Impact Assessment Endline, 2016

Table 4.2 reveals that the performance for UTDBE trainees for those taking the first year English Language course: FDC 111 ranged between 55% to 58.6% across the four Colleges of Education.

Table 4.3: Descriptive Statistics/results for Second Year FDC 121 – English I (with Elements of Literature)

College	N	Mean	Standard Deviation
Atebubu	891	56.6	7.29
Enchi	480	55.5	6.98
Jasikan	654	56.8	6.89
Offinso	835	60.3	6.07
Total	2860	57.6	7.05

Source: UTDBE Impact Assessment Endline, 2016

Table 4.3 reveals that the performance for UTDBE trainees taking the second semester English Language course: FDC 121 ranged between 55.5% to 60.3% across the four Colleges of Education.

Table 4.4: Descriptive Statistics for PFC 211 – Methods of Teaching English (Primary)

College	N	Mean	Standard Deviation
Atebubu	891	55.7	10.18
Enchi	480	51.2	9.06
Jasikan	654	56.5	9.96
Offinso	835	58.1	9.71
Total	2860	55.8	10.07

Source: UTDBE Impact Assessment Endline, 2016

A t-test was done to compare the results of two different tests to check if differences in the end results were significant or due to chance. In this situation, the most appropriate test, a paired sample *t*-test of significance was first conducted to find out if there was a significant improvement in English content knowledge. This test is conducted under the null hypothesis: H_0 : There is no improvement in trainees' performance in English Language against an alternative H_1 : There is improvement in trainees' performance in English Language. We reject the null hypothesis and argue that there is improvement in performance if the computed *t*-test statistic exceeds the critical probability value (*p*-value) of less than 5% significance (i.e. $p < 0.05$).

The results are shown in Tables 4.5 – 4.7.

Table 4.5: Results of Paired Sample *t*-test for FDC 111 and FDC 121

Course Code	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
FDC 111 (Year 1)	2860	55.8	7.34	0.137	-12.88	2859	.000
FDC 121 (Year 2)	2860	57.6	7.05	0.132			

Source: UTDBE Impact Assessment Endline, 2016

A comparison of the means in Table 4.5 for FDC 111 (Mean = 55.8) and FDC 121 (Mean = 57.6) shows that there is a slight improvement in content knowledge from Year 1 to Year 2 in English language for UTDBE trainees.

Table 4.5 shows that the result is statistically significant ($t_{0.05, 2859} = -12.88$; $p < 0.05$). This implies that, in general, performance in the English Language has improved from Year 1 to Year 2 for UTDBE trainees in the programme.

Table 4.6: Results of Paired Sample *t*-test for FDC 111 and PFC 211

Course Code	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
FDC 111 (Year 1)	2860	55.8	7.34	0.137	-0.463	2859	0.644
PFC 211 (Year 3)	2860	55.8	10.07	0.132			

Source: UTDBE Impact Assessment Endline, 2016

A comparison of the means in Table 4.6 for FDC 111 (Mean = 55.8) and PFC 211 (Mean = 55.8) shows that the means are the same. Though the means are the same, we can argue that there is improvement in content knowledge for UTDBE trainees since the content in PFC 211 (Methods of Teaching English) in Year Three is higher than FDC 111 (English Language Studies) in Year One. PFC 211 requires higher skill, competency and knowledge than FDC 111.

Table 4.7: Results of Paired Sample *t*-test for FDC 121 and PFC 211

Course Code	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
FDC 121 (Year 2)	2860	57.6	7.05	0.132	10.674	2859	0.000
PFC 211 (Year 3)	2860	55.8	10.07	0.132			

Source: UTDBE Impact Assessment Endline, 2016

Table 4.7 shows that the result is statistically significant ($t_{0.05, 2859} = 10.674$; $p < 0.05$). This implies that there is a difference in performance in English Language. However, since the mean for FDC 121 (Mean = 57.6) is higher than that of PFC 211 (Mean = 55.8) it could be said that there has been no improvement in the results from Year Two to Year Three since Year Two mean is higher.

Another analysis was carried out to find any improvement in content knowledge by individual raw scores. A trainee who obtained the same or a better score in a higher content course is deemed to have improved. Table 4.8 shows the result of the analysis.

Table 4.8: Improvement Status in English Language

Courses	Indication of improvement in English		Total
	No improvement	Improvement	
FDC 111 → FDC 121	39.0% (1115)	61.0% (1745)	100% (2860)
FDC 111 → PFC 211	48.6% (1391)	51.4% (1469)	100% (2860)
FDC 121 → PFC 211	56.8 % (1625)	43.2% (1235)	100% (2860)

Figures in brackets () are the absolute number of trainees
Source: UTDBE IA Endline, 2016

Table 4.8 reveals that 61.0% of the UTDBE trainees improved in content knowledge from the year 1 FDC 111 course to FDC 121 in Year Two. In addition, 51.4 % improved in content knowledge from FDC 111 to PFC 211 in Year Three while 43.2% improved from FDC 121 to PFC 211. In general, the results show that trainee teachers from the four Colleges of Education have improved in English Language content knowledge over the course of the three year period examined.

4.3 Comparison of DBE and UTDBE Examination Results

This section has focussed on the comparison of performance in the course, EPS 301--Trends in Education and School Management and the course Integrated Science from Year One 2012/2013. EPS 301 is the only common examination paper taken by both groups of DBE and UTDBE students in 2015 and thus could be compared. The UTDBE students wrote it as the end-of their third year examinations in May 2015 while the DBE students wrote it at the end-of-third year examination in July 2015. The paper consisted of two sections, A (40 objective-type items where students answered all questions) and a section B (with four questions in which they answered any two questions). Although the students took the examinations at different times, the questions were of the same standard and the results could be compared.

The comparison was carried out based on exam results from Atebubu, Enchi, Jasikan and Offinso Colleges of Education where both DBE and UTDBE students took the course. Table 4.9 shows the distribution of students.

Table 4.9: Distribution of Students by Programme and College

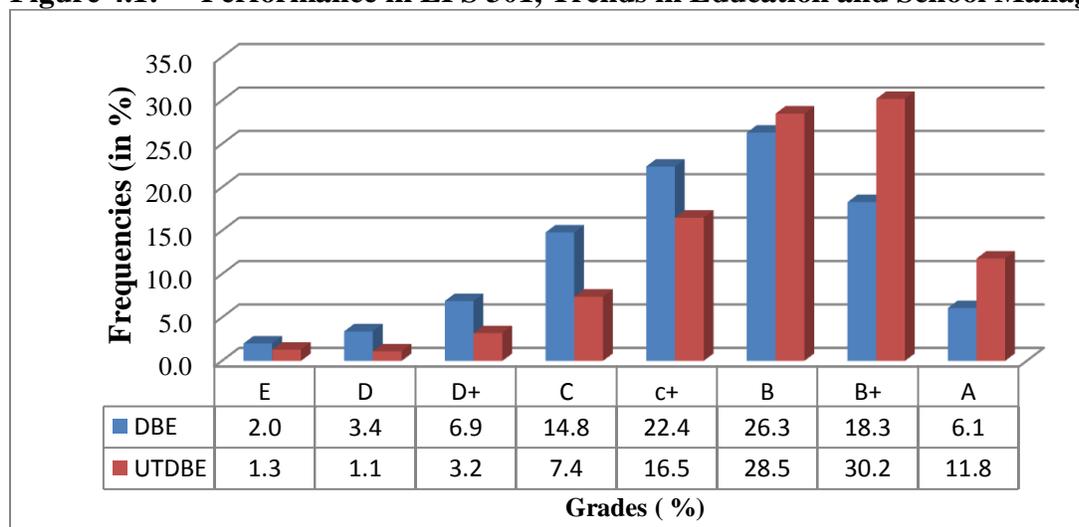
Programme	College of Education				Total
	Atebubu	Enchi	Jasikan	Offinso	
DBE	303	168	308	295	1073
UTDBE	918	538	852	665	2973

Programme	College of Education				Total
	Atebubu	Enchi	Jasikan	Offinso	
DBE	303	168	308	295	1073
UTDBE	918	538	852	665	2973
Total	1220	706	1160	960	4046

Source: UTDBE Impact Assessment Endline, 2016

The results of the students, using letter grades are depicted graphically in Figure 4.1. The figures in the diagram are in percentages.

Figure 4.1: Performance in EPS 301, Trends in Education and School Management



Source: UTDBE Impact Assessment Endline, 2016

The Figure 4.1 above shows that in general, at the lower grades (E, D, D+, C, C+), there is a higher percentage of DBE students, whereas at the higher grades, (B, B+, A), there is a higher percentage of UTDBE students. The picture shows that the UTDBE students performed better than the DBE students for the course: Trends in Education and School Management. It could be observed that, while the modal grade for the DBEs is B, it was B+ for the UTDBE students.

A further analysis was carried out using a statistical test of two independent samples t-test. The results are presented in Table 4.10

Table 4.10: Results of the Two Independent Samples t test

Course Code	N	Mean	Std. Deviation	t	Df	Sig. (2-tailed)
DBE	1073	68.8	8.00	11.8	1831	.000
UTDBE	2973	72.1	7.68			

Source: UTDBE Impact Assessment Endline, 2016

Results from the test suggest that UTDBE trainees performed better than the DBE trainees for the course Trends in Education and School Management. This is seen in the higher mean performance of UTDBE group (Mean = 72.1) compared to the DBE group (Mean = 68.8).

A statistical test of significance was conducted based on the null hypothesis that differences in the performance are not significant. Results from this analysis reveal that the difference in performance is statistically significant as revealed in Table 4.9 ($t_{1831} = 11.8$; $p < 0.05$). This implies that, in general, UTDBE students performed better (Mean = 72.1) than the DBE students (Mean = 68.8).

This result is not surprising. The UTDBE trainees are already teachers in the classroom and have practical experience and knowledge which can be applied to the course content-- Trends in Education and School Management. Though College of Education tutors and others indicated that UTDBE students were not performing well in the classroom, they showed by their performance in this course that they were able to use their practical understanding of teaching to their theoretical course work on teaching. This could also be an indication that the College Tutors had not visited the trainees in the field enough to make a full assessment of their competencies. As indicated in chapter 3, the UTDBE trainees are expected to be untrained teachers in the classroom. One of the selection criteria is that UTDBE candidates must be untrained teachers but engaged in teaching in a school. They are to acquire professional competence on the job and head teachers also are expected to act as their mentors whilst professional teachers provide the needed support. Research finding on UTDBE trainee classroom teaching experience as indicated in chapter five (5.6) reveals that their years of experience ranged from 1-12 years. The median tenure for trainees was 3 and half years.

The second examination analysis involves the course Integrated Science using 2111 trainees from Enchi and Atebubu Colleges of Education. The raw scores needed to obtain the means and standard deviations were not available except the grades the students obtained. The analysis was carried out by converting the grades obtained to numeric values as follows: A = 8, B+ = 7, B = 6, C+ = 5, C = 4, D+ = 3, D = 2, E = 1.

Table 4.11: Distribution of Students by Programme and College

Programme	College of Education		Total
	Enchi	Atebubu	
DBE	168	423	591
UTDBE	551	969	1520
Total	719	1392	2111

Source: UTDBE Impact Assessment Endline, 2016

A t-test of two independent samples was carried out to analyse the performance of DBE and UTDBE trainees based on the null hypothesis that the difference in the performance in Integrated Science is not significant. The results are in Table 4.12.

Table 4.12: Results of the Two Independent Samples t test

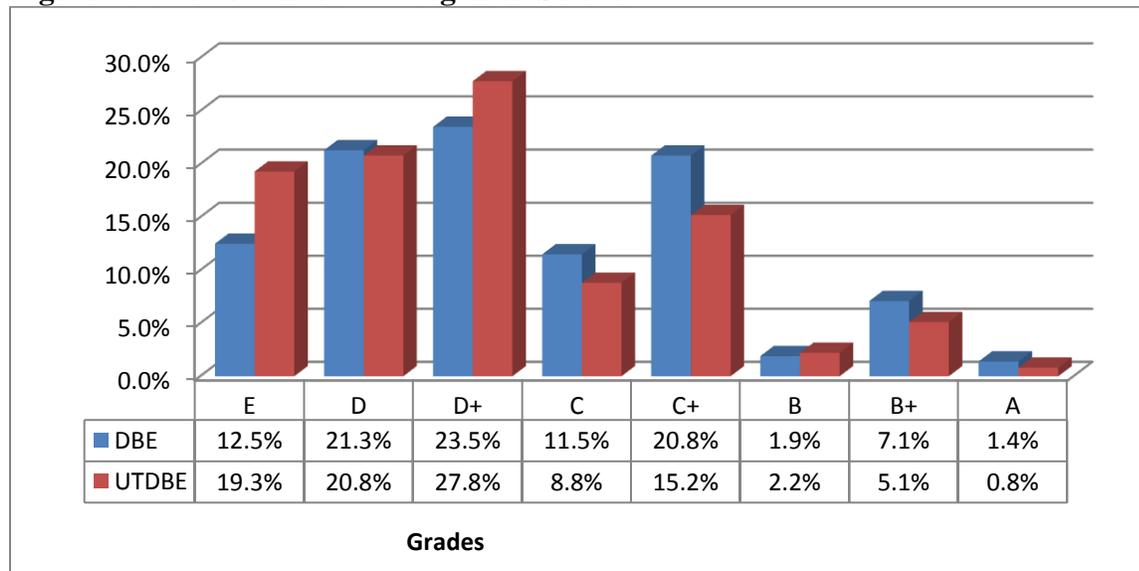
Course Code	N	Mean	Std. Deviation	T	Df	Sig. (2-tailed)
DBE	591	3.31	1.61	4.66	2109	.000
UTDBE	1520	2.95	1.60			

Source: UTDBE Impact Assessment Endline, 2016

Table 4.12 shows that the result is statistically significant ($t_{0.0252109} = 4.66$; $p < 0.05$). This implies that, in general, DBE students performed better (Mean = 3.31) than the UTDBE students (Mean = 2.95) in Integrated Science.

Figure 4.2 depicts graphically the performance by DBE and UTDBE students. The diagram shows that, in general, at the lower grades (E, D+) there is a higher percentage of UTDBE students, whereas at the higher grades (C, C+, B+, A), there is a higher percentage of DBE students.

Figure 4.2: Performance in Integrated Science



Source: UTDBE Impact Assessment Endline, 2016

4.4 Conclusion

The general results of the comparison of examination results shows that, while the DBE trainees performed better in the core subject area of Integrated Science, the UTDBE trainees performed better in the professional course-- Trends in Education and School Management. The performance of the UTDBE students in the professional course is significant. They were academically weaker as compared with the DBE students. In addition, they had less contact hours with tutors and went through a more stressful and rigorous programme since they were still working and had family obligations while undertaking the UTDBE coursework . Though starting from a weaker academic point, they had much more professional experience in teaching in the classroom which was displayed through their performance in exam results. It can therefore be argued that the “value added” to UTDBE learners in some courses is greater than the “value added” to DBE learners.

Chapter 5: Background Characteristics, Motivation and Aspirations of UTDBE Trainees

5.1 Introduction

The Untrained Teacher Diploma in Basic Education (UTDBE) trainees are drawn from the “most deprived districts” in the country; there are certain characteristics and factors that impact on their performance and training in several different respects. This chapter will examine these characteristics at the national, regional, district, school and individual level. Factors such as gender, community affinity, availability of social services and deprivation/location will be explored in relation to the impact on their performance, teaching outcomes at their schools and retention within the deprived districts.

This chapter of the UTDBE Programme Impact Assessment Endline Survey report throws light on specific indicators that play a significant role in the lives of the UTDBE trainees, their schools, and districts. Some of these indicators include national characteristics such as the size of the cohort of trainees at college level, district level, and rural-urban location. Other indicators that will be highlighted in this chapter include trainee motivation in becoming a teacher, and aspirations of the UTDBE trainees. Finally, the chapter will also explore the level of satisfaction by UTDBE trainees with regard to the programme and their likelihood of retention in the community, school and district in which they currently serve.

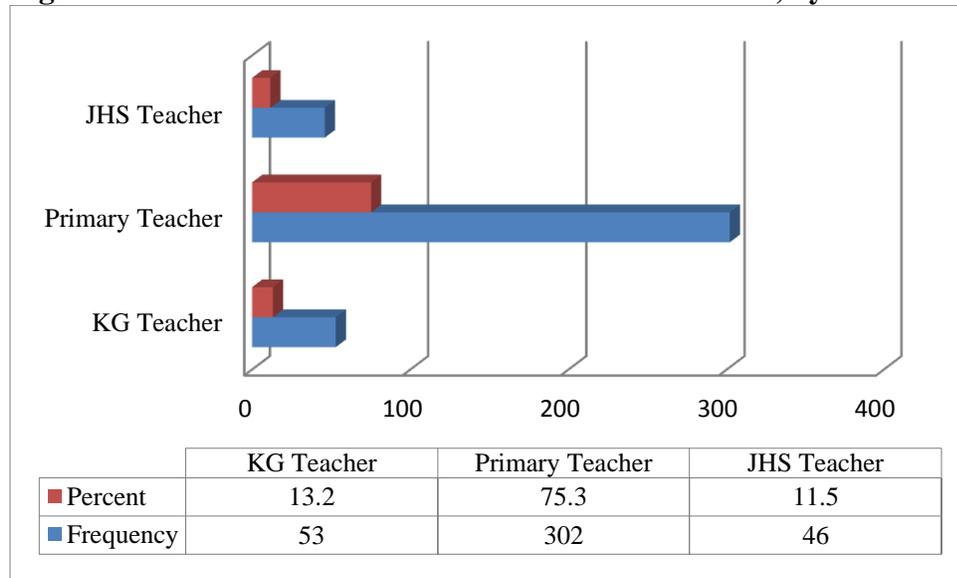
5.2 Proportions of Teachers at Each Grade Level

Head teacher interviews suggest that the most qualified teachers in any school are placed in the upper primary levels due to their experience and to ensure that the children gain the needed benefits of education before they transition to JHS. Interviews with heads and teachers themselves reveal that the higher level at which a teacher is placed also reflects the higher level of prestige placed on that teacher. Thus, teachers in Ghana are often judged by the level in which they teach as well as the categorization of professional and non-professional teachers. The minimum teaching qualification of professional teachers for basic school level is the DBE obtained from an accredited higher educational institution for training teachers. The minimum teaching qualification of professional teachers for second cycle level is a Bachelor’s degree in the appropriate subject(s) for that level, or a BA/BSc. (in any teaching subject) in addition to a post-graduate diploma in education (PGDE) or its equivalent.

Non-professional teachers such as the UTDBE trainees are categorised into three types: firstly, persons holding the Senior High School (SHS) certificate with three credits in core subjects, including English and Mathematics; secondly, persons with a diploma from an accredited polytechnics and other non-teaching tertiary institutions (e.g. HND); and thirdly, university graduates (without certificates in education).

Data from the UTDBE Endline Survey revealed that the majority of UTDBE trainees interviewed were teaching at the primary schools, with just a few placed at the KG and JHS levels. From figure 5.1 below, it can be seen that, out of the total of 401 trainees interviewed, 302 (75.3%) were primary teachers, teaching at the lower primary or upper primary level. Only 53 (13.2%) reported teaching at the KG level, with the remaining 46 teachers (11.5%) teaching at the JHS level.

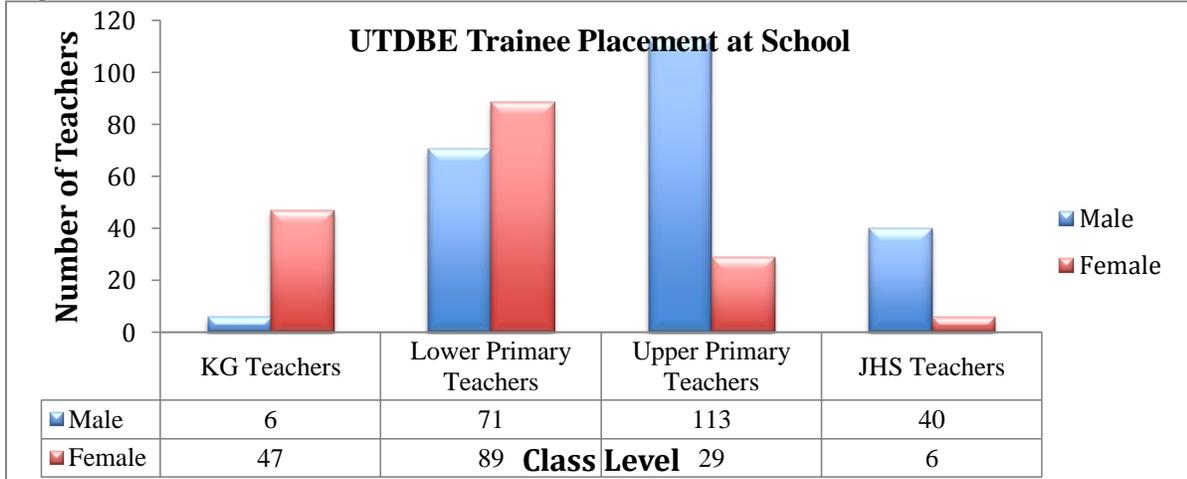
Figure 5.1: Numbers of UTDBE Trainees Interviewed, by Grade Level



Source: UTDBE Impact Assessment Endline, 2016

Further to this was an analysis of the placement of the UTDBE trainees interviewed by gender, class level and location. Table 5.1 (see annex) reveals that across the five regions, the UTDBE trainee teachers are mainly assigned to the primary level, with the majority of them being in the lower primary grades. A very small proportion are found teaching at the KG level with the highest number of KG teachers (26) found in Brong Ahafo. It is worth noting that, apart from the Brong Ahafo Region where the numbers of female trainee teachers were more than the male trainee teachers, the other four regions had a male dominated teaching force. Female teachers were greatest in the KG and lower primary levels across all the five sampled regions. The findings below reveal that more female UTDBE trainees were assigned to lower level classrooms. Figure 5.2 illustrates the placement of UTDBE trainees at the school level.

Figure 5.2: UTDBE Trainees Placement at School Level



Source: UTDBE Impact Assessment Endline, 2016

Figure 5.1b (See 5.1b annex) reveals that the vast majority of UTDBE female teachers were placed at the lower primary level and KG levels while the majority of male teachers were serving at the upper primary level and lower primary. Very few female UTDBE trainees were serving at JHS level.

5.3 Characteristics of the UTDBE Trainees based on the Endline Sample at District and School Level

This section of the Endline reports on the UTDBE trainees across the school sites and districts. It focuses on characteristics of UTDBE trainees such as gender representation; whether the school is in an urban or rural zone of the district; the level of qualification of each of the trainees interviewed; and the average number of trainees found in schools in particular districts.

Table 5.1 reveals that the majority of the UTDBE trainees interviewed across the nine sampled districts were Senior Secondary School graduates with either WASSCE or SSSCE certificates with only a few trainees having other qualifications (e.g. ‘O’ or ‘A’ levels). For instance, 73.1% were WASSCE certificate holders, and 24.9% were SSSCE certificate holders. This reflects the larger UTDBE cohort of 7,817.²⁰

²⁰ The UTDBE cohort of teachers in 2012 cohort contained 7817 trainees in total at inception of GPEG. Current enrolment of UTDBE trainees is 6744 for 2014/15 academic year.

Table 5.1: Educational Qualifications of UTDBE Trainees

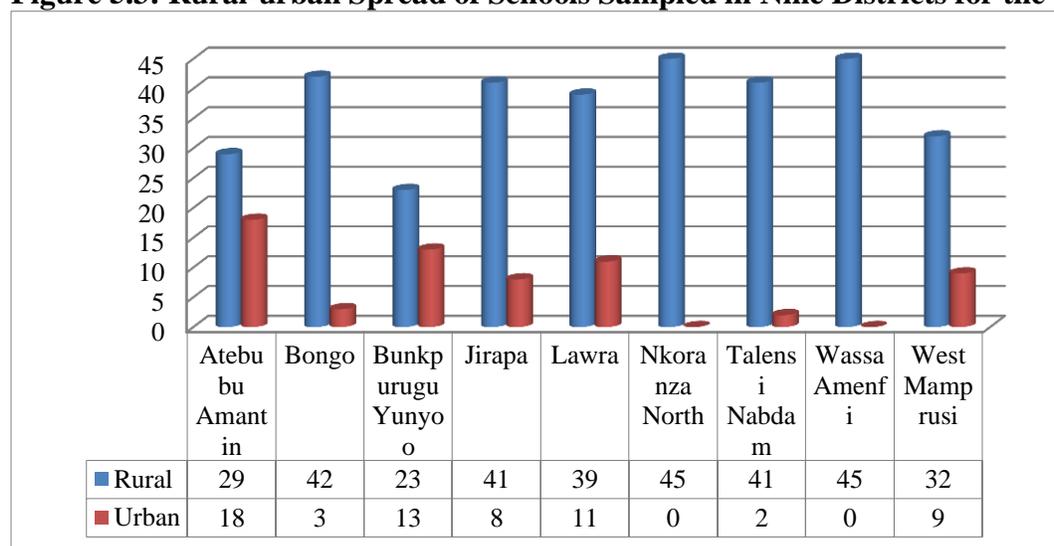
Education Qualification	Frequency	Percentage
A-level	2	.5
DBS	3	.7
GCE 'O' Level	3	.7
SSSCE	100	24.9
WASSCE	293	73.1
Total	401	100.0

Source: UTDBE Impact Assessment Endline, 2016

5.4 Rural-Urban Trainee Postings

The vast majority of 337 UTDBE trainees (84%) out of a total of 401 trainees interviewed were teaching in rural communities, the remainder, 64 (16%) were found teaching in the urban centres which in most cases were the district capitals. With the exception of Nkoranza North in the Brong Ahafo Region and Wassa Amenfi in the Western Region where all the UTDBE trainees were drawn from the rural hard-to-reach communities, the other sampled districts across the 5 regions had a the majority of their UTDBE trainees teaching in rural, and hard-to-reach communities. The focus of the endline survey, as well as the baseline survey, was to explore the key factors that support or impinge on teacher retention. According to the typology that guided the sampling and selection of both circuits and schools for inclusion in the study, the sample included schools in each district with an 80% rural and 20% urban spread. The basic objective was to understand the teacher retention and performance dynamics taking into consideration the location, condition, economic and social factors. All the 240 schools and communities observed, for the survey across the nine districts satisfied the first criteria --- 80% rural and 20% urban communities. The sample was further refined to ensure that three levels of deprivation were also considered: extremely deprived, deprived and less deprived. The sample revisited the same schools and teachers that were part of the baseline and midline assessment.

Figure 5.3: Rural-urban Spread of Schools Sampled in Nine Districts for the UTDBE



Source: UTDBE Impact Assessment End line, 2016

Table 5.2 below provides detailed information on the number and percentages of male and female trainees across the nine districts and the five regions where the study was conducted over the three year period.

Table 5.2: District, Region, and Gender of UTDBE Trainees

Name of District	Gender of Teacher		Total
	Female	Male	
Atebubu Amantin	26 (14.9%)	21 (9.3%)	47 (11.8%)
Bongo	16 (9.2%)	29 (12.8%)	45 (11.2%)
Bunkpurugu Yunyoo	6 (3.4%)	30 (13.3%)	36 (9.0%)
Jirapa	22 (12.6%)	26 (11.5%)	48 (12.0%)
Lawra	29 (16.7%)	24 (10.6%)	53 (13.2%)
Nkoranza North	27 (15.5%)	17 (7.5%)	44 (11.0%)
Talensi Nabdam	14 (8.0%)	29 (12.8%)	43 (10.8%)
Wassa Amenfi	18 (10.3%)	26 (11.5%)	44 (11.0%)
West Mamprusi	16 (9.2%)	24 (10.6%)	40 (10.0%)
Total	174 (100.0%)	226 (100.0%)	400 (100.0%)
Brong Ahafo	53 (30.5%)	38 (16.8%)	91(22.8%)
Northern	22 (12.6%)	54 (23.9%)	76 (19.0%)
Upper East	30 (17.2%)	58 (25.7%)	88 (22.0%)
Upper West	51 (29.3%)	50 (22.1%)	101 (25.2%)
Western	18 (10.3%)	26 (11.5%)	44 (11.0%)
Total	174 (100.0%)	226 (100.0%)	400 (100.0%)

Source: UTDBE Impact Assessment Endline, 2016

From the table above, the highest percentage of female trainees was from Lawra District (Upper West Region) (16.7%) unlike during the baseline when the highest was recorded in Nkoranza North District (17%). The region with the highest percentage of female trainees was Brong Ahafo Region (30.5%) although there has been a slight decrease in the percentage of female teachers from the baseline survey (32.1% to 30.5%). Conversely, during the endline survey, Bunkpurugu Yunyoo District (3.4%) and the Northern and Western Regions 12.6% and 10.3% respectively had the least number of female UTDBE trainees.

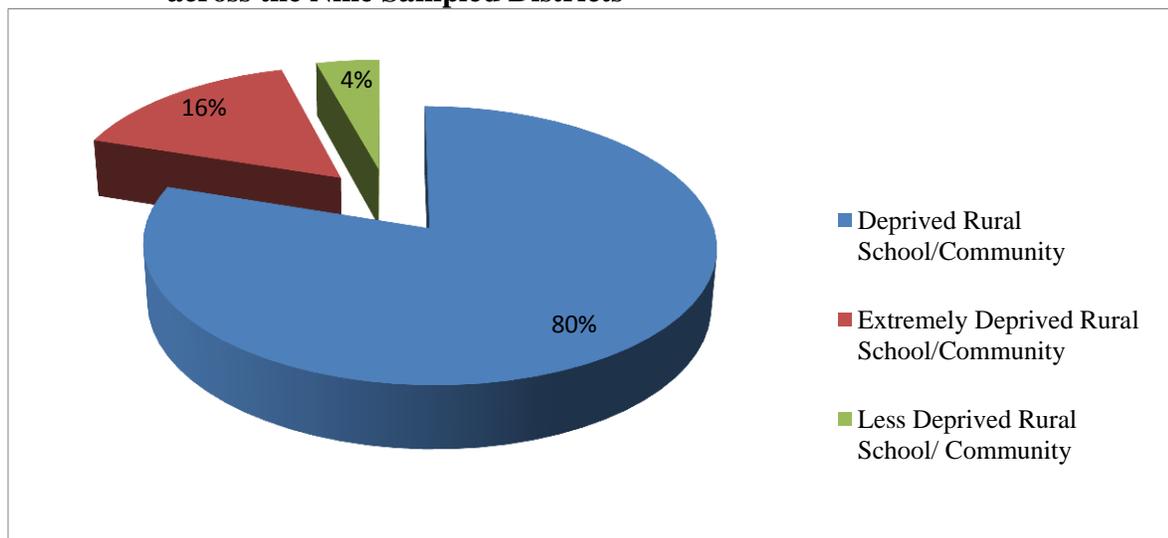
In comparing these results to the baseline survey, it is observed that the percentages recorded for each district and region during the endline survey decreased due mainly to drop out from the programme. Data analysis as indicated in chapter two gives dropout rate for female to be 19.9 as against 18.1 for males. The total dropout rate is estimated to be 18.9. For instance, although Bunkpurugu Yunyoo District in the Northern Region still recorded the least percentages of female trainees interviewed, the percentages during the endline survey were less as compared to the baseline survey. During the baseline survey the Upper East Region was reported to have the least female trainees interviewed, but during the endline survey it was the Western Region that recorded the least number of female trainees interviewed.

5.5 Perceptions of Deprivation Based on Interviews with UTDBE Trainees

The use of non-monetary deprivation indicators greatly complement our understanding of the context in which teachers work and the extent to which this impinges on teacher retention. Alkire and Santos (2010) outlined deprivation using three areas of a multi-dimensional poverty index, namely, education, health and living standard. For the purpose of this study, the six social service indicators used to measure living standards were used. These social service indicators include: access to electricity; sanitation facility; access to safe drinking water; type of flooring; type of cooking fuel; and overcrowding in sleeping (at least 3 people per room).

During the baseline and endline survey phases we asked the UTDBE trainees to classify their community/schools by categories of being ‘deprived rural school/community’, ‘extremely deprived school/community’, and ‘non-deprived school/community’ in order to assess how they perceived the community where they teach in comparison with other communities. They classified the community based on their perceptions. From the figure 5.3 below, it can be seen that as many as 321 (80%) of the trainees are reported to have classified their community schools as deprived rural schools based on the absence of some basic amenities such as potable drinking water and electricity. Sixty-three (63) (15.7%) are reported to have said their community schools were located in extremely deprived rural communities, with only 17 (4.2%) trainees stating their schools were located in less deprived rural communities. This finding in effect bring to light the fact that the majority of the trainees were teaching in deprived rural communities with only a few UTDBE trainees in the less deprived and extremely deprived districts.

Figure 5.4: Percentage of Communities Categorized by the Three Levels of Deprivation across the Nine Sampled Districts



Source: UTDBE Impact Assessment Endline, 2016

With regard to the level of deprivation across sex, 181 of the male trainees and 140 of the female trainees reported that their schools were located in deprived rural communities. The trainees were asked to provide reasons for their choices in categorizing their community/schools. These reasons ranged from school-based, social, economic and personal reasons. Some of these reasons are recapped here in the UTDBE trainees' voices across the nine sampled districts:

“The school lacks text books, accomodation. Children's parents can't afford to buy uniforms and sandals”.

“The community lacks a lot of things like proper classrooms, good food and others”.

“Because as compared to other schools in the district the school lacks adequate classroom structures especially the KG”.

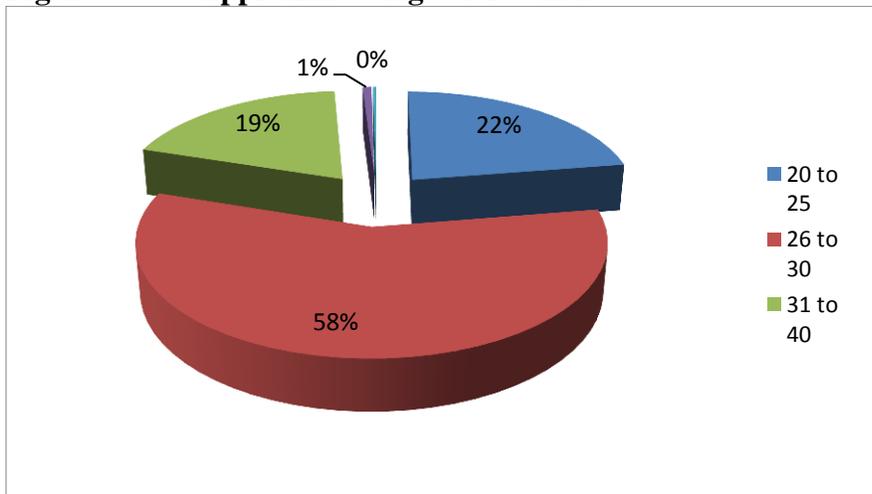
“Because bad roads, difficult to get food and non food items to buy. No clinic”.

“There are not TLM in the school. No playing ground equipment for play. The community lacks a lot of goods”.

5.6 Background Characteristics of UTDBE Trainees: Age and Length of Service in their Community

As reported during the baseline survey, the number of years a teacher stays in the teaching profession can reveal a great deal about teachers and the education sector as a whole. In Ghana, it is not uncommon for teachers to transition from the teaching field to another profession within the first 10 years of teaching. Teacher retention is a serious challenge confronting the educational system since most teachers remain in the teaching profession after training for only 4 years (MUSTER, Hedges, 2000). For teachers in Ghana, the length of time at a particular school or community helps us to better understand the likelihood of their retention. When the question ‘how long have you been teaching’ was posed to the UTDBE trainees, the analysis shows that the median tenure for trainees was three and half years. The newest UTDBE trainees had experience in the teaching field for about one year while the oldest UTDBE trainees had teaching experience for 12 years. The baseline and endline stages also collected data on the ages of trainees as well as the number of years they have served as pupil teachers. This is depicted in the figures below.

Figure 5.5: Approximate Age of Teacher



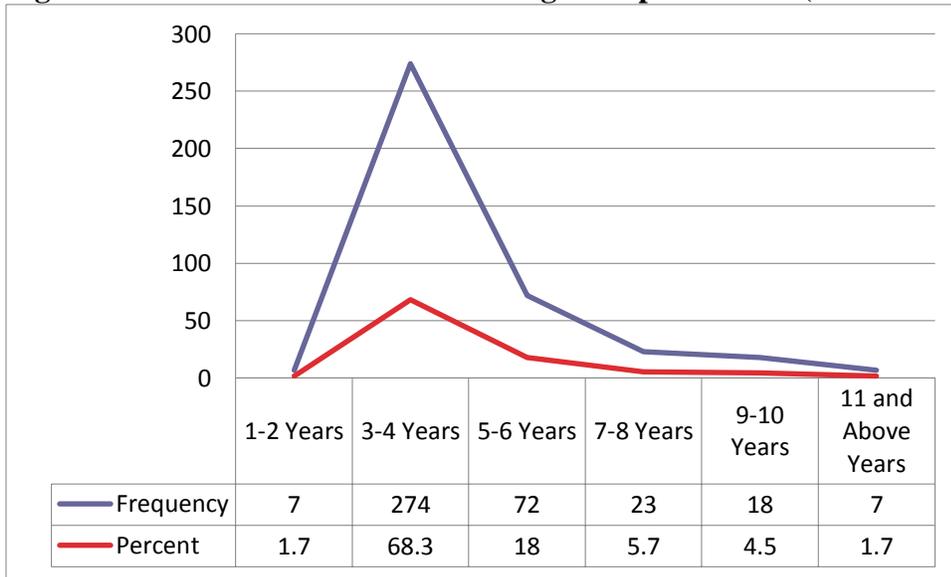
Source: UTDBE Impact Assessment Endline, 2016

Figure 5.5 above refers to the ages of the trainees and indicates that 58% are aged between 26 and 30, 22% are aged between 20 and 25, 19% were aged between 31 and 40 years and the 41 to 50 age cohort constituted 1%. The ages of UTDBE trainees between 26 and 30 recording 0%. This finding suggests that there is a tremendous difference between the UTDBE and regular DBE trainees with over 78% of UTDBE trainees being over the age of 25 years. This means that by 2016 when they are expected to graduate and migrate from non-professional to professional teacher status, they could potentially remain active in the teaching profession for about 30 additional years if they stay.

Figure 5.6 provides a snapshot of the length of time the trainees have been teaching in the basic school system often within their own community school. . The number of years the UTDBE

teacher has taught ranges from under 1 year to over 12 years. The vast majority (68%) of UTDBE trainees have been teaching for between 3 to 4 years. The curve is to be expected as non-professionals face two choices. Firstly, UTDBE trainees are often contract staff (or Pupil teachers of GES) whose tenure could be extended annually or be ended by the GES. Secondly, they could also opt to pursue more academic training and be absorbed into the teaching service as professional teachers or alternatively branch off into another career and leave teaching altogether. The trend has not really changed when comparing the baseline findings regarding the number of years trainees have served as pupil teachers to the current endline phase.

Figure 5.6: Numbers of Years Serving as Pupil Teacher (On and Off Payroll)

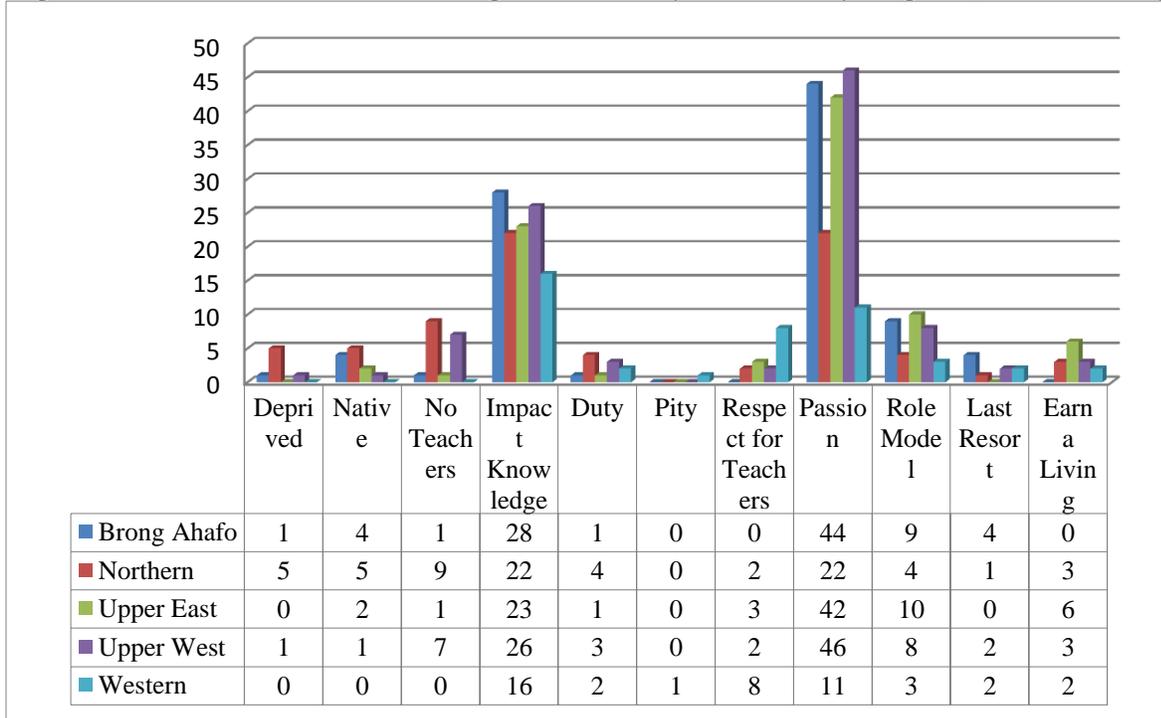


Source: UTDBE Impact Assessment Endline, 2016

5.7 Motivational Factors for Becoming a UTDBE Teacher Trainee

The motivational factors for becoming a teacher were also explored in relation to the UTDBE trainees' interests and potential retention in rural deprived communities after the programme. This section of the endline survey report explores why UTDBE trainees chose to enter the teaching profession and the importance of these motivations. This helps policy-makers, especially human resource and education managers, look into the entry behaviour and aspirations of UTDBE trainees; determine if the entry motivations change over time; and to examine whether there are differences in motivation due to demographic characteristics. In other words, this section examines some of the factors accounting for the question why teachers remain teaching in a particular school/community and district for a long period of time compared to others. It aims to ascertain or summarise the types of motivation UTDBE trainees ascribed for joining the teaching profession.

Figure 5.7: Motivation for Becoming a Teacher by Trainees by Region (actual in sample)



Source: UTDBE Impact Assessment Endline, 2016

A total of 10 different reasons were given by the 401 trainees interviewed during the endline survey as to why they were motivated to become teachers. Some of the reasons indicated that the trainees felt their communities were deprived communities, lacked teachers and so they needed to volunteer their services to teach in the communities. Others also felt that being “natives of the communities” it was their duty to teach the children in the community and give them the potential to be educated. Others wanted to “*impact the knowledge they have learnt to their younger brothers and sisters*”. A large number of trainees said they were passionate about the teaching profession, with some trainees attributing their motivation to the respect teachers are accorded in the community and took their position as a role models in their communities.

And finally a small number of trainees interviewed saw teaching as “*a last resort and a way to earn a living*”. From figure 5.7 above, it can be seen that, across all the five regions, the main motivational factor to becoming a teacher was their passion for the teaching profession and their desire to have an impact on knowledge within their community. All the regions recorded high numbers of trainees reporting that they “*have the passion for teaching and a dream of wanting to be teachers*”. The Upper West had the highest number of trainees (46) stating they had a passion for teaching. This is followed by the Brong Ahafo (44), Upper East (42), Northern (22) and Western (11) Regions. These are important findings given the fact that the vast majority of trainees had already been teaching for between 3-6 years in often very deprived rural communities.

The following are some examples of the motivation of the trainees for entering the UTDBE programme:

“My sister motivated me. I used to visit my sister who was a teacher and I fell in love with how she related to her pupils”.

“I enjoy teaching somebody taught me to become what I am so I also want to teach others to become someone in future”.

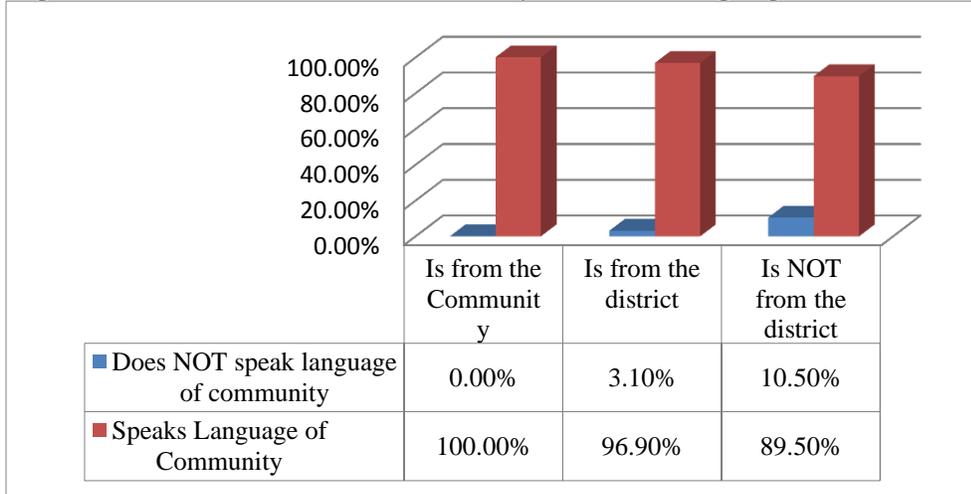
“I love children and have passion to impact the knowledge I have acquired to them”.

5.8 Affiliation to the Community and District: Language and Birth Place

One key measure relating to the performance and participation of the UTDBE trainees at the school level is the trainees’ location of residence and willingness to stay in the community where they teach and likely grew up. A number of studies on the quality of education in Ghana reveal that trained teachers continue to refuse postings to deprived rural and extremely deprived areas of the districts (Associates for Change, 2013). These deprived areas are also characterised by having a greater share of their population living below the poverty line as well as low enrolment of girls, poor pass rates in BECE English and low trained teacher ratios. To find out the commitment level of the UTDBE trainees, we sought to know more about the living conditions especially in the community where they currently reside when the school where they teach is in session. We also wanted to know whether their teaching position was a factor in the choice of residence or whether the trainees are natives of the community or the district.

Interviews with the UTDBE trainees on their place of residence in relation to their ability to speak the community language, elicited the following responses. From figure 5.8 below, it can be seen that the majority of the trainees were able to speak the language of the communities irrespective of whether they were from the community, from the district or not from the district. Further to this is the fact that all the trainees (100%) who said they were from the school communities were able to speak the local language. This is particularly important since most of the UTDBE trainees are placed at lower primary level where the language of instruction policy is to use the mother tongue language from KG to P3

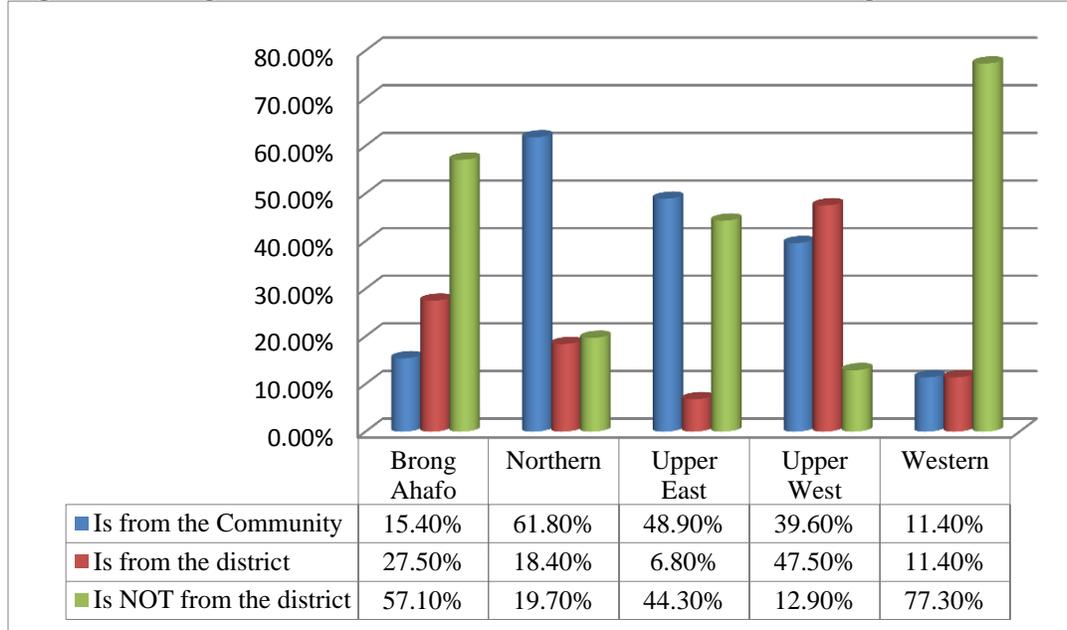
Figure 5.8: Affiliations and Proficiency in Local Language of Trainees



Source: UTDBE Impact Assessment Endline, 2016

Figures 5.9 and 5.10 portray the regional and district distributions of UTDBE trainees in the following categories: those who are “native” to the community where they serve; citizens of the district in which they teach; or not originally from the district they are working in. Figure 5.9 reveals that a large proportion of UTDBE trainees in the Brong Ahafo and Western Regions are not from the district or community they serve in. This is quite different in the Northern, Upper East and Upper West Regions where the trainees are either from the community or the districts where they are teaching. This is because these two regions are considered more advantaged, “developed” having more socio-economic amenities and “accessible” to larger towns compared to communities across the three northern regions; this is why the two regions attract a much higher proportion of teachers who are not from the community or district.

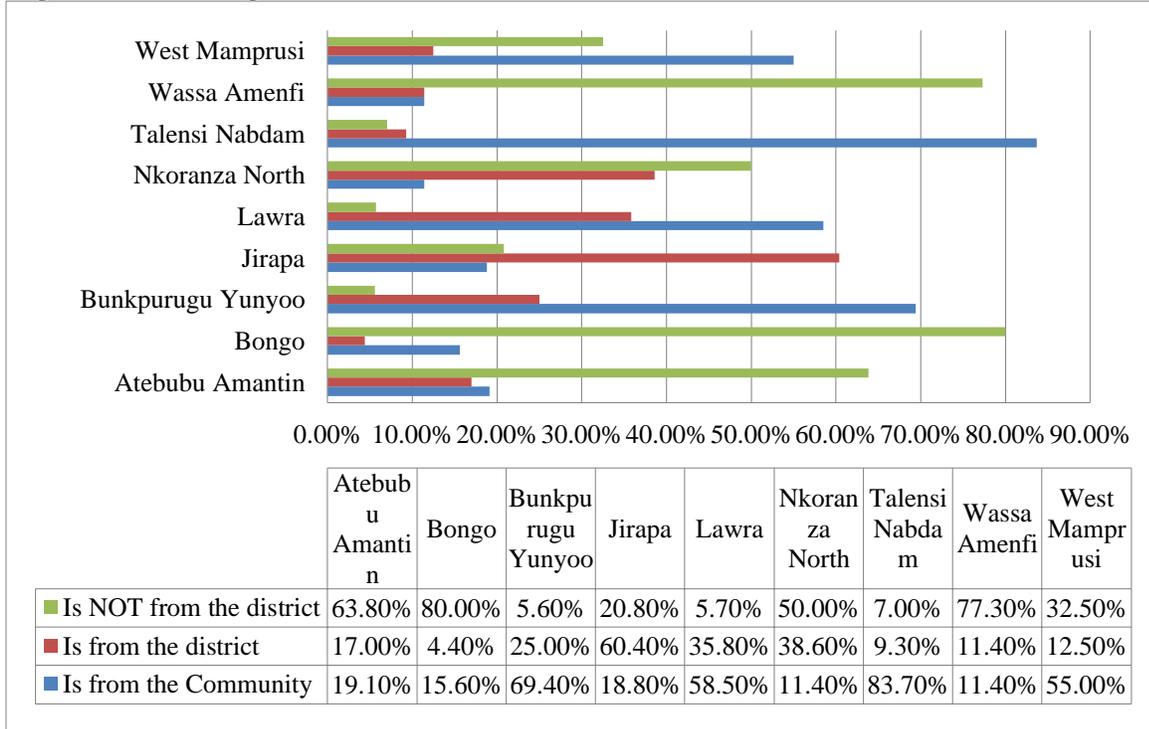
Figure 5.9: Regional Dimensions of UTDBE Trainees According to Community Affiliation



Source: UTDBE Impact Assessment Endline, 2016

At the district level, during the endline survey, Wassa Amenfi West District in the Western Region, Atebubu-Amanten in Brong Ahafo Region and Bongo District in the Upper East Region registered the highest distribution of trainees who do not come from the three districts. This still confirms the fact that, as reported during the baseline survey, these districts are in the transitional zone between the savannah and forest with the exception of Bongo District and therefore experience a high degree of migration especially from the north and adjoining districts to engage in farming activities. Districts having the majority of their trainees from the communities where they teach are Bunkpurugu Yunyoo (Northern Region), Talensi-Nabdam (Upper East), West Mamprusi (Northern Region) and Lawra (Upper West).

Figure 5.10: Origins of UTDBE Trainees across the Nine Districts



Source: UTDBE Impact Assessment Endline, 2016

Figure 5.10 of the endline survey reflects similar findings to what was reported during the baseline concerning the reasons for teacher retention--- affinity and origin of the UTDBE trainees. The findings suggest that a high proportion of trainees were actually from the community in the very high endemic poverty zones like Bunkpurugu Yunyoo, West Mamprusi, Talensi-Nabdam and Lawra in the Northern Region, Upper East and Upper West Regions respectively. This was compared to districts and regions with less deprived communities such as those in the Brong Ahafo and Western Regions where a high proportion of trainees were coming from outside the communities and districts. The field observations over the baseline and endline period show that trained teachers were unwilling to be posted to these remote rural areas within districts so the District Directors of Education were convinced that the UTDBE programme was the only means to attracting and retaining teachers in these areas.

In addition, the interviews with District Education Officers including Circuit Supervisors across sampled districts revealed that the UTDBE trainees related better to the school communities compared to the trained DBE teachers, many of whom were not natives of the communities where they teach. Interviews during field work further revealed that most of the UTDBE trainees were native of their communities and were actively involved in all community initiatives including school improvement projects and PTA meetings. Since schools are part of communities, the trainees think that they owe their communities an obligation to contribute to the development of their schools to enable their own community’s children to fully benefit. This was seen as one of the reasons that contributed to the high level of commitment exhibited by these UTDBE trainees during the baseline and endline stages. Findings during the baseline stage

suggest that community affinity was a strong factor in UTDBE retention rates and level of commitment to teaching in the community. Field interviews during the baseline also suggest that the UTDBE trainees demeanor was more open to consulting with the leadership and showing parents a level of respect and openness when asking questions about their children.

5.9 Level of Satisfaction with the UTDBE Programme among Trainees

This section explores the level of UTDBE trainee satisfaction with the programme. An analysis of the level of satisfaction of trainees undergoing the UTDBE programme reported that as many as 386 representing 96.3% out of the total of 401 trainees all indicated they were satisfied with the programme. The remaining 15 trainees (3.7%) indicated they were not satisfied with the programme. Varied reasons were given by the trainees in the table below: 132 (32.9%) of the trainees who indicated they were satisfied with the programme saw the sponsorship they received in the form of subsidized school fees from GPEG as an important factor.

Other trainees, 120 (29.9%) felt that, as a result of their attendance on the programme, their self-confidence and teaching skills were improved: 98 (24.4%) trainees and 32 (8%) trainees all said they will become professional teachers, thereby safeguarding their jobs as teachers and the fact that the programme was well-structured and had a flexible time period respectively. There were other trainees who were not satisfied with the UTDBE programme. Among these were 11 (2.7%) trainees who said the programme was too stressful because of the timing and 8 (2%) trainees who were not satisfied with the programme because they had to travel long distances to attend the face-to-face sessions at the designated Colleges of Education. It is important to note that, although there were some trainees who felt the programme could have been better planned, the majority of the trainees were satisfied with how the programme was structured and the tuition as well as other support services they were receiving under the programme.

Table 5.3: Level of Satisfaction with the UTDBE Programme

	Frequency	Percent
No	15	3.7
Yes	386	96.3
Total	401	100.0

Source: UTDBE Impact Assessment Endline, 2016

Table 5.4: Reasons for Satisfaction or Non Satisfaction with the Programme

		Frequency	Percent
Reasons	Sponsorship	132	32.9
	Future job security as a professional teacher under GES	98	24.4
	Improvement in self-confidence and teaching skills	120	29.9
	Programme well-structured and time flexibility	32	8.0
	Dissatisfied due to distance and financial burden	8	2.0
	Dissatisfied because of pressure of time and money	11	2.7
	Total	401	100.0

Source: UTDBE Impact Assessment Endline, 2016

All but one of those trainees interviewed said they enjoyed being enrolled on the UTDBE programme. Their reasons are categorised in the Table 5.5 below. The majority of the trainees 138 (34.4%) stated the provision of part scholarship by GPEG as one thing that makes them enjoy the programme. They saw it as a way to reduce their financial burden. Another group of trainees 112 (27.9%) said they enjoyed the programme because they were being trained to become professional teachers which will propel them to have a secure job as teachers and earn a salary to cater for their needs.

About a quarter of trainees 98 (24.4%), said they enjoyed the programme, because it was well structured and was helping them improve their skills and competencies as teachers. Furthermore, 21 (5.2%) said they enjoyed the programme because it was an avenue to pursue further studies to improve upon their knowledge that will enable them to impact on the children in their classrooms. For 19 (4.7%) of the trainees, they enjoyed the programme because it was flexible as compared to the regular DBE. Only 10 (2.5%) of the trainees indicated that they enjoyed the programme due to the easy admission process and procedures compared to the regular DBE. Only 3 (0.7%) of the trainees said they didn't enjoy the programme. The UTDBE programme, from the view point of the trainees interviewed, was based on the vast majority of trainees saying that they enjoyed being enrolled on the programme.

Table 5.5: Enjoy Being Enrolled on the UTDBE Programme

		Frequency	Percent
	No	1	.2
	Yes	400	99.8
	Total	401	100.0

Source: UTDBE Impact Assessment Endline, 2016

Table 5.6: Reasons for Enjoying the UTDBE Programme

Reasons provided for “enjoying the UTDBE programme”		Frequency	Percentage
Reasons	Provision of part scholarship by GPEG	138	34.4
	Programme well-structured to improve skills and competence of teachers	98	24.4
	Becoming a Professional teacher (job security, pay and respect from community)	112	27.9
	Avenue to pursue further studies to impact knowledge	21	5.2
	Simple admission procedure as compared to DBE	10	2.5
	Does not enjoy the UTDBE programme	3	.7
	Flexibility of the programme (schooling and teaching)	19	4.7
	Total	401	100.0

Source: UTDBE Impact Assessment Endline, 2016

Interviews with the College Principals across the sampled Colleges of Education revealed positive attitudes toward the programme because they see it contributing to teacher retention in deprived communities. They further underlined the point that the programme would give trainees equal opportunity for further studies after completing it successfully. Most of the principals viewed the programme as an opportunity for trainees to become professional teachers. Similarly, most of the principals saw both the DBE and UTDBE as giving trainees an equal opportunity for professional development and further education.

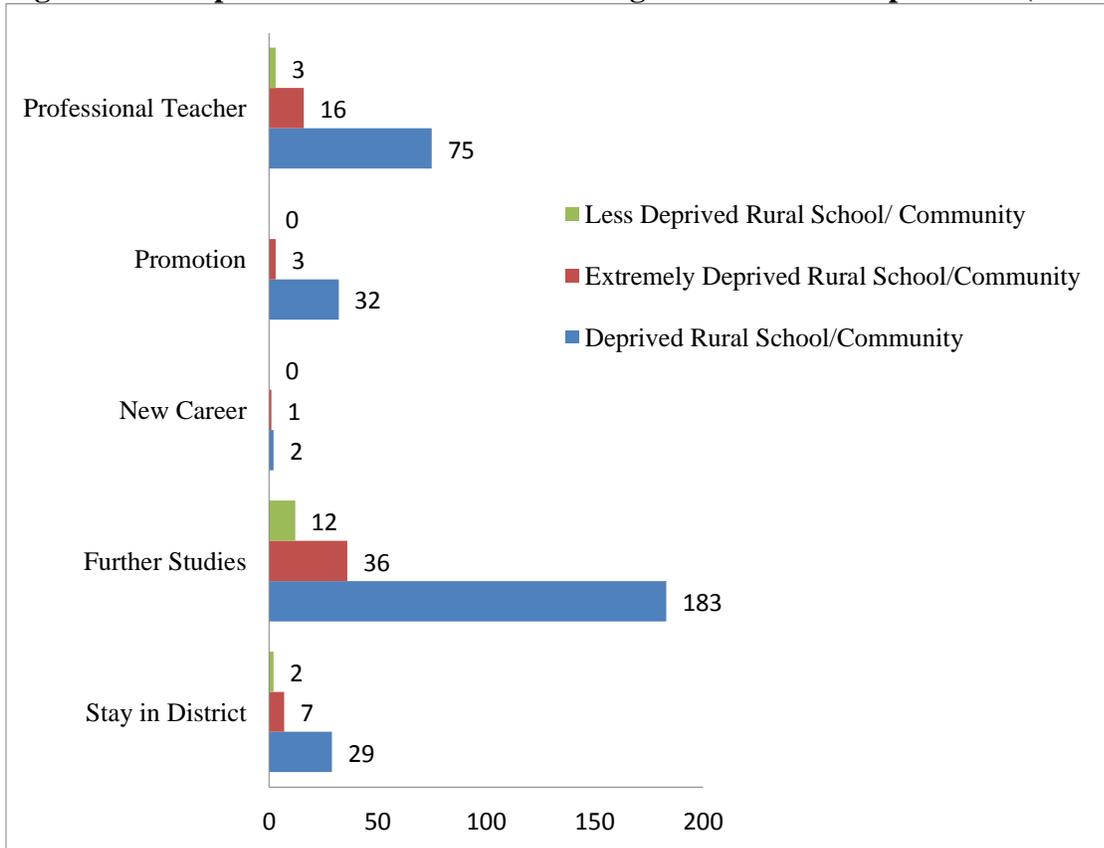
5.10 Aspirations of the UTDBE Trainees

Analysis of UTDBE trainees’ responses to the question of where they see themselves in the next 5 years revealed five broad aspirations of the trainees:

- To become a professional or trained teacher – job security (23.4%);
- To attain higher placement or promotion (8.7%);
- Change career or transfer (0.7%);
- Pursue further education – degree (57.6%); and
- Continue to remain in the current district (9.5%).

Figure 5.11 shows that the majority of the trainees in the deprived rural areas aspire to pursue further studies (attain degree), become professional teachers and get higher placement in the scheme of the teaching profession. The finding suggests that the GES, through the various District Education offices, need to value the UTDBE trainees’ competency, their aspirations, challenging work environment, and quality of work and provide them with chances for further training in order to have loyal and engaged trainees. This will help to retain the UTDBE trainees once they complete the course and narrow the trained teacher gap in the most deprived districts in Ghana.

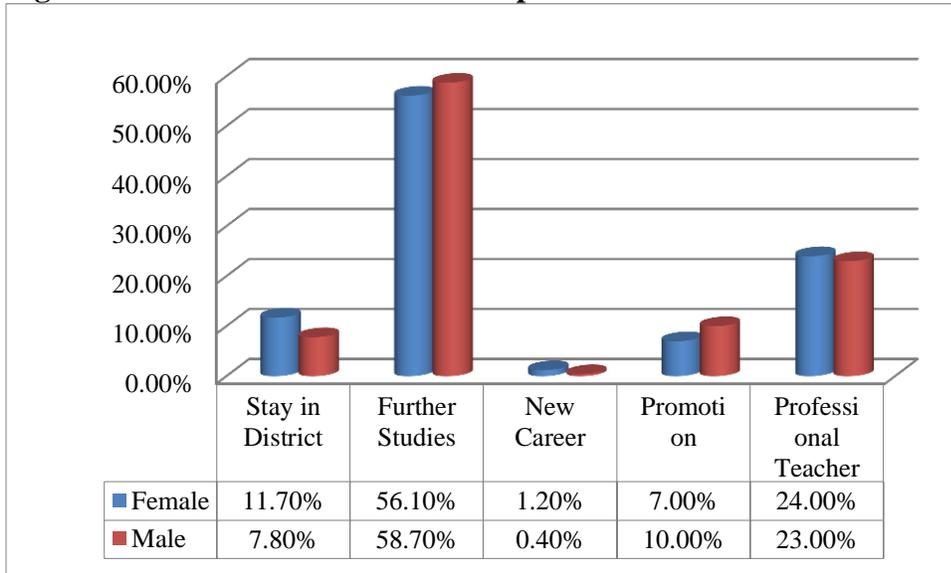
Figure 5.11: Aspirations of Trainees According to Location of Deprivation (Actual)



Source: UTDBE Impact Assessment Endline, 2016

Another issue which emerged from the data was how trainees’ aspirations were influenced by sex. For instance, 58.7% of all male trainees interviewed aspired to further their studies to attain a degree or higher in the next 5 years compared with 56.1% of female trainees. With regard to becoming a professional teacher, 24% of the female trainees compared to 23% of the male trainees aspired to become professional teachers. What was encouraging to note was that only a very small proportion of the trainees, both male (0.4%) and female (1.2%), said they would like to change their career in the next five years and move out of teaching. The finding shows that education authorities must appreciate the accelerated policies or programme aimed at promoting learning, mentoring, training and on-the-job development opportunities for committed pupil or volunteer teachers. It also points to the fact that there is likely to be the situation where trainees will continue to be teachers even after five years if they continue to experience job satisfaction through training and professional development opportunities which challenge them; this will also enhance teacher retention.

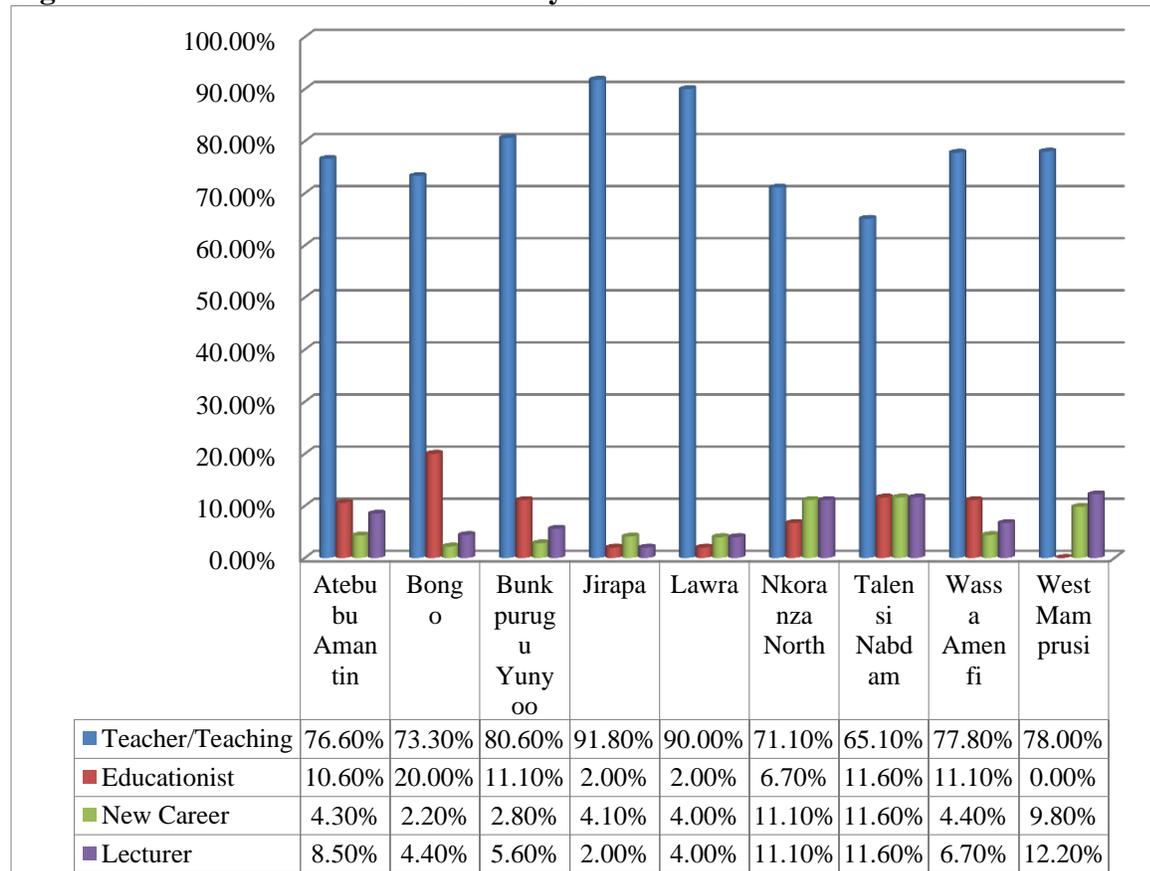
Figure 5.12: Gender and Trainee Aspirations



Source: UTDBE Impact Assessment Endline, 2016

Figure 5.13 shows that the majority of the UTDBE trainees across the nine districts sampled indicated teaching or being teachers as their most preferred vision and desired career preference. The district with the least number of trainees choosing teaching or being a teacher as their desired future career was in Talensi Nabdam District (Upper East) which had 65.1% of the trainees; and Jirapa District (91.8%) in the Upper West region had the highest number of trainees preferring teaching over other professions as their most desired career. Figure 5.13 reveals that only a few trainees interviewed aspired to move into other professions if the opportunity arose. Only 2.2% trainees interviewed in Bongo District and as high as 11.6% of the trainees interviewed in Talensi Nabdam District stated that they would like to leave the teaching profession pursue other professions like nursing and joining the security services. The data presents a very positive picture of teacher retention in these deprived districts if training and staff development are pursued since most trainees are looking forward to being promoted to higher levels of the teaching profession and see teaching as a long term career.

Figure 5.13: Desired Future Careers by District



Source: UTDBE Impact Assessment Endline, 2016

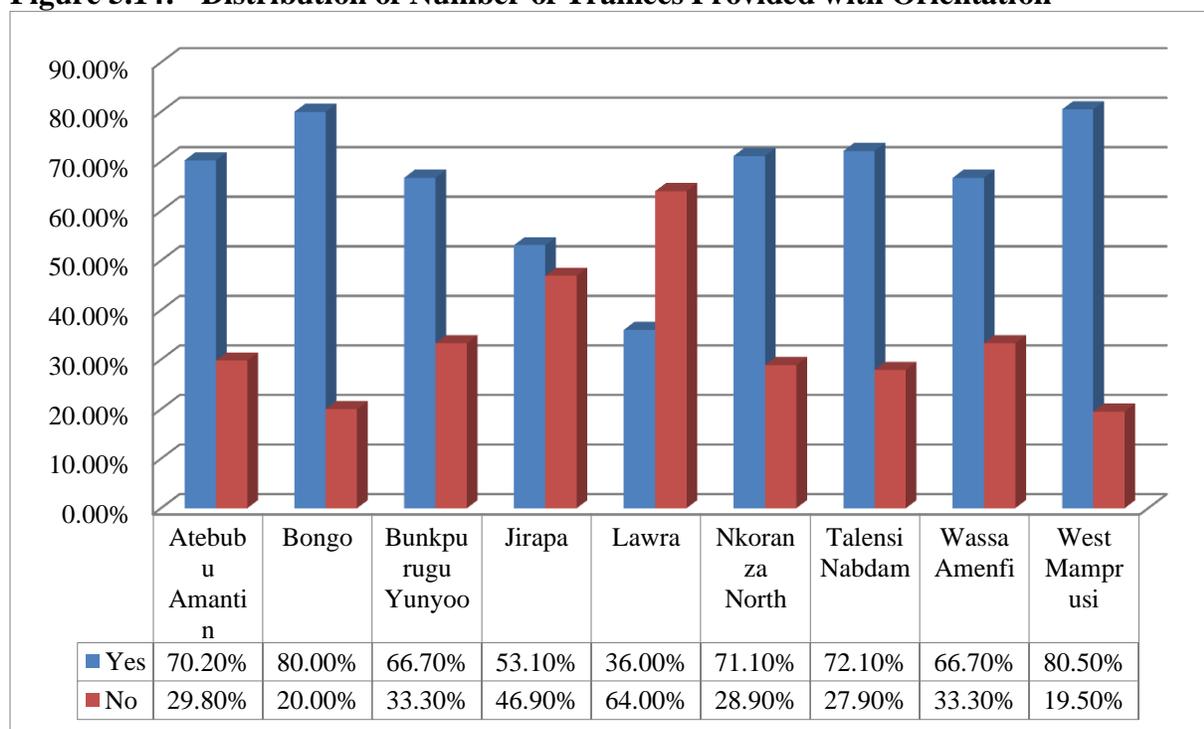
5.11 Preparation and Challenges of the UTDBE Trainees for Teaching and Learning

The ability of the UTDBE trainees to organise classrooms and manage the behaviour of their pupils is critical to achieving positive educational outcomes. Classroom organisation and behaviour management competencies influence the persistence of untrained trainees in teaching careers. Trainees who have problems with behaviour management and classroom discipline are frequently ineffective in the classroom, and can often suffer high levels of stress and symptoms of burnout. This section explores the level of teacher trainee preparedness in the classroom and schools they worked in.

5.11.1 Preparation of UTDBE Trainees for Teaching and Learning

Similar to the Baseline survey, the UTDBE trainees were asked about the preparation that was provided prior to their assumption of duties as teachers. The analysis of the endline data reveals that more than half (65.6%) of the 401 trainees interviewed received a short orientation to equip them for their work as teachers while 34.4% of trainees reported having no training. On a regional basis, the Upper East Region had the highest percentage (76.1%) of trainees who said they had received some type of orientation while the Upper West Region had the lowest percentage of UTDBE trainees receiving an orientation (44.4%). The Upper West Region had the highest percentage of trainees (55.6%) who claimed they had no orientation when recruited and the Upper East Region had the lowest percentage of trainees (23.9%) who received no orientation prior to starting their work as teachers in the classroom. Although there have been increases in the percentages recorded for those who have received orientation and those who have not received orientation since the baseline, the endline survey findings still reflect the same findings with regard to the regions that had the highest percentage of trainees receiving orientation as against the regions that received the lowest percentage of trainees receiving orientation to equip them for classroom teaching (see Figure 5.14 below).

Figure 5.14: Distribution of Number of Trainees Provided with Orientation



Source: UTDBE Impact Assessment Endline, 2016

Further to the regional analysis is the district analysis of orientation received by trainees prior to being posted to teach in schools. Figure 5.14 clearly depicts the distribution of the number of trainees who received orientation as well as those who did not receive any training when recruited at the district level. West Mamprusi District had only 19.5%, followed by Bongo with

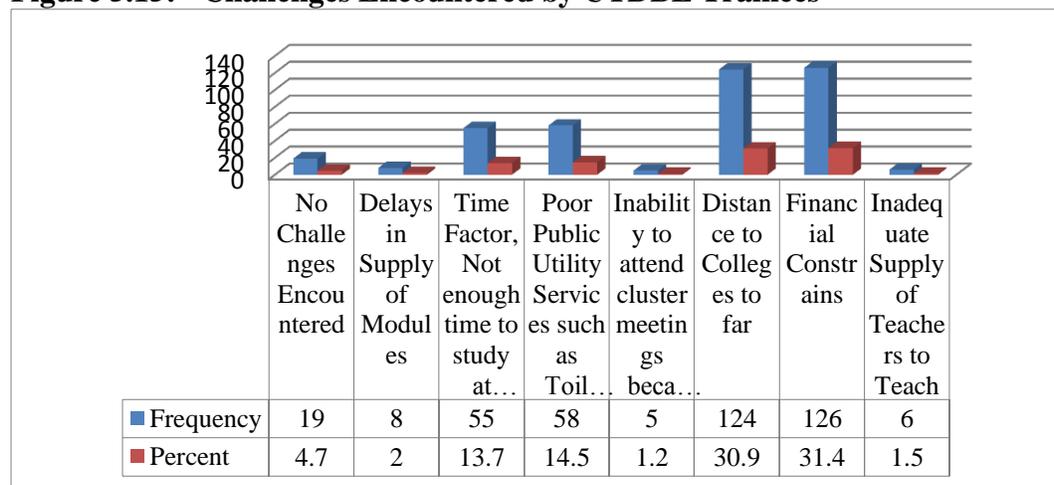
20% and Talensi Nabdam with 27.9% indicating that their UTDBE trainees were not given much orientation. This shows that the Upper East and Northern Regions offered the highest level of orientation to trainees while the Western and Upper West Regions are the worst when it comes to not preparing their untrained recruit trainees for the classroom. This can have serious implications for the effectiveness of the trainees in the classroom because it would impact on their ability to effectively manage classroom behaviour and this can contribute to the low educational achievement of the pupils they teach.

The FDG with tutors at the CoE level during the endline survey also revealed that head teachers and other professional teachers were to provide mentorship to UTDBE trainees at the school levels. As indicated in chapter two, the UTDBE programme endorsed provision of mentorship and on-the-job training to the trainees by the head. It was however clear from interviews with the heads and trainees that there was very little mentorship and coaching going on from head teachers and other trained teachers at the school base. The Principals of the Colleges of Education also asserted that trained teachers and head teachers should mentor UTDBE trainees just as was done for the DBEs during their practical attachments. The Principals, however, recommended that head teachers should be oriented on how to mentor and should be obliged to undertake mentorship role as part of their responsibility. FDG with tutors also confirmed the need for UTDBE trainees to have mentors at the school level. The tutors suggested that Colleges of Education be given the mandate to monitor the performance of trainees in their schools between the face-to-face sessions to ensure that methods taught are being applied.

5.11.2 Challenges Encountered by Trainees Pursuing the UTDBE Programme

The second aspect of this section tried to discuss and analyse the challenges encountered by the UTDBE trainees while pursuing the UTDBE programme. Overall, as many as eight challenges were echoed by trainees across the nine districts in five regions. However, prominent among these seven challenges was the fact that trainees were still faced with financial constraints (31.4%); distance to Colleges is too far (30.9%); poor amenities in the Colleges (14.5%) and not enough time to study at the College (13.7%) due to the short duration of the face to face sessions. When it came to paying the remaining amount for their training to the Colleges, the majority of the trainees who were not still on government payroll were the worst affected by financial difficulties. Only a few trainees (4.7%) stated they were not confronted with any challenge while pursuing the UTDBE programme.

Figure 5.15: Challenges Encountered by UTDBE Trainees



Source: UTDBE Impact Assessment Endline, 2016

The challenges encountered by UTDBE trainees while pursuing the programme was analysed in relation to the eight challenges raised by the UTDBE trainees. Overall, financial constraints and distance to Colleges were the greatest challenges most trainees reported across the nine districts. As shown in Table 5.9 below, the overall percentage of 31.4% of trainees interviewed across the nine districts reported financial difficulties and 30.9% of the trainees indicating distance to Colleges as the greatest challenges. The data revealed that the Bongo District UTDBE trainees indicated that distance to colleges was their main challenge (75.6%). This was followed by Bunkpurugu Yunyoo (Northern Region) and Talensi Nabdam (Upper East) where 69.4% and 62.8% of trainees respectively reported that the distance to the Colleges was too far. This finding is not surprising because trainees from these three districts were expected to attend Colleges of Education, which took over a day in travel time to reach (e.g. Presbyterian Women College of Education-Aburi in the Eastern Region and Jasikan College of Education in the Volta Region). These were by far the longest distances trainees needed to cover in order to get to attend the face to face sessions. Financial difficulties as a challenge was, to a very large extent, reported by many trainees in four districts. These districts were Jirapa (57.1%) and Lawra (48%) in the Upper West; Wassa Amenfi West (51.1%) in the Western Region and West Mamprusi (43.9%) in the Northern Region (see annex 5.9b for more details).

5.12 Conclusions

The profiles and background characteristics of the UTDBE trainees across the nine deprived districts and five regions reveal some similarities with regard to their background characteristics. As non-professional teachers, the trainees want to keep learning and developing their teaching skills so they are marketable and can contribute in a meaningful way towards the delivery of quality education in their communities. The most significant challenge confronting trainees appears to be how to combine learning on the job when they also have to travel far distances to attend the “face to face sessions”. Despite significant challenges for the UTDBE trainees in

relation to the cost and the distance to the Colleges of Education for face-to-face, most of the trainees found it enjoyable and were satisfied with the programme. Unfortunately, the programme did not provide adequate mentorship and on-site support to ensure that the UTDBE trainees maximized their learning experience. Little or no Head teacher and District Education Office support was apparent based on extensive observation and the field work interviews.

For GES management, the conclusion in relation to retention and improving quality is to sustain the interest of UTDBE teacher trainees in teaching in deprived areas after the completion of the programme will require a systematic approach to in-service training. Beyond the UTDBE programme, there is the need to focus on developing ongoing teacher development in order to meet the career goals and aspirations of newly qualified UTDBE trainees in the teaching profession. The GOG will need to build on the desire for lifelong learning, which has been ignited through the programme and continue to assist the new UTDBE trainees with ongoing opportunities to improve their teacher instructional practice and professional development. The new Teacher Professional Development Scheme under NTC has the potential to provide this framework.

CHAPTER 6: Cost Effectiveness and Efficiency of the (UTDBE) Programme

6.1 Introduction

The need to train more teachers to close the trained teacher gap, particularly in the most deprived areas of Ghana; within a climate of scarce resources is a crucial policy question. The scarcity of non-salary resources and the growing demand for trained teachers, particularly at KG and primary levels, provides the background to this chapter that explores which training model is most cost effective²¹. This chapter follows the same approach that was used in the baseline study to determining the cost effectiveness and efficiency of the Untrained Teachers Diploma in Basic Education (UTDBE) programme in comparison with the conventional method of training for the Diploma in Basic Education (DBE).

The data used for the analyses in this chapter was gleaned from both primary and secondary sources replicating the methods and sampling used in the baseline study. The primary data was collected through non-participant observation, the use of semi-structured interviews and questionnaires administered to DBEs, UTDBE trainees and several other community/district-based stakeholders. Some of the secondary data was collected from the Teacher Education Division (TED) of the Ghana Education Service; data on the GPEG expenditure was also taken from the five Colleges of Education (CoE) where UTDBE trainees undergo their training.

Unlike the baseline that used two sets of questionnaires and focussed only on the UTDBE respondents and CoEs, the endline survey added a third questionnaire for the DBE respondents. The questionnaire for the UTDBE trainees sought to collect background information, their valuation of the GPEG sponsorship, the extra costs incurred apart from the sponsorship and other costs. The DBE questionnaire solicited information on the DBEs' backgrounds and the extra costs incurred apart from the fees paid. The CoE questionnaire collected information on the breakdown of the costs that go into both UTDBE and DBE modes of training and inquired whether the rise in inflation and the exchange rate volatility had affected the cost of training both DBEs and UTDBEs.

This chapter presents the data and methodology for analysing cost effectiveness and efficiency of the UTDBE programme and the conventional DBE teacher-training programme. It further

²¹ **Efficiency** is the extent to which the UTDBE programme has converted or is expected to convert its resources/inputs (such as funds, expertise, time, etc.) economically into results in order to achieve the maximum possible outputs, outcomes, and impacts with the minimum possible inputs. While **cost-effectiveness** is the extent to which the UTDBE programme has achieved or is expected to achieve its results at a lower cost compared with the DBE alternative. (See DAC glossary and World bank)

discusses the gender analysis based on cost efficiency and the sponsorship packages available to the two teacher types.

6.2 Diagnostic Checks and Method of Data Analysis

After data entry, the data was cleaned to correct errors and identify and remove missing responses. At the end of the diagnostic checks, 385 respondents remained out of 386 and this figure is short of the baseline figure by two respondents. The analyses was carried out by using a gender and deprivation lens, which differentiated the levels of deprivation including less deprived, deprived and extremely deprived areas.

With regard to the analysis of the cost effectiveness of UTDBE and DBE modes of teacher training, the following steps were followed:

1. Identification of cost and availability of data;
2. Annualization of cost;
3. Categorization of cost into its components;
4. Reduction of cost to single constant currency; and
5. Computation and comparison of unit costs.

In order to derive annual costs and compare with those of alternatives, we assessed all costs, including those incurred per face-to-face sessions, costs incurred on modules and others. The study controls for the prevailing exchange rate at the time of expending (data collection). The cost efficiency ratio is defined as the ratio of the unit cost of trainee on UTDBE to that of the DBE is specified as follows:

$$CER = \frac{\text{Unit cost of trainee on UTDBE}}{\text{Unit cost of trainee on DBE}}$$

This gives a value that can be used to compare the relative efficiency of the two modes of training teachers. A value greater than one (1) indicates that UTDBE is less efficient than DBE, and a value less than one (1) indicate that UTDBE is more efficient than DBE. However, a value of one (1) implies that UTDBE is equally efficient to DBE.

6.3 Cost Effectiveness and Cost Efficiency in Open Distance Learning (ODL) and Conventional Education

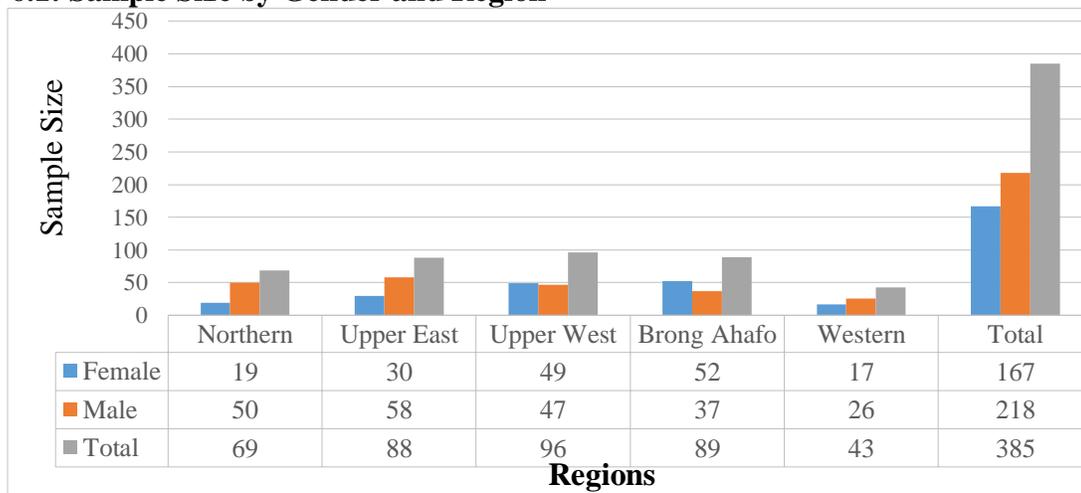
While the terms cost effectiveness and efficiency seem similar in meaning, they are not entirely the same and this must be stressed. Cost effectiveness implies a system's ability to attain its targeted goals at a lower cost compared with that of an alternative but cost efficiency measures the degree to which a particular system achieves an outcome at a minimum cost (Rumble, 1986; Vivier, 2008). This study follows from the angle of cost efficiency and brings on board the work of Rumble (2001), which states that a system is more cost efficient than another if the unit cost of its output is lower than the unit cost of the alternative with which it is being compared. The

UTDBE assessment sets out to do a similar comparison by comparing the unit cost of training a DBE trainee and a UTDBE trainee. Examples of studies done outside Ghana, but which analyse the cost efficiency of these two modes of training are that of Orivel (1987) and Perraton (2000), which showed that distance education is a more cost effective means of allocating educational resources, and that it is especially capable of reaching sufficient numbers of untrained teachers. Notwithstanding, other studies (see for instance UNESCO, 2002; Perraton, Creed & Robinson, 2002) have also found the cost of running ODL to be more expensive than conventional courses since ODL is associated with capital intensive resources such as technology which has additional cost implications²².

6.4 Gender Analysis of UTDBE Based on Cost Effectiveness Data

The total sample size disaggregated into gender and regions is presented in Figure 6.1. The figure indicates that for the 385 respondents, 197 (representing 43%) were females while the remaining 218 (57%) were males in relation to the cost effectiveness questionnaire. At the regional level, the regions with the highest and lowest sampled trainees were Upper East (96) and Western (43) respectively. The rather low number from the Western Region was because this region had only one district being covered compared to two districts usually visited per region. For the other regions, the sample drawn for Northern, Upper East and Brong-Ahafo were 69, 88 and 89 respectively. The Brong-Ahafo Region had the highest number of sampled females (31%) while the Upper East region had the highest number of sampled males (58%).

Figure 6.1: Sample Size by Gender and Region



Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE Trainee Endline (2016)

Table 6.1 (Annex 6.1b) shows the composition of the sampled trainees based on gender and level of deprivation in terms their location. It can be inferred from the table that, of the 385 trainees sampled, 87 (23%) were in less deprived areas; 142 representing 37% were located in deprived

²² A detailed literature review was conducted as part of the baseline study and is available on www.associatesforchange.org

areas (often within town or district capitals or within a 5 km radius of the district capital with access to basic social/economic services); and the remaining 156 (4%) were located in extremely deprived areas (hard to reach, limited social/economic service including trained teachers and beyond 2 hours from the district capital).

6.5 GPEG Sponsorship Package and Composition of Trainee Expenditure

Trainees have two major cost components — costs that go into fees and costs that are personally/additionally incurred as a result of receiving training. That of the UTDBE trainees include food, and the cost of transportation to and from the CoE for face-to-face sessions. Other costs are for communication to keep in touch with family while away. In other jurisdictions, costs to distance learning trainees could include radio, TV, computer assisted instruction costs and others. DBEs have similar costs but as they are resident on campus for a larger part of their training, they are different. Unlike DBEs, UTDBE trainees have three face-to-face training sessions per year, often occurring in December, April and August. Part of UTDBE fees is borne by GPEG, while part of DBE fees is borne by the Government of Ghana (GoG) and supported with IGF. While the majority of the cost is sponsored by Government, DBE students also pay for registration fees and Student Representative Council (SRC) dues.

The baseline study did not obtain data on DBE costs and expenditure, in contrast with this Endline study. Table 6.2 below outlines the average annual cost GPEG incurs to support one UTDBE student trainee as against the GOG annual cost for one DBE conventionally trained student. The following data is collected directly from the Colleges of Education (mainly the accountant) and then averaged out for both modalities.

Table 6.2: Expenditure on UTDBE and DBE Trainees

Expenditure	UTDBE (GPEG)	DBE (GoG)
	Annual cost per UTDBE trainee	Annual cost per DBE trainee
	GH¢	GH¢
Facility user fee (boarding and lodging)	140	369
Staff cost	938	1468
Field support/practicum	71	185
Feeding/Food (amount used to subsidize trainee)	227	495
Modules/Books	81	234
Examination and assessment	99	319
Ancillary (any other cost)	68	396
Total annual cost per student (GPEG)	1624	3466

Source: Instrument 7: Template for costs of UTDBE and DBE (2016)

From Table 6.2, it can be gleaned that GPEG spends, on average, **GH¢1,624** (US\$428)²³ on each UTDBE trainee per annum while the GoG spends an average amount of **GH¢3,466** (US\$914) per annum on each DBE trainee. Unlike the baseline where feeding cost formed the highest component (34%), the endline saw staff cost as forming the highest component for the UTDBE (58%) and DBE (42%). This is not surprising because even at the national level, it has always been a challenge that the majority of the budgetary allocation to the educational sector goes into personal emoluments and payments. What must be noted is that the annual cost per trainee for DBE no longer includes the trainee teachers' allowance (stipends) — the allowance has been abolished. In Murphy's (2012) study, this cost of allowances alone was GH¢3,198 and accounted for 56% of GoG's expenditure on each student per annum. The annual cost for each student borne by GPEG and GoG on UTDBEs and DBEs, respectively, is fixed for all trainees for specific modes of training and is irrespective of gender and level of deprivation. This implies that differences in annual costs emanate from individual and location-specific costs. The next section provides the national costs for the programme across the training colleges and a district level analysis of the cost composition borne by the students.

The budget releases across regions and over the years is presented in Table 6.2b and, by summary, indicates that from 2013 to 2014 almost all regions had a shortfall in budget releases.

Table 6.2b: Regional Budget Releases for 2013, 2014 and 2015

Region/District	Year	Release (GHC)	% Change in Releases
Ashanti	2013	373,361.46	
	2014	170,575.95	-54%
	2015	343,027.08	101%
Brong Ahafo	2013	1,217,654.6	
	2014	790,887.21	-35%
	2015	1,803,918.79	128%
Eastern	2013	112,326.5	
	2014	8,541.76	-92%
	2015	28,984.00	239%
Northern	2013	1,319,802.69	
	2014	974,657.44	-26%
	2015	1,803,934.95	85%
Upper East	2013	429,170.04	
	2014	325,384.54	-24%
	2015	573,111.90	76%
Upper West	2013	635,455.77	
	2014	483,252	-24%
	2015	846,309.74	75%
Volta	2013	377,741.6	
	2014	279,829.01	-26%
	2015	478,183.32	71%

²³ Exchange rate is US\$1= GH¢[3.7919](#).

Same figure is used to reduce the DBE cost to constant currency unit

Region/District	Year	Release (GHC)	% Change in Releases
Western	2013	430,905.49	
	2014	315,869.96	-27%
	2015	523,792.69	66%
National Total	2013	4,896,418.15	
	2014	6,382,125.78	30%
	2015	6,401,262.47	0.3%

Source: GPEG, Ghana Education Service (2016)

The region that suffered the most was the Eastern Region (92%) followed by the Ashanti Region. The regions that suffered least were the Upper East and Upper West with 24% across the board. From 2014 to 2015, the situation changed for all regions and now they all saw increases in their budget releases. It can be seen from the table that the region that experienced the most increase (239%) was the Eastern Region followed by the Brong-Ahafo Region (128%). The region that saw the least increase was the Western Region (66%). Nationally, the 2014 budget release showed an increase of 30% although region-wise, there was a decrease across all regions. On the 2015 figures as well, there was a marginal increase of 0.3%. This, by implication, shows that budget releases for 2015 are inadequate because the authorities at the Colleges of Education complain of increases in the general price levels affecting their expenditure on food but the releases to Colleges increased by only 0.3%. Studies by ISSER (2016) suggest that cost of living in Ghana increased by 18% across basic food and services.

6.6 Total Annual Costs for the UTDBE Programme

Table 6.3 shows that the UTDBE programme total cost per semester, suggesting that the highest personal cost is cost at home; but even with that, males spend GH¢10 (about US\$3) more than their female counterparts; this was not the case in the baseline, where females spent GH¢ 4 (a little above US\$1.0) more than the males. In essence, it could possibly be emanating from an understatement of cost by females or an overstatement of cost by males. For instance, females were not asked to state the cost they incur on nannies even when they make use of one. When it comes to transport costs, male UTDBE trainees spend GH¢36 (US\$9) more than females. In all, male and female trainees, respectively, incur an average annual cost of GH¢1,737 (US\$458) and GH¢1,536 (US\$405) which also shows that male UTDBE trainees spend GH¢201 (US\$53) more than their female counterparts.

Table 6.3: Annual Cost of UTDBE and DBE Modalities of Training – Gender Dissaggregated

Expenditure Student bears ²⁴	UTDBE				DBE			
	Annual cost per UTDBE trainee				Annual cost per DBE trainee			
	Female		Male		Female		Male	
	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢
Transport	104		140		67		101	
Additional food cost	131		113		165		195	
Other learning materials	50		74		139		143	
Communication	32		47		48		71	
SRC dues and other cost	34		34		35		35	
Cost at home ²⁵	161		171		154		489	
Total cost per student per semester	512		579		608		1034	
Total annual cost per student (Student)²⁶		1,536		1,737		1,824		3102
Total annual cost (GPEG + Student)		3,160		3,361		5,290		6568
TOTAL COST OVER 4 (UTDBE) & 3 (DBE) YEARS		12,640		13,444		15,870		19,704
Total cost over the 4 (UTDBE) & 3 (DBE) years (Student bears)		6,144		6,948		5,472		9306
Total cost over the 4 & 3 years GPEG and Government bear respectively²⁷		6,496		6,496		10,398		10398

Source: Instrument 7 (2016), Instrument 14B (2016), and 14D (Cost-Effectiveness Data sheet per DBE teacher, 2016)

Similarly, the DBEs' total cost per semester shows that their highest personal cost is cost at home with males spending three times (about US\$88) more than their female counterparts. This is because some of the male DBE trainees have their wife and children at home and have to remit funds to them. For transport costs, male DBE trainees spend GH¢34 (US\$9) more than females. In all, male and female DBE trainees, respectively, incur an average annual cost of GH¢3,102 (US\$818) and GH¢1,824 (US\$481) which also shows that male DBE trainees spend GH¢1,278 (US\$337) more than their female counterparts. Programme-wise, male DBE trainees spend GH¢1,365 (US\$360) more than male UTDBE trainees and female DBE trainees also spend GH¢288 (US\$76) more than female UTDBE trainees. In some specific cases the female DBE's spent more on teaching learning materials compared to their male counterparts.

²⁴ Throughout this chapter, these are the average costs incurred by a typical UTDBE and DBE trainee.

²⁵ It must be noted that cost at home is only incurred by those with dependents or caretakers hence these denote the average cost a trainee with dependent incurs.

²⁶ These costs are found by multiplying average cost per student by three (3) for both models since they usually attend school three times a year

²⁷ The total annual cost borne by GPEG and GoG for UTDBE and DBE are multiplied by four (4) and three (3) to respectively cater for the total duration of the programme.

6.7 Average Unit Cost of a UTDBE and DBE Trainee

Table 6.4 indicates that, on average, the majority of the UTDBE trainees' expenditure is incurred at home which is GH¢166 (US\$44) and this was followed by their expenditure on transport and additional food that cost GH¢122 (US\$32). In all, the least they spend on is SRC dues and other items which cost them GH¢34 (US\$9) on average. This cost is often negotiated and set by the SRC in consultation with the CoE. On the other hand, DBE trainees personally spend most on home expenses which is GH¢322 (US\$85); this is followed by additional expenditure on food, costing GH¢180 (US\$47) and other learning materials which costs them GH¢141 (US\$37).

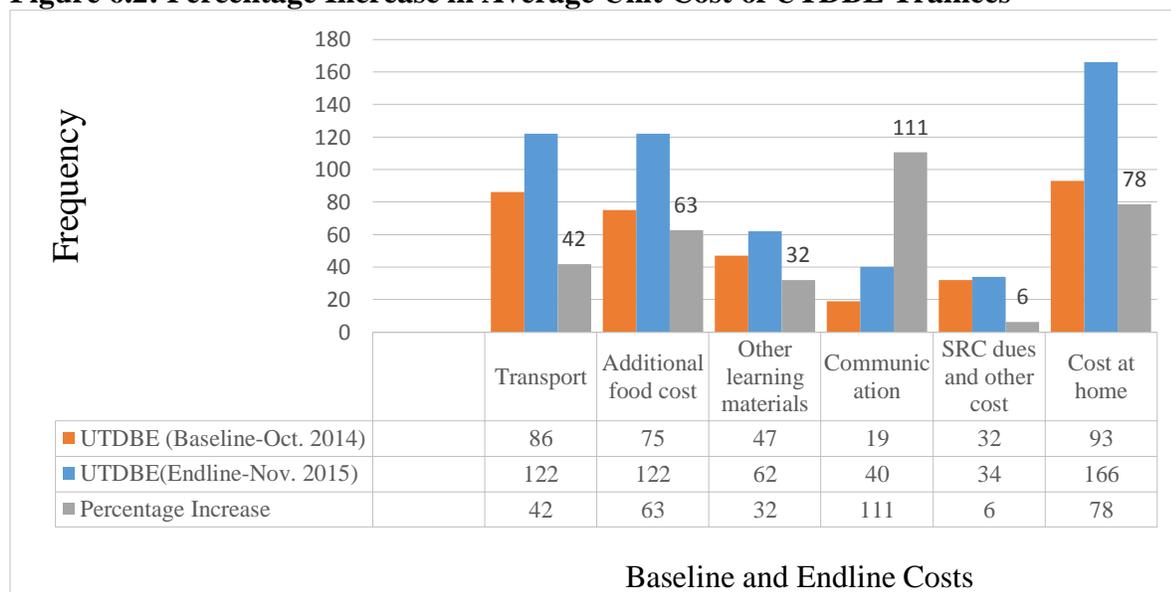
Table 6.4: Average Cost of Training UTDBE and DBE Teachers

Expenditure: GPEG and Government	UTDBE		DBE	
	Annual cost per UTDBE trainee		Annual cost per DBE trainee	
	GH¢	GH¢	GH¢	GH¢
Facility user fee (boarding and lodging)	140		369	
Staff cost	938		1468	
Field support/practicum	71		185	
Feeding/Food	227		495	
Modules/Books	81		234	
Examination and assessment	99		319	
Ancillary (any other cost)	68		396	
Total annual cost per student (GPEG)	1624		3466	
Expenditure Student bears				
Transport	122		84	
Additional food cost	122		180	
Other learning materials	62		141	
Communication	40		60	
SRC dues and other cost	34		35	
Cost at home	166		322	
Total cost per student per semester	546		821	
Total annual cost per student (Student)	1638		2463	
Total annual cost (GPEG + Student)	3262		5929	
TOTAL COST OVER 4 (UTDBE) & 3 (DBE) YEARS	13048		17787	
Total cost over the 4 (UTDBE) & 3 (DBE) years (Student bears)	6552		7389	
Total cost over the 4 & 3 years GPEG and Government bear respectively	6,496		10398	

Source: Instrument 7 (2016), Instrument 14B (2016), and 14D (Cost-Effectiveness Data sheet per DBE teacher, 2016)

For comparison purposes, UTDBE trainee costs for the baseline and endline were put side-by-side to determine changes in cost components over time. It can be seen from Figure 6.2 that communication cost has increased by 111% and this is followed by cost at home that increased by 78%. The item that increased least is SRC dues and other costs. These increments reflect the increments in national price levels and fares owing to domestic and external factors. For the former, the continual depreciation of the currency over the period stimulated increases in cost of production reflecting higher prices. For the latter, the rising oil prices at the international level also immensely contributed to the rising transport fares and cost of production on firms with the knock-on effect of inflation. It must be noted that GPEG has increased its commitment towards the UTDBE programme and covers almost everything including SRC but the existence of SRC dues in this list is as a result of the isolated cases of some specific UTDBE SRC bodies that charge some amounts for the purposes of development (development levy). Some costs such as teaching learning materials and the printed modules which UTDBE trainees purchase were compared to the handouts/ photocopies which the DBE trainees also have to purchase.

Figure 6.2: Percentage Increase in Average Unit Cost of UTDBE Trainees



Source: Instrument 14B (2016); Baseline Report – Final Draft (2014)

In all, the total cost of training UTDBE trainees over the four year period is GH¢13,048 (US\$3,441). From the overall cost, UTDBE trainees bear GH¢6,552 (US\$1,728), representing 50.2%, while GPEG bears GH¢6,496 (US\$1,713) representing 49.8%. Since GPEG is expected to support the upgrading and training of 8,000 untrained teachers in 57 deprived districts with a funding package of US\$15.06 million, it would cost GPEG US\$13.7 million (GH¢ 51.9 million) to achieve the set target. It must be noted that, as the years go by, the actual figures keep getting

close to those budgeted. During the baseline, the study showed that GPEG was going to need US\$9.8 million, however the endline study has also indicated that GPEG is now going to need US\$13.7 million. This is just about US\$1.36 million short of the GPEGs budgeted estimate. What accounts for this is the intrinsic exchange rate volatility that typically drives domestic prices of commodities.

For the DBE trainees, the national average of the total cost of training over the three year period is GH¢17,787 (**US\$4,691**). From the overall cost, DBE trainees bear GH¢7,389 (US\$1951), representing 42% while the GoG bears GH¢10,398 (US\$2,742) representing 58%.

6.7.1 Cost Effectiveness and Efficiency

To ascertain whether the UTDBE programme is cost effective we need to compare the average amount it costs GPEG or the government to train just one student on the distance modality to that on the conventional modality. Unlike the baseline study where data on the cost per unit of training a DBE student over the entire duration of the programme was based on secondary source analysis; , the endline sought to make the comparison using primary source data. Murphy's (2012) study found that the baseline estimated GH¢15,350 (US\$9,137)²⁸ as the cost per unit of training a DBE. Indeed, this figure included costs of students' stipend (trainee allowances) which by far constituted the most significant cost to the government. However, as at the time the endline survey was carried out, the government had abolished the payment of stipends to DBE teacher trainees. Anecdotally, by abolishing the trainees' allowance the cost burden to the government was reduced by approx. 60% and it presents a more feasible and accurate measure of the cost effectiveness on this development.

Looking at the total cost to GPEG and the GoG after being annualised and converted at constant currency unit over the four-year UTDBE and three-year DBE programmes, GPEG's cost for the UTDBE programme is GH¢6,496 (US\$1,713) while the cost to GoG for the DBE is GH¢10,398 (US\$2,742). This gives an efficiency ratio of 1:1.6 (that is 0.62). This means that training a student in the conventional mode costs the government 60% more than the cost of training a teacher trainee using the UTDBE modality—both modalities lead to the system having a professionally trained basic school teacher. In other words, for every GH¢100 (US\$26) spent on training a UTDBE, it will mean spending GH¢160 (US\$42) on a DBE. The endline ratio of 1:1.6 is narrower than the baseline ratio of 1:7 largely on account of the government policy that abolished the trainee teacher allowance (student stipend). Critically looking at the baseline study and the DBE cost used, GH¢15,350 (US\$4,048) was borne by government but the trainee allowances alone was GH¢9,594 (US\$2,530) represented 63%. Another outstanding outcome of the endline cost efficiency ratio is that it shows how the UTDBE programme is still more cost effective relative to the DBE model even when a major cost component (which was 63% of the total cost) in the DBE model has been removed from the total cost due to government policy.

²⁸ Murphy's study was done in 2012 when the exchange rate was US\$1: GH¢1.68. During the baseline in October 2014, Bank of Ghana exchange rate was US\$1: GH¢3.03. This means, GH¢15,350 in 2012 now values at GH¢27,685. During the endline survey in November (2015), the Bank of Ghana exchange rate is now US\$1:GH¢3.7919 and means that GH¢15,350 in 2012 now values at GH¢34,646.

We can also look at the cost efficiency by considering the opportunity cost of training and see that the UTDBE programme comes with a very low opportunity cost when it comes to time allocation. The UTDBE trainee stays in the classroom to teach and has no loss of benefit in relation to the use of their time away from the classroom work while the DBE trainee has to be out of the class for two out of three years of the training process. Again, the continuous stay as a teacher in the classroom by the UTDBE trainee amounts to a lower opportunity cost for both the GOG and the trainee themselves; this is compared to DBE trainee who is not receiving any allowance and cannot support the system which on the first two years of the programme they remain at the College of Education. This sums up the fact that the UTDBE programme is more cost efficient and effective in the delivery of its objective.

6.8 Cost Comparison across the Five Sampled Regions

Table 6.5 below presents the regional dimension to the average cost of producing a teacher on the UTDBE programme and this helps in identifying the regions with higher or lesser costs. With cost to GPEG being constant for all trainees, and differences emanating from individual costs, the total cost over the four year period is GH¢9,177 (US\$2,420) for trainees in the Northern Region; GH¢3792 (US\$1,000) for trainees in the Upper East Region and it is GH¢4958 (US\$1,308) for trainees in the Upper West Region. The costs for trainees in Brong-Ahafo is GH¢5384 (US\$1,420) and it costs trainees in the Western Region GH¢7780 (US\$2052). Trainees that bear the most cost are those from the Northern Region (similar to the baseline, with a cost of GH¢6,024 or US\$1,589) while the group of trainees that bear the least cost are those from the Upper East Region. There exist substantial cost variations over the two periods. For instance in the Northern Region, trainee cost burden increased by 34.36%. While the Upper East remains the cost effective region on account of its lower cost of training, its overall cost increased by GH¢740 (US\$195) over the period spanning the baseline and the endline. This could be due to the cost of travel for different trainees from different regions.

Table 6.5: Cost Incidence and Regional Comparison of Average Cost Training

Expenditure a Student Bears	Northern		Upper East		Upper West		Brong-Ahafo		Western	
	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢
Transport	215		62		100		50		83	
Additional food cost	134		59		97		123		154	
Other learning materials	89		53		51		56		83	
Communication	96		70		19		33		52	
SRC dues and other cost	33		12		32		35		57	
Cost at home	198		60		114		151		220	
Total cost per student per semester	765		316		413		449		648	
Total annual cost per student (Student)	2294		948		1239		1346		1945	

Expenditure a Student Bears	Northern	Upper East	Upper West	Brong-Ahafo	Western
Total annual cost (GPEG + Student)	3918	2572	2863	2970	3569
Total cost over the 4 years (Student)	9177	3792	4958	5384	7780
Total cost over the 4 years	15673	10288	11454	11880	14276

Source: Instrument 7 (2016), Instrument 14B (2016)

Similar to the baseline, this analysis used only one district in Western Region rather than two districts as in all other regions. It is therefore imperative to note that the average cost to students in the Western Region may change if the number of districts increased to two. This means that our established burden of cost to trainees may be misleading and conclusion reached on the figure for the Western Region should be done with some degree of caution.

6.9 District Level Cost Analysis across the Five Regions

This section presents a comprehensive analysis of trainees' expenditure in light of total cost of training at the district-level. The analysis focuses on two regions (Northern and Brong-Ahafo) out of the five regions visited and explores findings within the district in relation to the level of deprivation. The other three regions (Upper East, Upper West and Western Regions) are presented in Annex 5.

Northern Region Experience

Table 6.6 presents the costs for trainees in Bunkpurugu-Yunyoo and West Mamprusi Districts in the Northern Region. Consistent with the baseline survey (and across most deprivation levels), while trainees from less deprived areas in Bunkpurugu-Yunyoo spend more than their counterparts in deprived and extremely deprived areas, the reverse is true for those in West Mamprusi District which is consistent with the baseline findings. The trainees in this Bunkpurugu-Yunyoo District, especially those in less-deprived areas bear more than two-thirds of the total cost of training and this is not experienced by trainees in other districts. On the composition of the costs across Bunkpurugu-Yunyoo District (Northern Region), trainees in less deprived areas spend more on communication while those in deprived and extremely deprives areas spend more on transportation. These trainees are expected to travel to the south of Ghana to attend training college at Abiri College of Education. Apart from communication, those in the less deprived areas spend more on transport and this amount is even greater than what trainees in the deprived and extremely deprived areas spend on transport.

Table 6.6: Trainee’s Expenditure in Total Cost of Training: Bunkpurugu-Yunyoo District and West Mamprusi District (Northern Region)

Expenditure: Student	Bunkpurugu-Yunyoo District			West Mamprusi District		
	Less deprived	Deprived	Extremely deprived	Less deprived	Deprived	Extremely deprived
Transport	414	291	228	120	137	97
Additional food cost	88	153	132	144	112	131
Other learning materials	266	49	85	60	53	126
Communication	526	66	24	28	36	29
SRC dues and other cost	35	35	35	21	21	21
Cost at home	243	289	150	101	157	190
Cost per student per semester	1571	882	654	473	517	594
Total annual cost per student (Student)	4,714	2,647	1,962	1,418	1,550	1,782

Source: Instrument 14B (2016)

The additional food cost is included in the GPEG costs which are paid to the CoEs. Communication costs are greater than transport costs for those in the less deprived areas. For Bunkpurugu-Yunyoo as a whole, the endline finding contradicts the baseline finding, where those in the less deprived areas were rather spending more on transport while trainees from other locations were spending more at home. This finding could anecdotally reflect a shift in priorities and expenditure on account of the financing constraints especially on the back of the rather humble background of most of these trainees. For specific considerations, the costs incurred by trainees in Bunkpurugu-Yunyoo are driven by transport and communications costs. The situation in West Mamprusi is quite different from what we have in Bunkpurugu-Yunyoo because trainees in different locations have their cost burdens being virtually the same across. For West Mamprusi, trainee costs for those in less deprived areas are largely driven by additional cost of food (GH¢144) while those in deprived and extremely deprived areas have theirs driven largely by the costs they incur at home (GH¢157 and GH¢190 respectively).

For differences in costs and reasons behind them, similar reasons assigned for the baseline study were also evident in the endline. First, for each face-to-face training session, while trainees from Bunkpurugu-Yunyoo (Northern Region) attend Presbyterian Women’s CoE (PWCE) in the Eastern Region which is about 657km (up to 14 hours of travel by bus), trainees from West Mamprusi attend Atebubu CoE in the Brong-Ahafo Region which is 452km (up to 6 hours travel by bus) and relatively closer to the Northern Region than PWCE. This peculiarity in distance covered to CoE accounts for differences in transport costs²⁹ and why others have to spend so much on communication since they are not able to easily go back to visit family and relations,

²⁹ A typical situation is that of trainees in the Talensi-Nabdum and Bongo Districts (Upper East) who attend Jasikan CoE in the Volta Region which is about 615km (and takes up 9 hours of travel by bus), on average, UTDBE trainees in Talensi-Nabdum and Bongo use a large part of their budget on transportation to the CoE for each training session.

therefore needing phonecard credit to reach them. The next section presents the cost incidence over the entire training period.

Table 6.7: District Level Cost Incidence – Bunkpurugu-Yunyoo and West Mamprusi (Northern Region)

Level of deprivation	GPEG Pays	Student Pays	Total cost per annum	Total cost over 4 years
Bunkpurugu-Yunyoo District				
Less deprived	1624	4,714	6,338	25,352
Deprived	1624	2,647	4,271	17,084
Extremely deprived	1624	1,962	3,586	14,344
West Mamprusi District				
Less deprived	1624	1,418	3,042	12,168
Deprived	1624	1,550	3,174	12,696
Extremely deprived	1624	1,782	3,406	13,624

Source: Instrument 7 (2016), Instrument 14B (2016)

Table 6.7 presents the relative cost burden between GPEG and trainees in the Northern Region and it shows that, in Bunkpurugu-Yunyoo, the annual costs for trainees in less deprived, deprived and extremely deprived areas, respectively, is GH¢6,338; GH¢4,271 and GH¢3,586. For those in West Mamprusi, trainees in less deprived, deprived and extremely deprived areas, respectively, spend GH¢3,042, GH¢3,174 and GH¢3,406 respectively in deprived, deprived and extremely deprived areas. In contrast to the baseline study reveals that GPEG paid less than half the total cost across all districts and locations; the endline shows a slightly different picture, especially for those in the West Mamprusi District. While GPEG bears less than 50% of the total costs of training, for those in Bunkpurugu-Yunyoo and for only those in the extremely deprived circuits in the West Mamprusi District, GPEG bears 53% and 51% of the total costs of trainees in less deprived and deprived circuits in the West Mamprusi District. Beyond the district and locational differences (level of deprivation) dynamics, all trainees in the region nonetheless pay GH¢2,681 (US\$707) more than GPEG was paying but these trainees were paying GH¢1,144 (US\$301) more than GPEG during the baseline study.

Brong-Ahafo Region Experience

The expenditure composition of trainees in Atebubu-Amantin and Nkoranza-North Districts in the Brong-Ahafo Region is presented in Table 6.8. Across all locations in the Atebubu-Amantin district, trainees' expenditure at home constituted their highest costs. The trainees' costs at home make up 34% of costs of those in less deprived circuits and 40% of costs for trainees in the deprived and extremely deprived circuits. Because trainees in Atebubu-Amantin District attend Atebubu CoE, they spend very little on transportation, but trainees in the Nkoranza-North

District spend a little more on transportation because they travel a little longer (about 135km) from their district to attend Offinso CoE in the neighboring Ashanti Region.

Table 6.8: Trainee’s Expenditure in Total Cost of Training – Atebubu-Amantin and Nkoranza-North (Brong-Ahafo Region)

Expenditure: Student	Atebubu-Amantin District			Nkoranza-North District		
	Less deprived	Deprived	Extremely deprived	Less deprived	Deprived	Extremely deprived
Transport	47	32	37	43	57	78
Additional food cost	92	75	97	217	162	163
Other learning materials	73	72	49	47	39	51
Communication	31	32	29	30	31	44
SRC dues and other cost	21	21	21	32	32	32
Cost at home	136	154	157	233	138	151
Cost per student per semester	401	386	389	601	459	519
Total annual cost per student (Student)	1,202	1,157	1,167	1,804	1,377	1,557

Source: Endline Instrument 14B (2016)

Contrary to the baseline study, where trainees in both districts spent less on food with the average cost of 20%, the endline shows that trainees in Nkoranza-North District spend up to 36% on food in the less deprived circuits; and those in the deprived and extremely deprived areas were spending 35% and 31% respectively.

Table 6.9 below reveals that the annual cost of training UTDBEs in the Atebubu-Amantin District are GH¢2,826, GH¢2,781 and GH¢2,791 for those in less deprived, deprived and extremely deprived circuits respectively. For these yearly costs, the portion of the cost that are borne by the trainees in the entire Atebubu-Amantin District are less than 50% for all trainees, with the maximum 43% for trainees in the less deprived circuits. Contrary to the outcome of the baseline study, the endline indicates that the portion of the cost burden borne by GPEG, for the four year period, has increased from about 51% to about 58%. Indirectly, trainees’ burden has decreased from about 49% to about 42%.

Table 6.9: District Level Cost Incidence – Atebubu-Amantin and Nkoranza-North

Level of deprivation	GPEG Bears	Student bears	Total cost per annum	Total cost over 4 years
Atebubu-Amantin District				
Less deprived	1624	1,202	2,826	11,304
Deprived	1624	1,157	2,781	11,124
Extremely deprived	1624	1,167	2,791	11,164
Nkoranza-North District				
Less deprived	1624	1,804	3,428	13,712
Deprived	1624	1,377	3,001	12,004
Extremely deprived	1624	1,557	3,181	12,724

Source: Endline Instrument 7 (2016), Instrument 14B (2016), and consultant's calculations

For the Nkoranza-North District, the portion of annual training cost that is borne by trainees is GH¢3,428, GH¢3,001 and GH¢3,181 for those in less deprived, deprived and extremely deprived circuits respectively. In the terms of the relative cost burden per annum, trainees in the less deprived areas bear 53%; those in the deprived areas bear 46% while trainees in the extremely deprived circuits bear 49% and this stands the same when extended to cover the entire duration of the programme. Comparing the four year relative cost burden of the endline to the baseline for all trainees in the district, regardless of the level of deprivation, data reveals that GPEG still bears 51% (consistent with the baseline) while trainees bear 49% of total costs. The next section discusses the cost variations along gender lines.

6.10 The Gender Dimension of the UTDBE Cost Incidence

This section explores the gender dimension of the cost incidence; for instance, given that nursing mothers on the UTDBE programme may travel to CoE with a care giver/nanny to take care of the child. Situations like this may have cost implications for female trainees, but are there differences in the burden of costs across male and female trainees?

It has earlier been indicated that GPEG's cost burden for all trainees regardless of gender and levels of deprivation and other costs payable by trainees is also fixed for all trainees. In this way, it is the personal and extra costs incurred by trainees that are the source of variation in trainees' cost burden and the differences that exist in them along gender lines is what is presented in Table 6.10 and the ensuing paragraphs that relate to it.

Table 6.10 (see annex 6.10b) shows the gender differential in cost incidence for regions and level of deprivations in areas where trainees are working. For instance, in the Northern Region, females in the deprived areas spend more (GH¢1,284 or US\$339) than all females in other locations across the five sampled regions. For these female UTDBE trainees, the cost components that contribute the most are home related costs which are GH¢480 (US\$127) and

transportation costs to the UTDBE venues (GH¢407 or US\$107). With regard to males, those in the less deprived circuits of the Northern Region spend GH¢999 (US\$253) more than those in other locations and their cost is largely driven by communication which is GH¢273 (US\$72) and transport (GH¢264 or US\$70). With regard to gender and expenditure, females in the deprived areas spend GH¢756 or US\$199 (making it GH¢2,268 or US\$598 per annum) more than their male counterpart in similar locations within the region. This goes a long way to support the assertion in the baseline study that female trainees are likely to spend more than males since some go to the CoE with their children and nannies hence spending much more on transport and feeding costs. For males in less deprived areas, they spend GH¢594 or US\$157 (making it GH¢1,782 or US\$470 per annum) more than their female counterparts in similar locations.

For UTDBE trainees in the Upper East Region, the trainees who spend most are located in the extremely deprived circuits. These female trainees spend GH¢578 (US\$152) and their costs are largely driven by costs at home (GH¢229 or US\$60) and the males show similar trends to that found in the North where trainees from less deprived areas spend more on financing themselves on the programme. In the year, females in extremely deprived circuits spend GH¢9 (about US\$2) more than their male counterparts. For males, those in the less deprived circuits spend the most per annum, GH¢576 (US\$152) more than their female counterparts in the same locations.

In the Upper West Region, male UTDBE trainees spend more than females across all locations, from less deprived to extremely deprived circuits. In less deprived areas, males spend GH¢46 (US\$12) more than their female counterparts; in deprived areas, male trainees spend GH¢170 (US\$45) more than their female counterparts and in the extremely deprived areas, males spend GH¢61 (US\$16) more than their female counterparts. Unlike the Northern Region where females spend relatively more, the story is the other way around in the Brong Ahafo Region. For those in the Brong-Ahafo Region, it is only in the less deprived circuits that males spend more than their female counterparts. For the deprived and extremely deprived areas, respectively, females spend GH¢62 (US\$16) and GH¢36 (US\$9) more than their male counterparts in the same circuit within the region.

Finally, UTDBE trainees in the Western Region have a similar situation to that of the Upper West Region, where males spend more than females across all locations within the region. Specifically, in less deprived areas, males spend GH¢29 (US\$8) more than their female counterparts; in deprived areas, male trainees spend GH¢474 (US\$125) more than their female counterparts; and in the extremely deprived areas, males spend GH¢47 (US\$12) more than their female counterparts. In all, the locations where the expenditure difference is wide is in the deprived circuits where, per annum, females spend GH¢1,422 (US\$375).

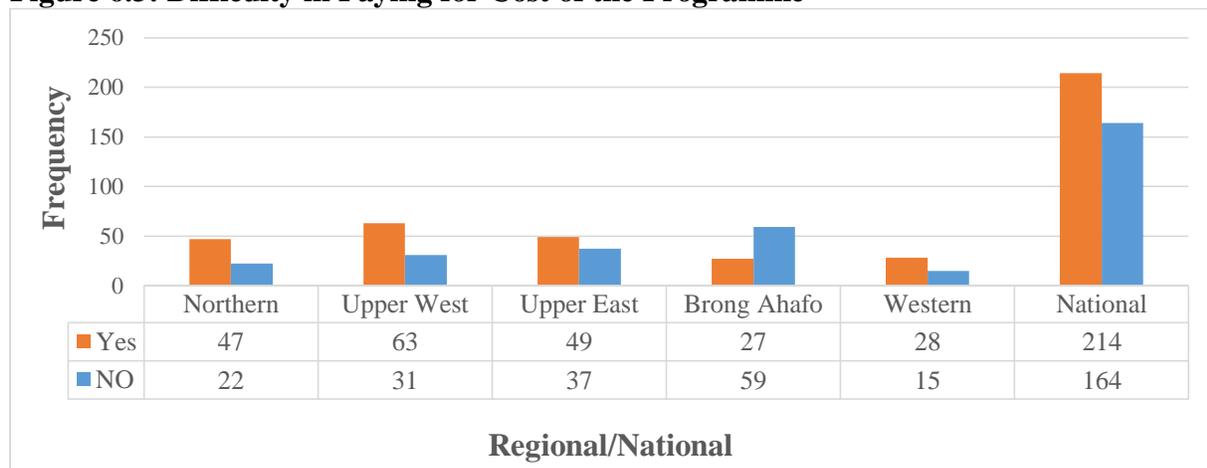
In summary, the analysis in this section paints a different picture compared to the baseline study, where females were found to have been spending more than their male counterparts. In the endline study, males have reported spending more, on average, than their female trainee counterparts within the same location. As indicated earlier, this could possibly be as a result of underestimates by females who may not be taking into consideration all the costs of their nannies in the course of their education or just an overstatement of cost by the male trainees. This

analysis has been carried out by taking SRC dues and other costs as fixed because they are the same for all trainees regardless of gender and location differences.

6.11 UTDBE Trainee’s Funding Constraints and the GPEG Sponsorship Contribution

Figure 6.3 displays the distribution of trainees who find it difficult bearing the cost of the UTDBE programme as against those who do not find it difficult. It can be gleaned from the figure below that, apart from the 7 (2%) non-responses, a total of 164 (43%) do not find it difficult paying for the cost of the programme while the remaining 214 (55%) have challenges paying the GH¢6552 (US\$1728) which is their cost commitment towards the entire training process over a four year period. This finding confirms difficulties most of the trainees experience in funding their training to complement the GPEG contribution as indicated in chapter two.

Figure 6.3: Difficulty in Paying for Cost of the Programme



Source: Instrument 14B, Cost Effectiveness Data sheet per UTDBE Trainee Endline (2016)

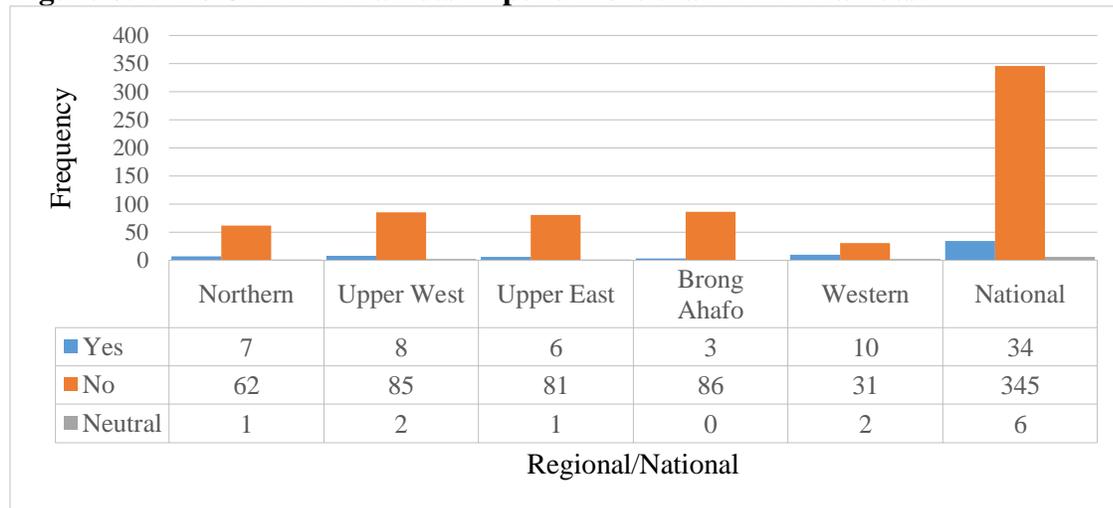
The regional distribution of findings suggest that trainees who have challenges in paying for their portion of the UTDBE training include: the Northern Region where 47 (68%) of trainees find it difficult to pay GH¢9177 (US\$2,420); in the Upper West Region, UTDBE trainees pay GH¢4958 (US\$1,308) and 63 (67%) of trainees found it challenging compared to the Upper East Region, where 49 (57%) have difficulty paying their GH¢3792 (US\$1,000) commitment. In the Brong-Ahafo Region the cost to UTDBE trainees was GH¢5384 (US\$1,420) and only 27 (31%) of trainees found it challenging to pay compared to 28 (65%) of trainees in the Western Region where the cost was GH¢7780 (US\$2052). In all, it is only in the Brong-Ahafo Region where fewer trainees found it difficult to pay their portion of the UTDBE training costs.

6.12 Do You Think You Spend/Pay More Than the Conventional Trainees?

Out of a total of 385 UTDBE trainee respondents (see Figure 6.4), 34 (9%) report spending more than their counterparts on the DBE programme. However, 345 trainees who make up the majority of the sampled trainees (89%) were of the view that they spend less as compared to the DBE trainees. Again, six of the UTDBE trainees representing 2% were neutral and could not assess if their spending was higher or lower than their DBE colleagues on the conventional programme. Reasons why they could not tell the difference relate to the fact that were only given the school fees to pay and the authorities do not give a breakdown of what goes into their fees. Due to this, they are unable to tell whether they pay more or less. At the regional level, similar to the baseline findings, the number of UTDBE trainees who feel they do not spend more than their DBE counterparts is highest (97%) in the Brong-Ahafo Region. This finding corroborates what was found during the baseline.

Contrary to the baseline where it also coincided that trainees' cost burden is lowest in the Brong-Ahafo Region, the endline found ---see Section 6.8 (Table 6.5) that trainees in the Upper East had the lowest cost burden of GH¢3792 (US\$1,000) and were followed by trainees in the Upper West where the trainee cost burden was GH¢4958 (US\$1,308).

Figure 6.4: Do UTDBE Trainees Expend more than DBE Trainees?



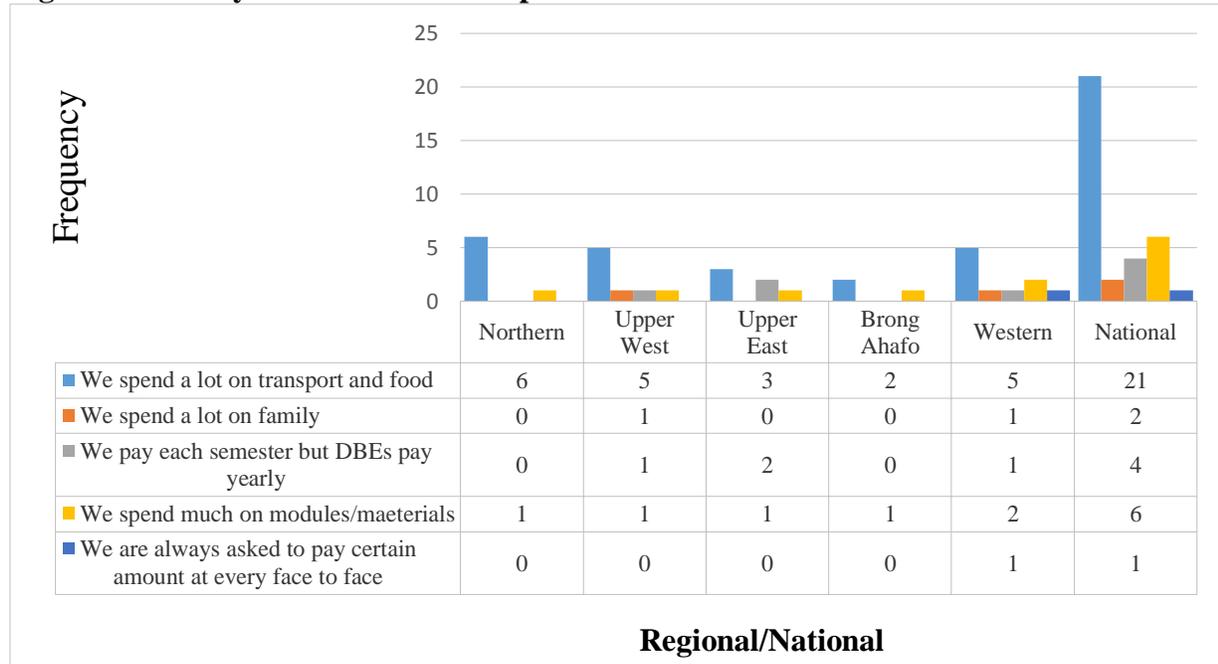
Source: Cost Effectiveness Datasheet per UTDBE Trainee Endline (2016)

6.13 Why UTDBE Trainees Perceive they Spend Higher than DBE

Figure 6.4b (see below) indicates that of these 34 trainees, 21 representing 62% argued that they spend more on their transportation than their CBE counterparts since they travel frequently to and from the CoE. Another two (6%) of the trainees think they spend a lot more on their families than the DBE trainees while 4 trainees (12%) perceived they have to pay for tuition fees more frequently for each semester while DBE students pay once in a year. Explaining further, 6 other

UTDBE trainees (representing 17%) shared the view that, because the UTDBE programme is self-instructional, they spend a lot more on course modules and other teaching and learning materials (for studies at home) as opposed to those who are on the DBE regular training who have the opportunity of attending regular classes. Finally, only one person felt UTDBE trainees spend more since they are made to pay certain amounts for TLMs on each face to face while DBEs are not made to pay. The endline corroborates the baseline finding because the majority of the reasons for paying more was due to transport and the UTDBEs are travelling more frequently for the sake of studies but the DBEs move to campus and stay for a long time as residents.

Figure 6.4b: Why UTDBE Trainees Spend More than DBE Trainees

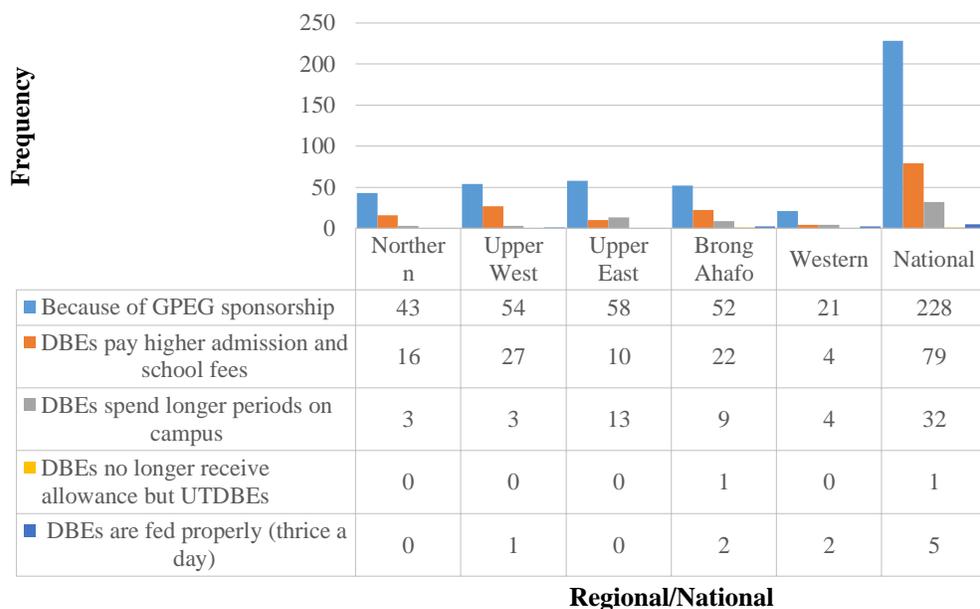


Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE Trainee Endline (2016)

6.14 Why UTDBE Trainees Perceive They Spend Less than DBE Trainees in Relation to the Cost of Financing

Figure 6.5, reveals that, out of the 345 UTDBE trainees who think they spend less compared to their counterparts on the conventional programme, the majority, numbering 228 (66%) attributed their perception of spending less to the GPEG sponsorship they receive while 79 (23%) said it was because DBEs pay higher admission and school fees. This was 4% higher than the baseline figure. In addition, 32 UTDBE trainees (9.3%) sited the longer duration DBEs trainees spend at the CoE as compared to their limited time on campus which was far less. Just one UTDBE trainee (representing 0.3%) cited the reason for them spending less was that DBEs no longer receive allowances like they did previously and they (UTDBEs) still teach to make money while schooling.

Figure 6.5: Why UTDBE Trainees Think They Spend Less than Those on the Conventional Training



Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE Trainee Endline (2016)

6.15 Value of the GPEG Sponsorship

Out of 385 UTDBEs trainees, the majority of 147 (38%), value the GPEG sponsorship to be high compared to 46 trainees (31%) in the Upper West Region and 14 trainees (10%) in the Western Region (see table 6.11 below). However, 130 UTDBEs trainees (representing 34%) rated the GPEG sponsorship as moderate. Trainees in Brong-Ahafo Region formed the majority in this group (22%), while trainees from Western Region were in the minority with 21 trainees representing this view (16%). In addition, 101 out of the total of 385 UTDBEs trainees (26%) ranked the GPEG sponsorship as very high. Of this number, the majority of trainees were in the Brong-Ahafo Region numbering 33(representing 33%) while the minority in this group were in the Western Region numbering 6 (representing 6%). Interestingly, only 3 trainees (representing 0.8%) with 2 and 1 from the Northern and Western Regions respectively ranked the GPEG sponsorship as low. Again, only one (0.4%) UTDBE trainee from the Western Region rated the GPEG sponsorship as very low. In addition, three trainees (0.8%) with each in the Northern, Upper West and Brong-Ahafo Regions respectively could not rank the GPEG sponsorship with the reason that they did not know how much the GPEG sponsorship is worth. Unlike the baseline study where the majority (53%) of the trainees ranked GPEG’s support as moderate, the endline had a majority (38%) of the UTDBE trainees ranking the GPEG support as high. This could be attributed to the enhanced support given by GPEG to cover more of their fees and facility user fees.

Table 6.11: Ranking the GPEG Sponsorship by Trainees

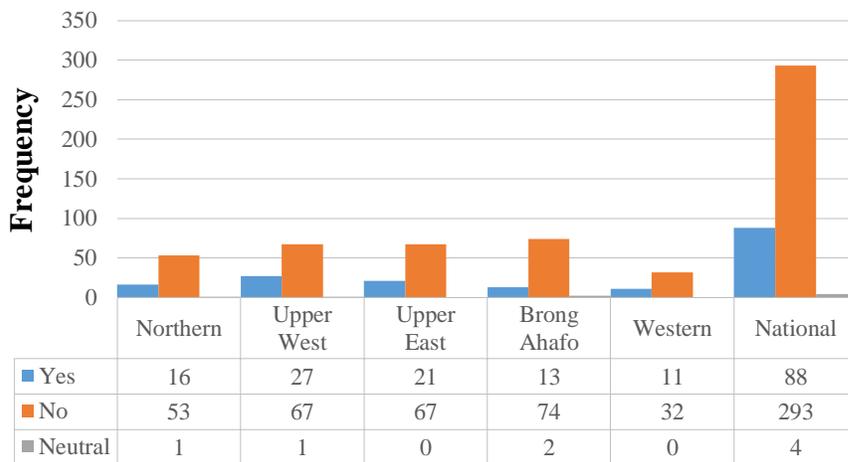
Rank	Northern			Upper West			Upper East			Brong Ahafo			Western			National
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	
Very High	6	12	18	10	14	24	7	13	20	17	16	33	1	5	6	101
High	5	17	22	25	21	46	10	29	39	21	5	26	7	7	14	147
Moderate	7	20	27	14	10	24	13	16	29	14	15	29	7	14	21	130
Low	1	1	2	—	—	—	—	—	—	—	—	—	1	0	1	3
Very Low	—	—	—	—	—	—	—	—	—	—	—	—	1	0	1	1
Can't Rank	0	1	1	0	1	1	—	—	—	0	1	1	—	—	—	3
Total	19	51	70	49	46	95	30	58	88	52	37	89	17	26	43	385

Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE Trainee Endline (2016)

6.16 Preferences and Choice of DBE or UTDBE Training by UTDBE Trainees

Figure 6.6 below presents the preferences of DBE or UTDBE training by UTDBE trainees; the vast majority of trainees prefer the UTDBE mode of training to the conventional mode with 88 UTDBE trainees (23%) preferring the conventional mode of training compared to 293 UTDBE trainees (76%). Out of the 293 who do not prefer the conventional mode, the majority, 74 (25%) are in the Brong-Ahafo Region and the minority are in the Western Region --32 (11%). The majority who prefer the conventional mode (31%) are located in the Upper West while the least proportion of UTDBE trainees (12%) are from the Northern Region. However, 4 trainees (1%) remained neutral on the subject, owing to their limited knowledge on what goes on in the conventional mode. The proportion of trainees who did not prefer the conventional mode has increased by 5% from the baseline and indicates a growth in preference towards the UTDBE programme by trainees. This is an important finding for policy makers who are considering the future of UTDBE.

Figure 6.6: Preference for DBE or UTDBE Modes of Training



National/Regional

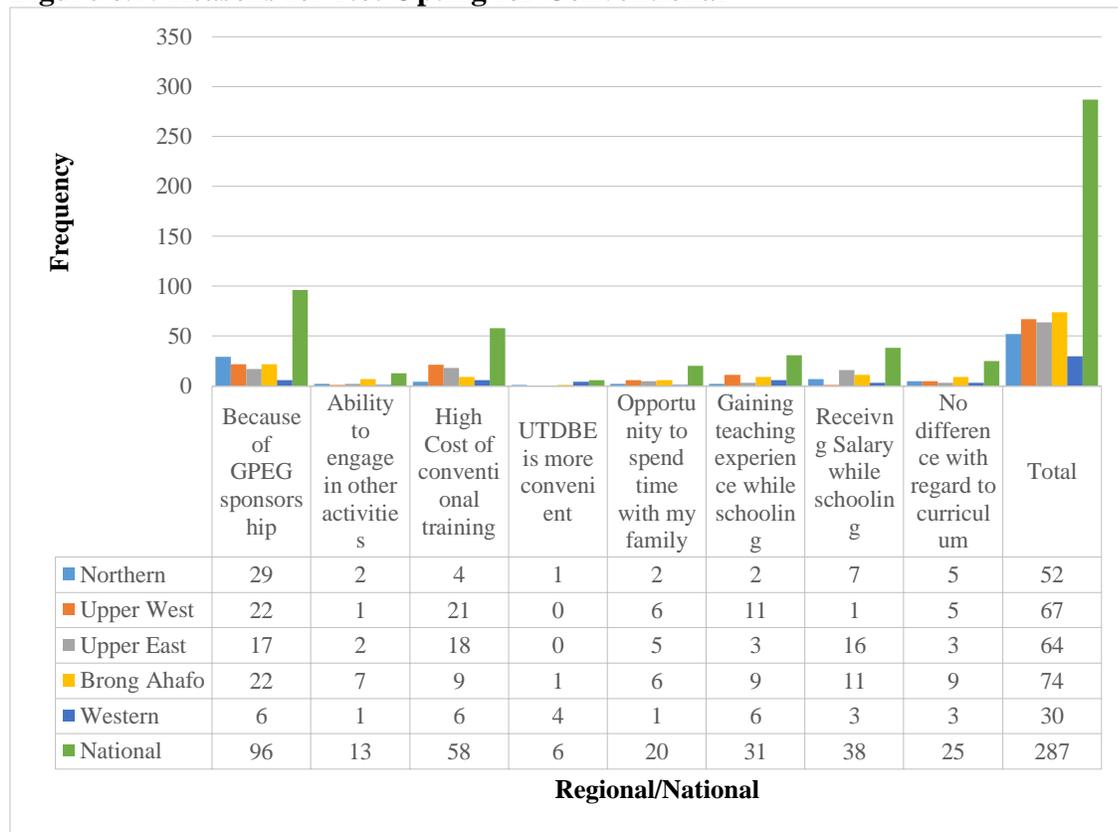
Source: Cost Effectiveness Datasheet per UTDBE Trainee Endline (2016)

6.17 Why Trainees do not Prefer the Conventional Teacher Training Mode

Figure 6.7 below presents the results of respondents' reasons for not opting for conventional teacher training. Findings suggest that the majority of trainees (96 out of 385) cited the GPEG sponsorship as the main reason for not opting for the conventional mode. For these respondents, most (30%) were from the Northern Region. 11% of the trainees did not opt for the DBE mode of training because with the UTDBE programme, they felt they have the ability to engage in other activities apart from teaching that could go a long way to boosting their career or their

financial situation. Other trainees explained that the UTDBE mode allowed them to engage in other income generating activities since it is more flexible. Another 58 (20%) of respondents said they did not opt for the conventional mode because the DBE programme comes with higher costs which trainees are unable to bear owing to their constrained financial position. Furthermore, 31 (11%) of the trainees did not opt for the DBE mode of delivery because, to them, the UTDBE programme offers the opportunity to gain teaching experience while at their school teaching and another reason they 38 (12%) was that they are more comfortable with the UTDBE than the DBE because, with the UTDBE, it allows them to receive a salary while training.

Figure 6.7: Reasons for Not Opting for Conventional



Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE Trainee Endline (2016)

Consistent with the baseline study, where 13% of the trainees did not opt for the conventional mode because they wanted to teach and “*help the younger ones in their various communities*”, the endline also has a similar situation. The endline results suggest that 20 (7%) of trainees said that the UTDBE enabled them to have the “*opportunity to spend time with their families*”. Overall, the least cited reason was the fact the UTDBE programme is more convenient.

Indeed, relative to the baseline, what was rather striking during the endline was the 9% (25 trainees) of the UTDBE trainees who did not prefer the conventional mode said that they did not

see any difference between the UTDBE and DBE programmes with regard to curriculum. This is what some of the trainees had to say:

“I do not prefer the conventional mode of training because it is the same curriculum and we will graduate with the same certificate” (Trainee from Brong Ahafo Region, Endline Field work, 2015).

“I did not opt for the conventional mode because, with UTDBE, I receive the same form of training at a lower cost” (Trainee from Upper West Region, Endline Field work, 2015).

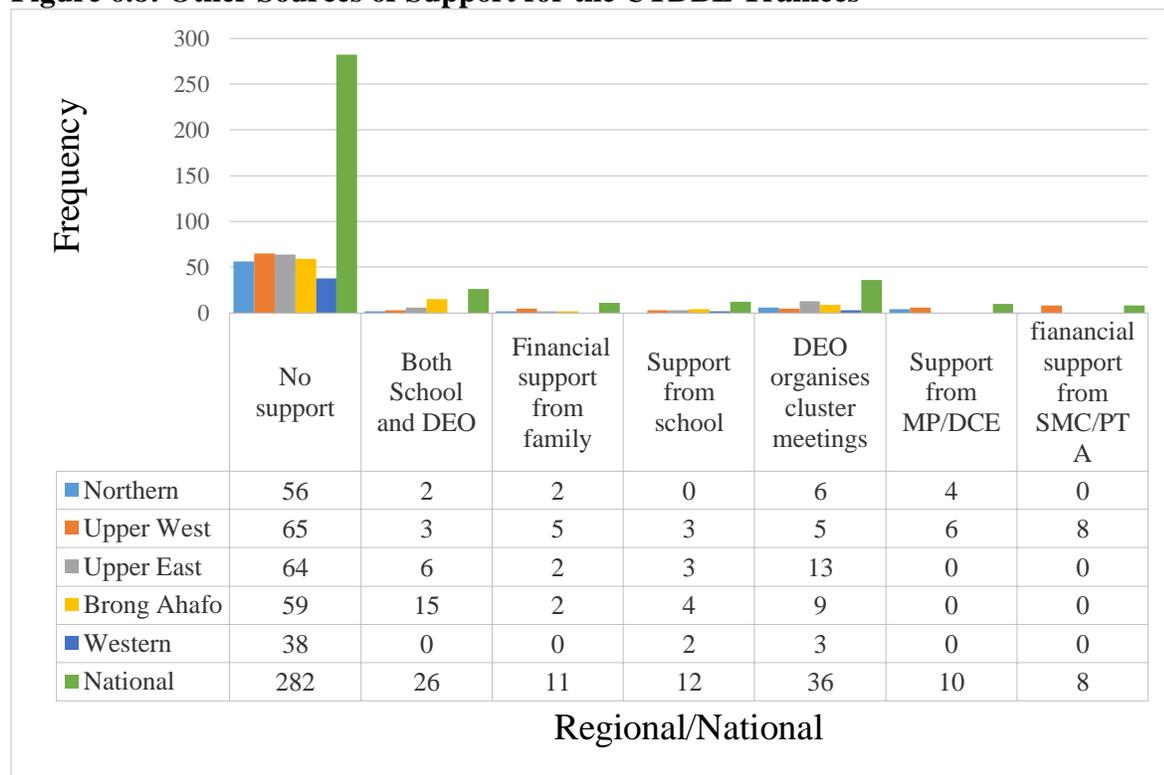
There are significant reasons why the trainees prefer the UTDBE modality due to their work and life balance. The findings depict an older generation of trainees who have added responsibilities in the home and community, who cannot easily opt for professional training unless it is flexible, subsidised and within reason cost wise.

6.18 Alternative Sources of Support for UTDBE Trainees

Figure 6.8 provides the respondents' views on alternative sources of support they receive for the UTDBE training. The findings suggest that most of the trainees (282 representing 73%), do not receive any form of support apart from the GPEG support while only (27%) receive support from other sources. Consistent with the baseline findings, the majority (23%) of trainees with no other support were from the Upper West Region. The Upper West Region has the highest rate of poverty incidence in Ghana estimated at 45.1% (GSS, 2014) which has several implications related to trainee retention, drop out and completion on the UTDBE programme. A similar trend was found in Upper East and Upper West Regions where 23% of trainees receive other support to complement the GPEG.

Again 7% of these trainees said they receive support from both their school and the DEO while 3% of trainees said they receive financial support from their family, school and from their Members of Parliament and District Chief Executives. Apart from these sources, 36 (9%) said they receive support from the DEO in the form of cluster meetings. Finally, 8 people (2%) said they receive financial support from their SMCs/PTAs, all of whom were from the from Upper West Region. This signifies that the vast majority of UTDBE trainees did not receive any support, but that there is (in some cases) community based and district based support/interest in improving the capabilities of teachers in some of the most deprived areas of the country (e.g. Upper West).

Figure 6.8: Other Sources of Support for the UTDBE Trainees

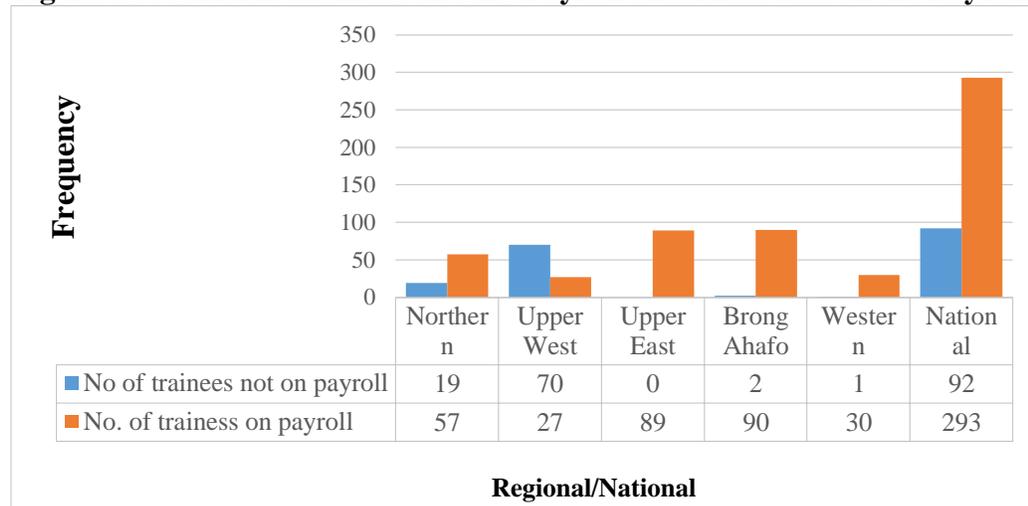


Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE Trainee Endline (2016)

6.19 UTDBE Trainees On and Off GES Payroll

Figure 6.9 shows the numbers of trainees who are on GES payroll while taking the UTDBE programme or are not on the GES payroll. Out of the 385 sampled UTDBE trainees at the endline, 293 (76%) were currently on the payroll as of Feb 2016 while the remaining 24% are still not on the GES payroll. This is an improvement over the baseline stage in 2014 when 52% of the UTDBE trainees in the sample were not on GES payroll. This finding suggests an improvement of 28% graduating to the GES payroll. The UTDBE programme requires that the applicant is on the GES payroll as a condition for programme admission; the baseline findings suggest that this was not the case in a number of instances which had an effect on the drop out on the programme along with other factors such as poor academic background. The migration of trainees onto the government payroll alleviates the financial constraints faced by trainees who have to subsidize their indirect training costs.

Figure 6.9: UTDBE Trainees on GES Payroll and Those Not on the Payroll



Source: Instrument 13, Lesson Observation Instrument, Endline (2016)

The region with the highest proportion of UTDBE trainees on the payroll is the Upper East Region where all the sampled trainees (100%) are on the payroll. This is followed by the Western Region and the Brong-Ahafo Region. The regions that have the least proportion of trainees on the payroll are the Upper West followed by the Northern Region. The turn-around of the trainee payroll situation can partly be attributed to the action taken by the MOE/GES to ensure that the majority of trainees were placed on the payroll partly as a result of the baseline findings and recommendations.

Table 6.12: Gender Disaggregation of Trainees On and Off the GES Payroll by Region

Region	No. of trainees on the payroll			No. of trainees not on the payroll		
	Female	Male	Total	Female	Male	Total
Northern	11	46	57	9	10	19
Upper West	13	14	27	36	34	70
Upper East	28	61	89	—	—	—
Brong Ahafo	52	38	90	1	1	2
Western	13	17	30	1	0	1
National	117	176	293	47	45	92

Source: Instrument 13, Lesson Observation Instrument Endline (2016)

Table 6.12 shows the gender disaggregation of trainees on the payroll and those who are not on the payroll. Contrary to the baseline study, where the majority of trainees were not on the payroll; the endline revealed that for the 293 that are on payroll, males make up 60% while 40% are females. For the 92 who are not on the payroll, 49% are males while females make up the remaining 51%. In sum, when considering those on the payroll, the majority are males. For the

majority (176) of males that are on the payroll, the findings suggest that the majority are from the Upper East Region (35%) and this is similar to the finding from the baseline, where the majority (36%) was from the Upper East. For the majority of females (47) who were not on the payroll, most (77%) are from the Upper West Region while others are from the Brong-Ahafo and Western Regions.

6.20 Average Monthly Salary of Pupil Teachers

Table 6.13 conveys the results of the average monthly salary of sampled UTDBE trainees. Respondents in the Northern Region reported an average monthly salary of GH¢397 (US\$105), while trainees in Brong-Ahafo reported an average monthly salary of GH¢388 (US\$102), trainees in the Upper East reported their average earnings as GH¢354 (US\$93), and Upper West Region trainees received GH¢356 (US\$94). Trainees in the Western Region reported earning an average monthly salary of GH¢364 (US\$96). However, the national average monthly salary for a pupil/untrained teacher in Ghana is GH¢371 (US\$98). Comparing the baseline figures to the endline, the findings suggest that the Upper West Region experienced the greatest increase in trainees' average monthly salary where it increased by GH¢66 (US\$17).

Table 6.13: Average Monthly Salary of UTDBE Trainees

Region	Baseline	Endline
	Average salary (GH¢)	Average salary (GH¢)
Northern	361 (US\$95)	397 (US\$105)
Brong Ahafo	381 (US\$100)	388 (US\$102)
Upper East	397 (US\$105)	354 (US\$93)
Upper West	215 (US\$57)	356 (US\$94)
Western	356 (US\$94)	364 (US\$96)
Total	357 (US\$94)	371 (US\$98)

Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE Trainee (2016)

6.21 Effect of Ghana Cedi Depreciation on Cost of Training DBEs and UTDBEs

The views of Principals at the CoEs were solicited to establish whether the currency depreciation suffered by Ghana has had any effect on the cost of training DBEs and UTDBEs. Findings from field interviews suggest that all training colleges have been affected which has also affected the cost of training the DBE and UTDBEs. Authorities interviewed at two Colleges of Education said that:

“The depreciation of the cedi has affected the cost of training DBE and UTDBE teachers because prices of both teaching and non-teaching materials has gone up, hence deficit budget”.

“Depreciation makes it difficult to feed the students. Depreciation leads to increases in prices of food items and service”.

6.22 Key Findings and Conclusion

The need to train more teachers in order to close the trained teacher gap in Ghana is a pressing policy issue particularly when educational resources are stretched and demand is growing. With limited resources available, policy makers and development partners have sought to identify a more cost efficient and effective mode of teacher training. The findings from the endline study suggest that there is a growing preference among untrained teachers for the UTDBE mode of training and that most trainees (76%) interviewed prefer the distance learning mode used by the UTDBE programme as the preferred choice of training compared to the conventional mode.

From the data collected across the five Colleges of Education, nine District Education Offices and 385 UTDBE trainees, the study attempted to analyse the cost incidence to government, GPEG (donor) and the students themselves since both programmes can be classified as cost-shared. The endline cost efficiency analysis showed that the unit cost of training a DBE graduate is 60% higher than the cost of training a UTDBE graduate. The UTDBE-DBE efficiency ratio is 1:6. The baseline cost efficiency ratio was 1:7 which showed that the UTDBE training modality was more cost effective and efficient than the DBE mode of training. The reduction in the ratio is a result of a government policy that reduced the cost of training DBEs by 63% after scrapping the trainee allowance. The UTDBE modality remains the more cost effective approach despite the policy change that eliminated the DBE student allowance.

In relation to the burden of costs, UTDBE students bear 50.2% (GH¢6,552 or US\$1,728) of the cost of their training while GPEG bears 49.8% (GH¢6,496 or US\$1,713); but when it comes to the DBE modality of training, students bear 42% (GH¢7,389 or US\$1,951) of the cost, while the GoG bears 58% (GH¢10,398 or US\$2,742). Comparing baseline and endline costs, the component of trainees’ costs that increased most is that of communication (111%) followed by home cost increases including additional food etc. (78%).

Regionally, trainees that bear the highest cost are from the Northern Region with a cost of GH¢6,024 or US\$1,589; the trainees that bear the least cost are those from the Upper East Region. These findings were similar to the regional findings at the baseline stage. The cost differences between the baseline and endline stages of the IA can be attributed to the higher cost of transportation and home related costs (e.g. extra feeding while away at the training, child care etc.) and cost of communication for trainees.

With respect to gender, the findings revealed that male UTDBE trainees spend GH¢201 (US\$53) more than their female counterparts; findings for the conventional DBE mode suggest that male DBE trainees spent more than their female counterparts. This is in line with the baseline study where male trainees, on average, spent GH¢24 (US\$10) higher than their female counterparts when costs are annualized over the lifetime of the training programme. Other key findings from this chapter suggest:

- GPEG spends, on average, GH¢1,629 (**US\$428**) on each UTDBE trainee per annum compared to the DBE which requires GoG to spend an average of GH¢3,466 (**US\$914**) per annum on each trainee.
- The results suggest that staff costs form the highest component for the UTDBE (58%) and DBE (42%) costs for training. The face to face component of the UTDBE programme appears to be the highest cost component.
- Overall, male and female trainees, incur an average annual cost of GH¢1,737 (US\$458) and GH¢1,536 (US\$405) respectively which shows that male UTDBE trainees spend GH¢201 (US\$53) more than their female counterparts.
- The majority of the UTDBE trainees' expenditure is incurred on "home costs" which is GH¢166 (US\$44) and this was followed by their expenditure on transport and additional food costs at the CoE of GH¢122 (US\$32).
- DBE trainees personally spend most on home expenses which is GH¢322 (US\$85) and this is followed by additional expenditures on food costing GH¢180 (US\$47) and other learning materials which cost GH¢141 (US\$37).
- The total cost of training UTDBEs over the four year period is GH¢13,048 (US\$3,441). UTDBE trainees bear GH¢6,552 (US\$1,728), representing 50.2% of the overall cost, while GPEG bears GH¢6,496 (US\$1,713) representing 49.8%. This includes the cost of producing the modules.
- The average cost of training DBE over the three-year period is GH¢17,787 (US\$4,691). DBE trainees bear GH¢7,389 (US\$1,951), representing 42% while GoG bears GH¢10,398 (US\$2,742) representing 58%.
- Training a student on the conventional mode (DBE) costs the government 60% more than the cost of training a teacher trainee using the UTDBE modality. The UTDBE programme is cost efficient relative to the DBE model even when a major cost component (which was 63%

of the total cost of allowances per trainee) in the DBE model has been removed from the total cost due to government policy.

- 89% of UTDBE trainees were of the view that they spend less as compared to the DBE trainees.
- The majority of UTDBE trainees (76%) prefer the UTDBE mode of training due to the associated high cost of DBE training and the absence of GPEG support for DBE training.
- 76% of UTDBE trainees sampled are on the GES payroll as “pupil teachers” earning an average salary of GH 371 (US\$98) per month. We recommend that the GES strives to attain 100% placement of UTDBE trainees on the payroll so these newly trained teachers are retained and secured in their positions in the most deprived areas across the country.
- Future distance education programmes for training teachers should continue to be supported by government in order to reduce the trained teacher gaps particularly in the most remote areas of Ghana.

Based on the findings, the Government of Ghana could, in the future, redesign the UTDBE programme to make it even more cost effective and efficient for both the trainee and GOG. The location of the Colleges used for the face to face activity should be closer to the trainees’ location of work and preferably within the region. This would reduce the cost of travel and, possibly, other home costs for the trainee and ensure that more regular supervision could be conducted by the CoE in collaboration with the DEO. DEO’s should also be more closely supervised in order to ensure that they are able to run objective application processes in selecting their trainees who will benefit from programmes such as UTDBE.

Chapter 7: IA Results Based on the Lesson Observation with UTDBE Trainees

7.1 Introduction

This section of the report is focused on the Research Question 2: “*What skills have the student teachers gained in lesson planning/preparation, teaching methodology and classroom organization and management?*” which is the main focus of the Impact Assessment (IA).

Classroom observations were conducted in 193 sampled schools to answer this research question. Overall, the research team conducted 400 ‘forty minute to one hour’ classroom observations across the nine sampled districts in five regions of Ghana. Approximately 390 (97.5%) of the trainees observed during the baseline (June 2014), and midline stage (June 2015) were observed during this endline stage in November 2015. Out of this sample, 92 (23%) of the trainees were located in less deprived schools, 152 (38%) in deprived schools and 156 (39%) in extremely deprived schools. The sex distribution reveals that 226 (56.5%) males and 174 (43.5%) females were observed which is slightly higher than what was recorded during the baseline study that recorded 235 (58.75%) males as against 157 (41.25%) females (Table 7.1 shows the number of lesson observations conducted across the five regions by level of deprivation).

Table 7.1: Number of Lesson Observations Conducted across Five Sampled Regions

Region	Total Number of Lessons Observed	Number of Males	Number of Females	Number in Deprived	Number in Less Deprived	Number in Extremely Deprived
Upper East	88	58	30	20	17	51
Brong Ahafo	91	38	53	448	16	31
Western	44	26	18	19	19	6
Northern	76	54	22	37	21	18
Upper West	101	50	51	32	19	50
Total	400	226	174	152	92	156

Source: Instrument 13, Lesson Observation Instrument Endline (2016)

The lesson observation schedule was developed by the GES and based on a range of 19 classroom observation indicators, which followed the same LOS conducted at the baseline stage of the IA. The same indicators were used during the baseline study to assess the performance of the UTDBE trainees (see annex for the LOS instrument used). The key indicators observed across the 400 teachers included:

<p>Instructional Planning Skills: Assessment of Lesson Plan (with 4 Key Indicators below)</p> <ol style="list-style-type: none"> 1. Lesson Objectives 2. Lesson Core Points 3. Teacher Learner Activities 4. Use of Teaching Learning Materials 	<p>Teaching Methodology Delivery (13 Indicators)</p> <ol style="list-style-type: none"> 1. Subject Knowledge and Content Accuracy 2. Use of Language 3. Language of Instruction 4. Use of Generic Skills 5. Use of Chalkboard 6. Questioning Skills 7. Gender Sensitivity 8. Sensitivity to Diverse Learner Needs 9. Feedback to Pupils 10. Use of TLMs 11. Pupils' Participation 12. Use of Teacher Learner Activities 13. Evaluation of Lesson 	<p>Classroom Organisation and Management (2 Key Indicators)</p> <ol style="list-style-type: none"> 1. Classroom Setting 2. Class Control
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As was the case in the previous baseline survey, the assessment of the key indicators at the endline stage was conducted using two approaches. Firstly, the observers (2-observers) rated each of the 19 indicators on a five point scale (with numerical values) as follows: Poor (1), Needs Improvement (2), Satisfactory (3), Good (4), and Excellent (5). Secondly, observers were asked to describe teacher and learner behaviour and activities in the following eight areas and as part of their observations (see annex 1 for IA instrument description and details):

- Teacher preparation for the lesson, indicating whether objectives were linked to the scheme of work and previous lesson;
- Describe the language of instruction used by the teacher indicating how the teacher used Ghanaian Language and English and how students used these languages;
- Strategies and methods/activities the teacher used in the classroom indicating whether the teacher used mainly a lecture style and the nature of student/ teacher interaction;
- Questioning and pupils' responses indicating whether the teacher accepted choral responses or focused mainly on more able students to answer questions, and whether opportunities were given for individual and group activities;
- Teacher's use of positive feedback;
- Pupils' activities during the course of the lesson;
- Teacher's use of time during the lesson; and
- Teacher's disciplinary practices used during the lesson.

Immediately following the lesson observation there was a brief interview with the teacher after which the enumerators compared their scores and descriptions of the classroom instruction

before making a final harmonized score. Quantitative and qualitative analyses were carried out to assess the findings of the classroom observation instrument. The quantitative analysis used the ratings while the qualitative analysis used the descriptions of the teacher's and learners' behaviour and instructional practice as described in the instrument. An analysis of the responses was conducted by comparing the scores with the description of what was observed to ensure accuracy and consistency across the regions and districts.

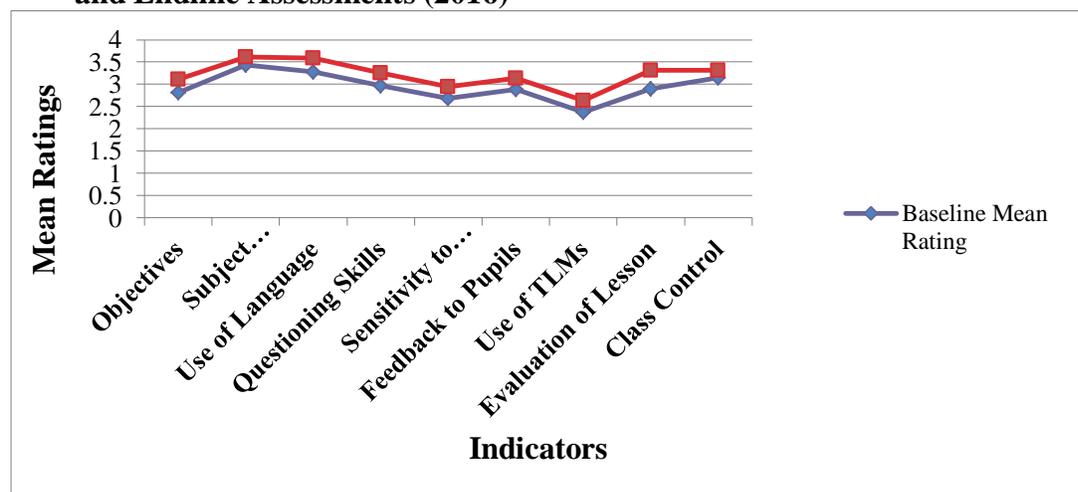
7.2 Quantitative Analysis

The lesson observation assessment rated each of the 19 indicators on a five point scale (with numerical values) as follows: Poor (1), Needs Improvement (2), Satisfactory (3), Good (4), Excellent (5). The mean ratings were then calculated using SPSS statistical analysis. Overall mean ratings were obtained (see Table 7.2) in order to identify the skills student teachers gained in lesson planning/preparation, teaching methodology and classroom organization and management. In addition, mean ratings were obtained for male and female teachers (see Table 7.2 across the five different regions (see Table 7.5 and across the three zones of deprivation. The Lesson Observation ratings for the endline are indicative of improved skills gained in lesson planning/preparation, teaching methodology and classroom organization and management based on two additional terms of the UTDBE programme, which included two additional sessions of face-to-face at the CoE.

7.2.1 Mean Rating of Classroom Observation Indicators

Table 7.2 and Figure 7.1 shows mean ratings for Baseline and Endline Assessments. In the Baseline Assessment trainees demonstrated "satisfactory performance" in six out of nineteen areas of classroom observation indicators. However, during the endline trainees demonstrated "satisfactory performance" in sixteen of the nineteen indicators showing improved performance in additional ten indicators over that of the baseline suggesting that trainees had gained knowledge and confidence in classroom processes.

Figure 7.1: Mean Rating of Selected Classroom Observation Indicators for Baseline (2014) and Endline Assessments (2016)



Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation: Instrument 13, 2016

Table 7.2: Mean Rating of Classroom Observation Indicators for Baseline, and Endline Assessments

Indicator	Baseline		Endline	
	Sample Size	Mean Rating	Sample Size	Mean Rating
Objectives	357	2.81	400	3.11
Core Points	354	2.91	400	3.03
Teacher Learner Activities	356	2.85	400	4.41
Preparation of Teaching Learning Materials	363	2.55	400	2.68
Subject Knowledge and Content Accuracy	385	3.43	400	3.61
Use of Language	384	3.28	400	3.59
Language of Instruction	382	3.28	400	3.62
Use of Generic Skills	376	2.72	400	3.00
Use of Chalkboard	385	3.15	400	3.46
Questioning Skills	385	2.97	400	3.26
Gender Sensitivity	384	3.19	400	3.41
Sensitivity to Diverse Learner Needs	307	2.68	400	2.95
Feedback to Pupils	377	2.89	400	3.14
Use of TLMs	386	2.38	400	2.64
Pupils' Participation	382	2.90	400	3.22
Use of Teacher Learner Activities	377	2.84	393	3.23
Evaluation of Lesson	374	2.90	400	3.32
Classroom Setting	377	2.82	400	3.20
Class Control	374	3.15	400	3.31

Source: UTDBE Endline Assessment, Classroom Lesson Observation: 2016

Table 7.3 below shows mean ratings for Baseline, and Endline LOS classroom observation indicators by gender. The UTDBE trainees' performances during the endline show remarkable improvement over their performances during the baseline. During the baseline, female trainees demonstrated satisfactory performance in seven indicators as against the male trainees' success in six indicators. However, during the endline the female trainees demonstrated satisfactory performance in 17 of the 19 indicators as against their male counterparts who performed satisfactorily on twelve indicators.

The female performance at endline has made significant improvement over the baseline performance; the female trainees have improved on an additional ten indicators as against their male UTDBE counterparts who improved on six indicators. This impressive endline performance as compared to the baseline performance is an indication that the trainees had acquired some practical teaching competencies from attending the UTDBE programme. For instance, during the midline the female trainees did rather better than the males on the use of TLMs (indicator 14), with a mean rating for females of 3.08 (satisfactory) as compared to the male rating of 2.84 (needs improvement). With respect to the endline performance on item 14 (use of TLMs), the overall performance of both trainees was poor as compared to the midterm assessment, though slightly better than the baseline assessment (female 2.90 rating as against 2.45 male rating).

The male trainees relapsed in their performance in the endline as against their performance in the midterm on ten items. Although they performed poorly in the endline their performance was an improvement over that of the baseline assessment. The male trainees' performance on core areas revealed that they had relapsed even beyond their performance in the baseline assessment (baseline 2.94; endline 2.90). However, on five items their performance improved when compared to the baseline and midterm assessments. On indicators such as pupil participation and use of teacher learner activities, the midterm and endline performances remained unchanged (3.12 and 3.15 respectively).

Table 7.3: Mean Rating: Baseline, Midline and Endline Assessments of Classroom Observation Indicators by Gender

Indicator	Baseline		LOS Midterm		End term	
	Female	Male	Female	Male	Female	Male
Objectives	2.83 (141)	2.82 (213)	3.18 (159)	3.27 (239)	3.17 (174)	3.07* (226)
Core Points	2.91 (140)	2.94 (211)	3.22 (160)	3.26 (234)	3.20 (174)	2.90** (226)
Teacher Learner Activities	2.97 (143)	2.80 (210)	3.36 (157)	3.24 (231)	3.29 (174)	2.93* (226)
Preparation of Teaching Learning Materials	2.74 (144)	2.44 (216)	3.23 (159)	3.04 (235)	2.82 (174)	2.57* (226)
Subject Knowledge and Content Accuracy	3.45 (152)	3.43 (230)	3.63 (160)	3.55 (234)	3.68* (174)	3.56 (226)
Appropriate Use of Language	3.44 (154)	3.17 (227)	3.49 (159)	3.35 (236)	3.63* (174)	3.59 (226)

Indicator	Baseline		LOS Midterm		End term	
	Female	Male	Female	Male	Female	Male
Language of Instruction	3.36 (153)	3.24 (226)	3.50 (157)	3.33 (227)	3.65* (174)	3.59 (226)
Use of Generic Skills	2.76 (148)	2.70 (225)	3.06 (158)	3.04 (237)	3.21* (174)	2.83* (226)
Use of Chalkboard	3.15 (152)	3.15 (230)	3.38 (159)	3.52 (237)	3.43* (174)	3.49* (226)
Questioning Skills	2.94 (152)	2.99 (230)	3.19 (159)	3.23 (238)	3.32* (174)	3.21* (226)
Gender Sensitivity	3.29 (149)	3.12 (232)	3.34 (158)	3.27 (237)	3.48* (174)	3.36 (226)
Sensitivity to Diverse Learner Needs	2.75 (122)	2.64 (182)	3.14 (146)	3.13 (217)	3.06 (174)	2.87* (226)
Feedback to Pupils	2.90 (146)	2.88 (228)	3.20 (152)	3.23 (232)	3.22* (174)	3.08* (226)
Use of TLMs	2.64 (154)	2.19 (229)	3.08 (158)	2.84 (235)	2.90 (174)	2.45* (226)
Pupils' Participation	3.07 (152)	2.79 (227)	3.28 (157)	3.12 (229)	3.34* (174)	3.12 (226)
Use of Teacher Learner Activities	2.88 (151)	2.81 (223)	3.17 (158)	3.15 (236)	3.33* (174)	3.15 (226)
Evaluation of Lesson	2.91 (149)	2.88 (222)	3.28 (155)	3.24 (230)	3.30* (174)	3.33 (226)
Classroom Setting	2.83 (150)	2.82 (224)	3.25 (134)	3.21 (197)	3.24 (174)	3.16* (226)
Class Control	3.07 (149)	3.21 (222)	3.30 (155)	3.36 (233)	3.32* (174)	3.31* (226)

Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2016

*3Note: Numbers in bracket are the sample sizes. Asterisk show indicators on which trainees had improved endline performance over baseline performance.

7.4 Skills Acquisition by Region

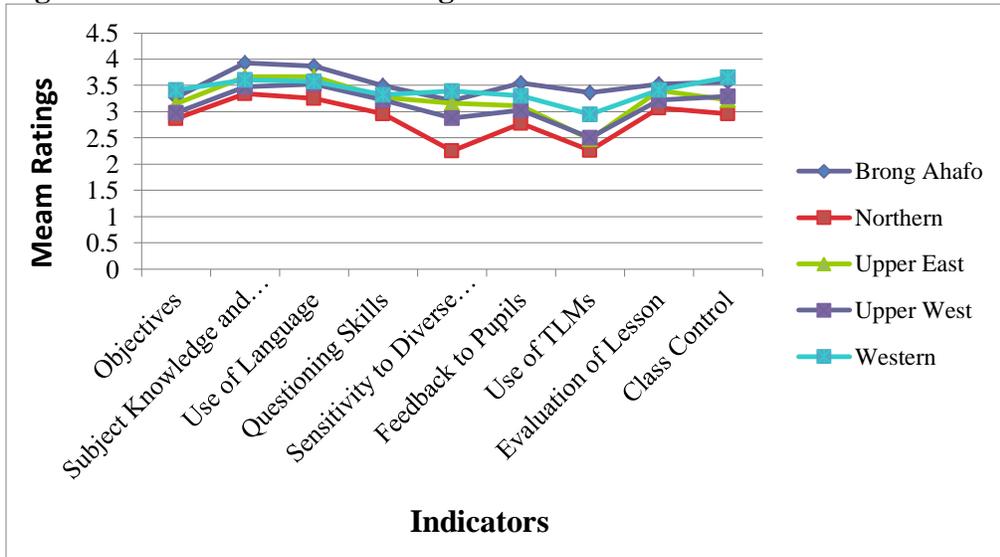
Table 7.4 shows endline mean ratings of classroom observation indicators for the five study regions. The endline results as compared to the baseline showed marked improvement in some regions and deterioration in others. For instance, in the Brong Ahafo Region the baseline results showed unsatisfactory results across seven indicators. However, at the endline the UTDBE trainees in the region had 'satisfactory' results in all 19 indicators. The Northern Region had unsatisfactory results across nine indicators at the baseline but this increased to 12 during the endline. In the Upper East, there was remarkable improvement over baseline performance at the endline. While the region recorded unsatisfactory results on 14 indicators during the baseline, at the endline, the unsatisfactory performance had been reduced to two indicators. In the Upper West the improvement was not as remarkable as in the Upper East. At the baseline, the results showed unsatisfactory results across 14 indicators but this was reduced to only six unsatisfactory indicators at endline assessment. In the Western Region, the baseline recorded unsatisfactory results across nine key indicators, which was reduced to only one unsatisfactory indicator at endline.

Table 7.4 shows mean ratings of classroom observation indicators for the five study regions. As compared to the baseline assessment results, the UTDBE trainee's performances had improved during the endline. While some regions improved their performances, others deteriorated.

There was marked deterioration in the performances of trainees in the Northern Region when comparing the baseline and endline assessments. While during the baseline the Northern Region

recorded satisfactory performance on 10 of the 19 indicators, in the endline assessment the region recorded satisfactory performance on only 7 indicators (Figure 7.2 and Table 7.4).

Figure 7.2: Endline Mean Rating of Selected Classroom Observation Indicators by Region



Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2016

The Upper East scored “satisfactory” performance on five indicators during the baseline, however at the endline stage they improved the satisfactory performance to fifteen indicators. Even though the Upper West Region was the worst performing region during the endline, it had improved on its baseline performance. The region’s satisfactory baseline performance on five indicators had risen to 12 at the endline.

The Western Region’s performance showed remarkable improvement in performance as the trainees in the region scored “satisfactorily” in 18 indicators as compared to thirteen during the baseline. The Western Region has been the only region that had consistently improved on all indicators from baseline to endline. See Table 7.4 for baseline and endline results across the regions.

Table 7.4: Baseline and Endline Results for Mean Rating of Classroom Observation Indicators by Region

Indicator	Brong Ahafo		Northern		Upper East		Upper West		Western	
	Base	End	Base	End	Base	End	Base	End	Base	End
1. Objectives	2.86 (79)*	3.27 (91)	2.66 (65)	2.87 (76)	2.80 (79)	3.15 (88)	2.70 (92)	2.98 (101)	3.21 (42)	3.41 (44)
2. Core Points	2.90 (78)	3.35 (91)	3.08 (66)	2.82 (76)	2.92 (76)	2.97 (88)	2.71 (92)	2.85 (101)	3.12 (42)	3.27 (44)
3. Teacher Learner Activities	2.97 (80)	3.37 (91)	2.96 (67)	2.74 (76)	2.81 (78)	3.09 (88)	2.64 (889)	2.99 (101)	2.98 (42)	3.30 (44)
4. Use of Teaching Learning Materials	3.07 (82)	3.09 (91)	1.90 (69)	3.32 (76)	2.47 (77)	2.81 (88)	2.53 (92)	2.33 (101)	2.74 (43)	3.00 (44)
5. Subject Knowledge and Content Accuracy	3.55 (89)	3.93 (91)	3.71 (69)	3.34 (76)	3.20 (82)	3.67 (88)	3.35 (98)	3.47 (101)	3.38 (47)	3.61 (44)
6. Use of Language	3.52 (90)	3.87 (91)	3.29 (68)	3.25 (76)	3.22 (81)	3.67 (88)	3.17 (98)	3.52 (101)	3.09 (47)	3.57 (44)
7. Language of Instruction	3.53 (91)	3.98 (91)	3.10 (67)	3.21 (76)	3.35 (79)	3.68 (88)	3.20 (98)	3.54 (101)	3.09 (47)	3.59 (44)
8. Use of Generic Skills	2.94 (90)	3.51 (91)	3.04 (67)	2.63 (76)	2.71 (79)	2.91 (88)	2.40 (93)	2.85 (101)	2.45 (47)	3.09 (44)
9. Use of Chalkboard	3.20 (90)	3.65 (91)	3.20 (69)	3.13 (76)	2.93 (81)	3.59 (88)	3.22 (99)	3.50 (101)	3.17 (46)	3.30 (44)
10. Questioning Skills	2.89 (91)	3.49 (91)	3.17 (69)	2.96 (76)	3.02 (80)	3.27 (88)	2.89 (99)	3.22 (101)	2.87 (46)	3.32 (44)
11. Gender Sensitivity	3.89 (89)	3.49 (91)	3.30 (69)	3.09 (76)	3.17 (82)	3.52 (88)	2.92 (98)	3.44 (101)	3.22 (46)	3.50 (44)
12. Sensitivity to Diverse Learner Needs	3.03 (75)	3.21 (91)	2.00 (50)	2.25 (76)	2.98 (66)	3.16 (88)	2.55 (74)	2.88 (101)	2.62 (42)	3.39 (44)
13. Feedback to Pupils	3.03 (87)	3.54 (91)	3.10 (68)	2.78 (76)	2.98 (81)	3.11 (88)	2.59 (97)	3.03 (101)	2.77 (44)	3.30 (44)
14. Use of TLMs	2.66 (91)	3.36 (91)	1.93 (68)	2.26 (76)	2.18 (83)	2.47 (88)	2.46 (97)	2.50 (101)	2.64 (47)	2.95 (44)
15. Pupils' Participation	3.05 (91)	3.63 (91)	2.81 (68)	2.89 (76)	2.85 (82)	3.11 (88)	2.81 (95)	3.10 (101)	3.02 (46)	3.39 (44)
16. Use of Teacher Learner Activities	3.04 (90)	3.54 (91)	2.80 (69)	2.80 (76)	2.81 (79)	3.24 (88)	2.66 (95)	3.19 (101)	2.95 (44)	3.41 (44)
17. Evaluation of Lesson	3.20 (89)	3.52 (91)	2.91 (69)	3.07 (76)	2.85 (80)	3.40 (88)	2.62 (90)	3.22 (101)	2.89 (46)	3.41 (44)
18. Classroom Setting	2.86 (88)	3.55 (91)	2.82 (67)	2.80 (76)	2.69 (81)	3.11 (88)	2.77 (95)	3.20 (101)	3.09 (46)	3.32 (44)
19. Class Control	3.37 (87)	3.56 (91)	3.25 (68)	2.96 (76)	2.96 (80)	3.22 (88)	3.05 (94)	3.29 (101)	3.11 (45)	3.66 (44)

Source: UTDBE IA Baseline (2014) and End line results, 2015/16

7.5 Skills Acquisition by Level of Deprivation

Table 7.5 shows mean ratings of classroom observation indicators by levels of deprivation. During the endline there was improvement across most of the classroom observation indicators in all three zones of deprivation compared to the baseline performance. Across all the zones of deprivation, the UTDBE trainee performance was high as trainees were found to underperform (e.g. below satisfactory) in only three or four of the nineteen core indicators. While the baseline assessment of performance in less deprived schools showed satisfactory performance in thirteen of the nineteen indicators, the endline assessment results showed slight declines in performance in the less deprived schools (district capitals). As compared to the baseline, the performance of teachers in schools in less deprived schools at the endline showed improved on only two additional indicators. During the baseline UTDBE teachers in schools in less deprived districts had satisfactory performance in 13 indicators as against 'satisfactory performance' in 15 during the endline.

With regard to the comparison between baseline and endline for the deprived area schools, the results show remarkable improvement during the endline. UTDBE teachers in deprived school scored 'satisfactorily' on seven indicators but their performance improved during the endline to fifteen indicators. Similarly, in the extremely deprived schools, there was an even more dramatic improvement as the teachers who scored satisfactorily only on four indicators during the baseline, now scored satisfactorily on sixteen indicators. UTDBE teacher performance at all levels is indicative of the acquisition of relevant teaching skills within the one and a half year time frame (June 2014 to Nov 2015).

Table 7.5: Baseline and Endline Mean Rating of Classroom Observation Indicators by Level of Deprivation

Indicator	Less Deprived		Deprived		Extremely Deprived	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
1. Objectives	3.00 (102)*	3.18 (92)	2.72 (137)	3.06 (152)	2.75 (118)	3.12 (156)
2. Core Points	3.06 (100)	3.03 (92)	2.82 (138)	2.97 (152)	2.90 (116)	3.08 (156)
3. Teacher Learner Activities	3.94 (101)	3.18 (92)	2.79 (138)	3.07 (152)	2.85 (117)	3.04 (156)
4. Use of Teaching Learning Materials	2.71 (101)	2.73 (92)	2.38 (144)	2.80 (152)	2.60 (118)	2.53 (156)
5. Subject Knowledge and Content Accuracy	3.56 (108)	3.45 (92)	3.44 (151)	3.67 (152)	3.30 (126)	3.65 (156)
6. Use of Language	3.45 (108)	3.55 (92)	3.19 (151)	3.62 (152)	3.22 (125)	3.57 (156)
7. Language of Instruction	3.31 (107)	3.57 (92)	3.17 (148)	3.62 (152)	3.39 (127)	3.64 (156)
8. Use of Generic Skills	2.84 (104)	2.96 (92)	2.60 (151)	3.09 (152)	2.75 (121)	2.94 (156)
9. Use of Chalkboard	3.25 (106)	3.48 (92)	3.14 (153)	3.45 (152)	3.06 (126)	3.47 (156)
10. Questioning Skills	3.07 (106)	3.21 (92)	2.89 (153)	3.22 (152)	2.98 (126)	3.32 (156)
11. Gender Sensitivity	3.31 (107)	3.26 (92)	3.18 (153)	3.45 (152)	3.09 (124)	3.46 (156)
12. Sensitivity to Diverse Learner Needs	2.62 (91)	2.82 (92)	2.62 (115)	2.81 (152)	2.81 (101)	3.17 (156)
13. Feedback to Pupils	3.04 (105)	3.13 (92)	2.80 (152)	3.12 (152)	2.87 (120)	3.13(156)
14. Use of TLMs	2.41 (107)	2.67 (92)	2.39 (154)	2.72 (152)	2.33 (125)	2.54 (156)
15. Pupils' Participation	2.98 (105)	3.21 (92)	2.91 (154)	3.25 (152)	2.83 (123)	3.19 (156)
16. Use of Teacher Learner Activities	2.90 (107)	3.29 (92)	2.87 (151)	3.70 (152)	2.76 (119)	3.22 (156)
17. Evaluation of Lesson	3.05 (105)	3.28 (92)	2.76 (148)	3.27 (152)	2.93 (121)	3.38 (156)
18. Objectives	3.00 (105)	3.20 (92)	2.79 (151)	3.24 (152)	2.70 (121)	3.15 (156)
19. Core Points	3.24 (106)	3.29 (92)	3.09 (150)	3.34 (152)	3.15 (118)	3.30 (156)

Source: UTDBE Baseline (2014) and Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2016

*Note: Numbers in bracket are the sample sizes.

7.6 Lesson Planning and Preparation

The endline lesson planning and preparation followed the use of a new category of ‘well prepared lesson’ as used in the LOS. Generally, the UTDBE trainees during the Endline Assessment demonstrated competence in almost all skill areas of lesson planning and preparation compared to the Baseline Assessment. The Endline Assessment results on lesson planning and preparation show about 37% of UTDBE trainees preparing lesson notes “very well”. The percentage of trainees who prepared lesson notes and did some form of preparation (trainees who linked their lessons to previous learning/lessons) during the Baseline, was 34%, which significantly declined to 1.8% in the Endline.

Results of ‘poorly planned lessons’ in both Baseline and Endline Assessments were comparable (Baseline 12% and Endline 11.6%). During the baseline the number of trainees that had ‘no lesson notes prepared’ for the lesson they were teaching was higher (23%) as compared to (17.5%) during the Endline. However, the overall results for ‘repeated lessons’ shows a level of difference (12% Baseline and 4% Endline) indicating that fewer trainees in the Endline

Assessment repeated lessons during the observation period. This indicates that the trainees were becoming more confident in their ability to deliver “new” lessons and not revert to “repeated” lessons.

Generally, on a regional basis there was significant improvement lesson planning and preparation during the Endline Assessment over the Baseline. During the Endline the number of trainees who demonstrated competence in ‘well prepared lessons’ ranged from 37% for the Western Region to 43% for the Northern Region.

Table 7.6: Regional Comparison of Baseline and Endline Lesson Planning and Preparation

Region	Assessment	Repeated Lesson		No Lesson Notes		Poor plan		Satisfactory Lesson Plan		Lesson linked to previous Learning/ Lessons		Well prepared lesson plan		Total
		No.	%	No	%	No	%	No	%	No	%	No.	%	
Brong Ahafo	Baseline	15	16%	13	14%	8	9%	15	16%	40	44%	-	-	91
	Endline	0	-	4	4.5%	12	13.5%	27	30.3%	7	7.9%	39	43.8%	89
Northern	Baseline	1	1%	24	35%	9	13%	17	25%	18	26%	-	-	69
	Endline	2	2.7%	13	17.3%	11	14.7%	17	22.7%	0	-	32	42.7%	75
Upper East	Baseline	7	8%	24	29%	11	13%	15	18%	26	31%	-	-	83
	Endline	8	9.4%	23	27.1%	6	7.1%	19	22.4%	0	-	29	34.1%	
Upper West	Baseline	24	24%	23	23%	12	12%	11	11%	29	29%			99
	Endline	4	4.2%	25	26.0%	12	12.5%	29	30.2%	0	-	26	27.1%	
Western	Baseline	0	0%	6	13%	8	17%	12	26%	21	45%	-	-	47
	Endline	2	4.7%	3	7.0%	4	9.3%	18	41.9%	0	0%	16	37.2%	43
Overall	Baseline	47	12%	90	23%	48	12%	70	18%	134	34%	-	-	389
Overall	Endline	16	4.1%	68	17.5%	45	11.6%	110	28.4%	7	1.8%	142	36.6%	388

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

The following excerpts from descriptions made by field researchers illustrate the link between lesson planning and the quality of the lesson itself:

The teacher was well prepared with appropriate objectives having a link to the scheme of work. She also took into consideration pupils’ relevant previous knowledge of the topic.

The teacher was prepared for the lesson; the lesson note was prepared and available for supervision. TLMs for the lesson were also available. (Male UTDBE teacher in Extremely Deprived School, Yenfri Methodist Primary School, Nkoranza North, Brong Ahafo Region).

Teacher starts lesson by recalling the previous knowledge of pupil, which is stated within the lesson plan. She then takes them through the core points, which contain the keywords in the topic (Female UTDBE teacher in Less Deprived School, St. Martins's R/C Primary, Atebubu Amantin, Brong Ahafo Region).

Teacher had up to date lesson plan. She stated her objectives she wanted to achieve though not all that SMART but were achieved. Activities outline towards developing the skills were in order and followed a sequential manner (Female UTDBE teacher in Extremely Deprived School, Nyeni DA Primary, Jirapa, Upper West Region).

7.8. Teaching Methodology Delivery

7.8.1: Subject Knowledge and Content Accuracy

Table 7.7 shows UTDBE trainees' performance rating on subject knowledge and content accuracy by level of deprivation. Although, in the Lesson Observation Sheet, the indicator is described as "subject knowledge and content accuracy", for the purpose of this study it is interpreted to mean teachers' familiarity with the different content themes/strands of the topic being taught. The study acknowledges the inherent difficulty of assessing subject content knowledge based purely on lesson observation. Therefore the subject content aspect is a complement to chapter 4 which examined subject content knowledge based on the exam results of CoEs..

To make comparison simple and easy for readers to follow, the results of three descriptors (satisfactory, good and excellent) have been combined to give an overall performance of the number of trainees who have performed satisfactorily or above. Figure 7.7 shows the findings based on this combination of descriptors. As compared to the findings on the Baseline survey, the endline findings show a significant improvement in overall performance in terms of content accuracy. In the baseline a total of 34% trainees were assessed as either "poor or needs improvement" while in the endline only 9.3% were in the same category. The overall performance of trainees within the satisfactory and above category rose from 66% to 90.7%. The overall findings for deprived and extremely deprived schools show improvement in the endline assessment as the number of trainees in the 'poor and need improvement' category reduced to single digit scores. For instance: Deprived area UTDBE trainee scores reduced from 37.8% to 7.9% while in the extremely deprived schools the "poor and needs improvement" category reduced from 33.1% to 9.3%. Similarly, trainees in less deprived schools recorded slight improvements as 81.1% of trainees in these areas were rated as satisfactory and above during the endline compared to 70.2% in the baseline. In the Extremely Deprived schools 91.8% of trainees were rated as satisfactory and above as compared to 66.99% at baseline.

Overall in the endline, a total of 92.1% trainees performed across the three descriptor areas of “satisfactory, good and excellent” while in the baseline the number of trainees in the same three groups numbered 62.2% showing improved performance among the UTDBE trainees in the deprived area schools. The regional analysis followed a similar trend where marked improvements in content accuracy were observed across all regions except in the Northern region where the performance hardly changed from that of the baseline (baseline 83.6% and endline 84.2%).

Table 7.7: End Term Rating of UTDBE Trainees’ Subject Knowledge and Content Accuracy by Region and Level of Deprivation

Region	Level of Deprivation	Poor/ Needs improvement		Satisfactory/Good & Excellent	
		Baseline	Endline	Baseline	Endline
Western	Deprived	55.5%	5.3%	44.5%	94.7%
	Less Deprived	34.8%	10.5%	65.2%	89.5%
	Extremely Deprived	16.7%	16.7%	83.3%	83.3%
	Total	40.4%	9.1%	59.6%	90.9%
Brong Ahafo	Deprived	18.9%	4.5%	81.1%	95.5%
	Less Deprived	26.0%	.0%	74%	100%
	Extremely Deprived	23.3%	.0%	76.7%	100%
	Total	22.3%	2.2%	77.7%	97.8%
Northern	Deprived	20.0%	16.2%	80%	83.8%
	Less Deprived	19.0%	4.8%	81%	95.2%
	Extremely Deprived	0.0%	27.8%	100%	72.2%
	Total	16.4%	15.8%	83.6%	84.2%
Upper East	Deprived	52.4%	.0%	47.6%	100%
	Less Deprived	22.2%	5.9%	77.8%	94.1%
	Extremely Deprived	47.5%	9.8%	52.5%	90.2%
	Total	43.0%	6.8%	57%	93.2%
Upper West	Deprived	55.0%	9.3%	45%	90.7%
	Less Deprived	47.4%	36.9%	55.6%	63.1%
	Extremely Deprived	38.3%	6.0%	61.7%	94%
	Total	38.3%	12.9%	61.7%	87.1%
Overall	Deprived	37.8%	7.9%	62.2%	92.1%
	Less Deprived	29.8%	11.9%	70.2%	88.1%
	Extremely Deprived	33.1%	9.0%	66.9%	91%
	Total	34.0%	9.3%	66%	90.7%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

7.8.2 UTDBE Trainees' Use of Language by Assessment Types

Table 7.8 shows the regional comparison of UTDBE trainees' use of language by assessment types. The overall findings for the use of language vary with the different assessment types. During the baseline the two dominant language modes were the combined use of L1 and L2 (26%) and the use of mainly English (24%). However, during the endline assessment the findings show a change with emphasis shifted to the use of 'mainly Ghanaian Language (29.2%) and 'English only' (28.6%). The overall picture suggests that, by the endline assessment, most trainees had gained confidence in the use of English only to the extent that it now forms the second dominant language mode used as a medium of instruction.

The findings on the regional use of language show that in Brong Ahafo during the baseline most UTDBE trainees (43%) used a mixture of languages of instruction often combining the use of English and Ghanaian language during the same class session. Another group of trainees used mainly Ghanaian Language (24%). During the endline, the dominant medium of instruction changed to mainly Ghanaian Language (42%) while 22.7% of trainees' used English and L1 as medium of instruction. Conversely, the findings in the Northern Region showed the dominant use of "English only" (59%) in the baseline, however at endline the dominant language of instruction had shifted to the use of mainly English (35.2%) suggesting that the Northern Region UTDBE trainees had now gained confidence in the application of language in education policy of the use of Local language in KG 1 – P3 and the use of English from P 4 – JHS.

With respect to UTDBE trainees' use of language of instruction in the Upper East, the findings for the baseline showed most trainees relying on the combined use of L1 and L2 (33%) and the use of mainly English (27%) during the baseline assessment. However, during the midterm assessment the majority of trainees used mainly Ghanaian Language (36.8%). This mode was closely followed by 32.6% of trainees using mainly English. The endterm findings for language of instruction used in the Upper West showed a reflection of the official language of instruction for the three levels: trainees teach (35.2%) mainly English; 25% only English and 22.7% mainly Ghanaian language. Mainly English is the official language of instruction for the UP, mainly Ghanaian language for the KG +LP and English only for JHS.

In the Upper West the baseline results showed the dominant use of mainly English (35%) supported by a mixture of English and Ghanaian Language (20%). The midterm assessment findings showed 36% of the trainees using mainly Ghanaian Language and 26% using mainly English while the endline assessment results showed a fair distribution of the use of three modes: 24% using mainly Ghanaian Language, 23% using English only and 21% using mainly English.

The findings for the Western Region showed the baseline results as the majority of trainees (28%) using mainly Ghanaian Language as the medium of instruction and another 24% using L1 and L2 (mixture). The midterm results showed an equal use of mainly English and mainly Ghanaian Language (36.2%) while the endterm results showed the emphasis on the same two

modes: UTDBE trainees using mainly English 40.9% as the medium of instruction and 36.4% using mainly Ghanaian Language (36.4%).

Table 7.8: Regional Comparison of UTDBE Trainees’ Use of Language from Baseline to Endline Assessment Types

Region		English and L1 as LOI	Mainly English as LOI	English only as LOI	Mainly Ghanaian Language as LOI	Ghanaian Language Only as LOI
Brong Ahafo	BASELINE	43%	12%	2%	24%	18%
Northern		8%	16%	59%	3%	14%
Upper East		33%	27%	14%	18%	8%
Upper West		20%	35%	15%	17%	14%
Western		24%	20%	16%	28%	12%
Brong Ahafo	MIDTERM (LOS)	9.6%	34.9%	3.6%	47.0%	4.8%
Northern		4.1%	28.4%	43.2%	18.9%	5.4%
Upper East		10.5%	32.6%	16.8%	36.8%	3.2%
Upper West		13.0%	26.0%	19.0%	36.0%	6.0%
Western		6.4%	36.2%	17.0%	36.2%	4.3%
Brong Ahafo	END LINE	22.7%	19.3%	4.5%	42.0%	11.4%
Northern		15.5%	35.2%	22.5%	23.9%	2.8%
Upper East		6.8%	35.2%	25.0%	22.7%	10.2%
Upper West		18.0%	21.0%	23.0%	24.0%	14.0%
Western		9.1%	40.9%	6.8%	36.4%	6.8%
OVERALL	BASELINE	26%	24%	19%	18%	13%
	LOS	9.3%	31.1%	19.5%	35.3%	4.8%
	END LINE	15.1%	17.4%	28.6%	29.2%	9.7%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

7.8.3: Language of Instruction by Region and Level of Deprivation

Table 7.9 shows the ratings of UTDBE trainees’ use of language of instruction by region and level of deprivation. The findings suggest that there was some variation from region to region. Generally, in the endline assessment, most teachers’ use of language of instruction, regardless of levels of deprivation reveal the following: that the majority of UTDBE teachers were using “Ghanaian Language only” (29.2%), followed by “English only” (28.6%) and then “mainly English” (17.4%).

The overall pattern for deprived areas during the endline, recorded 34% Ghanaian Language only; 23.8% English only and 19% mixed language. Similarly, the less deprived areas registered 36.7% English only and 26.7% Ghanaian Language only and the extremely deprived areas reported 28.6% UTDBE trainees using English only, and 26.0% Ghanaian Language only and 20.8% mainly English.

The regional distribution shows the use of 40.9% English only and 36.4% Ghanaian Language only in the Western Region. For levels of deprivation, deprived areas in the Western Region registered 42.1% Ghanaian Language only and 31.6% English only. The less deprived (mainly district capital schools) registered 52.6% English only and 31.6% Ghanaian Language only. Conversely, the extremely deprived areas observed that 33.3% of UTDBE trainees each used mainly “Ghanaian Language only”, 33.3% for “English only” and “mainly Ghanaian Language”.

The pattern for Brong Ahafo Region shows the dominant use of “Ghanaian Language only” for both the overall and the levels of deprivation: deprived 40.5%, less deprived 50%, extremely deprived 40% and overall 42%.

The findings for the Northern Region show a spread amongst the three instructional modes: English only (35.2%), Ghanaian Language only (25%) and mainly English 22.5%. For levels of deprivation the results are spread within four instructional modes English only (35.3%), Ghanaian Language only (23.5%), mainly English 26.5% and a combination of both languages (20%).

Interestingly, the pattern in the Upper East is similar to that of the Northern Region. The findings show overall pattern of three instructional modes of English only (35.2%), mainly English (25%) and Ghanaian Language only (22.7%). Deprived areas in the Upper East show 35.2% of trainees use English only; 26.5% use mainly English and 23.5% use Ghanaian Language only. In less deprived areas the findings show the dominant use of English at 52.9% while in the extremely deprived areas the pattern replicates the three instruction language use: English only (37.3%), mainly English 25.5% and Ghanaian Language only (23.5%).

The Upper West results show relatively that the trainees use all five instructional modes with an emphasis on Ghanaian Language only (24%) and mainly English (23%). In the extremely deprived areas the findings are similar to the overall pattern: mainly English 26%, Ghanaian Language only (20%) and English only (20%).

Table 7.9: Endline Ratings of UTDBE’s Language of Instruction by Region and Level of Deprivation

Region	Level of Deprivation	Mixture	Ghanaian Language Only	English only	Mainly English	Mainly Ghanaian Language
Western	Deprived	10.5%	42.1%	31.6%	15.8%	.0%
	Less Deprived	10.5%	31.6%	52.6%	.0%	5.3%
	Extremely Deprived	.0%	33.3%	33.3%	.0%	33.3%
	Total	9.1%	36.4%	40.9%	6.8%	6.8%
Brong Ahafo	Deprived	26.2%	40.5%	16.7%	2.4%	14.3%
	Less Deprived	18.8%	50.0%	18.8%	6.2%	6.2%
	Extremely Deprived	20.0%	40.0%	23.3%	6.7%	10.0%
	Total	22.7%	42.0%	19.3%	4.5%	11.4%
Northern	Deprived	14.7%	23.5%	35.3%	26.5%	.0%
	Less Deprived	20.0%	25.0%	35.0%	15.0%	5.0%
	Extremely Deprived	11.8%	23.5%	35.3%	23.5%	5.9%
	Total	15.5%	23.9%	35.2%	22.5%	2.8%
Upper East	Deprived	15.0%	30.0%	15.0%	30.0%	10.0%
	Less Deprived	5.9%	11.8%	52.9%	17.6%	11.8%
	Extremely Deprived	3.9%	23.5%	37.3%	25.5%	9.8%
	Total	6.8%	22.7%	35.2%	25.0%	10.2%
Upper West	Deprived	21.9%	34.4%	21.9%	15.6%	6.2%
	Less Deprived	11.1%	16.7%	22.2%	27.8%	22.2%
	Extremely Deprived	18.0%	20.0%	20.0%	26.0%	16.0%
	Total	18.0%	24.0%	21.0%	23.0%	14.0%
Overall	Deprived	19.0%	34.0%	23.8%	16.3%	6.8%
	Less Deprived	13.3%	26.7%	36.7%	13.3%	10.0%
	Extremely Deprived	12.3%	26.0%	28.6%	20.8%	12.3%
	Total	15.1%	29.2%	28.6%	17.4%	9.7%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

7.8.4: Use of Generic Skills by Region and Level of Deprivation

Table 7.10 shows a comparison of UTDBE trainees’ use of generic skills by region and levels of deprivation between baseline assessment and endline assessment based on a combination of descriptors. To make comparisons simple and easy for readers to follow, the results of three descriptors (satisfactory, good and excellent) have been combined to give an overall performance of the number of trainees who have performed satisfactorily and above and those who either performed poorly or needed improvement have also been merged. The overall results show slight improvement during endline over that of the baseline. While the baseline results show 66% of trainees performing within the satisfactory and above the endline results recorded 72.3%. Similarly, the performances in the three different districts of deprivation also follow the same trend of slight improvement. In deprived districts the baseline results was 62.3% as against 76.3% endline. In less deprived districts the results show 69.9% satisfactory and above performance for baseline and 70.7% for endline, while in extremely deprived districts the results show baseline of 66.9% and 71.8% for endline.

The results across the regions show slight improvement over the baseline results except in the Northern region where there was a decline over the baseline performance at the endline. The findings show use of generic skills amongst trainees in Brong Ahafo rose from 77.7% during baseline to 90.1% at the endline. In Brong Ahafo, the performance in the different districts of deprivation scored as follows: deprived districts satisfactory and above performance of 81.2% baseline and 86.4% endline, less deprived districts baseline 74% and endline 93.8% and extremely deprived districts baseline 76.6% and 93.5% satisfactory and above performance.

In the Northern Region the overall results show only 60.5% were rated in the combined group of 'satisfactory, good and excellent' during the endline as against 84.4% during the baseline, showing decline in overall performance. Similarly, the different deprived districts registered poor performance: baseline results for deprived districts showed 81% as against 64.9% at the endline, In the less deprived districts the baseline result was similarly 81% as against endline 61.9% and in the extremely deprived districts the baseline performance of 100% fell to 50% during the endline

In the Upper East the endline overall performance was an improvement over that of the baseline. The number of trainees scoring in the satisfactory and above group rose from 57% to 71.6% during endline, while the different deprived areas recorded: deprived districts baseline 47.6% and endline 85%, less deprived districts baseline of 77.8% to 64.7% endline and extremely deprived districts baseline of 52.5% and endline 68.7%.

In the Upper West the overall results show improved endline performance 65.4% with a baseline result registering 52.7%. The less deprived district maintained its baseline performance of 52.6% at the endline. However, the deprived districts and the extremely deprived districts slightly improved upon their baseline results: Deprived improved their baseline score of 45% to 65.6% endline and the extremely deprived districts improved from 61.7% baseline to 70% endline.

The overall performance in the Western Region improved from a baseline score of 59.6% to 81.9% endline score. For the different deprived districts both the deprived and less deprived districts respectively improved their performance from 44.5% and 65.2% to 84.2%. while the extremely deprived districts had downward performance of 83.3% baseline to 66.7% endline.

Table 7.10: Baseline and Endline Rating of UTDBE Use of Generic Skills by Region and Level of Deprivation

Region	Level of Deprivation	Poor & Needs improvement		Satisfactory, good and excellent	
		Baseline	Endline	Baseline	Endline
Brong Ahafo	Deprived	18.8%	13.6%	81.2	86.4%
	Less Deprived	26%	6.2%	74%	93.8%
	Extremely Deprived	23.3%	6.5%	76.7%	93.5%
	Total	22.3%	9.9%	77.7%	90.1%
Northern	Deprived	19	35.1%	81	64.9%
	Less Deprived	19%	38.1%	81%	61.9%
	Extremely Deprived	0.0%	50%	100%	50%
	Total	15.6%	39.5%	84.4%	60.5%
Upper East	Deprived	52.4%	15%	47.6%	85%
	Less Deprived	22.2%	35.3%	77.8%	64.7%
	Extremely Deprived	47.5%	31.3%	52.5%	68.7%
	Total	43%	28.4%	57%	71.6%
Upper West	Deprived	55%	34.4%	45%	65.6%
	Less Deprived	47.4%	47.4%	52.6%	52.6%
	Extremely Deprived	38.3	30%	61.7%	70%
	Total	47.3%	34.6%	52.7%	65.4%
Western	Deprived	55.5%	15.8%	44.5%	84.2%
	Less Deprived	34.8%	15.8%	65.2%	84.2%

Region	Level of Deprivation	Poor & Needs improvement		Satisfactory, good and excellent	
	Extremely Deprived	16.7%	33.3%	83.3%	66.7%
	Total	40.4%	18.1%	59.6%	81.9%
Overall	Deprived	37.8%	23.7%	62.3%	76.3%
	Less Deprived	30.1%	29.3%	69.9%	70.7%
	Extremely Deprived	33.1%	28.2%	66.9%	71.8%
	Total	34%	26.8%	66%	73.2%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

7.8.5: Use of Chalkboard

Table 7.11 shows a comparison of UTDBE trainees' use of chalkboard by region and levels of deprivation based on a combination of descriptors. The results of three descriptors (satisfactory, good and excellent) have been added up to give one new descriptor labeled "satisfactory and acceptable" while the descriptors "poor and needs improvement" have also been merged to give a new descriptor "unsatisfactory and needs improvement". The objective is to make analyses and discussions easy for readers to understand. Generally, UTDBE trainees' skills in the use of the chalkboard was scored as "satisfactory and acceptable". Overall 82% of the trainees were rated as demonstrating 'satisfactory and acceptable' skills in the use of the chalkboard. This high performance is expected because over 90% of the trainees have had at least two years prior teaching before being enrolled for the UTDBE programme and have had, as at the time of the assessment, another two years of practicing the use of the chalkboard both as a trainee and a teacher in the classroom. Across the three zones of deprivation, the performance was similar to the overall results with 80% of trainees and above rated as 'satisfactory' as blackboard users. Notwithstanding the overall high performance, the regional performances show variation and poor results in some regions. The Northern Region had the worst results with 27.6% performing in the 'unsatisfactory and needs improvement' category. Similarly, the Western Region had 25% of the UTDBE trainees unable to use the chalkboard satisfactorily. At the levels of deprivation in the regions, trainees in the Brong Ahafo Region's less deprived schools and trainees in Upper East's deprived schools were all rated as satisfactory and acceptable users of the chalkboard.

Table 7.11: Use of Chalkboard Rating

Region	Level of Deprivation	Unsatisfactory and Needs improvement	Satisfactory and acceptable
Brong Ahafo	Deprived	22.80%	77.30%
	Less Deprived	0.00%	100.00%
	Extremely Deprived	9.70%	90.30%
	Total	14.30%	85.80%
Northern	Deprived	21.60%	78.30%
	Less Deprived	28.60%	71.50%
	Extremely Deprived	38.90%	61.10%
	Total	27.60%	72.30%
Upper East	Deprived	0.00%	100.00%
	Less Deprived	17.70%	82.30%
	Extremely Deprived	15.70%	84.40%
	Total	12.50%	87.50%
Upper West	Deprived	9.30%	90.60%
	Less Deprived	26.30%	73.70%
	Extremely Deprived	16.00%	84.00%
	Total	15.90%	84.20%
Western	Deprived	36.80%	63.20%
	Less Deprived	10.50%	89.40%
	Extremely Deprived	33.40%	66.70%
	Total	25.00%	74.90%
Overall	Deprived	18.40%	81.60%
	Less Deprived	17.40%	82.50%
	Extremely Deprived	18.00%	82.10%
	Total	18.00%	82.00%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

7.8.6: UTDBE Trainees' Questioning Skills by Region and Level of Deprivation

Table 7.12 presents the comparison of UTDBE trainees' questioning skills by levels of deprivation and assessment types³⁰, based on a combination of descriptors as in previous sections. Across all five regions the evidence shows that most UTDBE trainees' ratings on questioning skills are concentrated within the "satisfactory and acceptable" ratings. In all cases, the overall findings for both the regional and across the different zones of deprivation show that the majority of UTDBE trainees' questioning skills were "satisfactory and acceptable".

The overall results of UTDBE trainees' ratings on questioning skills showed that during the base line as many as 73.2% performed "unsatisfactorily" while the endline results show 19% performed unsatisfactorily. The endline results show as many as 81% of the UTDBE trainees

³⁰ Baseline, and Endline

performed “satisfactorily”. Similarly, the three levels of deprivation results show improvement in trainees’ questioning skills at the endline assessment. In deprived schools the performance had moved from 21.4% scoring ‘satisfactory’ to 80.9% satisfactory at the endline. The less deprived schools improved from 22.6% during the baseline to 78.2% satisfactory performance at the endline assessment. In the extremely deprived schools, the picture is not different. The baseline results showed only 26.8% of trainees performing satisfactorily but the endline results show 82% of the trainees used questioning skills satisfactorily. The regional results showed similar improved performances. In Brong Ahafo, the baseline result of 30% satisfactory performance rose to 90.1% at the endline assessment. In Northern Region, the results improved from 33% of UTDBE trainees observed being satisfactory at the baseline moving to 69.8% during the endline assessment. In the Upper East, the baseline results of trainees scoring “satisfactory” performance of 27% improved to 81.9% during the endline assessment. In the Upper West Region, the story is the same. The baseline showed a 32% satisfactory performance that changed to 82% satisfactory performance during the endline assessment. Similarly, in the Western Region, the 77% baseline unsatisfactory performance has been turned round to 77.2% satisfactory performance. The overall picture is that trainees in the UTDBE programme had improved tremendously in relation to their questioning skills over the one and a half year period of the IA.

Excerpts of the comments from the observers on the use of questioning skills during the endline are presented below:

The teacher encourages repetitive and choral responses as well as individual responses from pupil who raise their hands to questions. She allows pupils to demonstrate their answers by role playing. Questions are one sided all from the teacher. For example, teacher asks pupil to translate the meaning of "under" from LI, and asks them to demonstrate its meaning using the classroom table (Baafi DA Primary, Nkoranza North).

“Teacher involved all pupils in the lesson, she was very gender sensitivity, and questions were evenly distributed to pupils in the class. Teacher called on pupils before allowing them to answer questions, teacher asked both high and low order questions. Pupils were given the opportunity to match given objects, this was done individual” (Brong Ahafo, Atebubu SDA Primary, Atebubu Amantin District)

“Individuals answer low order questions teacher acknowledges right or corrects wrong answer” Northern Region, Nakpanduri AG Primary, Bunkpurugu Yunyoo District

“The teacher posed a fairly balanced set of questions to pupils. The questions were evenly distributed between both sexes. The teacher hardly used coral responses, rather she adopted individual responses. The teacher also made pupils read in turns” (Western region, Bonsie EA Basic, Wassa Amenfi District).

Table 7.12: Baseline and Endline Ratings of UTDBE Trainees' Questioning Skills by Region

Region	Level of Deprivation	Unsatisfactory and Needs improvement		Satisfactory and acceptable	
		Baseline	Endline	Baseline	Endline
Brong Ahafo	Deprived	71%	15.9%	29%	84.1%
	Less Deprived	68%	6.2%	29%	93.8%
	Extremely Deprived	70%	3.2%	30%	96.8%
	Total	70%	9.9%	30%	90.1%
Northern	Deprived	80%	24.3%	20%	75.7%
	Less Deprived	83%	23.8%	17%	76.2%
	Extremely Deprived	64%	50.0%	36%	50%
	Total	78%	30.2%	33%	69.8%
Upper East	Deprived	78%	5.0%	22%	95%
	Less Deprived	67%	35.3%	22%	64.7%
	Extremely Deprived	73%	17.6%	27%	82.4%
	Total	73%	18.1%	27%	81.9%
Upper West	Deprived	83%	25%	17%	75%
	Less Deprived	75%	21.1%	25%	78.9%
	Extremely Deprived	81%	12%	19%	82%
	Total	68%	17.9%	32%	82.1%
Western	Deprived	81%	21.1%	19%	78.9%
	Less Deprived	94%	21.1%	6%	78.9%
	Extremely Deprived	60%	33.4%	40%	66.6%
	Total	77%	22.8%	23%	77.2%
Overall	Deprived	78.6%	19.1%	21.4%	80.9%
	Less Deprived	77.4%	21.8%	22.6%	78.2%
	Extremely Deprived	69.6%	17.9%	30.4%	82.1%
	Total	73.2%	19.0%	26.8%	81-

UTDBE Baseline, Midterm and Endline Impact Assessment Data, Instrument 13 (2016)

7.8.7: Gender Sensitivity Rating by Region and Level of Deprivation

Table 7.13 shows the gender sensitivity rating of UTDBE trainees by region and level of deprivation. Generally, at the endline stage, over 80% of trainees were rated as satisfactory and with acceptable gender sensitive skills. In the extremely deprived schools 90% of the trainees were found to be similarly “satisfactory and acceptable” in relation to gender sensitivity. Even in the less deprived schools where 14% of trainees did not perform satisfactorily, the overall performance was still commendable.

The regional performance on gender sensitivity skills were comparable: Upper West 94.8%, Brong Ahafo 93.5%, Upper East 93.2% and Northern and Western Regions respectively had 91.5% and 75.6% performing in the satisfactory and acceptable grade levels. All trainees in the Upper East’s deprived schools scored in the satisfactory and acceptable category while a third of trainees in Western Region could not make the satisfactory and acceptable grades.

Table 7.13: Endline Gender Sensitivity Rating by Region and Level of Deprivation

Region	Level of Deprivation	Unsatisfactory and Needs improvement	Satisfactory and acceptable
Brong Ahafo	Deprived	9.10%	90.90%
	Less Deprived	6.20%	93.70%
	Extremely Deprived	3.20%	96.80%
	Total	6.60%	93.50%
Northern	Deprived	24.30%	75.60%
	Less Deprived	9.60%	90.50%
	Extremely Deprived	16.70%	83.40%
	Total	18.40%	81.50%
Upper East	Deprived	0.00%	100.00%
	Less Deprived	17.60%	82.40%
	Extremely Deprived	5.90%	94.10%
	Total	6.80%	93.20%
Upper West	Deprived	9.30%	90.50%
	Less Deprived	12.00%	88.00%
	Extremely Deprived	12.90%	87.20%
	Total	5.30%	94.80%
Western	Deprived	15.80%	84.20%
	Less Deprived	33.30%	66.70%
	Extremely Deprived	13.70%	86.40%
	Total	24.30%	75.60%
Overall	Deprived	11.20%	88.80%
	Less Deprived	14.10%	85.80%
	Extremely Deprived	9.60%	90.30%
	Total	11.30%	88.80%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

7.8.8: UTDBE Trainees' Sensitivity to Diverse Learner Needs by Regions and Levels of Deprivation

Table 7.14 shows a comparison of UTDBE sensitivity to diverse learner needs by region and levels of deprivation comparing the baseline and endline assessment results based on a combination of descriptors. To make comparisons simple and easy for readers to follow, the results of three descriptors (satisfactory, good and excellent) have been combined to give an overall performance of the number of trainees who have performed satisfactorily and above and those who either performed poorly or needed improvement have also been merged.

The endline results as compared to the baseline, shows improvement in UTDBE trainees' performance with respect to sensitivity to diverse learner needs. While the baseline results show 34% of the UTDBE trainees performing in the poor and needing improvement category, 66% performed within the satisfactory and above band. However, the endline results show a rise in the satisfactory category to 73.2%. Similarly, the results for the three different categories of deprivation show minor improvement. The number of UTDBE trainees in the deprived area schools performed within the "satisfactory and above" rose from 62.3% (at baseline) to 76.3% (at endline). The results for UTDBE trainees in the less deprived area schools rose from baseline figures of 69.9% to 70.7% and that for UTDBE trainees in the extremely deprived area schools moved from 69.9 to 71.8%.

The Western region's UTDBE trainees satisfactory and above performance in relation to sensitivity to diverse learner needs moved from 59.6% to 81.9% at the endline. In the deprived and less deprived areas of the Western Region UTDBE trainees' performance improved appreciably from baseline performance at the satisfactory and above level at 44.5% to 65.2% respectively for deprived and less deprived areas to 84.2% at the end line in each case. However, in the extremely deprived areas the UTDBE trainees' baseline performance dipped from 83.3% to 66.7% at the end line.

In the Upper West Region, the overall satisfactory and above baseline performance of 52.7% changed marginally to 65.4% during the endline. The region's baseline results for satisfactory performance in the less deprived areas remained unchanged (52.6%). In the extremely deprived areas the change from baseline to endline was marginal moving from 61.7% at baseline to 70% endline. In the deprived areas, UTDBE trainee performance improved appreciably from 45% at baseline to 65.6% at endline.

The overall endline performance in the Upper East shows some improvement over the baseline. The 43% poor and needing improvement baseline performance reduced to 28.4% revealing that the satisfactory grade performance had moved from baseline score of 57% to 71.6% at the endline. The deprived areas where UTDBE trainees were observed in the Upper East recorded very impressive improvement in satisfactory and above grade performance at the endline. With 52.4% poor performance the UTDBE trainees in the deprived areas reduced to only 15%, thus raising the satisfactory performance at endline to 85%. The performance in the extremely deprived areas though increased, the increase was not comparable to that in the deprived areas

(52.5% baseline to 68.7% endline). However, the performances in the less deprived areas show deterioration in the baseline performance of 77.8% to endline performance of 64.7%.

The Northern region's overall endline performance shows deterioration over that of the baseline. The baseline's satisfactory and above performances of 84.4% reduced to 60.5%. Similar to the performance of UTDBE trainees in the deprived areas of the Upper East region, the Northern regions deprived areas improved their performance drastically. The deprived districts in Northern region recorded very impressive improvement in satisfactory and above grade performance at the endline. With 21.8% satisfactory baseline performance the UTDBE trainees in the deprived area schools improved the number 64.9%, thus reducing the unsatisfactory performance at endline to 35.1% as against 78.2% during the baseline. The 100% satisfactory performance during baseline in the extremely deprived area schools fell to 50% at the endline. However, the UTDBE performances in the less deprived area schools deteriorated in the baseline from 81.0% to endline performance of 61.9%.

In the Brong Ahafo region, the overall performance improved from 77.7% during baseline to 90.1% at endline. In the deprived districts of Brong Ahafo region the performances at baseline and endline seem stable. The baseline performance of 86.3% had only moved by 0.1% to 86.4% at endline. At the endline the performance of the extremely deprived and the less deprived were comparable. They respectively registered 93.6% and 93.8% satisfactory and above grade performance.

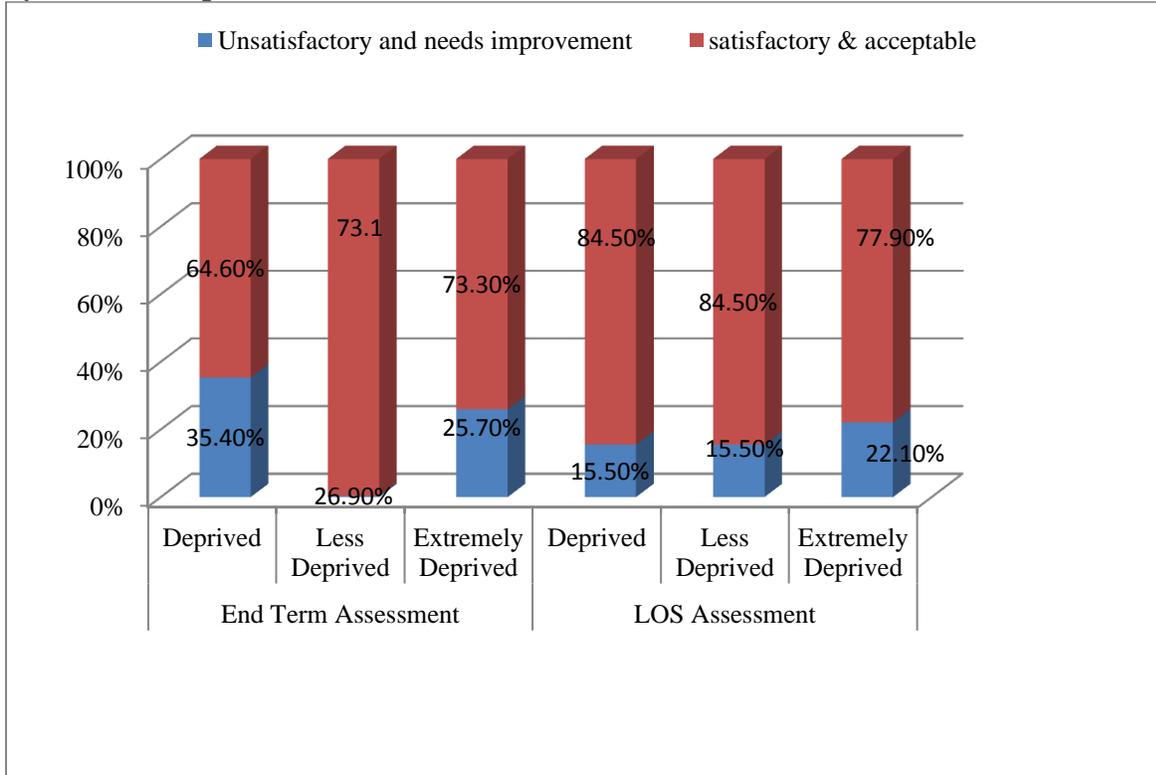
Table 7.14: Baseline Endline comparison of UTDBE Trainees' Sensitivity to Diverse Learner Needs by Regions and Levels of Deprivation

Region	Level of Deprivation	Poor & Needs improvement		Satisfactory, good and excellent	
		Baseline	Endline	Baseline	Endline
Brong Ahafo	Deprived	13.7%	13.6%	86.3%	86.4%
	Less Deprived	26%	6.2%	74%	93.8%
	Extremely Deprived	23.3%	6.5%	76.7%	93.5%
	Total	22.3%	9.9%	77.7%	90.1%
Northern	Deprived	78.2%	35.1%	21.8%	64.9%
	Less Deprived	19%	38.1%	81%	61.9%
	Extremely Deprived	0.0%	50%	100%	50%
	Total	15.6%	39.5%	84.4%	60.5%
	Deprived	52.4%	15%	47.6%	85%

Region	Level of Deprivation	Poor & Needs improvement		Satisfactory, good and excellent	
		Baseline	Endline	Baseline	Endline
Upper East	Less Deprived	22.2%	35.3%	77.8%	64.7%
	Extremely Deprived	47.5%	31.3%	52.5%	68.7%
	Total	43%	28.4%	57%	71.6%
Upper West	Deprived	55%	34.4%	45%	65.6%
	Less Deprived	47.4%	47.4%	52.6%	52.6%
	Extremely Deprived	38.3	30%	61.7%	70%
	Total	47.3%	34.6%	52.7%	65.4%
Western	Deprived	55.5%	15.8%	44.5%	84.2%
	Less Deprived	34.8%	15.8%	65.2%	84.2%
	Extremely Deprived	16.7%	33.3%	83.3%	66.7%
	Total	40.4%	18.1%	59.6%	81.9%
Overall	Deprived	37.8%	23.7%	62.3%	76.3%
	Less Deprived	30.1%	29.3%	69.9%	70.7%
	Extremely Deprived	33.1%	28.2%	66.9%	71.8%
	Total	34%	26.8%	66%	73.2%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

Figure 7.5: Midterm and Endline UTDBE Trainees’ Sensitivity to Diverse Learner Needs by Level of Deprivation



Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

7.8.9 Feedback Strategies among UTDBE Trainees at the Endline

Table 7.15 shows end of term UTDBE trainees’ feedback strategies by regions and gender aggregation with the grouped categories of performance as described above. The overall findings show that, although female UTDBE trainee performance was slightly higher than the males’ performance, the results were comparable (male 73% and female 75.3% satisfactory and acceptable feedback skills).

Table 7.15: Feedback Strategies among UTDBE Trainees at the Endline

Region	Sex	Unsatisfactory and needs improvement	Satisfactory and acceptable
Brong Ahafo	Male	13.20%	86.80%
	Female	7.50%	92.50%
	Total	9.90%	90.20%
Northern	Male	40.80%	59.30%
	Female	45.50%	54.50%
	Total	42.10%	57.90%
Upper East	Male	27.60%	72.40%
	Female	23.40%	76.70%
	Total	26.10%	73.90%
Upper West	Male	28.00%	72.00%
	Female	39.20%	60.80%
	Total	33.60%	66.30%
Western	Male	11.50%	88.50%
	Female	11.20%	88.80%
	Total	11.30%	88.60%
Total	Male	26.50%	73.50%
	Female	24.70%	75.30%
	Total	25.70%	74.20%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

7.8.10: UTDBE Trainees' Use of TLM by Region and Levels of Deprivation

Table 7.17 shows baseline and endline results of UTDBE trainees use of TLM by regions and Levels of deprivation. Usage of TLMs meant that the teachers were using textbooks, supplementary texts or other types of teaching learning materials during the lesson that was observed.

When we compare baseline to endline assessment results, the endline results show marginal improvement in the number of trainees whose TLMs were rated as relevant to the class objective and helped stimulate pupil participation. The overall figures show 51% of UTDBE trainees scoring satisfactory for baseline as against 56.5% for endline. For the three levels of deprivation the results for endline hardly changed from that of the baseline: extremely deprived schools recorded the same results for baseline and endline (50.6%); less deprived schools recorded 63.2% baseline and endline 63%; while the results for deprived areas recorded a slight change: baseline 52.8% and endline 58.9%.

The regional results show some variations. The number of trainees whose TLMs were rated as 'relevant to the objective as well as stimulated pupil participation' were as follows for the regions: Brong Ahafo- baseline 64% and endline 81.3%; Northern- baseline 21% and endline

44.8%; Upper East baseline- 44% and endline 47.7%; Upper West baseline 52% and endline 41.5% and Western Region baseline 64% and endline 77.3%.

Generally, UTDBE trainees' use of TLMs, questioning skills, feedback strategies as well as sensitivity to gender issues had all improved within the year and a half between baseline and endline. The UTDBE programme can on the basis of the endline findings, be rated as having been a key contributing factor to improved trainee performance.

Excerpts of the comments from the observers on the use of TLMs are stated below:

“Teacher uses chalkboard and conversational charts and pictures found in textbooks to teach lessons. Pupils were to look at pictures and predict what animals live at home and in the wild”.
Upper West, Babile DA Primary, Deprived Lawra District.

“The teacher used appropriate TLMs for the delivery. The teacher introduced TLM.'s timely. In an attempt to explain some keywords she got pupil to look at the environment to explain them”
(Upper East Region Balungu DA Bongo Primary, Bongo District).

The teacher used appropriate TLMs (drums, balls and noising cans). The teacher made varied sounds with the various TLMs and asked the children to make these sounds after her. In all, the TLMs were relevant to the objectives of the lesson (Upper East Region, Logre KG, Talensi Nabdam).

“The teacher does not use TLM. And there are no TLMs posted on the walls of the class”
(Western Region, Gonukrom DA JHS Wassa Amenfi District).

“Though the lesson was full of activity, the TLM's were not enough. It was used at the appropriate stages”. (Brong Ahafo, Fiema Anglican Primary, Extremely Deprived Nkoranza North).

Table 7.16 Baseline and Endline rating for UTDBE Trainees' Use of TLMs by Region and Level of Deprivation

Region	Level of Deprivation	No TLM or not relevant to lesson			TLM relevant to objectives, previous lesson and stimulates pupil participation		
		Baseline	Midterm	Endline	Baseline	Midterm	Endline
Brong Ahafo	Deprived	48%	38.8%	25%	52%	61.2	75
	Less Deprived	25%	50%	12.5%	75%	50	87.5
	Extremely Deprived	42%	30.0%	13%	58%	70	87
	Total	36%	36.4%	18.7%	64%	63.6	81.3
Northern	Deprived	82%	17.3%	54%	18%	82.7	46
	Less Deprived	69%	21.1%	52.4%	21%	78.9	47.6
	Extremely Deprived	45%	26.3%	61.1%	55%	73.7	38.9
	Total	69%	21.3%	55.2%	21%	78.7	44.8
Upper East	Deprived	33%	16.6%	35.0%	67%	83.4	65
	Less Deprived	52%	50%	47.9%	48%	50	53
	Extremely Deprived	69%	47.4%	60.8%	21%	52.6	39.2
	Total	56%	39.4%	52.3%	44%	60.6	47.7
Upper West	Deprived	43%	21.2%	62.5%	57%	78.8	37.5
	Less Deprived	51%	27.8%	52.7%	49%	72.2	47.3
	Extremely Deprived	48%	13%	58.0%	52%	87	42
	Total	48%	20.3%	58.5%	52%	79.7	41.5
Western	Deprived	30%	26.3%	26.4%	70%	73.7	73.6
	Less Deprived	44%	42.8%	15.8%	56%	57.2	84.2
	Extremely Deprived	33%	18.8%	33.3%	67%	81.2	66.7
	Total	36%	31.3%	22.7%	64%	68.7	77.3
Overall	Deprived	47.2%	23.3%	41.1%	52.8%	76.7	58.9
	Less Deprived	57%	36.4%	37%	63.2%	63.6	63
	Extremely Deprived	52.8%	28.9%	49.4%	50.6%	71.1	50.6
	Total	49%	29.8%	43.5%	51%	70.2	56.5

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

7.8.11: UTDBE Assessment of Lessons by Level of Deprivation by Region

Table 7.17 shows the endline rating of UTDBE evaluation of lessons by region and level of deprivation grouping the categories as described above. Generally, the overall performance rated over 80% of trainees to have ‘satisfactory and acceptable’ skills for evaluating classroom lessons. In the extremely deprived schools, 88.5% of the trainees were found to be using satisfactory and acceptable evaluation skills. Even in the less deprived schools only 13% of trainees did not perform satisfactorily; the overall performance was still commendable.

Table 7.17: Endline Rating of UTDBE Regional Evaluation of Lessons by Level of Deprivation

Region	Level of Deprivation	Poor / Needs improvement	Satisfactory, Good Excellent
Brong Ahafo	Deprived	9.10%	90.90%
	Less Deprived	0.00%	100.00%
	Extremely Deprived	0.00%	100.00%
	Total	4.40%	95.70%
Northern	Deprived	13.50%	86.50%
	Less Deprived	19.00%	80.90%
	Extremely Deprived	33.30%	66.60%
	Total	19.70%	80.20%
Upper East	Deprived	15.00%	85.00%
	Less Deprived	11.80%	88.30%
	Extremely Deprived	13.70%	86.30%
	Total	13.60%	86.30%
Upper West	Deprived	25.00%	75.00%
	Less Deprived	21.10%	79.00%
	Extremely Deprived	6.00%	94.00%
	Total	14.90%	85.20%
Western	Deprived	0.00%	100.00%
	Less Deprived	10.50%	89.50%
	Extremely Deprived	33.30%	66.70%
	Total	9.10%	91.00%
Overall	Deprived	13.20%	86.90%
	Less Deprived	13.00%	87.00%
	Extremely Deprived	11.50%	88.50%
	Total	12.50%	87.50%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

The regional performance on lesson evaluation skills by UTDBE trainees were comparable: Brong Ahafo 95.7%, Western Region 91%, Upper East 86.3%, Upper West 85.2%, and Northern Region 80.2% all performing in the satisfactory and acceptable grade level. All trainees in Brong Ahafo’s deprived and less deprived schools scored in the satisfactory and acceptable category

(100%) while a third of trainees in Western and Northern Regions could not make the satisfactory and acceptable grade.

Conclusions:

The endline overall performance on lesson planning and preparation, teaching methodology and classroom organization and management show improved LOS ratings over that of the baseline. This performance is indicative of improved skills gained in classroom processes based on two additional terms of the UTDBE programme being two additional sessions of face-to-face at the CoE (June 2014 – Nov. 2015) as well as support opportunities to study modules at the school, cluster and district levels. Contrary to the erroneous assertion that the female students were disadvantaged and will therefore perform poorly, the female UTDBE trainees during both the LOS baseline and endline assessments demonstrated satisfactory performance and even outperformed their male counterparts in lesson planning/preparation, teaching methodology and classroom organization and management skills.

Generally, on a regional basis there was improved lesson planning and preparation during the endline assessment over the baseline assessment. During the endline the number of trainees who demonstrated competence in ‘well prepared lessons’ ranged from 27% for the Upper West Region to 43% for the Northern Region while in the baseline no trainee demonstrated well prepared lessons.

On the subject of language of instruction, during the baseline the two dominant language modes were the combined use of L1 and L2 and the use of mainly English. However, during the end term assessment, UTDBE trainees had shifted to the use of ‘mainly Ghanaian Language’ and ‘English only’. This overall picture suggests that by the end term assessment most trainees had gained confidence in the use of English only to the extent that it now formed the second dominant language medium of instruction. The two dominant language modes used by the endline assessment confirms that trainees had the competence to follow and use the language policy directives on classroom language of instruction, namely, use of mainly Ghanaian Language for KG and lower primary classes and the use of mainly English for Upper primary (P4 – P6) and JHS. The language of instruction patterns at both the regional level and across the three zones of deprivation show compliance and competency to follow the language of instruction policy by UTDBE trainees.

7.9. Classroom Management and Control

Another very critical area of assessment of UTDBE trainees’ performance was the trainees’ abilities to manage their classroom and demonstrate class control. In this respect, the trainees were assessed against the following indicators:

- *Class control*

- *Classroom setting*
- *Feedback strategies*
- *Time on task*
- *Disciplinary practices*

7.9.1 Classroom Control among UTDBE Trainees

The observation of the trainees' classroom control was placed into five broad categories, namely:

- Teacher allows pupils to do whatever they want;
- Teacher constantly orders the pupils as to what they should do;
- Teacher sometimes communicates to pupils on what to do and ensures order in the classroom;
- Teacher and pupils communicate with each other and ensure a good atmosphere for teaching and learning in class together, and
- Pupils cooperate with each other without the teachers' control.

An overview of the results suggests that an overwhelming majority of the UTDBE trainees (90.2%) demonstrated good class control. This ranged from communicating with pupils, to pupils cooperating with each other to maintain order during the lesson; as against 9.8% who demonstrated poor classroom control skills including allowing pupils to do whatever they wanted and constantly ordering pupils as to what to do.

A further assessment of the results with respect to the study regions indicates that most of the UTDBE trainees in the Western Region were observed to have demonstrated 'good' class control measures. In addition, 95.1% and 90.9% of trainee teachers in the Brong-Ahafo and Upper West Regions respectively showed good class control skills during their lessons; those in the Upper East and in the Northern Regions recorded 89.5% and 77.5% of trainees demonstrating good classroom control skills. Significantly, no trainee in the Western Region showed poor class control ability while the Northern Region saw the highest proportion of trainees demonstrating 'poor' class control skills, recording 22.6%.

In terms of the levels of deprivation, it emerged that UTDBE trainees teaching in schools in less deprived areas showed greater class control than their counterparts in the deprived and extremely deprived schools do. In specific terms, 92% of trainees in less deprived schools as compared to 90.2% and 86.3% respectively in extremely deprived and deprived schools demonstrated good class control skills in the process of their lesson delivery. Trainees in schools in deprived areas demonstrated the poorest classroom control (13.7%) compared with trainees in schools in less deprived areas (8%). Table 7.18 gives an illustration of the classroom control abilities of the UTDBE trainees across regions and levels of deprivation.

Table 7.18: Class Control among UTDBE Trainees at Endline

Region	Level of Deprivation	Classroom Control				
		Teacher allows pupils to do whatever they want	Teacher constantly orders pupils what they do	Teacher sometimes communicates to pupils to maintain order	Teacher and pupils communicate with each other and ensure good control	Pupils cooperate with each other without teachers' control
Brong Ahafo	Deprived	5.0%	5.0%	35.0%	25.0%	30.0%
	Less Deprived	--	--	14.3%	57.1%	28.6%
	Extremely Deprived	--	--	28.6%	28.6%	42.9%
	Total	2.4%	2.4%	29.3%	31.7%	34.1%
Northern	Deprived	7.7%	23.1%	15.4%	30.8%	23.1%
	Less Deprived	7.7%	7.7%	38.5%	38.5%	7.7%
	Extremely Deprived	--	20.0%	60.0%	20.0%	--
	Total	6.5%	16.1%	32.3%	32.3%	12.9%
Upper East	Deprived	6.7%	6.7%	33.3%	26.7%	26.7%
	Less Deprived	--	7.7%	38.5%	23.1%	30.8%
	Extremely Deprived	3.4%	6.9%	37.9%	17.2%	34.5%
	Total	3.5%	7.0%	36.8%	21.1%	31.6%
Upper West	Deprived	9.1%	--	45.5%	27.3%	18.2%
	Less Deprived	33.3%	--	--	66.7%	--
	Extremely Deprived	5.3%	--	31.6%	36.8%	26.3%
	Total	9.1%	--	33.3%	36.4%	21.2%
Western	Deprived	--	--	28.6%	57.1%	14.3%
	Less Deprived	--	--	35.7%	64.3%	--
	Extremely Deprived	--	--	50.0%	--	50.0%
	Total	--	--	34.8%	56.5%	8.7%
Total	Deprived	6.1%	7.6%	31.8%	30.3%	24.2%
	Less Deprived	4.0%	4.0%	32.0%	46.0%	14.0%
	Extremely Deprived	2.9%	4.3%	36.2%	24.6%	31.9%
	Total	4.3%	5.4%	33.5%	32.4%	24.3%

Source: UTDBE Endline Assessment Field Data, 2016

7.9.1 Baseline-Endline Comparison of UTDBE Class Control

A comparative analysis of the baseline-endline results of the UTDBE trainees' class control abilities largely shows an improvement in their performance. Whereas in the baseline 76% of trainees were found to have demonstrated 'good' class control skills, the endline results found 90.2% of UTDBE trainees using 'good' class control measures. The results also suggest a decline in the use of negative class control measures such as allowing pupils to do what they want during lessons (5% to 4.3%), and teachers constantly ordering pupils on what to do (from 19 % to 5.4%).

This improvement was found to be consistent across all five study regions albeit with some variations. It is significant to note that the Upper West and East Regions, which recorded the highest portion of trainees using negative class control measures during the baseline, showed great improvement at the endline stage of performance. The Upper West improved from 67% to 90.9% (a 23.9% increase), while the Upper East improved from 70% to 89.5% of UTDBE trainees demonstrating good class control skills. The Northern Region however recorded the least improvement in the trainees' class control with 77.4% of trainees in the endline as compared to 76% in the baseline. The Brong Ahafo Region maintained its high performance exhibited by their trainees in the baseline as they steadily improved from 92% to 95.2% during the endline observation. This makes the region the lowest in the use of negative class control skills with the exception of the Western Region, which had all its trainees demonstrating 'good' class control abilities. Table 7.19 illustrates the baseline-endline comparison of the UTDBE class control skills.

Table 7.19: Baseline-Endline Comparison of UTDBE Class Control

Region	Level of Deprivation	Classroom Control									
		Teacher allows pupils to do whatever they want		Teacher constantly orders pupils what they do		Teacher sometimes communicates to pupils to maintain order		Teacher and pupils communicate with each other and ensure good		Pupils cooperate with each other without teachers control	
		Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Brong Ahafo	Deprived	3%	5.0%	9%	5.0%	57%	35.0%	26%	25.0%	6%	30.0%
	Less Deprived	--	--	4%	--	43%	14.3%	43%	57.1%	9%	28.6%
	Extremely Deprived	--	--	7%	--	52%	28.6%	38%	28.6%	3%	42.9%
	Total	1%	2.4%	7%	2.4%	52%	29.3%	34%	31.7%	6%	34.1%
Northern	Deprived	6%	7.7%	6%	23.1%	35%	15.4%	32%	30.8%	21%	23.1%
	Less Deprived	13%	7.7%	30%	7.7%	35%	38.5%	22%	38.5%	--	7.7%
	Extremely Deprived	9%	--	9%	20.0%	18%	60.0%	45%	20.0%	18%	--
	Total	9%	6.5%	15%	16.1%	32%	32.3%	31%	32.3%	13%	12.9%
Upper East	Deprived	4%	6.7%	35%	6.7%	39%	33.3%	17%	26.7%	4%	26.7%
	Less Deprived	--	--	17%	7.7%	44%	38.5%	33%	23.1%	6%	30.8%
	Extremely Deprived	--	3.4%	31%	6.9%	51%	37.9%	15%	17.2%	3%	34.5%
	Total	1%	3.5%	29%	7.0%	46%	36.8%	20%	21.1%	4%	31.6%
Upper West	Deprived	7%	9.1%	24%	--	32	45.5%	32%	27.3%	5%	18.2%
	Less Deprived	--	33.3%	20%	--	35	--	35%	66.7%	10%	--
	Extremely Deprived	--	5.3%	42%	--	21	31.6%	27%	36.8%	9%	26.3%
	Total	3%	9.1%	30%	--	29	33.3%	31%	36.4%	7%	21.2%
Western	Deprived	29%	--	12%	--	41	28.6%	18%	57.1%	--	14.3%
	Less Deprived	5%	--	9%	--	32	35.7%	45%	64.3%	9%	--
	Extremely Deprived	--	--	17%	--	17	50.0%	50%	--	17%	50.0%
	Total	13%	--	11%	--	33	34.8%	36%	56.5%	7%	8.7%
OVERALL TOTAL		5%	4.3%	19%	5.4%	39%	33.5%	30%	32.4%	7%	24.3%

Source: UTDBE Baseline (2014) and Endline Assessment Field Data (2016)

7.9.2 Classroom Setting among UTDBE Trainees

Teachers' ability to adequately prepare their classroom for lesson delivery has been identified as one of the key indicators of good classroom management. The UTDBE assessment found that the majority of the trainees (78.5%) adequately organized their classrooms for lesson delivery. This category included 38.8% of teachers who were able to arrange their classrooms and get pupils organized; 32.5% of teachers who properly arranged their classrooms before the start of their lessons, and 7.2% of teachers who were able to arrange their classrooms for a variety of activities.

A regional assessment of the results suggests that the Brong Ahafo Region had the highest proportion of its trainees (89.1%) appropriately setting up their classrooms before lesson delivery, whereas the Northern Region recorded the highest proportion of trainees (30.3%) who did **not** properly set up their various classrooms before their lesson delivery. In terms of gender, more female trainees (79.9%) were found to have adequately prepared their classrooms for their lesson delivery as compared to 77.5% of male trainees. This however was not the trend at the regional level, as the data showed more male trainees to have properly prepared their classrooms for lessons as compared to their female counterparts in all regions with the exception of the Upper West Region. The classroom setting of UTDBE trainees is presented in Table 7.20.

Table 7.20: Classroom Setting among UTDBE Trainees

Region	Gender	Classroom Setting				
		Teacher does not arrange classroom	Teacher arranges classroom but pupils are disorganized	Teacher arranges classroom and pupils get organized	Teacher arranges classroom before lesson begins	Teacher arranges classrooms for a variety of activities
Brong Ahafo	Male	--	10.5%	31.6%	44.7%	13.2%
	Female	--	11.3%	34.0%	47.2%	7.5%
	Total	--	11.0%	33.0%	46.2%	9.9%
Northern	Male	13.0%	14.8%	51.9%	18.5%	1.9%
	Female	18.2%	18.2%	36.4%	22.7%	4.5%
	Total	14.5%	15.8%	47.4%	19.7%	2.6%
Upper East	Male	1.7%	20.7%	44.8%	24.1%	8.6%
	Female	6.7%	30.0%	30.0%	23.3%	10.0%
	Total	3.4%	23.9%	39.8%	23.9%	9.1%
Upper West	Male	4.0%	30.0%	26.0%	34.0%	6.0%
	Female	5.9%	7.8%	43.1%	35.3%	7.8%
	Total	5.0%	18.8%	34.7%	34.7%	6.9%
Western	Male	7.7%	--	46.2%	38.5%	7.7%
	Female	11.1%	5.6%	38.9%	38.9%	5.6%
	Total	9.1%	2.3%	43.2%	38.6%	6.8%
Total	Male	5.3%	17.3%	40.3%	30.1%	7.1%
	Female	6.3%	13.8%	36.8%	35.6%	7.5%
	Total	5.8%	15.8%	38.8%	32.5%	7.2%

Source: UDBE Endline Assessment Field Data, 2016

7.9.3 Baseline-Endline Comparison of UTDBE Classroom Setting

A comparative analysis of the assessment of the classroom management and organizational skills of the UTDBE trainees in terms of class settings shows a level of improvement from the baseline to the endline. The endline assessment recorded a significant reduction in the number of UTDBE trainees who do not arrange their classrooms from 15% in the baseline down to 5.8% in the endline. Another significant variation worth noting is the increase in the proportion of UTDBE trainees who ‘arranged their classrooms for varied activities’ which increased from only 2% during the baseline survey to 7.2% in the endline survey. On the whole, 78.4% of trainees were found to have appropriately set up their classrooms for lessons compared to 69% who could do the same during the baseline. The improved performance of the UTDBE trainees in this respect

is replicated across all the regions except the Northern Region, which saw a reduction in the proportion from 72% during the baseline to 69.7% in the endline survey.

A gender analysis of the results also indicates that performance of both male and female UTDBE trainees have improved significantly from the baseline results. It also suggests that male trainees consistently perform better than their female colleagues on this indicator, with the exception of the Upper West Region where female trainees are doing much better than the males trainees in both baseline and endline. Table 7.21 illustrates the comparison between baseline and endline performance of UTDBE trainees in relation to classroom setting.

Table 7.21: Baseline-Endline Comparison of UTDBE Classroom Setting

Region	Gender	Classroom Setting									
		Teacher does not arrange classroom		Teacher arranges classroom but pupils are disorganized		Teacher arranges classroom and pupils get organized		Teacher arranges classroom before lesson begins		Teacher arranges classrooms for a variety of activities	
		Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Brong Ahafo	Male	10%	--	14%	10.5%	62%	31.6%	14%	44.7%	--	13.2%
	Female	9%	--	17%	11.3%	48%	34.0%	26%	47.2%	--	7.5%
	Total	9%	--	16%	11.0%	55%	33.0%	20%	46.2%	--	9.9%
Northern	Male	8%	13.0%	15%	14.8%	58%	51.9%	19%	18.5%	--	1.9%
	Female	16%	18.2%	26%	18.2%	37%	36.4%	16%	22.7%	5%	4.5%
	Total	10%	14.5%	18%	15.8%	52%	47.4%	18%	19.7%	1%	2.6%
Upper East	Male	18%	1.7%	16%	20.7%	46%	44.8%	14%	24.1%	5%	8.6%
	Female	24%	6.7%	24%	30.0%	24%	30.0%	24%	23.3%	4%	10.0%
	Total	20%	3.4%	19%	23.9%	40%	39.8%	17%	23.9%	5%	9.1%
Upper West	Male	25%	4.0%	17%	30.0%	23%	26.0%	29%	34.0%	6%	6.0%
	Female	21%	5.9%	16%	7.8%	26%	43.1%	35%	35.3%	2%	7.8%
	Total	23%	5.0%	17%	18.8%	24%	34.7%	32%	34.7%	4%	6.9%
Western	Male	10%	7.7%	10%	--	41%	46.2%	38%	38.5%	--	7.7%
	Female	12%	11.1%	12%	5.6%	29%	38.9%	47%	38.9%	--	5.6%
	Total	11%	9.1%	11%	2.3%	37%	43.2%	41%	38.6%	--	6.8%
OVERALL TOTAL		15%	5.8%	16%	15.8%	41%	38.8%	25%	32.5%	2%	7.2%

Source: UDBE Endline Assessment Field Data, 2016

7.9.4 Feed Back Strategies among UTDBE Trainees

The use of feedback strategies by the UTDBE trainees revealed that the majority (89.2%) used positive feedback strategies as against 10.8% who were observed to have given poor or no positive feedback to their pupils. On a regional basis, the Brong Ahafo Region had the majority of their UTDBE trainees (94.4%) using positive feedback strategies while Upper West had the highest proportion of their teachers (17%) using poor or no positive feedback to their pupils during lessons. On the gender dimension, there was no significant difference between male and female trainees on the use of positive feedback strategies as 89.2% of males and 89.1 of females were observed to have given positive feedback strategies during their respect lessons. However, there were considerable disparities between male and female trainees in the Brong Ahafo and Western Regions. The use of feedback strategies among UTDBE trainees is presented in detail in Table 7.22.

Table 7.22: Feed Back Strategies among UTDBE Trainees

Region		Feedback Strategies				Total
		Poor or No Positive Feedback		Positive Feedback		
Brong Ahafo	Male	4	10.8%	33	89.2%	37
	Female	1	1.9%	52	98.1%	53
	Total	5	5.6%	85	94.4%	90
Northern	Male	6	11.3%	47	88.7%	53
	Female	4	18.2%	18	81.8%	22
	Total	10	13.3%	65	86.7%	75
Upper East	Male	5	8.6%	53	91.4%	58
	Female	3	10.0%	27	90.0%	30
	Total	8	9.1%	80	90.9%	88
Upper West	Male	8	16.3%	41	83.7%	49
	Female	9	17.6%	42	82.4%	51
	Total	17	17.0%	83	83.0%	100
Western	Male	1	3.8%	25	96.2%	26
	Female	2	11.1%	16	88.9%	18
	Total	3	6.8%	41	93.2%	44
Total	Male	24	10.8%	199	89.2%	223
	Female	19	10.9%	155	89.1%	174
	Total	43	10.8%	354	89.2%	397

Source: UDBE Endline Assessment Field Data, 2016

7.9.5 Baseline-Endline Comparison of Feed Back Strategies among UTDBE Trainees

When the results of the endline and baseline are compared, they reveal a general improvement in the use of feedback strategies by the UDTBE. During the baseline, 75% of the UTDBE were found to have used positive feedback strategies while the remaining 25% did not. At the endline stage however, it was found that 89.2% of the trainees gave positive feedback to pupils in their lesson delivery. This improvement in performance was reflected at the regional level since between 83% to 94.4% of UTDBE trainees were observed in the various regions to have given positive feedback during the delivery of their lessons. The performance across gender also saw significant improvement in all regions, except in the Upper East where there was a decline among female trainees giving positive feedback from 92% at the baseline to 90% at the endline study. The baseline-endline comparison of the use of positive feedback strategies by UTDBE trainees is presented in Table 7.23.

Table 7.23: Baseline-Endline Comparison of Feed Back Strategies among UTDBE Trainees

Region	Feedback Strategies										
	Gender	Baseline					Endline				
		Positive Feedback	Poor or NO Feedback	Total	Positive Feedback	Poor or NO Feedback	Total				
Brong Ahafo	Male	35	80%	9	20%	44	33	89.2%	4	10.8%	37
	Female	41	89%	5	11%	46	52	98.1%	1	1.9%	53
	Total	76	84%	14	16%	90	85	94.4%	5	5.6%	90
Northern	Male	36	73%	13	27%	49	47	88.7%	6	11.3%	53
	Female	16	84%	3	16%	19	18	81.8%	4	18.2%	22
	Total	52	76%	16	24%	68	65	86.7%	10	13.3%	75
Upper East	Male	47	82%	10	18%	57	53	91.4%	5	8.6%	58
	Female	23	92%	2	8%	25	27	90.0%	3	10.0%	30
	Total	70	85%	12	15%	82	80	90.9%	8	9.1%	88
Upper West	Male	31	56%	24	44%	55	41	83.7%	8	16.3%	49
	Female	29	71%	12	29%	41	42	82.4%	9	17.6%	51
	Total	60	63%	36	38%	96	83	83.0%	17	17.0%	100
Western	Male	15	58%	11	42%	26	25	96.2%	1	3.8%	26
	Female	13	76%	4	24%	17	16	88.9%	2	11.1%	18
	Total	28	65%	15	35%	43	41	93.2%	3	6.8%	44
OVERALL TOTAL		286	75%	93	25%	379	354	89.2%	43	10.8%	397

Source: UDBE Endline Assessment Field Data, 2016

7.9.6 Time on Task by UTDBE Trainees

A teacher's ability to effectively use allocated time for a lesson is one of the most important indicators of their classroom management ability. The overwhelming majority of the trainees were found to have used their time effectively during lesson delivery. Furthermore, this result does not differ significantly across schools in areas of different zones of deprivation. Table 7.24 presents the use of time on task by UTDBE trainees in schools in areas by different zones of deprivation.

Table 7.24: Time on Task by UTDBE Trainees by Zone of Deprivation

Region	Level of Deprivation	Time on Task				Total
		Effective use of time		Less than Satisfactory use of time		
Brong Ahafo	Deprived	39	88.6%	5	11.4%	44
	Less Deprived	15	93.8%	1	6.2%	16
	Extremely Deprived	27	87.1%	4	12.9%	31
	Total	81	89.0%	10	11.0%	91
Northern	Deprived	33	89.2%	4	10.8%	37
	Less Deprived	20	95.2%	1	4.8%	21
	Extremely Deprived	17	94.4%	1	5.6%	18
	Total	70	92.1%	6	7.9%	76
Upper East	Deprived	20	100.0%	0	--	20
	Less Deprived	16	94.1%	1	5.9%	17
	Extremely Deprived	46	90.2%	5	9.8%	51
	Total	82	93.2%	6	6.8%	88
Upper West	Deprived	28	87.5%	4	12.5%	32
	Less Deprived	14	73.7%	5	26.3%	19
	Extremely Deprived	46	92.0%	4	8.0%	50
	Total	88	87.1%	13	12.9%	101
Western	Deprived	16	84.2%	3	15.8%	19
	Less Deprived	19	100.0%	0	--	19
	Extremely Deprived	6	100.0%	0	--	6
	Total	41	93.2%	3	6.8%	44
Total	Deprived	136	89.5%	16	10.5%	152
	Less Deprived	84	91.3%	8	8.7%	92
	Extremely Deprived	142	91.0%	14	9.0%	156
	Total	362	90.5%	38	9.5%	400

Source: UDBE Endline Assessment Field Data, 2016

The use of time on task by the UTDBE trainees by gender suggests that more males (92.5%) used their time effectively as compared to 87.9% of female trainees. The trend remained unchanged when the results are analysed by gender across the five regions. Male trainees in the Upper East Region observed the highest number of male trainees (96.6%) effectively using their

time on task while female trainees in the Upper West Region had the highest proportion of trainees (13.7%) who scored “less than satisfactorily” on their use of time on task. Table 7.25 shows the gender disaggregation in relation to the use of time on task by trainees.

Table 7.25: Use of Time on Task by Gender

Region	Gender	Time on Task				Total
		Effective use of time		Less than Satisfactory use of time		
Brong Ahafo	Male	34	89.5%	4	10.5%	38
	Female	47	88.7%	6	11.3%	53
	Total	81	89.0%	10	11.0%	91
Northern	Male	50	92.6%	4	7.4%	54
	Female	20	90.9%	2	9.1%	22
	Total	70	92.1%	6	7.9%	76
Upper East	Male	56	96.6%	2	3.4%	58
	Female	26	86.7%	4	13.3%	30
	Total	82	93.2%	6	6.8%	88
Upper West	Male	44	88.0%	6	12.0%	50
	Female	44	86.3%	7	13.7%	51
	Total	88	87.1%	13	12.9%	101
Western	Male	25	96.2%	1	3.8%	26
	Female	16	88.9%	2	11.1%	18
	Total	41	93.2%	3	6.8%	44
Total	Male	209	92.5%	17	7.5%	226
	Female	153	87.9%	21	12.1%	174
	Total	362	90.5%	38	9.5%	400

Source: UDBE Endline Assessment Field Data, 2016

7.9.7 Baseline-Endline Comparison of Time on Task by UTDBE Trainees

An overview of the results on time on task on a baseline-endline basis shows a marginal increase in the overall performance of the UTDBE trainees in this respect. Specifically, the endline results indicate that 90.5% of UTDBE were able to effectively use their time to perform the given task (teaching and learning). This figure, when compared to the baseline figure of 90%, implies a 0.05% improvement. The performance on a regional basis actually shows a reduction for some regions like Brong Ahafo (94% to 89%), Northern (96% to 92%) and Western (96% to 93%) and an improvement in the Upper East and Upper West. The comparison between baseline and endline performance of trainees' use of time on task is presented in Table 7.26.

Table 7.26: Baseline-Endline Comparison of Time on Task by UTDBE Trainees

Region	Gender	Time on Task									Total
		Baseline				Total	Endline				
		Effective use of time		Less than Satisfactory use of time			Effective use of time		Less than Satisfactory use of time		
Brong Ahafo	Male	40	91%	4	9%	44	34	89.5%	4	10.5%	38
	Female	43	98%	1	2%	44	47	88.7%	6	11.3%	53
	Total	83	94%	5	6%	88	81	89.0%	10	11.0%	91
Northern	Male	48	96%	2	4%	50	50	92.6%	4	7.4%	54
	Female	18	95%	1	5%	19	20	90.9%	2	9.1%	22
	Total	66	96%	3	4%	69	70	92.1%	6	7.9%	76
Upper East	Male	47	82%	10	18%	57	56	96.6%	2	3.4%	58
	Female	24	92%	2	8%	26	26	86.7%	4	13.3%	30
	Total	71	86%	12	14%	83	82	93.2%	6	6.8%	88
Upper West	Male	52	95%	3	5%	55	44	88.0%	6	12.0%	50
	Female	31	72%	12	28%	43	44	86.3%	7	13.7%	51
	Total	83	85%	15	15%	98	88	87.1%	13	12.9%	101
Western	Male	27	100%	0	0%	27	25	96.2%	1	3.8%	26
	Female	16	89%	2	11%	18	16	88.9%	2	11.1%	18
	Total	43	96%	2	4%	45	41	93.2%	3	6.8%	44
	Total	346	90%	37	10%	383	362	90.5%	38	9.5%	400

Source: UDBE Endline Assessment Field Data, 2016

7.9.8 Disciplinary Practices and Control Strategies among UTDBE Trainees

The use of different disciplinary strategies invariably characterises teachers' classroom management and organizational skills. While there are varying classroom management options available to teachers, some end up using adverse disciplinary strategies. Pufaa (2013) citing Agbenyega (2006) noted that children are often victims of severe corporal punishment in Ghanaian schools as a disciplinary measure. The description of the use of disciplinary strategies by UTDBE trainees was put into five broad categories:

- Despite poor behaviour in class there is no evidence of class control;
- Verbal chastisement used e.g. shouting or insults or non-verbal intimidation - stern or angry demeanour;
- Physical punishment strategies used to punish poor response or indiscipline e.g. cane or knocking;
- Evidence of positive class control strategies; and
- Well behaved class - no evidence of class control strategies other than reward for correct responses.

Overall, 24 (6.1%) of trainees were described as not showing evidence of class control despite poor behaviour of pupils in class, while 52 (13.1%) of trainees used verbal chastisement including shouting, insults or non-verbal intimidation such as stern or angry demeanour as disciplinary measures. Significantly, 28 (7.1%) of trainee teachers were seen to have used varying forms of physical punishment such as caning or knocking. However, the majority of the trainees - 154 (38.9%) demonstrated positive class control and disciplinary practices during the delivery of their lessons. Similarly, 138 (34.8%) of the trainees taught in classes where the pupils were well behaved and no disciplinary action was required. Table 7.27 illustrates the use of disciplinary strategies by UTDBE trainees. Table 7.28 summarizes the disciplinary practices.

Table 7.27: Broad Disciplinary Practices and Control Strategies among UTDBE Trainees

Region	Gender	Summary Statement of Disciplinary Practices										Total
		Despite poor behaviour in class there is no evidence of class control		Verbal chastisement used e.g. shouting or insults or non-verbal intimidation-stern or angry demeanour		Physical punishment strategies used to punish poor response or indiscipline e.g. cane or knocking		Evidence of positive class control strategies		Well behaved class-no evidence of class control strategies other than reward correct responses		
Brong Ahafo	Male	3	8.1%	6	16.2%	0		12	32.4%	16	43.2%	37
	Female	4	7.5%	10	18.9%	7	13.2%	28	52.8%	4	7.5%	53
	Total	7	7.8%	16	17.8%	7	7.8%	40	44.4%	20	22.2%	90
Northern	Male	3	5.6%	4	7.4%	--	--	24	44.4%	23	42.6%	54
	Female	1	4.5%	5	22.7%	--	--	11	50.0%	5	22.7%	22
	Total	4	5.3%	9	11.8%	--	--	35	46.1%	28	36.8%	76
Upper East	Male	3	5.2%	15	25.9%	2	3.4%	24	41.4%	14	24.1%	58
	Female	2	6.7%	2	6.7%	7	23.3%	14	46.7%	5	16.7%	30
	Total	5	5.7%	17	19.3%	9	10.2%	38	43.2%	19	21.6%	88
Upper West	Male	7	14.6%	5	10.4%	3	6.2%	10	20.8%	23	47.9%	48
	Female	1	2.0%	1	2.0%	9	17.6%	15	29.4%	25	49.0%	51
	Total	8	8.1%	6	6.1%	12	12.1%	25	25.3%	48	48.5%	99
Western	Male	--	--	3	12.0%	--	--	8	32.0%	14	56.0%	25
	Female	--	--	1	5.6%	--	--	8	44.4%	9	50.0%	18
	Total	--	--	4	9.3%	--	--	16	37.2%	23	53.5%	43
Total	Male	16	7.2%	33	14.9%	5	2.3%	78	35.1%	90	40.5%	222
	Female	8	4.6%	19	10.9%	23	13.2%	76	43.7%	48	27.6%	174
	Total	24	6.1%	52	13.1%	28	7.1%	154	38.9%	138	34.8%	396

Source: UDBE Endline Assessment Field Data, 2016

A further categorization of the use of disciplinary strategies into two sub groups i.e. good disciplinary strategies and poor disciplinary strategies shows that a total of 299 (74.8%) UTDBE trainees used good disciplinary measures as against 101 (25.2%) who used poor disciplinary strategies. A gender assessment of this result indicates that more male trainees (77.4%) used positive disciplinary measures as compared to 71.3% of female trainees. This trend was regular across all regions except in the Upper West and Western Regions. Western Region emerged as the region with the highest proportion of trainees who were observed to have used good disciplinary strategies.

Table 7.28: Summary of UTDBE Trainees’ use of Disciplinary Practice

Region		Disciplinary Practices				Total
		Good disciplinary strategies		Poor disciplinary strategies		
Brong Ahafo	Male	29	76.3%	9	23.7%	38
	Female	32	60.4%	21	39.6%	53
	Total	61	67.0%	30	33.0%	91
Northern	Male	48	88.9%	6	11.1%	54
	Female	16	72.7%	6	27.3%	22
	Total	64	84.2%	12	15.8%	76
Upper East	Male	40	69.0%	18	31.0%	58
	Female	19	63.3%	11	36.7%	30
	Total	59	67.0%	29	33.0%	88
Upper West	Male	35	70.0%	15	30.0%	50
	Female	40	78.4%	11	21.6%	51
	Total	75	74.3%	26	25.7%	101
Western	Male	23	88.5%	3	11.5%	26
	Female	17	94.4%	1	5.6%	18
	Total	40	90.9%	4	9.1%	44
Total	Male	175	77.4%	51	22.6%	226
	Female	124	71.3%	50	28.7%	174
	Total	299	74.8%	101	25.2%	400

Source: UDBE Endline Assessment Field Data, 2016

7.9.9 Baseline-Endline Comparison of Disciplinary Practices by UTDBE Trainees

A comparative analysis of the use of disciplinary strategies by UTDBE trainees during the baseline and endline showed a fall in the performance of trainees. During the endline results suggest that 74.8% of trainees employed ‘good’ disciplinary measures as compared to 85% in the baseline. At the regional level, the pattern was similar except for the Northern and Western Regions where trainees showed improvement in the use of positive disciplinary measures. The performance equally diminished across gender, although the male trainees maintained their higher performance over their female counterparts exhibited in the baseline. Table 7.29 is an illustration of the baseline-endline comparison of the use of disciplinary practices by trainees.

Table 7.29: Baseline-Endline Comparison of Disciplinary Practices by UTDBE Trainees

Region	Gender	Disciplinary Practices									Total
		Baseline				Total	Endline				
		Good disciplinary strategies		Poor disciplinary strategies			Good disciplinary strategies		Poor disciplinary strategies		
Brong Ahafo	Male	41	93%	3	7%	44	29	76.3%	9	23.7%	38
	Female	35	80%	9	20%	44	32	60.4%	21	39.6%	53
	Total	76	86%	12	14%	88	61	67.0%	30	33.0%	91
Northern	Male	42	84%	8	16%	50	48	88.9%	6	11.1%	54
	Female	14	74%	5	26%	19	16	72.7%	6	27.3%	22
	Total	56	81%	13	19%	69	64	84.2%	12	15.8%	76
Upper East	Male	50	89%	6	11%	56	40	69.0%	18	31.0%	58
	Female	22	85%	4	15%	26	19	63.3%	11	36.7%	30
	Total	72	88%	10	12%	82	59	67.0%	29	33.0%	88
Upper West	Male	45	83%	9	17%	54	35	70.0%	15	30.0%	50
	Female	33	85%	6	15%	39	40	78.4%	11	21.6%	51
	Total	78	84%	15	16%	93	75	74.3%	26	25.7%	101
Western	Male	23	85%	4	15%	27	23	88.5%	3	11.5%	26
	Female	15	83%	3	17%	18	17	94.4%	1	5.6%	18
	Total	38	84%	7	16%	45	40	90.9%	4	9.1%	44
	Total	320	85%	57	15%	377	299	74.8%	101	25.2%	400

Source: UDBE Endline Assessment Field Data, 2016

7.9.10 Summary of Findings

- The baseline-endline comparison shows that the UTDBE trainees improved remarkably on all 19 indicators assessed during the lesson observations and over the one and a half year period of the IA;
- UTDBE trainees at the endline stage performed less than satisfactory in three key areas (i.e. preparation of teaching learning materials, sensitivity to diverse learner needs, and usage of TLMs) as compared to 13 indicators during the baseline survey;
- The Impact Assessment suggests that training of teachers will require much more emphasis on the importance of using teaching learning materials such as text books, supplementary texts and other TLMs to enhance learning.

Chapter 8: Comparison between UTDBE Trainees and DBE Teachers

8.1 Introduction

The endline survey of the UTDBE Impact Assessment collected data on both UTDBE trainees and DBE teachers as was the case during the lesson observation survey (LOS) phase. This was carried out in order that comparison could be made between the two teacher types in terms of lesson planning and preparation, methodology as well as classroom organisation and management (See Annex 3 for the analysis on the lesson observation for the DBE teachers). Table 8.1 illustrates the number of lesson observations across all five regions by level of deprivation and by gender.

Overall, 400 UTDBE trainees were observed as against 185 DBE teachers. The UTDBE trainees had 2 semesters left in their programme and the DBE teachers had completed their programme and had on average 2 years of teaching practice since graduation as well as one year of college “out year programme.”³¹ Lesson observations were conducted by observing UTDBE and DBE teachers at the same school or within the same circuits and focused mainly on literacy and language lessons. Across the two teacher types, most of the UTDBE trainee teachers were found in the deprived area schools. The sex distribution also shows more males than females were in the deprived area schools among both UTDBE trainees and DBE teachers.

Table 8.1: Number of Lesson Observations Conducted across Five Sampled Regions

Region	Total Number of Lessons Observed	Number of Males	Number of Females	Number in Deprived	Number in Less Deprived	Number in Extremely Deprived
UTDBE Trainees						
Brong Ahafo	91	38	53	44	16	31
Northern	76	54	22	37	21	18
Upper East	88	58	30	20	17	51
Upper West	101	50	51	32	19	50
Western	44	26	18	19	19	6
Total	400	226	174	152	92	156
DBE Teachers						
Brong Ahafo	41	27	14	20	7	14
Northern	31	20	11	13	13	5
Upper East	57	33	24	15	13	29
Upper West	33	14	19	13	3	19
Western	23	14	9	7	14	2
Total	185	108	77	66	50	69

Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2016

³¹ The “college out year programme” provides DBE trainees one year out of college campus practicum in communities similar to those where DBE’s trainees will find themselves after graduation. During the out year programme head teachers provide mentorship and support to the trainees.

8.2 Mean Rating of Classroom Observation Indicators

The study sought to examine the skills UTDBE trainees and conventionally trained teachers gained in lesson planning/preparation, teaching methodology and classroom organisation and management. Mean ratings were obtained across all the classroom observation indicators, and these are reported in Table 8.2. The lesson observation assessment rated each of the 19 indicators on a five point scale (with numerical values) as follows: Poor (1), Needs Improvement (2), Satisfactory (3), Good (4), Excellent (5). The mean ratings were then calculated using SPSS statistical analysis. Overall mean ratings were obtained in order to identify the skills student teachers gained in lesson planning/preparation, teaching methodology and classroom organization and management.

On the whole, both UTDBE and DBE teachers obtained satisfactory ratings (ratings of 3.0 and above) across almost all the indicators. The UTDBE trainees however obtained satisfactory performance in 16 out of the 19 indicators while the DBE teachers had satisfactory rating in 17 out of the 19 indicators. Analysis of the individual indicators showed that the DBEs performed better than the UTDBE trainees in 17 indicators. The two indicators where UTDBE trainees performed better were teacher learner activities and use of TLMs and in classroom management - even though both teacher types had satisfactory performances. The poor performance on the part of both the trainees and DBE teachers on teacher learner centered activities and use of TLMs suggests that the CoE are weak in developing these skills. Therefore, the CoE will need to build capacity in teaching and training across these two areas which will include more practical methods of teacher modeling in the training college.

The preparation and use of TLMs recorded “unsatisfactory” performances for both DBEs (2.57) and UTDBEs (2.64). This result shows that both UTDBE and DBE teachers need much more improvement in the preparation and use of TLMs.

Table 8.2: Mean Rating of Classroom Observation Indicators for UTDBE Trainees and DBE Teachers Assessments

Indicator	UTDBE Trainees		DBE Teachers	
	Sample size	Mean rating	Sample size	Mean rating
1. Objectives	400	3.11	185	3.51
2. Core Points	400	3.03	185	3.45
3. Teacher Learner Activities	400	4.41	185	3.32
4. Preparation of Teaching Learning Materials	400	2.68	185	2.91
5. Subject Knowledge and Content Accuracy	400	3.61	185	3.96
6. Use of Language	400	3.59	185	3.72
7. Language of Instruction	400	3.62	185	3.72
8. Use of Generic Skills	400	3.00	185	3.18
9. Use of Chalkboard	400	3.46	185	3.66
10. Questioning Skills	400	3.26	185	3.40
11. Gender Sensitivity	400	3.41	185	3.51
12. Sensitivity to Diverse Learner Needs	400	2.95	185	3.18
13. Feedback to Pupils	400	3.14	185	3.41
14. Use of TLMs	400	2.64	185	2.57
15. Pupils' Participation	400	3.22	185	3.31
16. Use of Teacher Learner Activities	393	3.23	185	3.42
17. Evaluation of Lesson	400	3.32	166	3.64
18. Classroom Setting	400	3.20	166	3.48
19. Class Control	400	3.31	166	3.67

Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2016

8.3 Instructional Skills of UTDBE and DBE by Gender

The endline survey sought to identify whether there are gender differences in classroom practices among both UTDBE and DBE teachers. Table 8.3 shows the mean ratings of key classroom observation indicators by gender. The analysis shows virtually no difference in the performance of males and females between the two teacher types (i.e. DBE and UTDBE) across all the 19 indicators. Both sexes obtained satisfactory performances in most of the indicators.

In comparing female teachers across the two teacher-types, the UTDBE female trainees scored satisfactory ratings in 16 indicators whilst the female DBE teachers scored satisfactory ratings in 18 indicators. The male UTDBE trainees did better than the DBE teachers by scoring satisfactory marks in 18 indicators as compared to “satisfactory” performance in 17 indicators by the male DBE teachers. The results further show that the female UTDBE trainees and the male DBE teachers had ratings above 3.00 in all the indicators except for the preparation and use of

Teaching Learning Materials where the UTDBE trainees had 2.82 as against a “needs improvement” rating of 2.84 by the male DBE teachers.

The findings suggest that there was not much difference between UTDBE and DBE instructional performance in the classroom.

Table 8.3: Mean Rating of Classroom Observation Indicators by Gender

Indicator	UTDBE Trainees		DBE Teachers	
	Female	Male	Female	Male
1. Objectives	3.17 (174)	3.07 (226)	3.52 (58)*	3.53 (108)*
2. Core Points	3.20 (174)	2.90 (226)	3.53 (58)	3.34 (108)
3. Teacher Learner Activities	3.29 (174)	2.93 (226)	3.41 (58)	3.42 (108)
4. Use of Teaching Learning Materials	2.82 (174)	2.57 (226)	3.17 (58)	2.84 (108)
5. Subject Knowledge and Content Accuracy	3.68 (174)	3.56 (226)	3.81 (58)	3.72 (108)
6. Use of Language	3.63 (174)	3.59 (226)	3.57 (58)	3.55 (108)
7. Language of Instruction	3.65 (174)	3.59 (226)	3.52 (58)	3.59 (108)
8. Use of Generic Skills	3.21 (174)	2.83 (226)	3.31 (58)	3.02 (108)
9. Use of Chalkboard	3.43 (174)	3.49 (226)	3.57 (58)	3.48 (108)
10. Questioning Skills	3.32 (174)	3.21 (226)	3.40 (58)	3.38 (108)
11. Gender Sensitivity	3.48 (174)	3.36 (226)	3.43 (58)	3.35 (108)
12. Sensitivity to Diverse Learner Needs	3.06 (174)	2.87 (226)	3.14 (58)	3.25 (108)
13. Feedback to Pupils	3.22 (174)	3.08 (226)	3.34 (58)	3.24 (108)
14. Use of TLMs	2.90 (174)	2.45 (226)	2.97 (58)	2.48 (108)
15. Pupils' Participation	3.34 (174)	3.12 (226)	3.21 (58)	3.28 (108)
16. Use of Teacher Learner Activities	3.33 (174)	3.15 (226)	3.29 (58)	3.16 (108)
17. Evaluation of Lesson	3.30 (174)	3.33 (226)	3.29 (58)	3.41 (108)
18. Classroom Setting	3.24 (174)	3.16 (226)	2.98 (58)	3.02 (108)
19. Class Control	3.32 (174)	3.31 (226)	3.34 (58)	3.55 (108)

Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2016

*Note: Numbers in bracket are the sample sizes.

8.4 Instructional Skills across UTDBE and DBE's by Region

Table 8.4 shows the mean ratings of UTDBE trainees and DBE teachers in skills acquisition by region. The overall picture shows that the DBE's teachers performed better than the UTDBE, but the regional results show some variations. The regional analysis shows that the UTDBE teachers performed better than the DBE trainees in the Brong Ahafo Region, scoring satisfactory marks in all 19 indicators while the DBE's had 18 satisfactory performances, with the use of TLMs being unsatisfactory. In the Northern, Upper East and Upper West Regions, the DBE teachers did better than their UTDBE trainee counterparts. In Upper East and West Regions the DBE scored satisfactory results on 18 indicators as against 12 and 16 satisfactory performances in the Upper West and East respectively. However, in the Western Region the UTDBE trainees outperformed their DBE counterparts. The UTDBEs scored satisfactorily on 18 indicators while their DBE

colleagues had satisfactory performances on 14 indicators. In the Northern Region, the UTDBEs scored satisfactorily on 7 of the 19 indicators as against the DBEs 13. The findings also show consistent unsatisfactory results on use of TLM for both UTDBE trainees and DBE teachers re-emphasizing the CoE weaknesses in developing trainees' skills in the use of TLMs.

Table 8.4: Mean Rating of Classroom Observation Indicators by Region

Indicator	UTDBE Trainees					DBE Teachers				
	Brong Ahafo	North ern	Upper East	Upper West	Weste rn	Brong Ahafo	Northe rn	Upper East	Upper West	Weste rn
1. Objectives	3.27 (91)	2.87 (76)	3.15 (88)	2.98 (101)	3.41 (44)	3.36 (33)	3.44 (41)	3.80 (44)	3.59 (29)	3.26 (19)
2. Core Points	3.35(91)	2.82 (76)	2.97 (88)	2.85 (101)	3.27 (44)	3.33 (33)	3.29 (41)	3.57 (44)	3.52 (29)	3.26 (19)
3. Teacher Learner Activities	3.37 (91)	2.74 (76)	3.09 (88)	2.99 (101)	3.30 (44)	3.36 (33)	3.44 (41)	3.66 (44)	3.24 (29)	3.16 (19)
4. Preparation of Teaching Learning Materials	3.09 (91)	3.32 (76)	2.81 (88)	2.33 (101)	3.00 (44)	3.09 (33)	2.59 (41)	3.16 (44)	3.10 (29)	2.84 (19)
5. Subject Knowledge and Content Accuracy	3.93 (91)	3.34 (76)	3.67 (88)	3.47 (101)	3.61 (44)	3.55 (33)	3.78 (41)	3.84 (44)	3.93 (29)	3.58 (19)
6. Use of Language	3.87(91)	3.25 (76)	3.67 (88)	3.52 (101)	3.57 (44)	3.36 (33)	3.49 (41)	3.64 (44)	3.79 (29)	3.47 (19)
7. Language of Instruction	3.98 (91)	3.21 (76)	3.68 (88)	3.54 (101)	3.59 (44)	3.42 (33)	3.66 (41)	3.57 (44)	3.59 (29)	3.58 (19)
8. Use of Generic Skills	3.51 (91)	2.63 (76)	2.91 (88)	2.85 (101)	3.09 (44)	3.06 (33)	3.12 (41)	3.23 (44)	3.14 (29)	2.95 (19)
9. Use of Chalkboard	3.65 (91)	3.13 (76)	3.59 (88)	3.50 (101)	3.30 (44)	3.52 (33)	3.41 (41)	3.61 (44)	3.79 (29)	3.05 (19)
10. Questioning Skills	3.49 (91)	2.96 (76)	3.27 (88)	3.22 (101)	3.32 (44)	3.33 (33)	3.17 (41)	3.66 (44)	3.59 (29)	3.00 (19)
11. Gender Sensitivity	3.49 (91)	3.09 (76)	3.52 (88)	3.44 (101)	3.50 (44)	3.45 (33)	3.22 (41)	3.55 (44)	3.55 (29)	2.95 (19)
12. Sensitivity to Diverse Learner Needs	3.21 (91)	2.25 (76)	3.16 (88)	2.88 (101)	3.39 (44)	3.18 (33)	2.85 (41)	3.52 (44)	3.38 (29)	3.05 (19)
13. Feedback to Pupils	3.54 (91)	2.78 (76)	3.11 (88)	3.03 (101)	3.30 (44)	3.61 (33)	3.15 (41)	3.34 (44)	3.34 (29)	2.74 (19)
14. Use of TLMs	3.36 (91)	2.26 (76)	2.47 (88)	2.50 (101)	2.95 (44)	2.73 (33)	2.54 (41)	2.73 (44)	2.66 (29)	2.58 (19)
15. Pupils' Participation	3.63 (91)	2.89 (76)	3.11 (88)	3.10 (101)	3.39 (44)	3.15 (33)	3.17 (41)	3.32 (44)	3.52 (29)	3.05 (19)
16. Use of Teacher Learner Activities	3.54 (91)	2.80 (76)	3.24 (88)	3.19 (101)	3.41 (44)	3.09 (33)	3.24 (41)	3.36 (44)	3.14 (29)	3.05 (19)
17. Evaluation of Lesson	3.52 (91)	3.07 (76)	3.40 (88)	3.22 (101)	3.41 (44)	3.30 (33)	3.29 (41)	3.59 (44)	3.31 (29)	3.21 (19)
18. Classroom Setting	3.55 (91)	2.80 (76)	3.11 (88)	3.20 (101)	3.32 (44)	3.03 (33)	2.93 (41)	3.07 (44)	3.03 (29)	2.95 (19)
19. Class Control	3.56	2.96	3.22	3.29	3.66(44)	3.48	3.37	3.61	3.34	3.58

Indicator	UTDBE Trainees					DBE Teachers				
	Brong Ahafo	North ern	Upper East	Upper West	Weste rn	Brong Ahafo	Northe rn	Upper East	Upper West	Weste rn
	(91)	(76)	(88)	(101)	4)	(33)	(41)	(44)	(29)	(19)

Source: UTDBE Endline LOS Assessment, Classroom Lesson Observation Instrument 13, 2016

*Note: Numbers in bracket are the sample sizes.

8.5 Comparative Analysis of Lesson Planning and Preparation

Table 8.5 shows a comparison of UTDBE and DBEs Lesson Planning and preparation by region and levels of deprivation between baseline and endline assessments and a combination of descriptors. To make comparisons simple and easy for readers to follow, the results of three descriptors: (repeated lessons, No lesson plans & poor plans) have been combined to give an overall performance of the number of trainees who have performed poorly or unsatisfactorily. Similarly, the three descriptors of “satisfactory lesson plans, lessons linked to previous lessons and well prepared lesson plans” have also been merged to give satisfactory and above lesson plans. A more detailed analysis of lesson planning is available in the annex (table 8.5b) section of the report. In terms of lesson planning and preparation the overall results show that at the endline the UTDBE trainees had a greater proportion planning and preparing lessons scored as ‘satisfactorily and above’ compared to the DBE teachers. Generally, there appears to be high proportion of both male and female UTDBE trainees preparing and planning lessons satisfactorily compared to DBE teachers.

The overall results at the endline assessment show **28%** of DBE teachers planning and preparing lessons poorly and unsatisfactorily, while the UTDBE trainees had only 18% in the same category. Those planning and preparing lessons satisfactorily stood at 72% for DBE, while that for the UTDBE stood at 82%. While female and male DBEs had 24% performing in the poor and unsatisfactory grade, the results for UTDBE show 18.6% and 17.7% respectively for males and female trainees. Similarly, the regional results follow the same trend of a higher proportion of UTDBE trainees performing in the satisfactory category of lesson planning and preparation except in the Upper West where both female and male DBE had a higher proportion than the UTDBE in satisfactory category. Correspondingly, in the Upper East, the male DBEs had a higher proportion within the satisfactory range than the UTDBEs. The UTDBE trainees’ quality preparation of lesson planning and preparation is not surprising. While most DBE have just completed their training and have teaching experience ranging between one and three years, the UTDBE teaching have experiences of planning and preparing lesson notes ranging from a minimum of three years to a maximum of twelve years.

Table 8.5: Comparative Analysis on Lesson Planning and Preparation: UTDBE and DBE

Region	Gender	Poor and Unsatisfactory Lesson Plans		Satisfactory and above Lesson Plans	
		DBE	UTDBE	DBE	UTDBE
Brong Ahafo	Male	30%	29%	70%	71%
	Female	23%	20%	77%	80%
Northern	Male	27%	13%	73%	87%
	Female	23%	9%	77%	91%
Upper East	Male	9%	38%	81%	62%
	Female	20%	16%	80%	84%
Upper West	Male	6%	26%	94%	74%
	Female	24%	24%	86%	76%
Western	Male	11%	10%	89%	90%
	Female	25%	16%	75%	84%
Overall	Male	24%	17%	76%	83%
	Female	24%	18.6%	76%	81.4%
	Total	28%	18%	72%	82%

Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2016

8.6.1 UTDBE Trainees and DBE Teachers' Subject Knowledge and Content Accuracy

Table 8.6 presents results of UTDBE trainees and DBE teachers' subject knowledge and content accuracy by region and level of deprivation. For ease of comparison, the descriptors 'poor' and 'needs improvement' have been merged and the descriptors 'satisfactory', 'good' and 'excellent' have also been merged. The overall findings show more DBE teachers scoring in the 'satisfactory and above grade' compared to the UTDBE trainees. This performance is not surprising. The UTDBE trainees are still under training while the DBE teachers have successfully completed their teacher training and have between one to three years of post-graduation teaching experience. However, it must be acknowledged that the UTDBE trainees' performance is commendable as the percentage difference is not great. While the DBE teachers had 95.7% scoring in the satisfactory and above grade the UTDBE trainees scored 90.7% within the same assessment range. Similarly, findings for schools in areas of deprivation show that more DBE teachers scored in the satisfactory and above group than the UTDBE trainees. In the deprived area schools the results showed UTDBE trainees at 86.7% as against DBE teachers at 95.5% in the satisfactory and above category.

The UTDBE curriculum is based on the general programme of the conventional DBE mode. The core content of both programmes are the same with both programmes offering the same subject content. However, the conventional DBE trainees take elective courses which are not available to the UTDBE trainees. A comparison of the examination results of one common course (Trends in Education) shows that UTDBE trainees in the selected Colleges of Education performed better than the DBE trainees whereas in Integrated Science the DBE trainees performed better. In terms of the UTDBE trainees' improvement in subject knowledge, an analysis of examination results for English Language over a three-year period indicated that trainees had made progress (see chapter 4).

Interviews at the CoEs have revealed the factors that affect the acquisition of content knowledge and performance by UTDBE trainees: firstly, there are differences in face-to-face time with the tutors and trainees when comparing the two modalities; secondly, there are differences in the entry requirements ; thirdly, the timing of the UTDBE programme is not always favourable to the UTDBE trainees; and finally there is so much emphasis on subject knowledge which creates a situation whereby students simply memorize text for exams rather than gaining the necessary skills, methods and understanding to equip them for the classroom, particularly at primary level.

With regard to the regional results, the findings show that it was only in the Brong Ahafo Region that the UTDBE trainees outperformed the DBE teachers. However, with respect to levels of deprivation, the findings in the regions show that, in less deprived schools in Brong Ahafo and deprived schools in Upper East, the two groups performed equally. On the contrary, the UTDBE trainees outperformed their DBE counterparts in deprived and extremely deprived schools in Brong Ahafo.

Table 8.6: Comparison between UTDBE Trainees and DBE Teachers' Subject Knowledge and Content Accuracy by Region and Level of Deprivation

Region	Level of Deprivation	Poor Needs improvement		Satisfactory, Good & Excellent Performance	
		UTDBE	DBE	UTDBE	DBE
Western	Deprived	5.3%	0%	94.7%	100.0%
	Less Deprived	10.5%	0%	89.4%	100%
	Extremely Deprived	16.7%	0%	83.3%	100%
	Total	9.1%	0%	90.8%	100%
Brong Ahafo	Deprived	4.5%	15.4%	95.5%	84.6%
	Less Deprived	.0%	.0%	100%	100%
	Extremely Deprived	.0%	20.0%	100%	80.0%
	Total	2.2%	9.7%	97.8%	90.4%
Northern	Deprived	16.2%	6.7%	83.7%	93.4%
	Less Deprived	4.8%	15.4%	95.2%	84.7%
	Extremely Deprived	27.8%	3.4%	72.2%	96.6%
	Total	15.8%	7%	84.2%	93%
Upper East	Deprived	.0%	.0%	100%	100%
	Less Deprived	5.9%	.0%	94.1%	100%
	Extremely Deprived	9.8%	5.3%	90.2%	94.7%

Region	Level of Deprivation	Poor Needs improvement		Satisfactory, Good & Excellent Performance	
		UTDBE	DBE	UTDBE	DBE
	Total	6.8%	3.0%	93.2%	97%
Upper West	Deprived	9.3%	0%	90.7%	100%
	Less Deprived	36.9%	0%	63.1%	100%
	Extremely Deprived	6.0%	0%	94%	100.0%
	Total	12.9%	0%	87.1%	100%
Overall	Deprived	7.9%	4.5%	86.7%	95.5%
	Less Deprived	11.9%	4.0%	88.1%	96%
	Extremely Deprived	9%	4.3%	91%	95.7%
	Total	9.3%	4.3%	90.7%	95.7%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

8.6.2 UTDBE Trainees and DBE Teachers' DBE Language of Instruction

Table 8.7 shows the findings on UTDBE trainees and DBE teachers' language of instruction by region and level of deprivation. The five descriptors of 'mixture', 'only English', 'mainly English', 'only Ghanaian Language' and 'mainly Ghanaian Language' have been regrouped into three categories: "mixture" "only / mainly English" and "only / mainly Ghanaian Language". The English only and mainly English have been merged to give a new category: "only / mainly English". The "mixture" category has been retained, while the descriptors "only Ghanaian Language" and "mainly Ghanaian Language" have been merged to give "only / mainly Ghanaian Language".

The overall findings show the dominant use of "only / mainly English" by both the UTDBEs and DBEs. However, the DBEs use more of "only / mainly English" than the UTDBEs. On average, 46% of UTDBEs and 65% of DBEs scored within the scoring range "only / mainly English". Similarly, there is the dominant use of "only / mainly English" in all forms of deprived schools. The use of "only / mainly English" show UTDBE scored 40.1% and DBE 56.9% in deprived schools. In less deprived schools (mainly district capitals/semi urban sites) the results of the study reveal that the use of "only / mainly English" as follows: 50% UTDBEs and 72% DBEs. In extremely deprived schools the results show 49.4% UTDBEs and 68.1% DBE use "only / mainly English" as language of instruction. Overall, the findings suggest that DBEs are using "English only" in far more schools despite the level of deprivation.

However, with regard to the use of the mediums "mixed language" and "only / mainly Ghanaian language" many more UTDBEs used a mixture of languages of instruction compared to DBEs. This was to be expected as the UTDBE often come from the locality and speak the local language but the DBE do not necessarily come from the communities and as such often use English which then becomes the language of instruction. The findings show 38.9% UTDBEs as against 25% DBEs use "only / mainly Ghanaian Language" while for the use of "mixture of languages", the overall results give UTDBEs 15.1% as against 9.8% DBEs. Similarly, in the areas of deprivation many UTDBEs use a "mixture" of languages and "only / mainly Ghanaian

Language” more than their DBE colleagues do. An interesting observation is the seemingly equal use of “only /mainly English” and “only / mainly Ghanaian Language” in deprived schools (40.1% “only /mainly English” and 40.8% “only / mainly Ghanaian Language”).

The regional findings show the dominant use of the medium “only / mainly English” in four regions (Northern, Upper East, Upper West and Western) by both the UTDBEs and DBEs as against the dominant use of “only / mainly Ghanaian language” in Brong Ahafo. In Brong Ahafo, the dominant use of the “only /mainly” Ghanaian Language show 53.4% UTDBEs and 41.5% DBEs. Interestingly, in Brong Ahafo, the DBE teachers overall use both “only / mainly Ghanaian Language” and “only /mainly English” equally (41.5% each). In Brong Ahafo, regardless of locality and teacher type, the dominant medium of instruction is “only / mainly Ghanaian language”. Although in the other four regions the dominant medium or language of instruction is “only / mainly English” in the extremely deprived school in the Western Region the dominant language is “only / mainly Ghanaian Language”.

Table 8.7: Comparison between UTDBE Trainees and DBE Teachers’ DBE Language of Instruction by Region and Level of Deprivation

Region	Level of Deprivation	Only / Mainly English		Mixture		Only / Mainly Ghanaian Language	
		UTDBE	DBE	UTDBE	DBE	UTDBE	DBE
Brong Ahafo	Deprived	19.1	45	26.2%	20%	54.7	35
	Less Deprived	25	42.9	18.8%	0%	56.2	57.2
	Extremely Deprived	30	35.7	20.0%	21.4%	50	42.8
	Total	23.8	41.5	22.7%	17.1%	53.4	41.5
Northern	Deprived	61.8	69.3	14.7%	7.7%	23.5	23.1
	Less Deprived	50	77	20.0%	15.4%	30	7.7
	Extremely Deprived	58.8	60	11.8%	.0%	29.4	40
	Total	57.7	71	15.5%	9.7%	26.7	19.4
Upper East	Deprived	45	53.3	15.0%	6.7%	40	40
	Less Deprived	70.5	84.6	5.9%	7.7%	23.4	7.7
	Extremely Deprived	62.8	82.7	3.9%	6.9%	33.3	10.3
	Total	60.2	75.5	6.8%	7.0%	32.9	17.5
Upper West	Deprived	37.5	72.8	21.9%	.0%	40.6	27.3%
	Less Deprived	50	100	11.1%	.0%	38.9	.0%
	Extremely Deprived	46	73.7	18.0%	10.5%	36	15.8%
	Total	44	75.7	18.0%	6.1%	38	18.2
Western	Deprived	47.4	50	10.5%	16.7%	42.1	33.3%
	Less Deprived	52.6	64.3	10.5%	7.1%	36.9	28.6%
	Extremely Deprived	33.3	50	.0%	.0%	66.6	50.0
	Total	47.7	59	9.1%	9.1%	43.2	31.8%
Overall	Deprived	40.1	56.9	19.0%	10.8%	40.8	32.3
	Less Deprived	50	72	13.3%	8.0%	36.7	20
	Extremely Deprived	49.4	68.1	12.3%	10.1%	38.3	21.7

Region	Level of Deprivation	Only / Mainly English		Mixture		Only / Mainly Ghanaian Language	
		UTDBE	DBE	UTDBE	DBE	UTDBE	DBE
	Total	46	65.2	15.1%	9.8%	38.9	25

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

8.6.3 UTDBE Trainees and DBE Teachers' Language of Instruction by Region and Grade Taught

Table 8.8 shows UTDBE trainees and DBE teachers' language of instruction by region and grade taught. The overall findings show that both UTDBE and DBE teachers follow the language of instruction policy which states that teachers use mainly Ghanaian Language in KG and lower primary (LP) and use English in the upper primary (UP) and JHS. In the KG and LP the dominant language of instruction is "only / mainly Ghanaian Language" while in the UP and JHS the dominant medium of instruction is "only / mainly English". The KG and LP results show a higher proportion of DBE teachers than UTDBE trainees using "only / mainly Ghanaian Language": DBE 64.7% and UTDBE 57%. The results for the UP show more DBE teachers than UTDBE trainees using "only / mainly English": DBE 89.6% and UTDBE 74.1%. This is due to the fact that UTDBE trainees are affiliated and natives of the communities as indicated in chapter five (5.8). Most of the DBE teachers are not from the community and do not understand the local language; hence the use of the English language.

Similarly, the regional findings show that most UTDBE trainees and DBE teachers are following the language of instruction policy except in the JHS in three regions: Brong Ahafo, Upper West, and Western Regions where contrary to the policy, the majority of UTDBE trainees and DBE teachers use more of "only / mainly Ghanaian Language" than "only / mainly English", the prescribed language of instruction for the level. In Brong Ahafo, the majority of the DBE teachers at the JHS use more of "mixed language" while most UTDBE trainees at this level use "only / mainly Ghanaian language". In Upper West, 50% of UTDBE trainees and 100% of DBE teachers, contrary to the language of instruction guidelines, use "only /mainly Ghanaian Language" instead of "only / mainly English". Similarly, at the JHS in Western Region DBE teachers' dominant medium is "only / mainly Ghanaian language" (55.6%), while UTDBE trainees dominant medium is "only / mainly English" (60%).

Table 8.8: Comparison between UTDBE Trainees and DBE Teachers’ Language of Instruction by Region and Grade Taught

Region	Level of Deprivation	Only / Mainly English		Mixture		Only / Mainly Ghanaian Language	
		UTDBE	DBE	UTDBE	DBE	UTDBE	DBE
Brong Ahafo	KG +LP	8.2%	15.8%	31.1%	10.5%	60.7%	73.7%
	UP	61.6%	83.3%	3.8%	.0%	34.6%	16.6%
	JHS	0.0%	40.0%	.0%	50.0%	100.0%	10.0%
	Total	23.8%	41.5%	22.7%	17.1%	53.4%	41.5%
Northern	KG +LP	14.3%	20.0%	28.6%	.0%	57.1%	80.0%
	UP	83.4%	70.5%	4.2%	17.6%	12.5%	11.8%
	JHS	89.5%	100.0%	10.5%	.0%	0.0%	0.0%
	Total	57.7%	71.0%	15.5%	9.7%	26.7%	19.4%
Upper East	KG +LP	38.0%	30.0%	6.0%	20.0%	56.0%	50.0%
	UP	87.1%	100.0%	9.7%	.0%	3.2%	0.0%
	JHS	100.0%	100.0%	.0%	.0%	0.0%	0.0%
	Total	60.2%	75.5%	6.8%	7.0%	32.9%	17.5%
Upper West	KG +LP	23.1%	20.0%	26.9%	.0%	50.0%	80.0%
	UP	70.0%	92.3%	10.0%	7.7%	20.0%	0.0%
	JHS	50.0%	0.0%	.0%	.0%	50.0%	100.0%
	Total	44.0%	75.7%	18.0%	6.1%	38.0%	18.2%
Western	KG +LP	18.8%	0.0%	12.5%	50.0%	68.7%	50.0%
	UP	66.7%	90.9%	.0%	.0%	33.4%	9.1%
	JHS	60.0%	33.3%	20.0%	11.1%	20.0%	55.6%
	Total	47.7%	59.0%	9.1%	9.1%	43.2%	31.8%
Overall	KG +LP	20.7%	21.6%	22.2%	13.7%	57.0%	64.7%
	UP	74.1%	89.6%	6.5%	5.2%	19.4%	5.2%
	JHS	75.5%	62.1%	8.9%	16.2%	15.5%	21.6%
	Total	46.0%	65.2%	15.1%	9.8%	38.9%	25.0%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

8.6.4 UTDBE Trainees and DBE Teachers’ Use of Generic Skills by Region and Levels of Deprivation

Table 8.9 shows the results of findings on UTDBEs and DBEs use of generic skills by region and levels of deprivation. The findings show that both UTDBE trainees and DBE teachers use of generic skills is encouraging. The majority of both groups of teachers scored within the “satisfactory, good and excellent”. The overall scores show that more DBEs (82.7%) were ranked satisfactory than the UTDBEs (73.2%). The findings also show a large number of UTDBEs were assessed as “poor and needs improvement” particularly in less deprived schools. However, the number of UTDBE trainees and DBE teachers assessed as “poor” in the extremely deprived schools is comparable (24.6% DBEs and 28.2% UTDBEs).

The regional findings also show most trainees and teachers were assessed as “satisfactory”, although there are pockets of very poor generic skills in some regions. The Brong Ahafo Region

has the highest number of both DBEs and UTDBEs ranked as “satisfactory, good and excellent” in the use of generic skills. DBE teachers ranked as poor ranged from 4.3% in the Western Region to 33.3% in the Upper West. Similarly; the number of UTDBE trainees ranked as “poor and needing improvement” ranged from 9.9% in the Brong Ahafo Region to 40% in the Northern Region. Although the Western Region had the highest number of DBE teachers ranked as “satisfactory, good and excellent” (95.7%) in the use of generic skills, the Brong Ahafo Region had the highest number of UTDBEs graded as “satisfactory, good and excellent” (90.1%). A high proportion of DBE teachers also ranked as “satisfactory” (92.7%).

The findings suggest that, in the extremely deprived schools, the UTDBE trainees have the edge over their DBE teachers in the use of generic skills in the classrooms to promote learning. For instance, in the extremely deprived schools the UTDBEs’ ranked “poor / needs improvement” ranged from 6.5% in Brong Ahafo to 50% in Northern Region. The range for the DBE trainees showed 7.1% in Brong Ahafo and 50% in Western Region.

In the less deprived schools, the DBE teachers outperform the UTDBE trainees in the use of generic skills. For instance, the UTDBEs ranked “poor / needs improvement” ranged from 6.2% in Brong Ahafo to 47.4% in Upper West Region. For the DBE trainees the results show 0.0% in both the Western and Brong Ahafo Regions and 33.3% in the Upper West Region.

Results in the deprived schools reveal that for the UTDBE trainees, the lowest number recorded as performing “poor / needs improvement” was 13.6% in the Brong Ahafo Region and 35.1% in the Northern Region. For the DBEs, the findings show 0.0% in Western Region and 36.4% in the Upper West (see the table below for details).

Table 8.9: UTDBE Trainees and DBE Teachers' Use of Generic Skills by Region and Levels of Deprivation

Region	Level of Deprivation	Poor & Needs improvement		Satisfactory, Good and Excellent	
		DBE	UTDBE	DBE	UTDBE
Brong Ahafo	Deprived	10.0%	13.6	90%	86.4
	Less Deprived	.0%	6.2%	100%	93.8%
	Extremely Deprived	7.1%	6.5%	92.9%	93.5%
	Total	7.3%	9.9%	92.7%	90.1%
Northern	Deprived	15.4%	35.1%	84.6%	64.9%
	Less Deprived	23.1%	38.1%	76.9%	61.9%
	Extremely Deprived	20.0%	50%	80%	50%
	Total	19.3%	39.5%	80.7%	60.5%
Upper East	Deprived	6.7%	15%	93.3%	85%
	Less Deprived	15.4%	35.3%	84.6%	64.7%
	Extremely Deprived	27.6%	31.3%	72.4%	68.7%
	Total	19.3%	28.4%	80.7%	71.6%
Upper West	Deprived	36.4%	34.4%	63.6%	65.6%
	Less Deprived	33.3%	47.4%	66.7%	52.6%
	Extremely Deprived	31.6%	30%	68.4%	70%
	Total	33.3%	34.6%	66.7%	65.4%
Western	Deprived	.0%	15.8%	100%	84.2%
	Less Deprived	.0%	15.8%	100%	84.2%
	Extremely Deprived	50.0%	33.3%	50%	66.7%
	Total	4.3%	18.1%	95.7%	81.9%
	Deprived	13.6%	23.7%	86.4%	76.3%
	Less Deprived	12.0%	29.3%	88%	70.7%

Region	Level of Deprivation	Poor & Needs improvement		Satisfactory, Good and Excellent	
		DBE	UTDBE	DBE	UTDBE
Overall	Extremely Deprived	24.6%	28.2%	75.4%	71.8%
	Total	17.3%	26.8%	82.7%	73.2%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

8.6.5 DBE Teachers and UTDBE Trainees' Questioning Skills

Table 8.10 shows DBE teachers and UTDBE trainees' use of questioning skills by region and level of deprivation. The findings show that the majority of DBE trainees (87%) and UTDBE teachers (81%) were rated in the "satisfactory" category. The results show that more UTDBEs (19%) than DBEs (13%) were ranked as "poor / needs improvement". In the extremely deprived areas, the performance of the DBEs is comparable to that of UTDBEs (82.6% DBE and 82.1% UTDBE). The DBEs performed better than the UTDBEs in the less deprived schools as 94% of them were ranked within the "satisfactory, good and excellent" grades as compared to UTDBE's 78.2%. Similarly, in the deprived schools the DBEs had many more ranked in the "satisfactory" category than the UTDBEs (86.4% DBEs and 80.9% UTDBEs).

The regional findings show that, in four of the five regions, the DBEs demonstrated slightly higher scores in the "satisfactory" category with regards to questioning skills than the UTDBEs. However, in the Brong Ahafo Region the UTDBE trainees demonstrated stronger skills in questioning pupils (90.1%) compared to their DBE counterparts (85.4%) in the "satisfactory" grouping. In extremely deprived schools in the regions UTDBEs in Brong Ahafo and Northern Regions outnumbered the DBE in "satisfactory and above" grading, while in Western and Upper West Regions the DBEs had a greater number of teachers assessed as "satisfactory and above" than the UTDBE (Western - DBEs 100% "satisfactory" as against UTDBEs 66.6%; Upper West - DBEs 94.7% and UTDBE 82% classified as "satisfactory and above"). However, in the Upper East the UTDBE trainees performed nearly as well as the DBEs (82.6% for DBEs and 82.4% for UTDBEs).

Although the general performance scores for both DBEs and UTDBEs across almost all the sampled regions are encouraging, that of the Northern Region was however very poor. The DBE teachers had as many as 60% scoring within the "poor / needs improvement" category, while the UTDBE trainees had as many as 50% within the same slot.

Table 8.10: DBE Teachers and UTDBE Trainees' Use of Questioning Skills Rating by Region and Levels of Deprivation

Regions	Levels of Deprivation	Poor / Needs Improvement		Satisfactory, Good & Excellent	
		DBE	UTDBE	DBE	UTDBE
Brong Ahafo	Deprived	15.0%	15.9%	85	84.1
	Less Deprived	.0%	6.2%	100	93.8
	Extremely Deprived	21.4%	3.2%	78.6	96.8
	Total	14.6	9.9%	85.4	90.1
Northern	Deprived	15.4%	24.3%	84.6	75.7
	Less Deprived	.0%	23.8%	100	76.2
	Extremely Deprived	60.0%	50.0%	40	50
	Total	16.1	30.2%	83.9	69.8
Upper East	Deprived	13.3%	5.0%	86.7	95
	Less Deprived	.0%	35.3%	100	64.7
	Extremely Deprived	17.2%	17.6%	82.8	82.4
	Total	12.3	18.1%	87.7	81.9
Upper West	Deprived	9.1%	25%	90.9	75
	Less Deprived	.0%	21.1%	100	78.9
	Extremely Deprived	5.3%	12%	94.7	82
	Total	6	17.9%	94	82.1
Western	Deprived	14.3%	21.1%	84.7	78.9
	Less Deprived	21.4%	21.1%	78.6	78.9
	Extremely Deprived	.0%	33.4%	100	66.6
	Total	17.4%	22.8%	82.6	77.2

Overall	Deprived	13.6%	19.1%	86.4	80.9
	Less Deprived	6.0%	21.8%	94	78.2
	Extremely Deprived	17.4%	17.9%	82.6	82.1
	Total	13%	19.0%	87	81

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

In the less deprived schools (usually urban town capitals) across all regions, all the DBE teachers (100%) scored within the satisfactory grade, while the UTDBE's scores ranged from 64.7% in the Upper East Region to 93.8% in the Brong Ahafo Region. The DBE teachers' satisfactory performance is not surprising since these more urban schools often in district capitals tend to have the most "seasoned teachers" with more supervision due to the proximity with the District Education Offices. These are teachers who also have completed their professional training and have had at least another year of practice after graduation to improve and perfect their questioning skills. On the contrary, the UTDBE trainees are still in training and have not yet covered the whole curriculum.

In the deprived schools in the regions, it was only in the Upper East that the UTDBEs outnumbered the DBEs in "satisfactory and above" scores. With respect to scores in the poor and needs improvement category, the worst scores were recorded in the Northern Region for both teacher types (15.4% DBEs and 24.3% UTDBEs).

8.6.6 UTDBE Trainees and DBE Teachers' Sensitivity to Diverse Learner Needs

Table 8.11 presents the results of UTDBE trainees and DBE teachers' sensitivity to diverse learner needs. The findings reveal that the majority of UTDBE trainees and DBE teachers had satisfactory and above ratings on their ability to be sensitive to diverse learner needs across a wide spectrum of children in the classes they taught. The findings suggest that, although more DBE teachers (77.8%) were evaluated as "satisfactory and above" compared to UTDBE trainees (69.5%), the results are comparable. The majority of both groups were graded within the "satisfactory and above" category. In the extremely deprived schools 74.3% of UTDBE trainees were rated in the "satisfactory / excellent" group while slightly more (79.7%) of DBE teachers were rated in the same class. In the less deprived schools, the proportion was 72.2% UTDBEs and 78% DBEs rated as having sensitivity to diverse learner needs. In the deprived schools, 64.1% of UTDBEs and 75.8% of DBEs were all evaluated as "satisfactory and above".

The regional findings show that most UTDBE trainees and DBE teachers were assessed as performing "satisfactorily and above" in terms of their sensitivity to diverse learner needs. However, in the Northern Region the majority of UTDBE trainees were evaluated as "poor / needing improvement" in their sensitivity to diverse learner needs. The results show that as many

as 52.6% of UTDBE trainees and as many as 32.5% of DBEs were evaluated as exhibiting poor or requiring improvement in their sensitivity to diverse learner needs. Although the results show 67.5% of DBEs had "satisfactory" skills in handling diverse learner needs, 32.5% were rated as needing improvement. This represents a challenge for GES considering that these are already qualified professional teachers. The performance of teachers as "poor" in relation to diverse learner skills among DBEs was found in extremely deprived rural schools in the Northern Region and Western Region of Ghana where not one DBE teacher was assessed as "satisfactory".

Table 8.11: UTDBE Trainees and DBE Teachers' Sensitivity to Diverse Learner Needs

Region	Level of Deprivation	Poor Needs improvement		Satisfactory Good & Excellent	
		UTDBE	DBE	UTDBE	DBE
Brong Ahafo	Deprived	22.8%	25.0%	77.2	75%
	Less Deprived	6.2%	.0%	93.8	100%
	Extremely Deprived	9.7%	.0%	90.3	100%
	Total	15.4%	12.2%	84.6	87.2%
Northern	Deprived	62.1%	23.1%	37.9	76.9%
	Less Deprived	52.3%	38.5%	47.7	61.5%
	Extremely Deprived	33.4%	40.0%	66.6	60%
	Total	52.6%	32.5%	47.4	67.5%
Upper East	Deprived	40.0%	20.0%	60	80%
	Less Deprived	11.8%	30.8%	98.2	69.2%
	Extremely Deprived	25.5%	20.7%	74.5	79.3%
	Total	26.1%	22.8%	73.9	77.2%
Upper West	Deprived	31.2%	36.4%	68.8	63.6%
	Less Deprived	36.9%	.0%	63.1	100%
	Extremely Deprived	34.0%	21.1%	66	78.9%
	Total	33.6%	24.2%	66.4	75.8%
Western	Deprived	10.5%	14.3%	89.5	85.7%
	Less Deprived	21.1%	14.3%	78.9	85.7%
	Extremely Deprived	16.7%	100.0%	83.3	0%
	Total	15.9%	21.7%	84.1	78.3%
Overall	Deprived	34.9%	24.2%	64.1	75.8
	Less Deprived	27.2%	22.0%	72.8	78
	Extremely Deprived	25.7%	20.3%	74.3	79.7
	Total	29.5%	22.2%	69.5	77.8

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

8.6.7 UTDBE Trainees and DBE Teachers' Use of TLMs

Table 8.12 shows UTDBE trainees and DBE teachers' use of TLMs by regions and across different levels of deprivation. Generally, there is a large proportion of trainees and teachers who scored "poor / needs improvement" on the use of TLMs. Surprisingly, the UTDBE trainees' use of TLMs was better than that of the DBE teachers.

Across the different levels of deprivation, the less deprived areas had the poorest results for both DBEs and UTDBEs. For the DBEs the results show 52% "poor" and 48% "satisfactory and above". The extremely deprived schools followed with 45.4% "poor" and 54.6% "satisfactory" for the DBEs and 31.9% "poor / needs improvement" and 68.1% "satisfactory" for UTDBEs. In the deprived schools the scores were 40.9% "poor" and 59.1% "satisfactory" for DBE and 22.7% "poor" and 77.3 "satisfactory" for UTDBE trainees.

The regional findings show similar poor performance for both DBE teachers and UTDBE trainees. The highest "satisfactory" score was 89.7% for UTDBEs in the Upper West, while the highest score among DBEs was 68.3% in the Brong Ahafo Region. The worst UTDBE scores were in the Upper East where 35.1% of trainees scored "poor and needs improvement" were compared to over 66.7% of DBEs in the Upper West Region.

In deprived schools across the regions, the best results where 92.3% of UTDBE trainees in the Brong Ahafo Region scoring "satisfactory" compared to 68.3% of DBE teachers in the Brong Ahafo Region. In the less deprived areas the best "satisfactory" UTDBE trainees score of 100% was recorded in Brong Ahafo Region, while that for DBE teachers was 57.1% recorded in the Western Region. In the extremely deprived schools the highest satisfactory score of 100% for UTDBEs was recorded in the Northern and Western Regions while that for DBEs (78.1%) was recorded in the Brong Ahafo Region.

Table 8.12: UTDBE Trainees and DBE Teachers' Use of TLMs by Region and Level of Deprivation

Regions	Levels of Deprivation	Poor / Needs Improvement		Satisfactory, Good & Excellent	
		UTDBE	DBE	UTDBE	DBE
Brong Ahafo	Deprived	35.0%	30.0%	65	70
	Less Deprived	42.9%		57.1	100
	Extremely Deprived	21.4%	14.3%	78.6	85.7
	Total	31.7	26.8%	68.3	73.2
Northern	Deprived	30.8%	7.7%	69.2	92.3
	Less Deprived	61.6%	46.2%	38.4	53.8
	Extremely Deprived	60.0%	0.0%	40	100
	Total	48.4	32.3%	51.6	67.7

Regions	Levels of Deprivation	Poor / Needs Improvement		Satisfactory, Good & Excellent	
		UTDBE	DBE	UTDBE	DBE
Upper East	Deprived	26.7%	20.0%	73.3	80
	Less Deprived	53.9%	46.2%	46.1	53.8
	Extremely Deprived	51.7%	37.9%	48.3	62.1
	Total	45.6	35.1%	54.4	64.9
Upper West	Deprived	90.9%	36.4%	9.1	63.6
	Less Deprived	66.7%	33.3%	33.3	66.7
	Extremely Deprived	52.6%	26.3%	47.4	73.7
	Total	66.7	30.3%	33.3	89.7
Western	Deprived	28.6%	14.3%	71.4	84.7
	Less Deprived	42.9%	28.6%	57.1	71.4
	Extremely Deprived	50.0%	0.0%	50	100
	Total	39.1	26.1%	60.9	73.9
Overall	Deprived	40.9%	22.7%	59.1	77.3
	Less Deprived	52.0%	40.0%	48	60
	Extremely Deprived	45.4%	31.9%	54.6	68.1
	Total	45.9%	30.8%	54.1	69.2

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

8.6.8 UTDBE Trainees and DBE Teachers Evaluation of Lesson

Table 8.13 shows UTDBE trainees and DBE teachers' evaluation of lesson by regions and levels of deprivation. Generally, the findings show more DBEs ranked in the "satisfactory and above" grade than the UTDBEs. Overall 94.1% of DBEs were ranked as "satisfactory" in lesson evaluation skills as against 87.5% of UTDBEs. Findings for different levels of deprivation show satisfactory rankings for trainees and teachers in all levels of deprivation. In extremely deprived schools, the findings show 92.8% of DBE teachers ranked as "satisfactory, good or excellent" by lesson evaluators as compared to 89.5% of UTDBE trainees assessed in the same grading. In less deprived schools, 100% of DBE teachers were ranked in the "satisfactory" category while only 87% were classified as "satisfactory and above" for the UTDBE trainees. In deprived schools, 91% of DBEs were categorized as teachers with "satisfactory" lesson evaluation skills while 86.8% were similarly ranked for the UTDBE trainees. The findings in the regions show that DBE teachers have more ranked in the "satisfactory" slot than do UTDBE trainees in all regions. The Western Region had all DBE teachers ranked "satisfactory and above" while the Brong Ahafo UTDBE trainees had 95.6% ranked as "satisfactory". At the different levels of deprivation, DBE teachers and UTDBE trainees in deprived schools in the Western Region all scored 100% within the "satisfactory" slot. The worst score for UTDBE trainees is in the Upper West where 25% of the trainees were ranked as "poor". The poorest performance for the DBE teachers is 15.4% in deprived schools in Northern Region. DBE teachers in four of the five regions scored 100% within the "satisfactory" slot. The DBE's weak performance of 90% was recorded in the Western Region. UTDBE trainees in less deprived school scored 100% only in

the Brong Ahafo Region. In the extremely deprived schools, DBE teachers in three regions had a 100% “satisfactory” rating. For the UTDBE trainees, it was only in the Brong Ahafo Region that all trainees were assessed as “satisfactory” in their lesson evaluation.

Table 8.13: UTDBE Trainees and DBE Teachers’ Evaluation of Lessons by Region and Level of Deprivation

Regions	Levels of Deprivation	Poor / Needs Improvement		Satisfactory, Good & Excellent	
		DBE	UTDBE	DBE	UTDBE
Brong Ahafo	Deprived	5.0%	9.1%	95%	90.9%
	Less Deprived	.0%	.0%	100%	100%
	Extremely Deprived	.0%	.0%	100%	100%
	Total	2.4%	4.4%	97.6%	95.6%
Northern	Deprived	15.4%	13.5%	84.6%	86.5%
	Less Deprived	.0%	19%	100%	81%
	Extremely Deprived	.0%	33.3%	100%	66.7%
	Total	6.4%	19.7%	93.6%	81.3%
Upper East	Deprived	13.4%	15.0%	86.6	85%
	Less Deprived	.0%	11.8%	100%	88.2%
	Extremely Deprived	10.3%	13.7%	89.7%	86.3%
	Total	8.8%	13.6%	91.2%	86.4%
Upper West	Deprived	9.1%	25%	90.9%	75%
	Less Deprived	.0%	21.1%	100%	78.9%
	Extremely Deprived	10.6%	6.0%	89.4%	94%
	Total	9.1%	14.9%	90.9%	85.1%
Western	Deprived	0%	.0%	100%	100%
	Less Deprived	0%	10%	90%	90%
	Extremely Deprived	0%	33.4%	100%	66.4%
	Total	0%	9.1%	100%	90.9%
Overall	Deprived	9%	13.2%	91%	86.8%
	Less Deprived	.0%	13%	100%	87%
	Extremely Deprived	7.2%	11.5%	92.8%	89.5%
	Total	5.9%	12.5%	94.1%	87.5%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2016

8.7 Classroom Management and Control: Comparative Analysis of UTDBE Trainees and DBE Teachers

This section of the report compares the UTDBE trainees and DBE trained teachers in classroom management and control based on their performance in lesson observations carried out during the endline survey. The indicators upon which the comparison was made are class control; classroom setting; feedback; time on task; and disciplinary practices.

8.7.1 UTDBE-DBE Comparison on Class Control

When the performance of UTDBE trainees is compared with DBE trained teachers in class control skills, a higher proportion of DBE trained teachers (90.3%) generally used good class control measures. These measures included communicating with pupils occasionally on what to do in order to ensure a good atmosphere for teaching and learning, and cooperating effectively with pupils to maintain order during the lesson delivery. However, 77.2% of UTDBE trainees were found to have used such class control measures in their lessons during the field observations. 91 UTDBE trainees (22.8%) exhibited poor class control abilities, which is an issue of concern though the trainees had been teaching for 3-years on the average. Across the various regions, a higher proportion of DBE trained teachers were identified to have used good class control methods compared to the UTDBE trainees. The gender dimension of the results suggest that male DBE trained teachers performed better than male UTDBE trainees as did female DBE trained teachers. However, both male UTDBE trainees and male DBE trained teachers showed higher levels of class control skills than their female colleagues in their respective categories. Table 8.14 illustrates the comparison between UTDBE trainees and DBE trained teachers on class control.

Table 8.14: UTDBE-DBE Comparison on Class Control

Region	Gender	UTDBE Classroom Control				DBE Classroom Control					
		Good Class Control		Poor Class Control		Total	Good Class Control		Poor Class Control		Total
Brong Ahafo	Male	32	84.2%	6	15.8%	38	26	96.3%	1	3.7%	27
	Female	46	86.8%	7	13.2%	53	13	92.9%	1	7.1%	14
	Total	78	85.7%	13	14.3%	91	39	95.1%	2	4.9%	41
Northern	Male	36	66.7%	18	33.3%	54	16	80.0%	4	20.0%	20
	Female	10	45.5%	12	54.5%	22	8	72.7%	3	27.3%	11
	Total	46	60.5%	30	39.5%	76	24	77.4%	7	22.6%	31
Upper East	Male	50	86.2%	8	13.8%	58	31	93.9%	2	6.1%	33
	Female	19	63.3%	11	36.7%	30	20	83.3%	4	16.7%	24
	Total	69	78.4%	19	21.6%	88	51	89.5%	6	10.5%	57
Upper West	Male	35	70.0%	15	30.0%	50	13	92.9%	1	7.1%	14
	Female	43	84.3%	8	15.7%	51	17	89.5%	2	10.5%	19
	Total	78	77.2%	23	22.8%	101	30	90.9%	3	9.1%	33
Western	Male	22	84.6%	4	15.4%	26	14	100.0%	--	--	14
	Female	16	88.9%	2	11.1%	18	9	100.0%	--	--	9
	Total	38	86.4%	6	13.6%	44	23	100.0%	--	--	23
Total	Male	175	77.4%	51	22.6%	226	100	92.6%	8	7.4%	108
	Female	134	77.0%	40	23.0%	174	67	87.0%	10	13.0%	77
	Total	309	77.2%	91	22.8%	400	167	90.3%	18	9.7%	185

Source: UDBE Endline Assessment Field Data, 2016

8.7.2 UTDBE-DBE Comparison on Classroom Setting

Another area assessed under the “classroom organization and management” was in relation to the classroom setting. This indicator measures a teacher’s ability to set up his/her classroom approaches for lesson delivery and is a good indicator of the teacher’s class control and management. The findings suggest that more DBE trained teachers were able to set their classrooms up appropriately for their lessons compared to the UTDBE trainees. Specifically, 89.2% of DBE trained teachers as compared to 78.5% of UDTBE trainees demonstrated “good” classroom settings. The regional trends were no different except in the Northern (69.7%) and Upper East (72.7%) Regions where a higher proportion of UTDBE trainees were found to have properly set up their classrooms compared to DBE trained teachers.

Gender comparisons illustrated that more male DBE trained teachers (91.7%) were able to set up their classes properly for lessons as compared to 77.4% of UTDBE male trainees. Similarly, a higher proportion of female DBE trained teachers (85.7%) were able to set up their various classrooms adequately before lesson delivery as compared to only 79.9% of female UTDBE

trainees. It is instructive to note, however, that more females than male UTDBE trainees showed good classroom setting skills. The comparison between UTDBE trainees and DBE trained teachers on class setting is presented in Table 8.15.

Table 8.15: UTDBE-DBE Comparison on Classroom Setting

Region		UTDBE Classroom Setting				DBE Classroom Setting					
		Good Class Setting		Poor Class Setting		Total	Good Class Setting		Poor Class Setting		Total
Brong Ahafo	Male	34	89.5%	4	10.5%	38	26	96.3%	1	3.7%	27
	Female	47	88.7%	6	11.3%	53	13	92.9%	1	7.1%	14
	Total	81	89.0%	10	11.0%	91	39	95.1%	2	4.9%	41
Northern	Male	39	72.2%	15	27.8%	54	15	75.0%	5	25.0%	20
	Female	14	63.6%	8	36.4%	22	6	54.5%	5	45.5%	11
	Total	53	69.7%	23	30.3%	76	21	67.7%	10	32.3%	31
Upper East	Male	45	77.6%	13	22.4%	58	30	90.9%	3	9.1%	33
	Female	19	63.3%	11	36.7%	30	21	87.5%	3	12.5%	24
	Total	64	72.7%	24	27.3%	88	51	89.5%	6	10.5%	57
Upper West	Male	33	66.0%	17	34.0%	50	14	100.0%	0		14
	Female	44	86.3%	7	13.7%	51	18	94.7%	1	5.3%	19
	Total	77	76.2%	24	23.8%	101	32	97.0%	1	3.0%	33
Western	Male	24	92.3%	2	7.7%	26	14	100.0%	0		14
	Female	15	83.3%	3	16.7%	18	8	88.9%	1	11.1%	9
	Total	39	88.6%	5	11.4%	44	22	95.7%	1	4.3%	23
Total	Male	175	77.4%	51	22.6%	226	99	91.7%	9	8.3%	108
	Female	139	79.9%	35	20.1%	174	66	85.7%	11	14.3%	77
	Total	314	78.5%	86	21.5%	400	165	89.2%	20	10.8%	185

Source: UDBE Endline Assessment Field Data, 2016

8.7.3 UTDBE-DBE Comparison on the Use of Positive Feedback

The results on the use of positive feedback suggest only marginal differences between DBE and UTDBE trainees; with slightly more UTDBE trainees (89.2%) giving positive feedback to their pupils as a way of motivation as compared to 87% of DBE trained teachers during their lesson delivery. Marginal differences were recorded across the regional levels. In the Upper East and West Regions a slightly higher proportion of DBE trained teachers were observed to have given positive back to their pupils compared to UTDBE trainee teachers. The results further indicate that male and female UTDBE trainees performed higher than male and female DBE trained teachers. Findings suggest that more male teachers (both UTDBE and DBE trained) than female

UTDBE trainees and DBE trained teachers used positive feedback. Table 8.16 illustrates the use of feedback by UTDBE trainees and DBE trained teachers.

Table 8.16: UTDBE-DBE Comparison on the Use of Positive Feedback

Region	Gender	Positive Feedback among UTDBE					Positive Feedback among DBE				
		Positive Feedback		Poor or NO Positive Feedback		Total	Positive Feedback		Poor or NO Positive Feedback		Total
Brong Ahafo	Male	33	89.2%	4	10.8%	37	22	81.5%	5	18.5%	27
	Female	52	98.1%	1	1.9%	53	11	78.6%	3	21.4%	14
	Total	85	94.4%	5	5.6%	90	33	80.5%	8	19.5%	41
Northern	Male	47	88.7%	6	11.3%	53	17	85.0%	3	15.0%	20
	Female	18	81.8%	4	18.2%	22	9	81.8%	2	18.2%	11
	Total	65	86.7%	10	13.3%	75	26	83.9%	5	16.1%	31
Upper East	Male	53	91.4%	5	8.6%	58	29	87.9%	4	12.1%	33
	Female	27	90.0%	3	10.0%	30	23	95.8%	1	4.2%	24
	Total	80	90.9%	8	9.1%	88	52	91.2%	5	8.8%	57
Upper West	Male	41	83.7%	8	16.3%	49	12	92.3%	1	7.7%	13
	Female	42	82.4%	9	17.6%	51	15	78.9%	4	21.1%	19
	Total	83	83.0%	17	17.0%	100	27	84.4%	5	15.6%	32
Western	Male	25	96.2%	1	3.8%	26	13	92.9%	1	7.1%	14
	Female	16	88.9%	2	11.1%	18	9	100.0%	--	--	9
	Total	41	93.2%	3	6.8%	44	22	95.7%	1	4.3%	23
Total	Male	199	89.2%	24	10.8%	223	93	86.9%	14	13.1%	107
	Female	155	89.1%	19	10.9%	174	67	87.0%	10	13.0%	77
	Total	354	89.2%	43	10.8%	397	160	87.0%	24	13.0%	184

Source: UTDBE Endline Assessment Field Data, 2016

8.7.4 UTDBE-DBE Comparison of Use of Time on Task

A comparative analysis regarding the effective use of time on task by UTDBE trainees and DBE trained teachers reveals that a higher proportion of DBE trained teachers (96.7%) were able to use their time on task more effectively than UTDBE trainees (90.5%). This trend was replicated across all the five study regions. However, the findings suggest that, while more male UTDBE trainees (92.5%) used time effectively compared to female UTDBE trainees (87.9%). All female DBE trained teachers (100%) as compared to 94.4% were observed to have used their time effectively in lesson delivery. The time on task comparison between UTDBE trainees and DBE trained teachers is presented in Table 8.17.

Table 8.17: UTDBE-DBE Comparison of Use of Time on Task

Region	Gender	Use of Time on Task by UTDBE					Use of Time on Task by DBE				
		Effective use of Time		Less than Satisfactory use of time		Total	Effective use of Time		Less than Satisfactory use of time		Total
Brong Ahafo	Male	34	89.5%	4	10.5%	38	26	96.3%	1	3.7%	27
	Female	47	88.7%	6	11.3%	53	14	100.0%	0		14
	Total	81	89.0%	10	11.0%	91	40	97.6%	1	2.4%	41
Northern	Male	50	92.6%	4	7.4%	54	19	95.0%	1	5.0%	20
	Female	20	90.9%	2	9.1%	22	11	100.0%	0		11
	Total	70	92.1%	6	7.9%	76	30	96.8%	1	3.2%	31
Upper East	Male	56	96.6%	2	3.4%	58	31	93.9%	2	6.1%	33
	Female	26	86.7%	4	13.3%	30	24	100.0%	0		24
	Total	82	93.2%	6	6.8%	88	55	96.5%	2	3.5%	57
Upper West	Male	44	88.0%	6	12.0%	50	12	92.3%	1	7.7%	13
	Female	44	86.3%	7	13.7%	51	19	100.0%	0		19
	Total	88	87.1%	13	12.9%	101	31	96.9%	1	3.1%	32
Western	Male	25	96.2%	1	3.8%	26	13	92.9%	1	7.1%	14
	Female	16	88.9%	2	11.1%	18	8	100.0%	0		8
	Total	41	93.2%	3	6.8%	44	21	95.5%	1	4.5%	22
Total	Male	209	92.5%	17	7.5%	226	101	94.4%	6	5.6%	107
	Female	153	87.9%	21	12.1%	174	76	100.0%	0	--	76
	Total	362	90.5%	38	9.5%	400	177	96.7%	6	3.3%	183

Source: UTDBE Endline Assessment Field Data, 2016

8.7.5 UTDBE-DBE Comparison on Use of Disciplinary Practices

With regard to the use of disciplinary strategies by the observed teachers, it emerged that 82.1% of trained DBE teachers on the whole used more positive disciplinary measures in the course of their lessons as compared to the UTDBE trainees, of which 74.8% were noted to have used positive disciplinary methods. Apart from the Northern Region, this pattern was reflected in all the other study regions. The gender dimension of the results also showed a higher proportion of male teachers (i.e. both DBE trained and UTDBE trainees) using positive disciplinary practices than their female counterparts. Table 8.18 illustrates the comparison between DBE trained teachers and UTDBE trainees on the use of disciplinary practices.

Table 8.18: UTDBE-DBE Comparison on the Use of Disciplinary Practices

Region	Gender	UTDBE Disciplinary Practices					DBE Disciplinary Practices				
		Positive Disciplinary Strategies		Poor Disciplinary Strategies		Total	Positive Disciplinary Strategies		Poor Disciplinary Strategies		Total
Brong Ahafo	Male	29	76.3%	9	23.7%	38	23	85.2%	4	14.8%	27
	Female	32	60.4%	21	39.6%	53	13	92.9%	1	7.1%	14
	Total	61	67.0%	30	33.0%	91	36	87.8%	5	12.2%	41
Northern	Male	48	88.9%	6	11.1%	54	15	75.0%	5	25.0%	20
	Female	16	72.7%	6	27.3%	22	9	81.8%	2	18.2%	11
	Total	64	84.2%	12	15.8%	76	24	77.4%	7	22.6%	31
Upper East	Male	40	69.0%	18	31.0%	58	29	87.9%	4	12.1%	33
	Female	19	63.3%	11	36.7%	30	16	66.7%	8	33.3%	24
	Total	59	67.0%	29	33.0%	88	45	78.9%	12	21.1%	57
Upper West	Male	35	70.0%	15	30.0%	50	10	76.9%	3	23.1%	13
	Female	40	78.4%	11	21.6%	51	15	78.9%	4	21.1%	19
	Total	75	74.3%	26	25.7%	101	25	78.1%	7	21.9%	32
Western	Male	23	88.5%	3	11.5%	26	13	92.9%	1	7.1%	14
	Female	17	94.4%	1	5.6%	18	8	88.9%	1	11.1%	9
	Total	40	90.9%	4	9.1%	44	21	91.3%	2	8.7%	23
Total	Male	175	77.4%	51	22.6%	226	90	84.1%	17	15.9%	107
	Female	124	71.3%	50	28.7%	174	61	79.2%	16	20.8%	77
	Total	299	74.8%	101	25.2%	400	151	82.1%	33	17.9%	184

Source: UTDBE Endline Assessment Field Data, 2016

8.7.6 Conclusion

In conclusion, this section is a comparison between UTDBE trainees and DBE trained teachers on their lesson planning and preparation, subject content knowledge, classroom organization and management abilities. The areas of comparison were class control, classroom setting, feedback strategies, time on task and disciplinary practices. The results generally showed that the DBE trained teachers have better classroom organization management abilities than UTDBE trainees except in the use of positive feedback towards students. The results further suggest that male teachers (both UTDBE trainees and DBE trained) demonstrated greater classroom organization and management skills than their female counterparts in the two categories except in the area of time on task.

The findings on the examination of the skills student and trained teachers gained in lesson planning/preparation, teaching methodology and classroom organization and management reveals that both DBE teachers and UTDBE trainees had unsatisfactory skills in teacher learner activities and use of TLMs; 45.9% of the UTDBE trainees scored within the poor and needs improvement category while the DBEs had as many as 30.8% performing poorly. This suggests that there are likely weaknesses in modeling and developing these skills of candidates at the CoE. The CoE will need to build strategies to improve the teaching and development of skills in teacher learner activities and use of TLMs. Although the gender findings show there was not much difference between UTDBE and DBE instructional performance in the classroom, the results again highlight weak performance in teacher learner activities and the use of TLMs.

The comparison between UTDBE and DBE teacher instructional skills acquisition shows overall that the DBE's teachers performed better than the UTDBE trainees did. For instance on generic skills the results show 82.7% DBE teachers scoring within the satisfactory, good and excellent range while 73.2% UTDBEs were in the same range; on questioning skills the results show 87% DBE in satisfactory and above category with only 69.5% UTDBEs achieve the same rating, although the regional results show variations: Brong Ahafo Region's UTDBE trainees performed better than the DBE teachers and Western Region DBE teachers outperformed UTDBE trainees. In all regions and across the two teacher types the consistent finding is the "unsatisfactory" performance scores on the use of TLMs, re-emphasizing the CoE weaknesses in developing trainees' skills in the use of TLMs.

On lesson planning and preparation, there were no significant gender differences between UTDBE trainees and DBE teachers. However, more male UTDBE trainees had satisfactory to well-prepared lesson plans compared to the male DBE teachers. The findings suggest that the CoE are providing same curriculum tutorage for both programmes in this area.

On subject knowledge and content accuracy the overall findings show many more DBE teachers scoring "satisfactory and above grade" as compared to the UTDBE trainees. This performance is not surprising. The UTDBE trainees are still under training while the DBE teachers have successfully completed their teacher training and have between one to three years of post-

graduation teaching experience. However, it must be acknowledged that the UTDBE trainees' performance is commendable as the percentage difference is not great.

The comparison on language of instruction by region and level of deprivation show both the UTDBEs and DBEs overall dominant use of "only / mainly English". However, the DBEs use more of "only / mainly English" than the UTDBEs. Similarly, in the areas of deprivation many UTDBEs use a "mixture" of languages and "only / mainly Ghanaian Language" more than their DBE colleagues. An interesting observation is the seemingly equal use of "only /mainly English" and "only / mainly Ghanaian Language" in deprived schools.

The comparison on the use of generic skills show that more DBE trained teachers were ranked "satisfactory" than the UTDBE trainees. The findings show a large number of UTDBEs assessed as "poor and need improvement" particularly in less deprived schools. However, the number of UTDBE trainees and DBE teachers assessed as "poor" in the extremely deprived schools is comparable. In the less deprived schools , the DBE teachers outperform the UTDBE trainees in the use of generic skills.

On class control and management the findings show that more DBE trained teachers were able to set their classrooms up appropriately for their lessons compared to the UTDBE trainees. The comparison on the use of positive feedback shows very marginal differences between DBE and UTDBE trainees; although admittedly UTDBE trainees had slightly more positive feedback skills towards their pupils as compared to DBE trained teachers during their lesson delivery. A comparative analysis regarding the effective use of time on task by UTDBE trainees and DBE trained teachers reveals that a higher proportion of DBE trained teachers were able to use their time on task more effectively than UTDBE trainees. This trend was replicated across all the five study regions. The comparison on disciplinary practices shows DBEs ranked higher than UTDBEs.

In conclusion, the finding suggest that the UTDBE programme is comparable to the DBE course and that teachers trained under both programm are equipped with relevant skills for lesson planning and preparation, teaching methodology and classroom organization and management. The findings also suggest that more emphasis is needed (across both programmes) to ensure teacher instructional competencies in the use of child centered strategies are improved, and that TLMs and positive feedback methods are used more in the classroom.

Chapter 9: Support, Retention and Staying Power of UTDBE Trainees

9.1 Introduction

This chapter of the study, reviews findings related to the support, retention and staying power of UTDBE trainees. The support received by UTDBE trainees included the support by the District Education Office through the UTDBE Programme Coordinators, and Circuit Supervisors along with other key stakeholders. Their support was also assessed in relation to how head teachers and other teachers at the school level supported UTDBE trainees in areas of lesson note preparation and delivery, and addressing trainees' concerns about difficult subjects and topics in the course of their programme. In a similar fashion, the assessment reviewed how UTDBE trainees were supported at the community level by the SMC/PTA, the District Assembly, and community members. The chapter presents the key factors and conditions that promoted or hindered UTDBE trainees' teacher retention and staying power in deprived communities.

9.2 Support UTDBE Trainees Received in the Course of their Training

Table 9.1 shows the support UTDBE trainees received from District Education authorities (UTDBE coordinator and circuit supervisors), head teachers, teachers and community members (SMC/PTAs). The interviews and field observation revealed that there was little difference in the support UTDBE trainees received at the baseline stage (2014) midline (2015) from the endline stage of the study (2016). At all stages from the baseline to endline stages, the trainees had very limited support while pursuing their training to equip them with the needed skills and experience to make them competent and successful professional teachers after completing their training. The midline study suggest that only one cluster based training was organised in a year with only one or maximum two SBIs at school level.

As shown in Table 9.1 the findings, based on interviews with the UTDBE trainees,³² suggest that they received very limited institutional and individual support. At the district level, the trainees reported receiving some support from the District Education Office (DEO) and the District Assembly mainly based on the receipt of GPEG financial support, district based in-service training support (DBI support) and cluster based in-service support (CBI support). They also reported sometimes receiving circuit supervisors' monitoring and supervision support, various teacher awards (Best Teacher Awards) and financial support in terms of being put on the payroll (migration of UTDBE trainees onto government payroll). The midline assessment, as part of the IA, suggests that the in-service training and school based inset, and support by the Head teachers was very limited and in some districts was non-existent. Head teachers

³² A total of 401 UTDBE trainees were interviewed across the nine districts in five regions of the country.

interviewed during the baseline and endline assessments reported that they were not aware of their roles in providing coaching and mentoring support to the UTDBE trainees in their schools. The head teacher interviews conducted during the baseline has positively impacted on head teacher support as was evident during the endline. In some areas the interviews had helped to educate the head teachers on their roles and responsibilities to support the trainees and provide them mentorship to further develop their teaching skills.

The district GES officials, including the Circuit Supervisors and UTDBE Coordinators, reported that they organised lesson observations and post observation conferences at the various trainee teachers' schools and offered demonstration methods and skills to improve upon trainees' lesson preparation and delivery; however, this was not confirmed in the interviews and observations at the UTDBE trainee classroom level. Although the UTDBE trainees in some districts reported that the DEOs organized district cluster based INSETs and monitored weekly cluster meetings at cluster centres for all teachers, these monitoring exercises were inadequate, irregular and infrequent.

At the District Assembly, a few trainees further reported that they had received some financial support from Members of Parliament (MP's financial support), financial support from the District Assembly (DA financial support) and District Assembly common fund support for the disabled. The MPs gave a few UTDBE trainees financial support to pay the cost of transportation to the face-to-face meetings at the Colleges of Education. Similarly, the District Assembly sometimes organized transport for them to travel to the Colleges or provided financial support to pay their own transport to the Colleges. District Directors and District Assembly support for the UTDBE trainees was not widespread across the nine sampled districts and recorded in only a few schools.

At the school level, only a few UTDBE trainees claimed that they received support from either their head teachers or other colleagues. In a few cases trainees reported that the head teachers organized school based In-Service Training (INSETs) to update and refresh their knowledge on lesson note preparation and delivery, teaching methodology and classroom management. Furthermore the trainees revealed that, in some cases, head teachers supported them financially as well as provided them with TLMs and exercise books when they were about to go to the face-to-face sessions at the Colleges of Education. The majority of the UTDBE trainees reported that their colleagues who are trained teachers supported them when the need arose through guiding them in the preparation of their lesson notes, as well as on how to teach difficult subjects and topics. This is in line with the guidelines on trainee support at the school level to acquire professional skills on the job as indicated in chapter two.

At the community level, a few UTDBE trainees reported that they received support from SMC/PTAs and parents. Interviews with SMC/PTAs and parents revealed that some of the SMC/PTAs contributed financially to support UTDBE teachers not on the GES payroll and supported them with the provision of accommodation for those who wanted to reside in the

communities where they taught. Table 9.1 provides some insight into the responses and view of how the UTDBE trainees were supported.

Table 9.1: UTDBE Trainees’ Support While in Training

School based support	District /COE support	Community support
School based in-service support (SBI support) Head teacher guidance and counseling support Head teacher TLM support	GPEG financial support; District based in-service training support (DBI support); Cluster based in-service support (CBI support); Financial support from member of parliament (MP’s financial support); Financial support from the District Assembly (DA financial support); District Assembly common fund support for disabled; Migration of UTDBE trainees onto payroll; Circuit supervisors’ monitoring and supervision support; Various teacher awards (Best Teacher Awards).	Support from Parent/Teacher Association (SMC/PTA support); Support in the form of water supply especially during the harmattan season.

Source: UTDBE Impact Assessment Endline Study, 2016

9.3 Support UTDBE Trainees Received from DEOs, Head teachers and Other Teachers at the School Base

The findings suggest that District Education Officers and Head teachers provided some professional support to the trainees to sustain their interest in choosing teaching as a career and to transition through the UTDBE programme successfully. Interviews with Deputy Directors revealed that Circuit Supervisors not only visited the schools where trainees teach, but they also observed the trainees’ teaching and organized post observation appraisal meetings to highlight the strengths and weaknesses of the trainees’ performances and to provide suggestions to address the trainees’ challenges. The findings show that a few DEO offices (four out of the nine districts visited) organized cluster based INSETS to help in ICT and lesson note preparation. In only a few cases did the DEO, in collaboration with the COE, organized extra tuition for UTDBE trainees. The interviews revealed that the DEO UTDBE Coordinators monitored and supervised trainees INSET sessions and the District Director of Education usually motivated UTDBEs by providing advice. These DEO support activities evident during the endline study are the same as those found during the baseline. For example, in the baseline it was found in all regions that

DEOs organized demonstration lessons for trainees on a regular basis; this was found to be ongoing at the time of the endline survey.

The endline survey results suggest that DEOs organize school based INSETs (SBI and Cluster Based Inset (CBI) when common problem(s) were identified among trainees in very few districts. DEOs vetted trainees' lesson notes to identify areas of concern. Similarly, in all regions it was reported that Circuit Supervisors organized tutorials for trainees after residential face to face sessions in the CoEs in order to consolidate the learning of trainees. Informal conversations with DEO personnel suggest that their support level is restricted by lack of funds to organize separate insets for the trainees and they used funds meant for trainees to organize INSETs for all teachers in the district. This was surprising given the high rate of disbursement to districts under the GPEG.

Interviews with frontline staff or Deputy Directors revealed that in some districts, UTDBE Coordinators supervised and monitored the trainees' performance to ensure successful implementation of the UTDBE programme. Coordinators only spent a few days visiting the CoEs to monitor the course content, instruction and trainees' attendance as well as to help in addressing any challenges identified with the trainees. However, these claims are not supported by Circuit Supervisors' reports that they continued to lack resources in order to engage in regular monitoring exercises and students' assertions that Circuit Supervisors hardly ever visit their schools. Similarly, District Education Offices UTDBE Coordinators blamed their inability to visit and stay with UTDBE trainees during the face to face sessions on lack of adequate resources.

Interviews with a few head teachers suggest that they supported the UTDBEs' teaching competency development through support in lesson note preparation and delivery; vetting UTDBEs lesson notes and commenting on mistakes made; providing TLMs; and organizing school based in-service trainings on UTDBE teachers' content knowledge and teaching skills. In addition to the professional support, in a few cases Head teachers provided financial and material support to facilitate UTDBE trainees' acquisition of teaching skills and experiences. In a few cases, Head teachers collected "voluntary" pupil fees from parents to support UTDBE trainees. Some Head teachers supported UTDBE trainees with funds such as for transport costs to face to face meetings at the Colleges of Education as well as giving UTDBE trainees varying sums of money as monthly support. These reports were confirmed by almost all the UTDBE trainees interviewed.

Besides support from DEOs and Head teachers and other colleague teachers, UTDBE trainees also receive support from the school community towards their training. Only in a few cases did community members support their UTDBE trainees with food items, and some PTAs provided a monthly remuneration of between fifty and sixty Cedis. In addition to these, other PTAs contributed between one cedi and ten Cedis per child in the school in order to support UTDBE teachers who are not on the GES payroll or are volunteer teachers. Table 9.2 presents findings on DEOs, Head teachers and teachers' support to UTDBE trainees.

Table 9.2: DEOs, Head Teachers and Teachers Support to UTDBE Trainees

Head teachers' support	DEO/COE support	Community based support
<ul style="list-style-type: none"> ▪ Headmaster support to improve teaching skills; ▪ The Head teacher supports with exercise books for course work in CoE; ▪ The head teacher provides in-service training support for the UTDBEs; ▪ My head teacher takes volunteer fees from the students, that is one cedi per month and pay us termly; ▪ H/T provides financial support for transportation to face to face (30 Cedis); ▪ Head teacher's monthly financial support of Gh¢10.00 or 20.00. 	<ul style="list-style-type: none"> ▪ Circuit supervisor does lesson observations and post observation tutorials; ▪ Circuit supervisor makes monitoring and supervision visits to schools; ▪ District based in-service; ▪ The DEO office organizes cluster base INSET to help in ICT and in preparing lesson notes; ▪ The DEO in collaboration with the COE organizes extra tuition for UTDBE trainees Coordinator's monitoring and supervision; ▪ DEO UTDBE coordinator and District Director of Education usually motivates us through his advice; ▪ GPEG sponsorship; ▪ District Assembly MP's common fund; ▪ The DEO organizes INSETS for all teachers, UTDBE trainees and DBES. 	<ul style="list-style-type: none"> ▪ Community support with foodstuff ; ▪ PTA monthly support of 60 Cedis; ▪ SMC/PTA gives us GH 50.00 per month for provisions; ▪ PTA contribution of GHs1.00 per child in the school to support UTDBE teachers who are not on payroll; ▪ PTA contribution of GH¢10.00 per child per term to support UTDBE and volunteer teachers.

Source: UTDBE Impact Assessment Endline Study, 2016

9.6a Reasons for UTDBE Trainee Teacher Retention in Deprived Rural Communities

Table 9.3 shows the different reasons UTDBE trainees provides as factors likely to encourage them to stay in deprived schools after completing their course of study. The main reasons given fall into three broad categories, namely: school/community related reasons; personal reasons; and reasons related to education authorities' efforts to retain the trainees after they complete the UTDBE course. At the school community level, the trainees agreed that they would remain in their deprived stations because the community members are very supportive to them and sociable. Corroborating the social nature of the community, UTDBE trainees claimed that the

community is supportive, loving, caring, cordial and very helpful to teachers and the pupils are similarly very respectful of teachers.

Another main reason they gave was that good teacher--community relationships existed in the community. In addition, they contended that, as a result of the community's support they would remain in the community in order to pay back to the community its contribution to their education. In other words, they were staying back after their UTDBE training in order to show appreciation for the community's role in their education. Yet other reason UTDBE trainees gave was their desire to help the children in their community, the lack of trained teachers and the disciplined nature of the pupils.

On a personal level, some UTDBEs claimed they would stay after their course to help the community establish a secondary school. Others wanted to remain because they were natives of the communities and wanted to contribute to its development through education (approximately 46% were native to the communities and 26% were native to the district). Similarly, some trainees are staying back because they like the community and the community offers them opportunities for further studies after completing the UTDBE course. Reasons that relate to efforts of education authorities are captured in the following comments *"I am not on salary and if I am sent to a distant school, I cannot make it"*. *"I will remain in the community if I am put on payroll"*. Others will only remain to serve the 2-year bond after completing the course. These reasons aside, some trainees are committed to stay in the communities in which they pursued the training programme if education officials do not transfer them elsewhere; however, this would be in contravention of the conditions for admission for the UTDBE programme.

Table 9.3: Reasons for UTDBE Teachers' Retention in Deprived Districts

School/Community related reasons	Personal reasons	Education authorities efforts
<ul style="list-style-type: none"> ▪ Because the community members are very sociable; ▪ I want to help the pupils that I started with; ▪ Because of the good community - teacher relationship; ▪ Because I want to give back to the community; ▪ To show appreciation to the community for their contribution to my education; ▪ I would like to pay back the favor the district has done me by selecting me for the 	<ul style="list-style-type: none"> ▪ Yes, just to help the community to establish a secondary school; ▪ Because I want to further my education and this place offers me the opportunity since it is closer to Techiman; ▪ I am a native of the community and I want to contribute to its development through education; ▪ Yes, because my service is needed I like the school and community; 	<ul style="list-style-type: none"> ▪ To serve the bond ▪ If it is the decision of GES I will be ready to stay; ▪ Yes, as long as am not transferred; ▪ It is the DEO that determines; ▪ Yes, because GES is not supposed to transfer us and they have already transferred me; ▪ It will depend on the DEO but I will prefer to remain in the community because I have a good relationship with the community;

School/Community related reasons	Personal reasons	Education authorities efforts
<ul style="list-style-type: none"> programme; ▪ I like the community and its location; ▪ The community is supportive and cordial to teachers; ▪ The pupils are very respectful and the community members are very helpful; ▪ Yes, because there are not enough teachers in this school; ▪ Yes, because they are loving and caring; ▪ Yes, there is so much discipline in the school and I also like my Head teacher's way of doing things. 	<ul style="list-style-type: none"> ▪ Because I have a good relationship with the teachers and also the community. 	<ul style="list-style-type: none"> ▪ Yes, if the DEO does not transfer me; ▪ I am not on salary and if I am sent to a distant school, I cannot make it; ▪ I will remain in the community if I am put on the payroll.

Source: UTDBE Impact Assessment Endline Study, 2016

9.6b SMC/PTA Support to Encourage Teachers to Stay in Rural Deprived Schools

Table 9.4 shows findings on SMC/PTA support to encourage teachers' retention in rural deprived schools. Responses from respondents reveal that support to encourage the retention of teachers in deprived schools came from community members in terms of parents as well as from the SMC/PTAs. The findings indicate that the SMC/PTAs are not necessarily the only key players in the factors influencing teachers to stay on in the community. The findings show that individual parents, chiefs and elders (as well as the SMC/PTAs) all play critical roles to ensure the wellbeing of both teachers and pupils in rural deprived schools in order to help retain teachers within the communities. The support teachers receive to encourage them to stay and work for longer periods varies from financial support to social welfare support, which ranges from provision of accommodation, visits and talks, to organizing parties for teachers.

On the kinds of financial support SMC/PTAs, community members and parents give to help retain teachers in their communities the following responses from some SMC/PTAs tell the full story:

“We organize annual cash/ clothes awards to hard working teachers”; “The parents contribute 2 Ghana Cedis per child for the upkeep of the volunteer teachers”; “The SMC/PTA gives financial support to volunteers /teachers who are not on payroll”. Others are “We task parents

to contribute 50p each or give foodstuffs for all volunteer teachers not on payroll”; “Parents sometimes (monthly) pay for the teachers utility bills”; “PTA contributes to pay them (teachers not on payroll/volunteer teachers) GH¢ 50.00 a month”; “We support the UTDBE trainees with GH¢50.00 each monthly”; “We contribute T&T for them to go to Offinso (residential face to face meetings)”; “Support Community Service Volunteer teachers (CSV) with GH¢ 20 per month” and “We contribute at least GH¢6.50 and at most GH¢ 10.00 from each parent to help trainees who are not on salary to be able to buy one or two things for themselves”.

With respect to social welfare support, the SMC/PTAs reported that they provided accommodation, food and other petty gifts to support teachers. They also provided land for teachers who want to farm as well as help them in their farm work. In addition, they organize communal labour to clean up the school environment; encourage parents to visit teachers at their homes; Chief organizes best teacher awards; and they use PTA meetings to encourage the untrained teachers to keep up their good work and encourage them to work harder to get qualified. See Table 9.4 for more social support teachers receive from SMC/PTAs and community members.

The baseline and endline results are no different in this regard. In the baseline, SMC/PTAs contended that they provided free decent accommodation, farmlands for teachers to farm as well as providing free labour to till the lands for the teachers. In some cases, communities provided food stuffs to teachers. A number of the SMC/PTAs reported that they have been able to levy each parent every month to financially support teachers who are not yet on the government payroll, especially the UTDBE trainees and community volunteer teachers. The similarities of the endline support to the baseline support illustrate the continued support given over the period of the trainees’ programme. The UTDBE trainees corroborated these assertions.

Table 9.4: SMC/PTA Support to Encourage Teachers to Stay in Rural Deprived Schools

SMC/PTA Financial Support	Social and Welfare Support
<ul style="list-style-type: none"> ▪ We organize annual cash/ clothes awards to hard working teachers; ▪ The parents contributes GH¢2 per child for the upkeep of the volunteer teachers; ▪ The SMC/PTA gives financial support to volunteers /teachers who are not on payroll; ▪ We task parents to contribute 50p each or give foodstuffs for all volunteer teachers not on payroll; ▪ We seek for funds to build new block for JHS; ▪ SMC / PTA give moral advice to UTDBE trainees; ▪ Parents sometimes (monthly) pay for the teachers utility bills; ▪ PTA contributes to pay them GH¢ 50.00 a month; ▪ We support the UTDBE trainees with GH¢ 50.00 each month; ▪ We contribute T&T for them to go to Offinso; ▪ Support CSV with GH¢ 20 per month; ▪ We contribute at least GH¢6.50 and at most GH¢ 10.00 from each parent to help trainees who are not on salary to be able to buy one or two things for themselves. 	<ul style="list-style-type: none"> ▪ Provision of accommodation, food and other petty gifts support; ▪ Provision of foodstuffs to teachers newly posted; ▪ Provide land for teachers who want to farm; ▪ SMC/PTA encourages teachers to be punctual; ▪ We encourage parents to visit teachers at their homes; ▪ We use PTA meetings to encourage the untrained teachers to keep up their good work; ▪ We support them when they are doing any project in the school; ▪ We lobby for utilities such as electricity and water to make teachers happy in the community; ▪ We talk to them to work harder to get qualified. ▪ Organize communal labour to clean up the school environment; ▪ Provision of school building for pupils and teachers; ▪ Chief organizes best teacher awards; ▪ We visit the school regularly to find out the welfare of teachers; ▪ We help them in their farm work; ▪ When the teachers give us any complaints we meet and take a decision to solve the problem; ▪ We put up a new classroom structure and renovated an old structure to be used as a kitchen; ▪ We provide basic facilities such as urinals, toilet and kitchen; ▪ We establish good relations with teachers in order to make them happy to stay in the community; ▪ We pay visits to the school to monitor performance attendance; ▪ We accord our teachers respect; ▪ The mission head in the district sometimes throws a party for teachers in the school where they get to interact/discuss issues concerning the school.

Source: UTDBE Impact Assessment Endline Study, 2016

9.7 SMC/PTAs Views on Performance of Trained DBE Teachers Compared to Untrained UTDBE Trainees

SMC/PTAs views were sought on the performance of both trained DBE teachers and untrained UTDBE trainees. While some SMC/PTAs argued that UTDBE teachers are better in term of preparation, delivery and classroom management compared to DBEs other SMC/PTAs contended that DBE teachers are better at teaching across most subject areas compared to UTDBE trainees. However, SMC/PTA's held the following viewpoints in relation to the more favorable performance of DBEs based on the following arguments:

- DBE teachers are better in the teaching due to their lesson delivery and content knowledge;
- DBEs have the knowledge and skills to deliver and they are more patient with the kids;
- DBEs can speak better English than the UTDBEs;
- The DBE takes shorter time to teach children to understand but the UTDBEs take longer time;
- Sometimes, the DBE teachers guide the UTDBE teachers in their lesson deliveries;
- DBE teachers are properly trained and their performance is higher than UTDBE trainees;
- The DBE teachers prepare more comprehensive lesson notes as compared to the UTDBE; and
- The UTDBE trainees lack certain skills and techniques in teaching.

Arguments by the SMCs, PTAs and parents which were positive and viewed the UTDBEs as better than the DBEs are as follows:

- UTDBE trainees are more committed than DBE teachers;
- UTDBEs teach using TLMs and love the children but some DBE teachers beat our children and have no respect for elderly people;
- The UTDBE teachers have a better relationship with the pupils;
- In terms of punctuality and regularity to school the UTDBE teachers are better than DBEs;
- UTDBE teachers give the children more homework than the trained teachers;
- The UTDBEs live in the community and knows what happens in the community while the DBEs are unable to know what happens in the community.

9.8 Impact of UTDBE Programme on Quality Delivery of Education in Schools

Table 9.5 shows the contributions UTDBE trainee teachers make towards improving the quality of education in deprived schools. An analysis of the contributions that UTDBE trainees add to the delivery of quality education can be summarised into three main areas: participation related improvement; improvement in pupil performance; and improvement in school management. UTDBE trainee teachers have helped to increase enrollment in deprived schools; the following views were expressed in Brong Ahafo and the Upper East Regions:

- “UTDBE trainees contributed to the enrolment of the school because of quality teaching and improvement in the performance of the children”. Brong Ahafo, St. Patrick RC Primary, Atebubu Amantin.
- “The presence of UTDBE teachers has improved pupil enrollment significantly” Upper East, Kong-Daborin Primary, Talensi Nabdam District.

Respondents also argued that UTDBE trainees have a better attitude towards work compared to trained DBE teachers, which is exhibited in their punctuality and regularity in attending school. *“They have contributed to improving the quality of teaching in school, they are regular to school, punctual and hardworking”* Northern Region, Gbankoni DA Primary, Bunkpurugu Yunyoo District.

Another contribution in the area of access is in developing pupils’ interest in education. *“Teaching our children, the trainees visit homes to find out why a child has absented him/herself, organized entertainment for children to learn cultural dance, it makes children to develop interest in going to school”* Northern Region, Nabopelik DA Primary, Bunkpurugu Yunyoo District.

Respondents argued that UTDBE teachers have addressed the challenge of pupils having to repeat at the JHS level due to their sub-standard preparation at the primary school; SMC members explained that UTDBE teachers often organize extra classes to improve pupil performance; they have brought new teaching methods to the deprived schools and have improved reading and writing skills of pupils. Here are some of the responses by SMC’s and PTA members:

- *“They are doing very well in their teaching but the trained teachers are a bit ahead of them. In terms of their attendance it is not good and you can attest to that. **Because of the work of the UTDBE trainees now when the pupils go to JHS, they are not repeated**”* Brong Ahafo, Old Konkrompe SDA Primary, Atebubu Amantin.
- *“They organize extra classes for pupils. Involve pupils in co-curriculum activities example sports”. Brong Ahafo Region, Amantin SDA Primary Atebubu Amantin District*

- *“Contributed to the enrolment of the school because of quality teaching improvement in the performance of the children” Brong Ahafo, St. Patrick RC Primary, in Atebubu Amantin District.*
- *“The pupil teachers seem to be organizing extra curriculum activities however the trained teachers teach better” “Teachers have brought new teaching methods. They have made pupils develop an interest in education”. Upper East, Gowrie DA Primary, Bongo District.*

At the level of management performance of UTDBE trainees, SMC/PTA members said they did several activities to improve school community relations and strengthen learning outcomes among learners and these included: speaking to parents about the performance of the pupils; do all the tasks given to them; improved teacher community relationships; formed youth clubs in schools; organized tree planting and monitored pupils absenteeism from school.

“They (the UTDBE trainees) do all task given to them and are equally engaged as the other teachers” Brong Ahafo Amantin EA Primary, Atebubu Amantin. “The untrained teachers are more committed than the trained teachers, in terms of community relationship. Brong Ahafo, Asekye-Krukese Presby Primary, Nkoranza North District. “One contribution the untrained teachers are doing is the formation of youth clubs in the school which they play a lead role”. Upper East, Sheaga KG Talensi Nabdam District.

Table 9.5: Contributions of UTDBE Trainee Teachers make Towards Improving Quality Education in Schools

15. What contributions are UTDBE teachers (untrained) making towards improving quality education in the school?		
Strengthening Access and Participation	Improving Quality Performance	Management and Community Relations
<ul style="list-style-type: none"> ▪ Contributed to the enrolment of the school because of quality teaching; ▪ The UTDBE trainees have a better attitude towards work than the trained teachers do in terms of punctuality and regularity; ▪ They are very regular and punctual in school; ▪ The untrained UTDBE teachers are committed to work, punctual, regular and hardworking; 	<ul style="list-style-type: none"> ▪ Because of the work of the UTDBE trainees now when the pupils go to JHS, they are not repeated; ▪ UTDBE teachers have improved the performance of children in our school; ▪ They are putting in their best to teach the pupils in the school; ▪ They organize extra classes for pupils. UTDBE organizing extra curriculum activities for pupils, example sports. They also put much efforts in the 	<ul style="list-style-type: none"> ▪ They do all task given to them and are equally engaged as the other teachers; ▪ They have improved relationship between teachers and children; ▪ They have improved teacher community relationship; ▪ UTDBE teachers talk to parents about the performance of the pupils; ▪ UTDBE teacher traces to find out why a pupil is absent; ▪ One contribution the

15. What contributions are UTDBE teachers (untrained) making towards improving quality education in the school?		
Strengthening Access and Participation	Improving Quality Performance	Management and Community Relations
<ul style="list-style-type: none"> ▪ The UTDBE untrained teachers have helped to improve upon the children attendance to school; ▪ The presence of teachers has improved pupil enrollment significantly; ▪ They have made pupils develop interest in education; ▪ The UTDBE pupils’ oversee to their welfare. 	<ul style="list-style-type: none"> teaching; ▪ UTDBE organize extra classes for pupils; ▪ Their presence is creating the needed impact in relation to quality delivery of education; ▪ They have contributed to improving the quality of teaching in school; ▪ By teaching their brothers and sisters; ▪ They help to make the pupils learn all the time; ▪ They help reduce the workload of the trained teachers; ▪ They teach their children well and by so doing they impart knowledge to them than the trained teachers; ▪ Teachers have brought new teaching methods; ▪ They help our wards in reading and writing. 	<ul style="list-style-type: none"> untrained teachers are doing is the formation of youth clubs in the school for which they play a lead role; ▪ UTDBE organized pupil to plant and fence trees round the school; ▪ They make sure classrooms are occupied; ▪ They help to ensure that every class has a teacher; ▪ They improve the staffing situation; ▪ They are ready to teach and even visit the homes of pupils who have absented themselves from school for days.

Source: UTDBE Impact Assessment Endline Study, 2016

9.9 Key Challenges UTDBEs Faced in Deprived Communities

The key challenges of UTDBE trainees faced in working in deprived rural communities at the endline assessment stage were no different from those found during the baseline assessment. The SMC/PTAs, during both the baseline and endline assessment phases, reported that the major challenge most UTDBE trainees faced is financial constraint, especially for those who are still not on the government payroll but are teaching in deprived or extremely deprived communities. Another key challenge was the lack of basic social amenities available in most of the communities where UTDBE trainees stay and teach. The SMC/PTAs complained about the lack of potable drinking water, electricity, access roads, and decent accommodation for their teachers. Some SMC/PTAs lamented on the non-cooperative nature of some community members who

sometimes harass teachers. Other financial challenges include the untimely release of GPEG funds from the GES to the Colleges of Education for the face-to-face meetings; lack of decent teachers' accommodation in communities and the high cost of renting accommodation; challenges of lack of salary; and sometimes freezing of salaries or not being on the payroll at all. Some UTDBE trainees receive insufficient allowances to cater for their families and therefore necessitate their taking out loans to enable them pursue the UTDBE training programme. Table 9.6 below shows some of the key challenges UTDBE trainees face in working in the deprived communities.

The UTDBE trainees faced challenges in their educational foundation in relation to the subject knowledge. They had difficulty understanding some of the course areas (i.e. ICT); the inability to teach ICT in their schools because of lack of computers; inadequate staffing (i.e. one or two teachers handling the whole school; overcrowded classrooms; and lack of furniture for pupils and teachers. Other challenges included: dilapidated classrooms; pupils' irregular attendance and lateness; absenteeism; inadequate / scarcity of teaching/learning materials including textbooks. In addition, there are issues of inadequate sitting spaces and parents not buying books for their children. Furthermore, they face challenges of not being able to prepare Ghanaian Language lesson notes due to lack of teaching and learning materials in the local languages; and poor BECE results coupled with poor enrollment in rural deprived schools.³³

On the societal challenges in both the baseline and the endline the SMC/PTAs reported the difficulties for teachers seeking accommodation to stay in the community; challenges of water shortage in the dry seasons; the lack of parental control over children; the lack of cooked food to buy in the communities; poor road networks (muddy roads); high absenteeism rates in the farming season; teachers not staying in the community and commuting long distances daily to school; and the outcomes of their attendant lateness.

Table 9.6: Key Challenges UTDBE Trainees Faced in Deprived Communities

Financial challenges	Educational challenges	Social challenges
<ul style="list-style-type: none"> ▪ Financial challenges; ▪ Untimely release of funds from the GES; ▪ Poor allowance, and many have families to take care of; ▪ Some take loans in order to survive for the month; ▪ High cost of renting ▪ Problems with their 	<ul style="list-style-type: none"> ▪ Difficulty in understanding some of the course areas (for example ICT); ▪ Most of the classroom are dilapidated (poor classroom conditions); ▪ The ICT teachers is not able to teach well as there is no computers and electricity in the 	<ul style="list-style-type: none"> ▪ Problem of having to look for accommodation to stay in the community and teach; ▪ Water shortage in dry seasons; ▪ The teachers are worried by the lack of parental control over children; ▪ Lack of cooked food to buy in the communities;

³³ This was said by SMC/PTA members; they often interact with trainees and as such know the difficulties the training go through.

Financial challenges	Educational challenges	Social challenges
<p>salaries especially freezing of salaries; UTDBE not on the payroll</p> <ul style="list-style-type: none"> ▪ Most volunteer teachers are not on the payroll. 	<p>school;</p> <ul style="list-style-type: none"> ▪ One/two teachers handling the whole school; ▪ Overcrowding of pupils and inadequate teachers; ▪ Lack of teachers' accommodation in communities; ▪ High absenteeism of pupils especially during rainy season; ▪ Lack of furniture for staff common room; ▪ Students are always late to school; ▪ Inadequate and scarcity of teaching/learning materials including textbooks; ▪ Inadequate sitting spaces ▪ Parents do not buy books for their children; ▪ Textbooks and furniture are not adequate; ▪ Poor BECE results; ▪ The teachers find it difficult to prepare Ghanaian Language lesson notes due to lack of teaching and learning materials; ▪ Low enrolment due to lack of school feeding programme in community. 	<ul style="list-style-type: none"> ▪ Poor road network (muddy roads); ▪ The teachers are sometimes confronted and harassed by some parents for disciplining their wards; ▪ Lack of social amenities like electricity and good drinking water in school communities; ▪ Parents don't have time to monitor children's performance; ▪ Parents take children to farms; ▪ Poor pupil attendance to school during festivals; ▪ Teachers travel long distances to school to teach; ▪ Most of the teachers live outside the community and that does not make them punctual; ▪ Teachers do not have means of transportation for example motor bikes; ▪ Distance from the capital because community is deprived; ▪ Means of transport to commute to the school; ▪ DBE trained teachers do not think of staying in communities.

Source: UTDBE Impact Assessment Endline Study, 2016

9.10 Recommendations to Retain Teachers in Deprived Schools

SMC/PTA respondents across the sampled communities gave suggestions on the measures that the government (represented by the District Assembly and District Education officials), the community and GES officials and teachers need to embrace in order to ensure the retention of teachers in deprived communities. In the baseline study, the key issue was the recommendation that GPEG sponsorship be increased to cover the entire cost of the course in order to ease the

burden on trainees, many of whom were not on the government payroll. For some unexplained reason this concern did not appear during the endline assessment although the need to put all teachers on the government payroll was re-echoed. Table 9.7 provides information on SMC/PTAs recommendations for teacher retention in deprived schools.

As was the case in the baseline, SMC/PTAs in the endline called on District Assemblies to provide teachers' bungalows to cater for the accommodation needs of the trainees. They also asked that government provide basic utilities such as electricity, potable water, accessible roads and other amenities to make teachers stay in the deprived communities. Another recommendation made during the baseline that re-surfaced during this endline was the selection of local students from the deprived communities for the UTDBE training programme and not people from urban communities who are usually not willing to stay in the deprived communities after their training.

Other recommendations were the provision of school infrastructure and teachers' quarters in school communities, and the provision of incentive packages such as televisions and motorbikes to teachers in deprived rural schools. They also recommended the provision of clinics or health facility in the rural communities and improved road networks. Other important recommendations based on the interviews with SMC/PTAs included:

- Circuit supervisors regularly monitoring and making supervision visits to support teachers;
- Provision of toilet facility for teachers;
- DEO engage more SHS students for the UTDBE programme;
- Minimize irregular transfer of teachers;
- Inform SMC/PTA of the selection of teachers for future programmes;
- District Assembly should provide decent teacher accommodation in villages;
- Provide appropriate furniture to the lower grades;
- Institute an award scheme for teachers in deprived schools;
- Increase pupil textbooks ratio on core subjects, RME and citizenship education;
- Train more ICT teachers for rural deprived schools;
- Motivate teachers through promotions and early payment of salaries, and payment of transfer grants; and
- Improve cellular phone networks.

Besides directing their recommendations to Government, the SMC/PTAs directed some of their recommendations back to themselves (SMC/PTAs) and for the attention of community members. These are presented in table 9.7.

Table 9.7: Recommendations to Retain Teachers in Deprived Schools

Recommendations to retain trained and untrained teachers in deprived communities		
Directed at community	Government/GES/District Assembly	Head teacher & staff
<ul style="list-style-type: none"> ▪ Provide accommodation in communities for teachers; ▪ Provide playing field or football park; ▪ Step up community help for newly posted teachers to the community; ▪ PTA to help teachers to control indiscipline in the school; ▪ Parents should respect and help teachers solve school problems; ▪ Chiefs should organize annual best teachers' awards; ▪ Parents should continue to financially support untrained teachers; ▪ Community members should visit and respect teachers; ▪ Parents should be advised to make sure pupils are sent to school; ▪ PTA/SMC should provide accommodation and feeding for newly posted teachers to the community; ▪ Community members need to motivate the teachers with petty gifts during holidays/vacation ▪ SMC/PTA should always listen to teachers' concerns; ▪ The community should 	<ul style="list-style-type: none"> ▪ Provide basic utilities : portable water & electricity to schools & communities; ▪ Provide school infrastructure & teachers' quarters in school communities; ▪ Re-introduce caning to instill discipline in schools; ▪ Provide incentives like television, motorbikes etc. to teachers in deprived rural schools; ▪ Provide clinic or health facility; ▪ Improve road network; ▪ Regular monitoring and supervision visits to support teachers; ▪ Provision of toilet facility for teachers ▪ Inform SMC/PTA of the selection of teachers for future programmes; ▪ Let DEO engage more SHS students for UTDBE program; ▪ Minimize irregular transfer of teachers ▪ District Assembly should provide decent teacher accommodation in villages; ▪ Provide appropriate furniture to the lower grades; ▪ Institute an award scheme for teachers in deprived schools; ▪ Put all teachers on payroll; ▪ Increase pupil textbooks ratio on core subjects, RME and citizenship education; ▪ Train more ICT teachers for rural deprived schools; ▪ Motivate teachers through early payment of salaries, promotions, and payment of transfer grants; ▪ Improve Cell phone network. 	<ul style="list-style-type: none"> ▪ Build good inter personal relationship; ▪ Teachers should develop children's reading skills; ▪ Teachers and parents should meet regularly to discuss issues affecting the school; ▪ Parents and teachers should contribute a token amount for teachers (newly posted and UTDBE) who are not on salary.

Recommendations to retain trained and untrained teachers in deprived communities		
Directed at community	Government/GES/District Assembly	Head teacher & staff
construct teachers quarters.		

Source: UTDBE Impact Assessment Endline Study, 2016

9.11 Conclusions

This chapter examined the support, retention and staying power of UTDBE trainees. It explored the factors and conditions that promote or hinder UTDBE trainees' retention and staying power in deprived communities. In conclusion, UTDBE trainees received limited support from District Education authorities (UTDBE Coordinator and Circuit Supervisors), Head teachers, teachers and community members (SMC/PTAs). The interviews and field observation revealed that there was little difference in the support UTDBE trainees received at the baseline stage (2014) to the endline stage of the study (2016). At both the baseline and endline stages, the trainees had limited support while pursuing their training to equip them with the needed skills and experience to make them competent and successful professional teachers after completing their training.

The findings, based on interviews with the UTDBE trainees, suggest that they received very limited institutional and individual support from District, training college and school based support. At the district level, the trainees reported receiving some support from the District Education Office (DEO) and the District Assembly mainly based on the receipt of GPEG financial support, district based in-service training support (DBI support) and cluster based in-service support (CBI support). They also reported sometimes receiving Circuit Supervisors' monitoring and supervision support, various teacher awards (Best Teacher Awards) and financial support in terms of being put on the payroll (migration of UTDBE trainees onto the government payroll). This support, provided through the Head teacher, DEO's, and other key stakeholders in the programme, was neither regular nor reliable.

It further emerged that trainees receive support from three major sources: the district, community and school levels. The notable forms of support received at the district level include financial support (GPEG financial support, MP's financial support, District Assembly financial support, salary support, and District Assembly Common Fund support for the disabled), in-service training (INSET) support (DBI and CBI), monitoring and supervision support, teacher awards (best teacher awards), and lesson observations and post observation conferences. The forms of support received by trainees at the school are mainly academic support provided by the Head teacher and other colleagues, participation in school based INSET (SBI), and guidance and counselling support from Head teachers. Community level support given to trainees is mostly from SMC/PTAs, parents, general community contributions in the form of cash, food stuff,

supply of water, accommodation, and financial support for transportation to Colleges of Education.

The reasons that influence the retention of UTDBE trainees particularly in the rural deprived schools were classified into three categories namely: school/community related reasons, personal reasons, and factors relating to the efforts by education authorities. The community related factors identified include the sociable nature/good relations of the community members, support provided by community towards their training, affiliation and familiarity with the community, the lack of teachers in the community, and their desire to serve in general. The personal reasons mentioned are that, by serving in deprived communities, trainees will be able to advance their education since they are being sponsored. Trainees who are natives of the communities felt it is their personal responsibility to serve and make their communities better in terms of education. The reasons identified that relate to the education authorities at the district level include serving the bond period (about 2 years) after completion, ensuring trainees are put on the payroll, and ensuring that trainee teachers are not transferred from the communities/schools.

The key challenges to the retention of UTDBE trainees particularly in the rural deprived community schools include financial constraints, especially for those who are yet to be put on the government payroll, lack of basic social amenities such as potable water, electricity, access roads, and decent accommodation. Other challenges identified include the lack of infrastructure, particularly, classrooms and furniture, and inadequate teaching and learning materials in the schools they teach. On the other hand, a number of conditions including cordial community relationships and support, provision of teacher accommodation, periodic supply of foodstuff had the potential of keeping teachers in the deprived communities for about 3-years on the average.

Chapter 10: Analysis of “Other” Teacher Types not Observed but Teaching in the School

10.1 Introduction

This chapter reports on findings from questionnaires administered to 570 “other teachers” who were not directly observed in the endline survey but were present in the 193 schools visited as part of the UTDBE study. “Other teachers” refers to the teachers who are not currently part of the GPEG sponsored UTDBE programme but were teaching in schools where the lesson observation and interviews were conducted at all phases of the baseline to the endline. These “other teachers” excluded the Head teacher and UTDBE trainees observed and interviewed. The other teachers included professional (certificate ‘A’) teachers and untrained “pupil” teachers who had reached various levels of education; they also included teachers who had already completed the DBE by either full time or distance education but had been teaching for over 3 years in the school and were not part of the DBE sample. It also covers National Service Volunteers (NSVs), community volunteer teachers and other types of untrained teachers with non-professional degree and diploma holders. All “other” teachers who were present at school on the day the research team visited were interviewed.

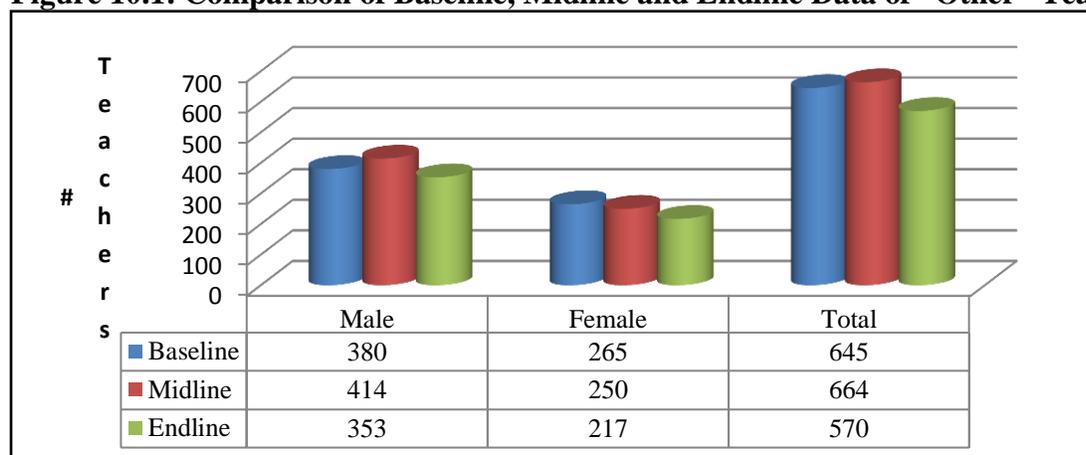
The chapter highlights characteristics of “other teachers” at the school level, both trained and untrained and their attitudes to the teaching service, which could determine their retention in deprived districts. The chapter also provides insight into the numbers of untrained teachers who remain in schools but were unable to gain access to the UTDBE programme or similar training. Efforts made by various stakeholders, both at the school and district levels, to improve the quality of teaching through in-service training are also documented in this chapter.

10.2 Background Characteristics of “Other” Teachers

A total of five hundred and seventy (570) “other” teachers³⁴ participated in the endline survey of the UTDBE study, a reduction of 11.6% and 14.2% from the baseline and midline cohorts respectively (Figure 10.1). The endline sample comprised 61.9% males and 38.1% females. This shows a 3% increase of males over the baseline cohort but a marginal decrease of 4% over the midline cohort. There is a decrease of 3% females in the endline survey compared with the baseline but a marginal increase by .4% compared with the midline survey.

³⁴ Teachers who were not enrolled on the UTDBE programme and were not directly observed during the IA but were present at the school on the day of data collection.

Figure 10.1: Comparison of Baseline, Midline and Endline Data of “Other” Teachers



Source: UTDBE Impact Assessment Endline Study, 2016

Table 10.1 shows a comparison of regional data for the three phases of the study, which reveals a consistent decrease in the number of both male and female teachers across the Upper East and Upper West Regions and an increase in the Western Region at the endline survey stage. Although the numbers of teachers increased in the Brong Ahafo and Northern Regions in the midline study, the endline showed a decrease for both males and females (Table 10.1).

Table 10.1: Comparison of Endline Sample with Baseline and Midline by Regions and Sex

Regions	Male			Female			Total			% over total		
	Baseline	Midline	Endline	Baseline	Midline	Endline	Baseline	Midline	Endline	Baseline	Midline	Endline
Brong Ahafo	95	103	99	86	79	69	181	182	168	28.1	27.4	29.5
Northern	93	135	101	39	42	32	132	177	133	20.5	26.7	23.3
Upper East	112	119	101	66	74	69	178	193	170	27.6	29.1	29.8
Upper West	54	40	32	63	51	36	117	91	68	18.1	13.7	11.9
Western	26	17	20	11	4	11	37	21	31	5.7	3.2	5.4
Total	380	414	353	265	250	217	645	664	570	100.0	100.0	100.0
%	58.9	62.3	61.9	41.1	37.7	38.1						

Source: UTDBE Impact Assessment Endline Study, 2016

Except for the Western and Northern Regions, there has been a consistent decrease in the number of “other” teachers in schools visited in the Brong Ahafo, Upper East and Upper West Regions throughout the three phases of the study. This demonstrates that there was a reduction in the number of teachers in the schools visited over the period. For instance, in the Bongo District

(Upper East Region) and Atebubu Amantin (Brong Ahafo Region) had a higher proportion of “other” teachers. The Wassa Amenfi District in the Western Region had the least number of “other” teachers outside those with DBE and UTDBE qualifications (see Table 10.2 below).

Table 10.2: Sample of “Other” Teachers by Regions by Districts and by Sex

	District	Male	Female	Total
Brong Ahafo	Atebubu Amantin	45	51	96
Brong Ahafo	Nkoranza North	54	18	72
Northern	Bunkpurugu Yunyoo	66	13	79
Northern	West Mamprusi	35	19	54
Upper East	Bongo	67	40	107
Upper East	Talensi Nabdam	34	29	63
Upper West	Jirapa	15	19	34
Upper West	Lawra	17	17	34
Western	Wassa Amenfi	20	11	31
Totals		353	217	570

Source: UTDBE Impact Assessment Endline Study, 2016

Distribution of Teachers by Regions, Districts and Level of Deprivation

An analysis of the location of schools indicated that relatively equal proportions of schools are located in the three categories of deprived (37.7%), extremely deprived (31.4%) and less deprived (30.9%) communities. The Brong Ahafo, Northern and Western Regions had the majority of their schools located in deprived communities while the Upper East had 48.3% of sampled schools in extremely deprived school communities. Only the Upper West Region had the majority of its teachers located in less deprived communities (Figure 10.2).

Table 10.2 (above) shows the distribution of “other” teachers by region, district and sex. The distribution of “other” teachers is skewed in favour males. The findings show that it was only in the Atebubu District of Brong Ahafo Region and in the Jirapa District of the Upper West that female “other” teachers outnumbered males. The findings also show that the Bongo District of the Upper East Region and Atebubu Amantin District in the Brong Ahafo Region had the highest proportion of “other” teachers. The Wassa Amenfi District in the Western Region had the least number of “other” teachers.

Table 10.3 shows data (below) on the distribution of schools by gender and the three levels of deprivation. The finding shows more males in all three zones of deprivation compared to female teachers. The male/ female distribution show 24.2% male and 13.5% female in deprived schools, 18.8% and 12.6 % male and female “other” teachers in extremely deprived schools while the distribution in less deprived schools show 18.9% males and 11.9% females. When male/female

aggregation is taken into account, there are relatively equal proportions of “other” teachers within the three categories: deprived (37.5%), extremely deprived (31.5%) and less deprived (30.8%). In all regions and in all levels of deprivation, except in the less deprived schools of Upper West Region, males dominate in the distribution of “other” teachers.

Table 10.3: Level of Deprivation by Region and Sex

	Deprived		Extremely Deprived		Less Deprived		Total
	Male	Female	Male	Female	Male	Female	
Brong Ahafo	38	33	34	16	27	20	168
Northern	48	10	18	6	35	16	133
Upper East	33	18	43	39	25	12	170
Upper West	10	8	8	10	14	18	68
Western	9	8	4	1	7	2	31
Total	138	77	107	72	108	68	570
%	24.2	13.5	18.8	12.6	18.9	11.9	100.0

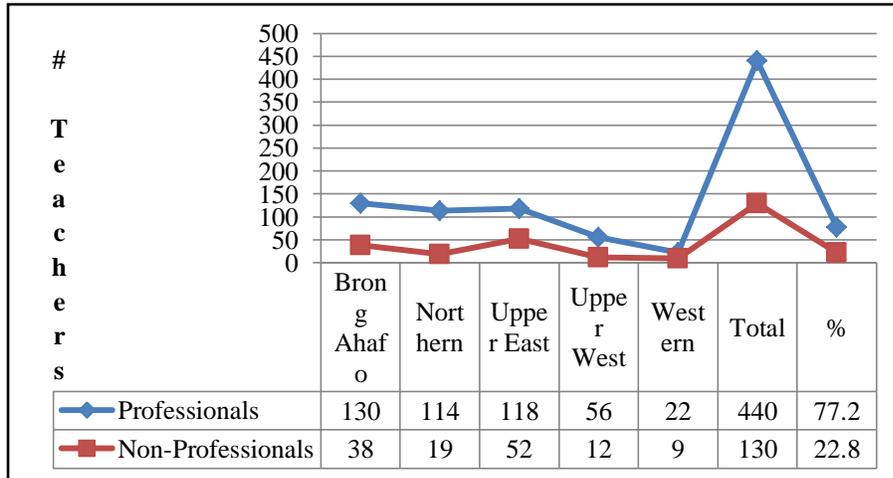
Source: UTDBE Impact Assessment Endline Study, 2016

10.4 Categories of “Other” Teachers Serving at the School

Professional Qualification of Teachers

Figure 10.3 (below) shows regional professional and non-professional distribution of “other” teachers. The findings show that, out of the total of 570 “other” teachers, a total of 440 (77.2%) were professional trained teachers across the 193 schools visited and 23% were untrained and included “pupil” teachers and National Service Volunteers. This is an increase of 18.9% and 15.3% compared with baseline and midline data figures respectively. The Brong Ahafo Region had the highest number of “other” professional teachers in the sampled schools followed by the Upper East and Northern Regions while the Upper East and Brong Ahafo Regions had the highest number of non-professional teachers (Figure 10.2).

Figure 10.2: Regional Distribution of “Other” Teachers by Professional Qualification



Source: UTDBE Impact Assessment Endline Study, 2016

Table 10.4 shows the regional distribution of “other” teachers by qualifications. The overall findings show that, out of the 440 professional teachers, they hold varying types of teacher professional certificates with different academic qualifications. The findings show 321 DBE (56.3%), 35 (6.1%) B. Ed, 20 (5.3%) Post Diploma in Basic Education certificates and 3 Year post secondary and 4 Year post Mid-school Teacher’s Certificate A (6.1% and 4.7% respectively). The finding also shows 11 privately registered UTDBE trainees (not GPEG sponsored trainees) but attending northern CoE’s for another type of UTDBE course. For the 130 non-professionals, the findings show 15 (2.6%) HND holders, 6 BA degrees holders and 106 (18.6%) teachers with the WASSCE certificates. In addition, there were some teachers who held certificates from the National Vocational Training Institute (N.V.T.I), Diploma in Agriculture, and Diploma in Management Studies.

The professional teachers comprised 227 (61.8%) males and 168 (38.2%) females. Non-professionals comprised similar proportions of males (61.5%) and females (38.5%).

Table 10.4: Regional Distribution of “Other” Teachers by Professional Qualifications

Regions	Professional Qualifications						Totals	Non-Professional Qualifications				Total
	DBE	B. Ed	Post Dip in Basic Educ.	Cert A 3 Yr	Cert A 4 Yr	Non-GPEG UTDBE Trainee		HND	Degree	WASSCE	Others	
Brong Ahafo	95	5	10	5	5	10	130	5	2	31	0	38
Northern	81	8	10	6	8	1	114	2	0	17	0	19
Upper East	86	17	3	8	4	0	118	4	1	45	2	52
Upper West	42	4	5	1	4	0	56	2	0	9	1	12
Western	17	1	2	0	2	0	22	2	3	4	0	9
Total	321	35	30	20	23	11	440	15	6	106	3	130
%	56.3	6.1	5.3	3.5	4	2	100%	2.6	1.1	18.6	0.5	100.0

Source: UTDBE Impact Assessment Endline Study, 2016

Type of Teachers

The majority of teachers interviewed were professionally trained teachers who comprised a total of 380 (66.7%).³⁵ One hundred and thirty (22.8%) “others” were pupil teachers, 16 (2.8%); National Service personnel, 38 (6.7%); community volunteers, 4 (0.7%); student teachers doing their practicum³⁶ and two (.4%) NGO-sponsored volunteer teachers. Upper East, Northern and Brong Ahafo Regions had the highest number of trained teachers of 108 (28.4%), 101(26.6%), 100 (26.3%) respectively. In addition, Brong Ahafo with 59 (45.4%) and Upper East with 56 (43.1%), had the highest number of pupil teachers; and the Northern 21 (55.3%) and Upper West 10 (26.3%) regions had the highest number of community volunteer teachers. There were more males than females in most categories of teachers identified in the schools (Table 10.5).

Table 10.5: Type of Teachers by Sex

Sex	Community Volunteers	NGO Sponsored Volunteers	National Service Personnel	Pupil Teachers	Student Teachers	Trained Teachers
Male	26 (68.4%)	1 (50%)	11 (68.8%)	78 (60.0%)	2 (50%)	235 (61.8%)
Female	12 (31.6%)	1 (50%)	5 (31.3%)	52 (40.0%)	2 (50%)	145 (38.2%)

³⁵ Almost all these teachers were professionals except those with WASSCE...even these teachers were pursuing various degree and diploma courses.

³⁶ Student teachers were those doing their practicum while the pupil teachers were the untrained SS leavers.

Total	38 (100%)	2 (100%)	16 (100%)	130 (100.0%)	4 (100%)	380 (100.0%)
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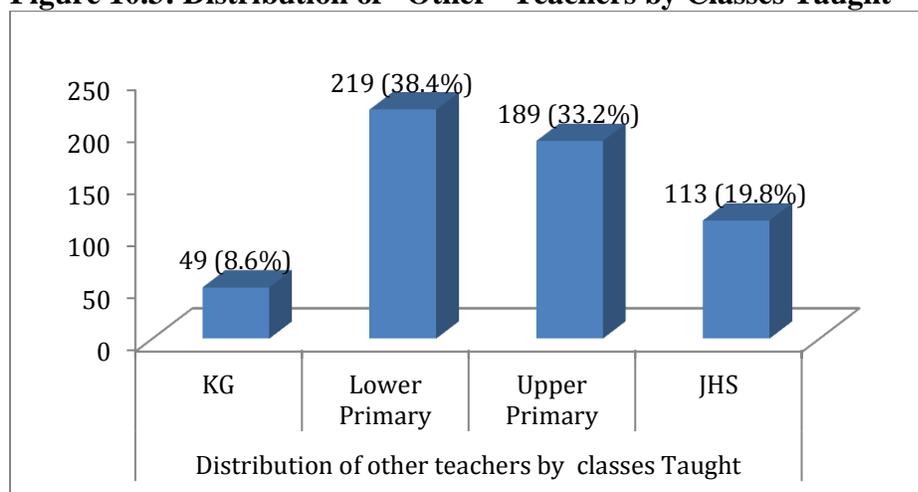
Source: UTDBE Impact Assessment Endline Study, 2016

On the basis of the level of deprivation, the majority of “other” teachers who were teaching at the schools where UTDBE trainees were found consisted of trained teachers with 215 (37.7%) in deprived communities; 142 (31.4%) in extremely deprived communities; and 30.9% in less deprived communities. Regardless of the level of deprivation, trained teachers comprised the majority of teachers across the three categories. Out of the 380 trained teachers interviewed, 142 (37.4%) were in deprived school communities, 111 (29.2%) and 127 (33.4%) respectively in extremely deprived and less deprived school communities.

Distribution of Teachers by Classes Taught

Figure 10.3 shows the distribution of “other” teachers by classes taught. The majority of “other” teachers in the schools studied taught in the lower primary (38.4%), with upper primary having 33.2% teaching at that level, while 19.8% taught at the JHS and only 8.6% taught at the KG level.³⁷

Figure 10.3: Distribution of “Other” Teachers by Classes Taught

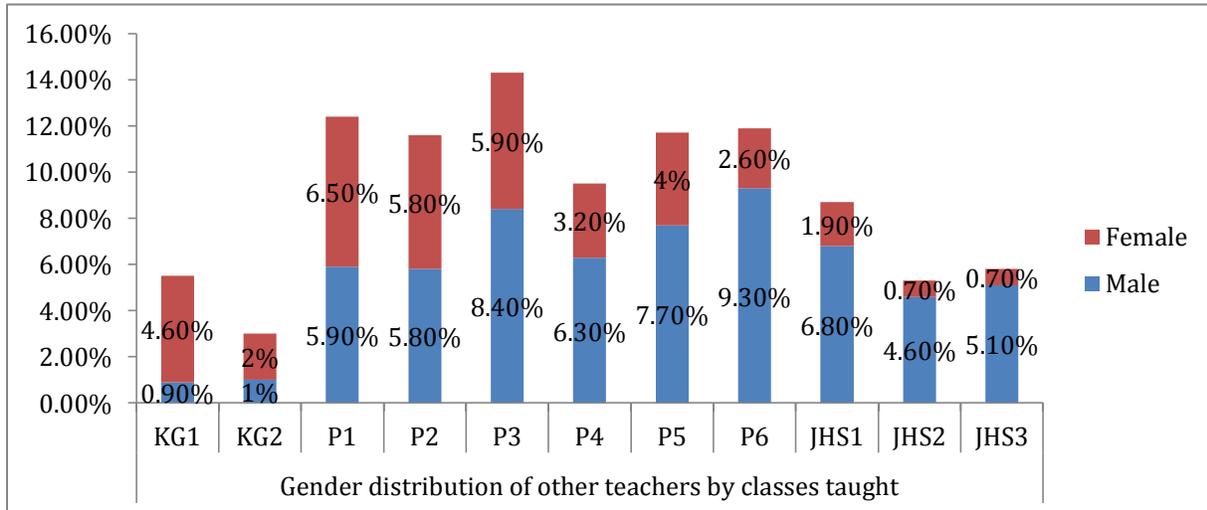


Source: UTDBE Impact Assessment Endline Study, 2016

Figure 10.4 shows the gender distribution of “other” teachers by classes taught. The findings show more females taught at the KG and primary levels; while more male teachers taught P3 to JHS3. This is consistent with findings in the baseline and midline phases of the UTDBE study and is confirmation of the practice of Head teachers placing their female untrained teachers at KG and lower primary levels.

³⁷ Not all the schools had KG and JHS.

Figure 10.4: Gender Distribution of “Other” Teachers by Classes Taught



Source: UTDBE Impact Assessment Endline Study, 2016

Teaching Experience

The number of years a teacher had served as a teacher at the current school spanned between two weeks and thirty (30) years. More than a quarter (28.3%) had taught in the school for one year or less with two teachers serving between two and three weeks. The majority of teachers: 334 (58.6%) had been serving in their respective schools for between two to five years while 10.5% had taught for six to 10 years and 11 (1.9%) serving between 11 to 20 years. Only four (0.7%) had served terms of 21 to 30 years in their respective schools (Table 10.6).

Table 10.6: Distribution of Teachers by Number of Years of Service at School Level

	Teachers	%
1 year & below	161	28.3
2-5 years	334	58.6
6-10 Years	60	10.5
11-20 years	11	1.9
21-30 years	4	0.7
	570	100

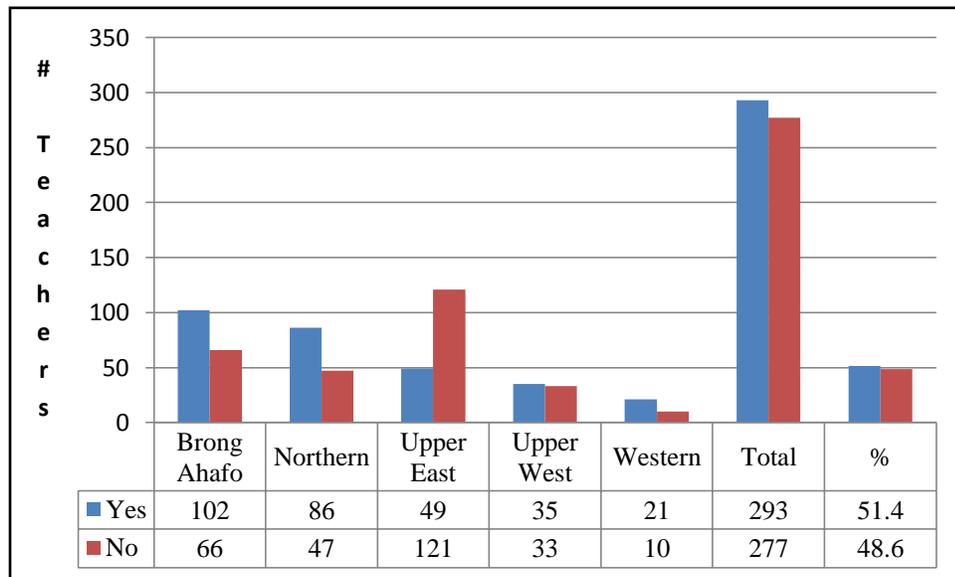
Source: UTDBE Impact Assessment Endline Study, 2016

Regional Distribution of “Other” Teacher Residence in Relation to the Community

Figure 10.5 shows the distribution of “other” teachers’ residence in relation to the community. The findings show 51.4% of “other” teachers lived within the school community compared to 277 (48.6%) who resided outside of the school community, the majority of whom were living in the urban and peri-urban communities, which have better social amenities and facilities. Generally, the proportion of teachers residing in school communities is 4% lower than in the baseline study.

On a regional basis, Brong Ahafo recorded the highest number of teachers (61%) living in the school community followed by Northern Region while Upper East had the highest number of teachers residing outside the school community (Figure 10.5). Comparative analysis with baseline data further showed a reduction of 17.8% to 34.8%, a difference of 38.5% of teachers who resided in the school community in the Brong Ahafo Region. The large number of teachers residing outside the school community in the endline survey implies obvious lateness and absenteeism of teachers to school, considering the fact that most school communities have poor road networks with very few vehicles available to transport teachers to their schools. Teachers who have to commute long distances on a daily basis to and from school often encounter transportation problems as some had indicated that they travelled a total of twelve and eighteen kilometres each day to school and back.

Figure 10.5: Number of “other teachers” Residing within the Community

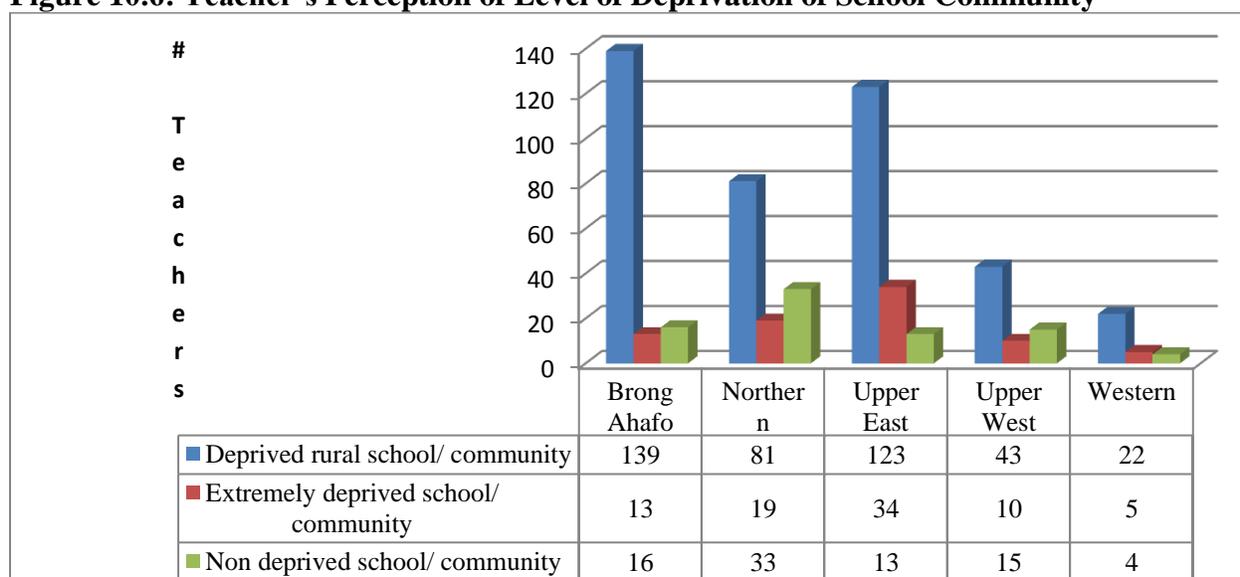


Source: UTDBE Impact Assessment Endline Study, 2016

Teachers' Perception of Level of Deprivation in School Communities

In response to teachers' perception of the level of deprivation of their school communities, 408 (71.6%) of teachers perceived their school communities to be deprived, 81 (14.2%) each perceived them to be either extremely deprived or less deprived. Brong Ahafo and Upper East Regions had the highest number of teachers who perceived their school communities to be deprived, while Northern and Upper East ranked highest in the extreme and non-deprived categories respectively (Figure 10.6). The studies own analysis placed at least 40% of schools in the deprived and 40% extremely deprived category and 30% in the less deprived category (district capitals).

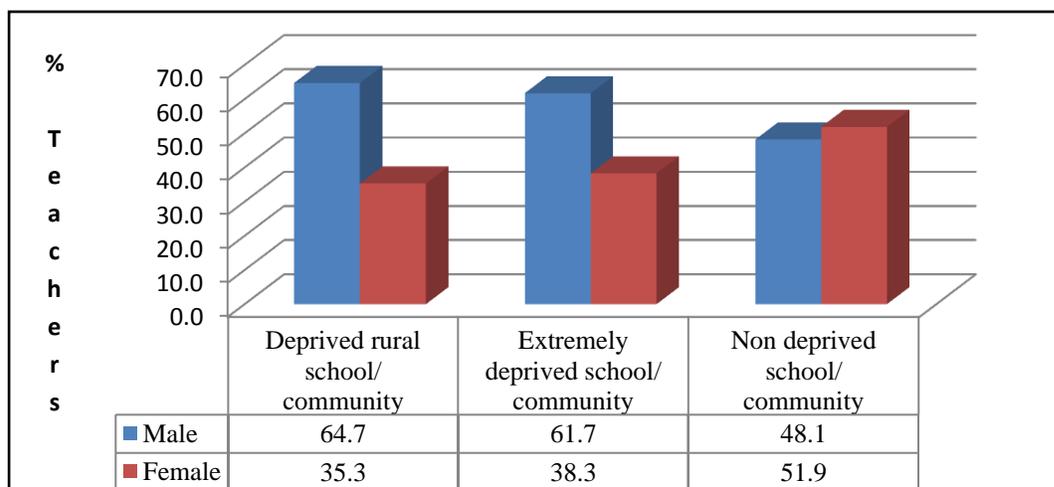
Figure 10.6: Teacher's Perception of Level of Deprivation of School Community



Source: UTDBE Impact Assessment Endline Study, 2016

Two hundred and sixty four males (64.7%) and 144 females (35.3%) classified their school communities as deprived. Similarly, more males (61.7%) than females (38.3%) perceived the school communities as extremely deprived. However, 51.9% of female teachers perceived their school communities as less deprived although earlier analysis showed that more males taught in less deprived school communities (Figure 10.7). A summary of the various reasons adduced for the perceptions is presented on Table 10.8.

Figure 10.7: Teacher Perception of Level of Deprivation by Sex



Source: UTDBE Impact Assessment Endline Study, 2016

Table 10.7: Reasons Adduced for the Various Classification of School Communities

Deprived rural school community	Extremely deprived school community	Non-deprived school community
<p>Because the schools lacks a lot of resources. They do not have adequate classrooms, tables and chairs. Some of the children learn under trees. <i>'There is inadequate classrooms lack of text book for the major core subjects, lack of urinal and so may facilities. We lack facilities like library, No computers for teaching ICT and inadequate TLMs'</i>.</p> <p>The region itself is deprived and with that everything is lacking. Most of the people in the community are illiterate. Some do not know the essence of education. Parents are largely poor farmers and find it difficult to meet the needs of their wards, especially educational materials like exercise books, sandals, pencils. Some pupils come to school with no uniforms and no money to buy food and water.</p> <p>Lack of portable drinking water, public place for convenience, communication network, poor road network etc. <i>'There is a lack of stable telecommunication connection. There is also a</i></p>	<p>Because the school lacks a lot of materials and infrastructure/amenities e.g. inadequate classrooms, no offices, no school toilet etc., no KG class, no JHS. No sporting activities, quality of teachers and performance of the pupil academically are generally low. Because we teach under trees; we don't take part in school feeding programme.</p> <p>Some of the community members are poor and cannot afford to buy books and pencils for their wards. <i>Most parents do not know the importance of education and for that reason most pupils are in school without learning materials like exercise books, pens and pencils. Parents keep on telling their wards, they don't have money to buy them. They also keep their children at home during schooling hours to run errands for them saying there is no profit in a child's education.</i></p> <p>No social amenities such as lights, good roads, infrastructure and accommodation. No</p>	<p><i>It is less deprived school because it has pipe borne water for the pupil;, there is electricity in the school and teachers quarters for few staff. It is a school of well-equipped teachers and pupils. The school is at the centre of the district capita and has access to road, bore-hole, classrooms, good teachers and good administrators and at least 50 percent of TLMs are available. There is a place of convenience in the school.</i></p> <p>There is electricity in the community, portable drinking water is available. Because almost all the communities are literates. The school is not far from the GES office and the District Assembly. They come around to supervise and also</p>

<i>difficulty getting a vehicle out of town'.</i>	electricity, no potable water, no toilet.	give books and other items to pupils.
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Source: UTDBE Impact Assessment Endline Study, 2016

10.5 Comparison of “Other” Teacher Characteristics and Attitudes according to their Training Mode

Out of a total of 484 teachers that responded to this item, 212 teachers, constituting 43.8%, had trained as teachers using a distance learning mode of training while 272 (56.2%) were trained on a full time basis at the Teacher Training Institutions³⁸. A higher proportion of female teachers (65.4%) studied by distance learning while more males opted for full time studies (Figure 10.11.). This is consistent with findings from the baseline and midline studies. On a regional basis, Brong Ahafo had the highest proportion of teachers who studied for teacher certification by distance learning while the Upper East Region had the highest trained on a full time basis.

Characteristics of “Other” Teachers who Possessed DBE Certificates

The endline study showed that 321 (56.3%) teachers held the Diploma in Basic Education (DBE) certificate comprising 58.6% males and 41.4% females (Table 10.9). Regional distribution of DBE teachers showed that the Brong Ahafo, Upper East and Northern Regions hosted the largest number of DBE teachers, a pattern that is consistent with the baseline studies. In the midline studies, the Northern Region reported the highest number of DBE teachers.

Table 10.8: Regional Distribution of DBE Teachers

Region	Male	Female	Total	%
Brong Ahafo	55	40	95	29.6%
Northern	58	23	81	25.2%
Upper East	47	39	86	26.8%
Upper West	17	23	42	13.1%
Western	9	8	17	5.3%
Totals	188	133	321	100.0%
%	58.6	41.4		

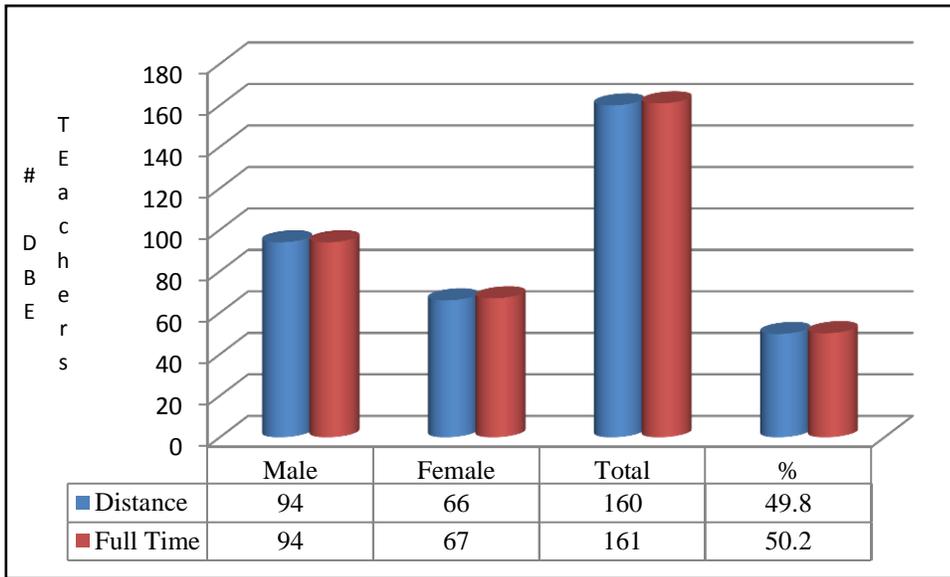
Source: UTDBE Impact Assessment Endline Study, 2016

³⁸ These were CERT ‘A’, DBE and degree teachers that had acquired their various training in various professional institutions.

DBE Teachers by Mode of Study

Relatively more DBE teachers (161) 50.2%, studied on a full time basis by the distance learning mode of instruction at the University of Cape Coast and the University of Education, Winneba compared to those on the full time conventional College of Education mode. While the proportion of male teachers who studied by either distance or the full time conventional mode was equal; female teachers who studied on a full time basis were marginally more than those who studied by distance learning by 0.8% (Figure 10.8).

Figure 10.8: Gender Distribution of DBE Teachers by Mode of Studies

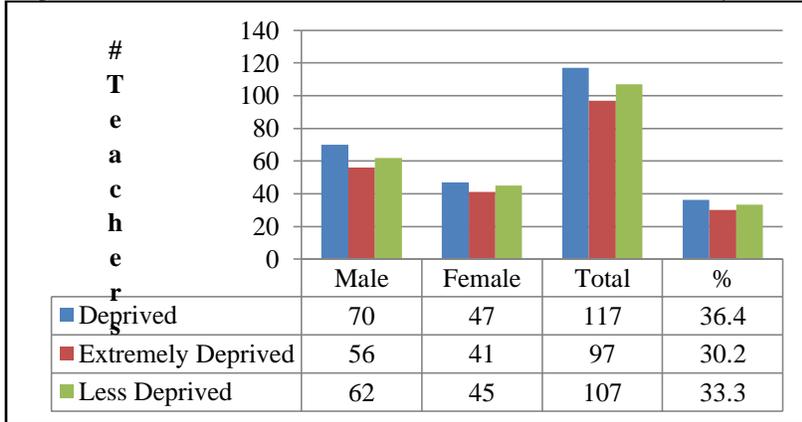


Source: UTDBE Impact Assessment Endline Study, 2016

Gender Distribution of DBE Teachers by Level of Deprivation

The data showed that DBE “other” teachers were almost equally spread across the three levels of deprivation although relatively more teachers taught in deprived school communities. However, male teachers at each level of deprivation outnumber the females (Figure 10.9).

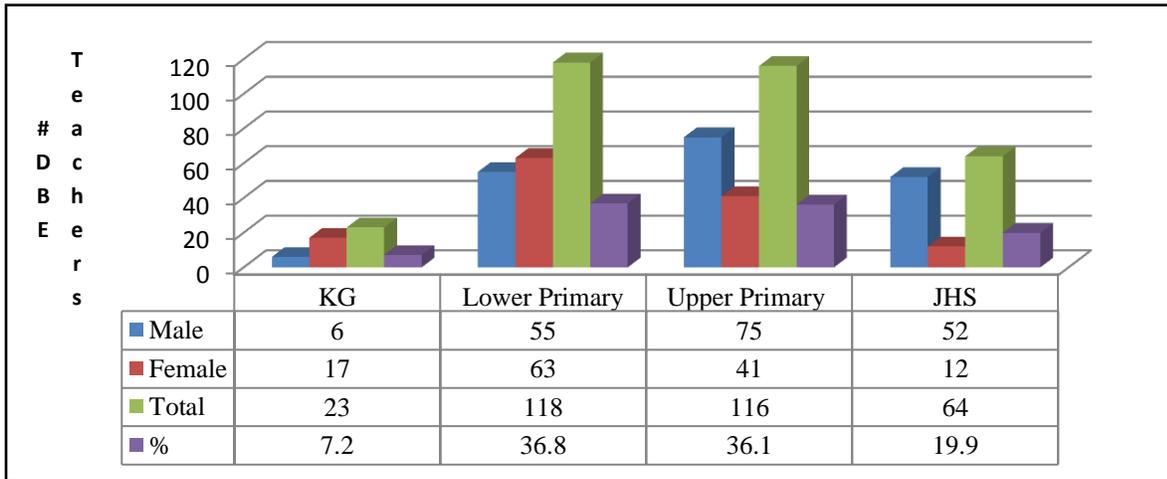
Figure 10.9: Gender Distribution of DBE Teachers by Level of Deprivation



Source: UTDBE Impact Assessment Endline Study, 2016

Findings from the “other” teacher questionnaire suggests that DBE teachers were mainly found at the lower primary or upper primary level (see Figure 10.10 below).

Figure 10.10: DBE Teachers and Classes Taught



Source: UTDBE Impact Assessment Endline Study, 2016

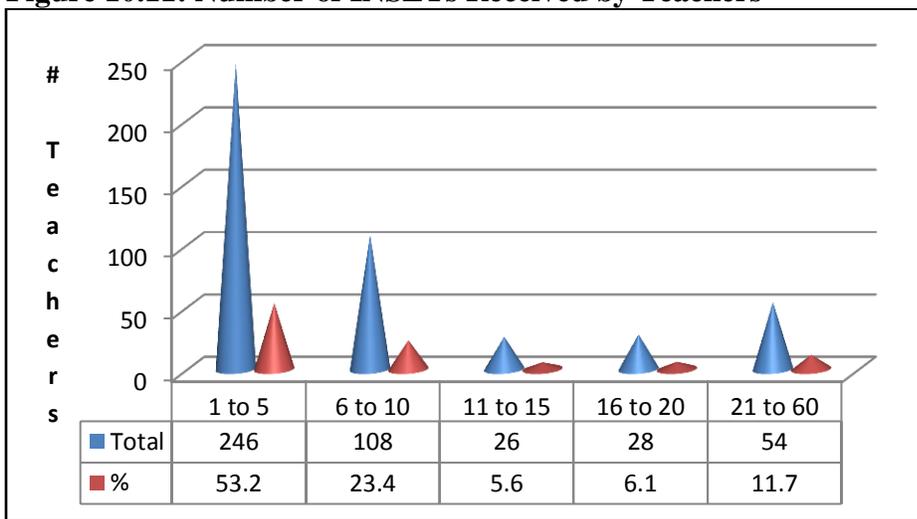
In-service Training

In-service training and workshops are important in schools to orient newly recruited teachers about principles of educational practice and equip them with the requisite skills to make them effective and efficient. Periodic INSETs for “other” teachers already in practice also exposes them to new trends in education. This is most important in deprived rural areas where a large number of untrained ‘pupil’ teachers are engaged in teaching. The UTDBE endline asked the

“other” teachers at the school if they had received any type of INSET in the past two to three years. In response, a very small proportion of teachers 34 (5.96%) said *‘There has not been any form of training or workshop organised in or outside the school for us. We teach what we know’*.

Findings suggest that a total of 462 teachers indicated they had received between one and sixty INSETs. Out of this number, thirty nine (8.4%) had received only 1 INSETs, 61 (13.2%) had 2 INSETs and 63 (13.6%) had participated in 3 INSETs in the last 2-3 years, and 47 (10.2%) had 4 INSET sessions. Further analysis showed that more than half 246 (53.2%) were given between 1-5 INSETs during the 1-3 year period and only 5.6% had between 11-15 INSETs (Figure 10.11). Similar results were found during the baseline and midline field work.

Figure 10.11: Number of INSETs Received by Teachers



Source: UTDBE Impact Assessment Endline Study, 2016

Regarding type of support given, about 98% of teachers said they were provided with school-based and cluster-based in-service training and mentorship by the Head teacher and the District Education Office to improve teaching and learning in the classroom which would also improve the quality of teaching. It is obvious from responses given by teachers who participated in various in-service trainings and workshops that the INSETs and workshops were very beneficial and improved professional practices in the classroom as these had a positive impact on the teaching and learning processes and outcomes. Teachers’ testimonies are stated on Table 10.9.

Table 10.9: Impact of INSET Training on Everyday Teaching and Learning Processes

<ul style="list-style-type: none"> • <i>INSET has improved the teaching and learning methods in the classroom and helps to treat difficult topics.</i> • <i>INSET has improved the use of TLMs when teaching. To know when and how to use TLMs to review pupils RPK when teaching.</i> • <i>INSET has also improved the method of teaching by using child centered.</i> • <i>INSET has enabled me to be in total control of the class, which has actually impacted positively o class performance of children.</i> • <i>I have gained more confidence during teaching services.</i> • <i>It has helped them to handle all levels of pupils.</i> • <i>It has improved the management, notes preparation, class control and improvement in numeracy and literacy delivery.</i> • <i>Pupils now always understand whatever I teach.</i>
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Source: UTDBE Impact Assessment Endline Study, 2016

Attitudes towards Teaching

A large proportion of teachers 311 (96.9%) indicated in the questionnaires that they enjoyed teaching. Gender disaggregation of the results showed that 181 (58.2%) males and 130 (41.8%) DBE teachers enjoyed teaching. A very small proportion (less than 5%) indicated they do not enjoy teaching. The following table provides some of the reasons they became teachers.

Table 10.10: Attitudes to the Teaching Profession

Varied reasons	Why did you become a teacher?
Passion for teaching profession	Because I like/have the passion for teaching profession and want to help the upcoming generation. I love teaching since middle school form 1 when my class teacher became my mentor. In fact I appreciated how he taught us especially in Math. Is a noble profession. The prestige attached to teachers is high. I am good at teaching and continued to the COE due to recommendations from friends. Some are born to teach, so I saw myself as one because as a child, I was able to teach my friends for easy understanding so I said why not go into teaching, hence my becoming a teacher. I love teaching which gives me satisfaction. To explore his prospects in the teaching field.
Educate children	I became a teacher in order to help pupils to be literate. To help the young ones to acquire knowledge and skills in other to live well in the community. To help young ones to achieve a very successful future. To teach the younger generation and to mould them to become great people in the society and acquire good jobs. To help bring-up the future generation by teaching them. I always wanted to guide people to become good and responsible in future and this can be achieved through teaching. I felt a need to impart some knowledge, skills and attitudes on pupils

Varied reasons	Why did you become a teacher?
	who are going to be leaders of one country in the near future.
Impact knowledge	It has being always my wish to impact the knowledge I acquired in school to the up-coming ones and for this matter I taught it wise to become a teacher. To serve as an agent of change in my community where I can influence the lives of the people particularly the youth by imparting knowledge and skills to them and also contribute to policy making that will bring about development in the area
Love Children	I love children and I have the patience to work with them. I love kids and always want to be with them in order to be able to understand and assist them, so therefore I felt that teaching is the number means to closer and interact with them. Became a teacher because I had love for children when I was I child and like playing and in teaching with children and I developed interest in teaching when I did pupils teaching in the year 2002-2003. I have passion of helping others especially the young to realize their dreams and with the inspiration from my teachers, I choose teaching because I think it is the best medium for fulfilling this passion. And also, I have the skills to teach and handle pupil in the classroom as teaching is an art. I love to interact with children and like to learn daily. Because I enjoy interacting with pupils
Help nation	I become a teacher to help my country as a whole and to help my sisters and brothers in the community. Because I saw it as an avenue through which I could also contribute my quota towards nation building by helping to mould the lives of pupils. I have always believed that an educated child is an asset as well as a tool for development. For the development of mother Ghana. To help reduce the illiteracy rate. To help raise the standard of education in the community, district, region and the nation as a whole. To help improve standard of education in district and the nation at large.
Earn a living	Due to lack of other jobs after completing SHS. Lasting to earn a living. To acquire a permanent job. It gives me gainful employment. Because I wanted a secured job. I wanted to make a living.
NSS	I became a teacher as a result of national service posting,
Socio-economic	I became a teacher because of my poor family background as they could not afford to sponsor me to pursue my dream program. Lack of financial support. Because my parents could not pay my fees for University. I went to COE to enjoy the allowance at COE. I also will have time to engage in other activities. I became a

Varied reasons	Why did you become a teacher?
	teacher because I did not get entrance into the secondary school after my MSLC
Acquire knowledge	Teaching is something that when you are in it you learn more things every day. I acquire more knowledge from colleagues and students.
Motivated, convinced to teach	My sister, guardian wanted me to be a teacher. I decided to become a teacher due to my former teacher's advice. A dream and motivated by my form teacher in primary six. Hhe normally dressed well and I liked the way he taught us and he was gentle kind and firm with us that motivated to become a teacher today. I was motivated to be a teacher because I admired my teachers when I was in school. I used to admire one of my teachers back at the SSS and told myself that I will become a teacher in future.
Developm ent of nation	To improve quality of education in the Ghana Education Service and raise the image of the education sector. To build a better society. To support education in deprived communities. The community invited me to help their children after they saw me loitering around and knew very well that I have completed SHS. I became a teacher because I want to help the nation/town to uplift the image of the school. I think this is where I can also contribute effectively to the development of mother Ghana better than any other sector. To Because education is important.
Role model	In fact, I realized that most of the girls were lacking in terms of education. I thought becoming a teacher will help me serve as a role model to most of the girls in my community and also support the younger ones to be educated.
To further education	To use it as a stepping stone for my educational ladder

Source: UTDBE Impact Assessment Endline Study, 2016

How long are you willing to serve in this particular school?

Other teachers working at the same school as the UTDBE tracked trainees were asked to indicate how long they would like to serve in their current schools. Only a few of these “other” teachers indicated that they would like to serve as long as possible. Some said *‘I would like to serve for the rest of my life because of the good performance of the pupils in the district. But it is only God who can decide’*. Others would like to serve in the school until *‘the district transfers me from the school’*.

The majority of the teachers interviewed indicated that they would like to serve for between one to five years. One hundred teachers would serve for three years, 155 teachers opted for one to two years, while 143 would prefer four to five year stay in service in their current schools. Reasons provided by the teachers for these answers indicate that:

- *It depends because my husband is a government worker so if he is being transferred, I will also transfer.*
- *No specific years where ever and whenever my service is needed I am ready to go.*
- *Because I love children and I want to put good things in them. I cannot determine that, transfers are done every new academic year. But I would have wished to serve all my teaching years here.*
- *Want to stay in the school till I am able to save enough money to continue my education in the polytechnic.*
- *I don't want to serve here again. Because I would want a change of environment.*
- *Until retirement if only accommodation is available.*
- *Till on retirement because it is closer to my village.*

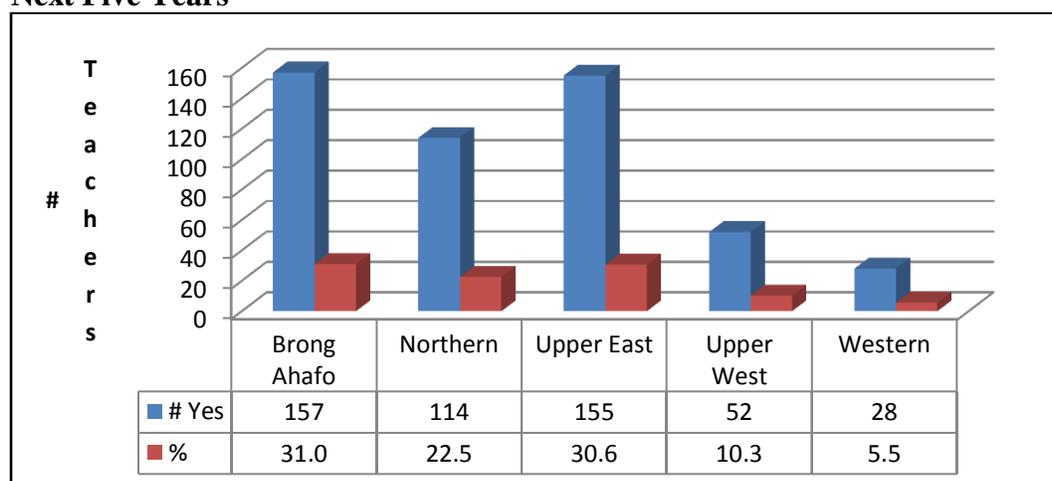
10.7 Teachers' Future Aspirations

Plans in Relation to Teaching

The “other” teachers were also asked about their future plans in relation to the teaching profession. Their responses showed that the majority (506) of teachers representing 88.8% of teachers interviewed are willing to remain in the teaching profession for the next five years while 64 (11.2%) would like to leave. More than 60% of these teachers are from the Brong Ahafo and the Upper East Regions (Figure 10.12). Out of the 506 teachers who indicated their intention to remain in teaching in the next five years, 309 (54.2%) are males and 197 (34.6%) are females (Table 11.10). On a regional basis, the male teachers were more willing to continue serving in rural deprived areas and stay in the teaching profession compared to their female counterparts except for the Upper West Region.

All the 283 (88.2%) DBE teachers who responded to this item said they would remain in teaching for the next five years. Out of this number, 170 (60.1%) were males and the remaining 113 (39.9%) females.

Figure 10.12: Teachers who are Willing to Remain in the Teaching Profession Over the Next Five Years



Source: UTDBE Impact Assessment Endline Study, 2016

Table 10.11: Teachers Willing to Remain in Teaching by Region and Sex

Region	Male	Female	Total
Brong Ahafo	92	65	157
Northern	84	30	114
Upper East	88	67	155
Upper West	25	27	52
Western	20	8	28
Totals	309	197	506
%	54.2	34.6	88.8

Source: UTDBE Impact Assessment Endline Study, 2016

Diverse reasons were given for their decision to remain in the teaching field within the period. Included are the facts that some teachers found the community friendly and caring, some would like to stay there and qualify for study leave with pay, an incentive given to teachers who opt to serve in deprived school communities. While others were bonded by government and having been sponsored for their studies and were compelled to serve the bond in the community; some teachers were seriously involved in church activities in the community. For those who would like to leave the community they said they would like a change of environment, experience

conditions in other organization or establish their own businesses; others gave health challenges and some were due for retirement. Due to family ties and commitments some teachers would either stay or leave the teaching service within the period. A summary of the reasons is presented on Table 10.12.

Table 10.12: Reasons Teachers Would Remain or Leave Teaching

	Reasons for staying
Educational reasons	Because of the good academic performance of the school. I want to help the pupils to also become responsible men and women in future i.e. those at the junior high. I have planted trees in the school and I will love to stay and see them grow up to change the environment. Because the school environment is friendly and also because it is a mission school
Friendly Community	Because the people in the community are friendly and caring. Because I feel comfortable in the community. Because I want to learn their language that they speak in the community. Because I have the love for the kids and the community.
Study leave with pay and further education	To qualify for study leave with pay. I wish the years to further my education in this school. I want to further my education by distance education.
Politics	Because I want to contest for assembly man in that community. To join politics.
Bonded	Because I signed a bond to teach at the deprived rural school when I was in college.
Change environment	I would like to taste new conditions of service elsewhere. I want to face new challenges in other places. I do not even wish to be here because the town is boring and even the school lack a lot. No TLM, no infrastructure etc. I need change of environment.
Church activities	Because I am taking care of church too. I like catholic schools
Personal and Family	Because I want to be closer to my family and to continue with my course. Just because the school is near to my house
	Reasons for leaving
Health	Because of ill-health. Because the distance and road to school is bad. I am even encountering problem with my child falling sick all the time.
Establish own business	Leave the teaching profession and establish my own fashion house
National Service	Because am a service personnel

Source: UTDBE Impact Assessment Endline Study, 2016

Further probing revealed that more than a third of the “other” teachers who were willing to remain in teaching would prefer to teach at the SHS level while a quarter preferred teaching at the tertiary level. Apart from the KG level where more female teachers outnumber their male counterparts, more males would prefer to teach in all the higher levels of education (Table 10.13). This finding is similar to the trends found during the baseline and midline.

Table 10.13: Teachers preferred levels for teaching

Sex	KG	Primary	JHS	SHS	Tertiary	Total
Male	9 (1.8%)	48 (9.5%)	58 (11.5%)	115 (22.7%)	80 (15.8%)	310 (61.3%)
Female	14 (2.8%)	37 (7.3%)	33 (6.5%)	61 (12.1%)	51 (10.1%)	196 (38.7%)
	23 (4.5%)	85 (16.8%)	91 (18.0%)	176 (34.8%)	131 (25.9%)	506 (100%)

Source: UTDBE Impact Assessment Endline Study, 2016

Conclusions

This chapter identified and discussed the characteristics of ‘other’ teachers who were not GPEG supported UTDBE trainees observed during the lessons but were teaching at the school and interviewed as part of the endline study. They include all “other” teachers who were present on the day the research team visited the schools. This chapter has presented the findings related to “other” teachers who were also teaching at the schools where the UTDBE trainees were found. These teachers were therefore the “colleague” teachers of the UTDBE trainees and often served as a role model teachers for the trainees. The findings were presented in order to present the context in which UTDBE trainees were teaching and compare the patterns of behaviour, commitment and background characteristics to better understand the UTDBE programme contribution in general.

A total of 570 “other” teachers with varying years of teaching experience (1-20 years) at all grades at the basic level (KG, Primary and JHS) were interviewed in this study. This indicates a consistent decrease in the number of “other” teachers in this category from the baseline (645), midterm (664) and endline (570) at a rate of 11.6%. Two major categories of “other” teachers were encountered in the study: professional teachers and non-professional teachers. The professional teacher category included all other teachers who are trained teachers either from the Colleges of Education or Universities, while the non-professional category refers mainly to ‘pupil’ teachers including National Service Personnel, Community Service Volunteers, UTDBE trainees, DBE distance students, NGO-Sponsored Volunteer teachers, and National Youth Employment teachers.

The results show that there is a significant proportion of non-professional teachers (33.3%) in the classrooms particularly in schools in deprived communities visited who were not part of the

UTDBE programme. It is a further indication that, in spite of the current UTDBE intervention, there is still an existing pool of untrained teachers who should be assisted to train as teachers to serve in these communities. This category of teachers could be targeted for sponsorship and INSET training to enhance their teaching abilities in the classroom, while efforts are made towards enrolling them on pre-service training programmes. This is particularly important because their retention in the classroom after training is largely guaranteed because approximately 90% of them expressed their willingness to build a career and remain in the teaching profession. The study also suggests that there is a high demand for distance learning since a significant proportion of the “other teachers” identified at the school sites had opted for distance education programmes run by CoE’s or Universities and had self financed themselves for this tuition.

From the analysis of the baseline, midterm and end line data, we conclude that, apart from the Western and Northern Regions, by the endline survey there were decreases in the number of “other” teachers in schools visited in the Brong Ahafo and Upper West Regions. This could be the result of either a reduction in the number of teachers in the schools visited over the period in the affected districts or an increase in the supply of trained teachers to replace the non-qualified “other teachers”.

On the distribution of “other” teachers by region, district and sex we conclude that the distribution of “other” teachers is skewed in favour of males. On the distribution of “other” teachers by gender and levels of deprivation, it can be concluded that there were more male “other” teachers in all three levels of deprivation than female “other” teachers. We also conclude that in all regions and in all levels of deprivation, except in the less deprived schools of Upper West Region, males dominate in the distribution of “other” teachers. Only the Upper West Region had the majority of its “other teachers” located in less deprived communities.

On professionalism of “other” teachers, the findings suggest that over three quarters of the “other” teachers have various professional teacher qualifications. On a regional analysis the Brong Ahafo Region has the highest number of professional “other” teachers. The majority of them were trained teachers and form more than a third of the “other” teachers population. In relation to the distribution of “other” teachers by classes taught we found the majority taught in the lower primary. On the gender distribution of DBE “other” teachers by classes taught, the findings show more female “other” teachers at the KG and lower primary while male “other” teachers dominate the Upper primary and JHS classes.

On “other” teachers teaching experiences at their current schools, the findings show “other” teachers’ teaching experiences ranged from one year and below to over 21+ years. The majority of have teaching experiences spanning between 2 and 5 years. With respect to “other” teachers’ residence in relation to the school community, the findings show the majority lived in the school community.

The comparison on type of training mode revealed that more “other” teachers were trained through the traditional full time training than through the distance mode. However, a higher proportion of “other” female teachers studied by distance learning than their male counterparts who preferred full time mode. Similarly, on the qualification of “other” teachers the studies found over fifty percent of the other teachers have Diploma in Basic Education (DBE) certificates. There were more male “other” teachers with DBE certificates than females. The regional distribution of “other” teachers with DBE showed the Brong Ahafo Region had the largest proportion of “other” teachers with DBE qualification. On the subject of where the DBE “other” teachers reside the study found more than half of the DBE “other” teachers reside within the school communities in which they teach. However, more female “other” teachers stayed outside the community in which they work. On the gender distribution of DBE “other” teachers, the findings show slightly more DBE “other” teachers in deprived schools. Similarly, the distribution show minor differences between the numbers of DBE “other” teachers in less deprived areas than in extremely deprived schools.

On the subject of the number of times DBE “other” teachers have received INSETs, the study found the number of INSETs ranged from none at all to over 21 times. However, over two thirds of the other teachers had INSETs in the range of one to five times within the last five years. This goes a long way to caution us on accepting the claims of the DEOs and their UTDBE coordinators that they organized regular INSETs for UTDBE teachers. The claim should be taken with a pinch of salt as it is nothing but mere window dressing.

On reasons encouraging teachers to stay in deprived areas, some teachers wanted to remain because of the friendly and caring nature of the school communities. Others are enticed to stay because of the prospects of being considered for sponsorship for further academic laurels; and others want to stay because of incentive packages for teachers in deprived communities. Others are forced to stay because they are bonded, in lieu of their sponsorship while they were in training and some are staying to pastor the communities.

Chapter 11: Conclusions, Key Findings and Recommendations

11.1 Introduction

The impact assessment of UTDBE aimed at assessing the extent to which the programme has achieved its objective of upgrading the skills and competencies of the untrained teachers in the deprived targeted districts. The evaluation further investigated the trainees' career aspirations and willingness/commitment to serve as teachers in rural deprived areas once the programme was over. The study also looked at the cost effectiveness and value addition by comparing the UTDBE competencies and costs to the conventional DBE programme.

This chapter summarizes the conclusions, key findings and recommendations of the UTDBE Endline Impact Assessment Survey Report. In all, 193 schools were visited across the nine sampled districts over the stipulated data collection period. Classroom observations were conducted in 193 sampled schools in which 400 one hour classroom observations were conducted with UTDBE Trainees across the nine sampled districts and an additional 200 observations were conducted for the DBEs. Out of the sample, 92 of the UTDBE trainees were located in less deprived schools, 152 in deprived schools and 156 in extremely deprived schools. A total of 400 UTDBE trainees were tracked over the 2 year impact evaluation including 226 males and 174 females. The number observed was slightly higher than the sample during the baseline study which recorded 235 males as against 157 females (approximately 57% male and 43% female sample). Interviews were also conducted with District Education officers, head teachers and other teachers present at the school on the day of observations.

11.2 The Key Findings

11.2.1 Location and Background Characteristics of UTDBE Trainees

The study found that, in relation to location and background characteristics of UTDBE trainees, a high proportion of trainees were “natives” of the communities in which they were teaching (over 70%). A large number of the UTDBE trainees were teaching in the extremely deprived and high endemic poverty zones like Bunkpurugu Yunyoo, West Mamprusi, Talensi-Nabdam and Lawra Districts in the Northern Region, Upper East and Upper West Regions respectively. The study further revealed that most of the UTDBE trainees being from the community were actively involved in most community initiatives including school improvement projects, PTA meetings and knew the children they were teaching. This was seen as one of the reasons that contributed to the high level of commitment exhibited by these UTDBE trainees towards their teaching in the classroom and their path to becoming professional teachers. Comparatively the districts and regions with less deprived communities such as those in the Brong Ahafo and Western Regions

had a high proportion of UTDBE trainees who were not from the community, but from the district or region, and were having to find accommodation or travel daily to work in the communities they served in.

11.2.2 Supply, Demand and Drop-Out Rate

An analysis of the trained teachers demand and supply across the national, regional and district levels studied revealed a tremendous demand for trained teachers with little option other than the UTDBE programme to ensure the supply of trained teachers to Ghana's most remote and often deprived areas. The UTDBE programme was assisting to close the trained teacher gap in these areas and has the potential of augmenting the shortages of trained teachers especially at the most deprived and remote communities of the sampled districts. However the remaining 24% of UTDBE trainees who are still not on payroll must be addressed.³⁹

Across all the regions and districts sampled for the IA study, data gathered suggest that there remain a very high proportion of untrained teachers (often over 40%). The lack of trained teachers is compounded by the rapid pupil enrolment growth at the basic level as a result of enrolment growth not keeping pace with the trained teacher supply; this has resulted in a poor quality of educational provision across the country but most exacerbated in the three northern regions and Western region (Associates for Change 2013).

In all the sampled districts, the KG level had the highest rate of untrained teachers estimated at 68.1% followed by the Primary level with a rate of 51.4%. Junior High School had a rate of 28.6% untrained teachers. A large proportion of untrained teachers were female, particularly at the lower Primary levels including KG. Poor quality teacher resourcing at KG and Primary levels has adversely affected learning outcomes and has also risked the potential cognitive development of pupils at Primary level and beyond. All nine districts sampled confirmed that the UTDBE programme was used as the main strategy for closing the trained teacher resource gap in their basic schools and had strengthened teacher retention in these areas.

The UTDBE programme has experienced a drop-out of trainees across all nine study districts. On the whole, the endline study found that, by the 2014/15 academic year; out of the 8,367 trainees who had been enrolled in the programme 19.4% had dropped out distributed in the ratio 11.2% males and 8.2% females. The study found the reasons for dropping out included: financial challenges; inability to cope with working while studying; poor academic performance; poor initial candidate selection by districts and family related challenges. Trainees unable to complete the training rob the districts of the maximum benefits of the programme in terms of the cost and quality of the teacher resource, thus, delaying the attainment of targets set by districts to supply all basic schools with trained teachers in line with the Ministry of Education's target of 95% by 2020.

³⁹ Several UTDBE trainees who were admitted to the programme were not on payroll even though this was one of the requirements,

The results from the questionnaire to “other” teachers serving at the school sites visited (but not on the UTDBE programme) reveal that there is still a significant proportion of non-professional teachers (33.3%) in the classrooms particularly in schools in deprived communities. This further indicated that there is still an existing pool of untrained teachers who should be assisted to train as professional teachers to serve these communities. This is particularly important because their retention in the classroom after training is will extend for another 3-5 years since the majority reported that they were willing to build a career and remain in the teaching profession.

11.2.3 Classroom Ratings

The findings on classroom observation indicators show that the endline assessment ratings improved over that of the baseline. The UTDBE trainees were rated ‘satisfactory’ in 16 out of 19 indicators at the endline as compared to 6 during the baseline. Trainers were rated ‘unsatisfactory’ in only 3 indicators (i.e. preparation of lessons, sensitivity to diverse learner needs and the use of TLMs). The endline assessment findings show female trainees outperformed the male trainees in 17 of the 19 assessment indicators. The findings show that, the male trainees improved in their endline performance compared to baseline assessment. The regional analysis with regard to skill acquisition also shows that some regions improved while others deteriorated in their performance in the endline assessment.

The findings further showed marked declines in performance in the schools located in less deprived communities. Thus, the endline assessment findings for schools in deprived areas recorded four areas of unsatisfactory performance as compared to the LOS assessment where there was not a single unsatisfactory performance. The findings in the extremely deprived schools show a slight improvement in the endline assessment results compared to the previous assessments.

11.2.4 Lesson Planning and Preparation

The findings in the endline assessment showed that UTDBE trainees demonstrated competence in almost all skill areas of lesson planning and preparation compared to the baseline assessment. All three indicators which were scored low at baseline --47% with unsatisfactory performance in: repeated lessons, no lesson notes and poor lesson plans declined to 32% at the endline. Conversely, 66.8% of UTDBE trainees were rated positively on lesson planning and preparation during the endline as compared to 52% at the baseline. The endline assessment found that most trainees had well prepared lesson plans which was not the case during the baseline. The regional assessment shows improvement in lesson planning and preparation during the endline phase compared to that of the baseline results.

11.2.5 Subject Content Knowledge and Content Accuracy

How much a teacher knows determines the quality of classroom delivery. The endline study found that trainees' subject content knowledge and content accuracy has improved. An analysis of a three-year tracking of trainees' performance in English Language examinations results showed a statistically significant result of improved English Language performance. A paired sample *t*-test of significance analysis on the performance of the trainees rejected the null hypothesis that "there is no improvement in trainees' performance in English Language" over the three year period thereby accepting the alternative hypothesis that "there is improvement in trainees' performance in English Language". The result is statistically significant ($t_{0.05, 2859} = -12.88$; $p < 0.05$). This implies that, in general, performance in English Language has improved from Year 1 to Year 2 for UTDBE trainees.

The overall findings on subject knowledge and content accuracy by levels of deprivation for deprived areas show improvement in the endline assessment in the number of trainees scoring within the "good" category.

11.2.6 Comparative Analysis of UTDBE and DBE Teachers

A comparison of DBE and UTDBE examination results in the three subjects: "Trends in Education, School Management, and Integrated Science" found that at the lower grades (E, D, D+, C, C+), there is a higher percentage of DBE students, whereas at the higher grades, (B, B+, A), there is a higher percentage of UTDBE students. The findings show that the UTDBE students performed better than the DBE students as the modal grade for the DBEs is B and that for the UTDBEs is B+. Similarly, analysis of statistical tests of two independent samples *t*-test results show the UTDBE group mean of 72.1% as against the DBE group mean of 68.8% suggesting that UTDBE trainees performed better than the DBE trainees. *The general findings on the comparison of examination results shows that while the DBE trainees performed better in the core subject area of Integrated Science, the UTDBE trainees performed better in the professional field course of Trends in Education and School Management.*

In terms of subject knowledge and content accuracy during the lesson observations, many more DBE teachers scored "satisfactory and above" grades than the UTDBE trainees did. The overall findings on language of instruction show that both UTDBE and DBE teachers follow the Language of Instruction Policy which advocates the use of more Ghanaian Language in KG and LP and the use of English in Upper Primary and JHS. The endline findings show that more DBEs were ranked "satisfactory" than the UTDBEs on the use of generic skills, however, the UTDBE trainees' use of TLM is better compared to that of the DBE teachers.

11.2.7 Cost Effectiveness and Efficiency

The findings show that, on average, the government spent less on a UTDBE trainee per annum than on a DBE trainee. The DBE trainees however, spend more than UTDBE trainees on individual costs per semester leading to a higher unit cost than UTDBEs. Further, the government bears a higher percentage cost for training a DBE trainee (58%) than it does on a UTDBE trainee (49.8%); it costs the government about 60% more to train a DBE than training a UTDBE, making the UTDBE programme more cost efficient even when a major cost component (which was 63% of the total cost) in the DBE model has been scrapped from the total cost due to government policy.

11.2.8 Retention in Deprived Districts

The study found that 60% of UTDBE student teachers come from their school communities and districts which had a positive impact on their “staying power” as rural trained teachers. The findings also suggest that the programme helped to augment the number of female teachers living and working as trained teachers in the rural deprived areas since they were from the communities and sometime already married with families. The study found three categories of factors likely to encourage UTDBE trainees to stay in deprived communities (schools) after completing their course of study: school/community related reasons; personal reasons; and reasons associated and related to education authorities’ efforts at retaining the trainees after they complete the course. The findings on school community level factors of retention include the sociable nature of the community, good teacher community relationships and community support to teachers. The findings show that individual parents, chiefs and elders as well as the SMC/PTAs in the communities all play critical roles to ensure the wellbeing of both teachers and pupils in order to help retain teachers within the communities.

11.2.9 Use of Language

The overall findings for the use of language vary with the different assessment types. During the baseline the two dominant language modes were the combined use of L1 (mother tongue) and L2⁴⁰ and the use of mainly English. In the endline assessment the findings show a change with emphasis shifted to the use of “mainly Ghanaian Language” and “English only”. The endline assessment findings show that, regardless of levels of deprivation, most teachers’ use of language of instruction, group around three descriptors: “Ghanaian Language only”; “English only” and “mainly English”.

⁴⁰ L1 refers to the local language while L2 refers to a second language.

11.2.10 Preparation and Use of TLMs

The findings on UTDBE trainees' use of TLMs fluctuated between the baseline and the endline assessments. During the endline assessment there was considerable improvement in trainees' use of TLMs as compared to the baseline results. Notwithstanding this change in instructional practice, the preparation and usage of TLMs were among the three indicators in which trainees were rated unsatisfactory during the endline.

11.2.11 Class Control and Management

The findings on UTDBE trainees' class control strategies show trainees' endline skills had improved over that of the baseline with more trainees demonstrating the use of good class control measures. The endline findings on UTDBE trainees' classroom management and organizational skills show a remarkable improvement over that of the baseline. The endline findings on UTDBE trainees' class control and disciplinary practices show that the majority of the trainees demonstrated evidence of positive class control and disciplinary practices during lessons delivery.

11.3 Key Conclusions

The following key conclusions emerged from the UTDBE endline study:

UTDBE trainees were performing at a commensurate level in terms of instructional skill and competency to the DBE trained teachers who had two years of teaching practice. Significant differences were found in relation to the commitment and attitude to working in rural deprived areas with the UTDBE trainees having a higher commitment level to serving in these deprived areas due to three key factors: relationship and affinity to the community, desire to serve their community and aspiration that they would one day be a professional GES paid teacher. A high proportion of untrained teachers are still found in the three northern regions (30-40%); given the challenges of accommodation and willingness to live in these often deprived areas, the GES should consider future scale up of the UTDBE programme in order to ensure that all 'pupil' and untrained teachers are trained and remain at post for at least 9 years.

The study found that the location in which the teachers were living was a significant factor in their availability in the classroom particularly in relation to presence at school and relationships to the community. The endline data indicate that over 70% of the trainees are natives of the deprived communities, who feel obliged to serve the children within the community with quality instruction. Thus, the UTDBE model of training teachers via the UTDBE programme will enable the Ministry of Education to achieve its target of 95% trained teachers in all public basic school by 2020.

Although the DBE's showed slightly higher levels of subject content knowledge their career trajectory indicated that they would not be willing to serve in these remote rural areas for more than 3 years compared to the 7 years that the UTDBE teachers were serving. The value addition of UTDBE suggests that this is a very strong programme for ensuring that 'untrained' teachers from the most deprived rural areas of Ghana are able to transition to professional careers in teaching and provide at least 7 years of teaching in these remote areas.

The findings also suggest that the UTDBE programme was far more cost effective for the GoG in ensuring the achievement of the trained teacher development strategy of 95% trained teachers in deprived areas by 2020. In terms of cost effectiveness, the study concludes that the UTDBE programme is 60% less expensive to government than the DBE programme even after the removal of Government allowances for trainees. From a comparison of individual cost per semester for UTDBE and DBE trainees, it was evident that male DBE trainees spend more than male UTDBE trainees and female DBE trainees also spend more than female UTDBE trainees. We conclude that DBE trainees spend more than UTDBE trainees per semester per individual. From the results, we conclude that the DBE trainee's unit cost is higher than UTDBEs. We conclude that the government bears a higher cost training a DBE than training a UTDBE. The overall conclusion is that the UTDBE programme is more cost effective than the DBE programme.

From a quality of education perspective, the UTDBE trainees were able to use the appropriate language of instruction at the lower primary level (L1) in order to facilitate early grade reading to a higher extent than the DBE's. This was mainly based on the fact that the trainees were from the community and were native speakers of the L1. This has major implications for implementing a more effective government strategy in early grade reading which is one of MOE's key objectives. There was also evidence of improvement in the UTDBE trainees' subject content knowledge over the period of the training programme. From the general findings on the comparison of examination results of DBEs and UTDBEs we conclude that, while the DBE trainees performed better in the core subject area of Integrated Science, the UTDBE trainees performed better in the professional field course of Trends in Education and School Management. The overall endline classroom observation ratings are indicative of improved skills gained by trainees in lesson planning/preparation, teaching methodology and classroom organization and management over the three years of the UTDBE training.

The UTDBE programme has transformed the face of teacher education in the remote rural areas of Ghana and provided incentives for young SHS graduates to stay and teach in these areas; it has also enhanced the status of untrained "pupil" teachers by equipping them with requisite teaching skills and providing them with a professional qualification which has improved their status in the teaching profession. The programme has also assisted the District Education Offices streamline their selection of teachers and forced many to focus on existing untrained teachers to fill vacancies of trained teachers in the most deprived communities.

11.4 Policy and Programme Recommendations

On the basis of the study findings, the following actions would enhance the quality and full realization of the objectives of the UTDBE Programme⁴¹:

- With regard to cost effectiveness and efficiency of the UTDBE programme, we fully recommend that the Government of Ghana adopt the UTDBE training mode as it is less expensive to train qualified teachers for the basic level of education compared to the conventional DBE programme. The programme has greater potential of retention of teachers in rural deprived communities than the convention DBE programme because most of the beneficiaries are natives of rural communities and they themselves come from the deprived areas. Another key advantage to training teachers from the communities is that they have no problem with accommodation, language of instruction and living arrangements; the programme also should it is having a significant impact on increasing the number of female teachers willing and able to teach in these areas. Most importantly the programme stimulates a desire within young adults/youth who are already serving as volunteer teachers in their communities to continue as committed teachers in some of the harshest and most remote areas of the country.
- The UTDBE programme should continue to train eligible untrained teachers in the most deprived areas of the country in order to meet the MOE target of 95% trained teachers by 2020. This would require better targeting of untrained teachers across the most deprived districts and ensuring that sponsorship and INSET training enhance their teacher training in the classroom. The programme selection criteria should place special emphasis on selecting eligible candidates who have been serving in their communities as pupil or volunteer teachers and come from the locality with special emphasis on females (Action: MOE/GES). SHS graduates (with the requisite skills) who have served for at least two years as volunteer teachers willing to work and serve in these deprived areas should be considered high priority by MOE/GES in order to close the trained teacher supply gaps at district levels across the country.
- The findings suggest that the UTDBE programme course content should be fully reviewed to ensure that the UTDBE course curriculum is in sync with current instructional approaches to basic education level teaching; much more content time should be spent on key subjects such as early grade reading, literacy and numeracy instruction, child development, disciplinary and motivational practice for students using positive encouragement, efficacy of TLMs in the learning process etc. The current curriculum needs to be much more relevant to primary education, especially focussed to lower primary teaching and possibly KG levels. This would involve **at least** two more courses on the teaching of literacy and numeracy using a bilingual literacy approach

⁴¹ The agencies in the bracket indicate who should lead on implementing the recommendation.

highlighting current reading strategies in early literacy, language development, phonics and phonological awareness, vocabulary development, fluency and comprehension (TED, NTC with selected Colleges of Education and Universities).

- It is recommended that the UTDBE modules must be fully revised and structured in a way that will be user-friendly with minimum external support at district and college level. This would likely involve the use of online supplementary materials from the TESSA project and other multimedia CD RMs available for training teachers with emphasis on teaching of literacy and numeracy for primary level. Subject content must also be designed to focus on the relevant subject areas which are needed by learners at different levels (e.g. lower primary, upper primary and JHS).
- The UTDBE programmes in future should be designed to focus on targeting teachers for teacher training at lower primary level possibly including KG in order to ensure that the trained teachers are available at KG to P3 levels with the (L1) language of instruction in these deprived rural areas and improve literacy and numeracy outcomes.
- A two year period of service as a teacher before application to the UTDBE programme, four year period during the UTDBE programme and a three year period of bonding after the completion of the programme should continue to be mandatory in order to be accepted onto the programme with GOG support. Directors of Education should be advised not to transfer any teachers who are on the UTDBE programme. (Policy Action: MOE/GES).
- MOE/GES should consider a private public partnership arrangements with the Colleges of Education; the programme should be designed to support untrained teachers in the most deprived rural areas of the country and GOG should provide subsidies to the untrained teachers directly through supporting their fees at the relevant colleges. Currently six Colleges of Education are offering UTDBE programmes to untrained teachers across the country on a private fee paying basis. Some NGO's are supporting trainees on the programme through a 70:30 cost share with the beneficiaries and the demand appears to be high.
- As the migration of trainees onto the government payroll greatly resolved trainees' financial challenges and enabled them to contribute to their financial component of the programme, we recommend that the trainees who are still not on the government payroll be migrated onto the payroll in order to maximise the outcomes of the UTDBE programme and help meet GOG targets for trained teachers (GES /MOE, DG, GES and Controller and Accountant General).
- The New Teacher Professional Development Framework by TED and NTC which provides linkages of the UTDBE programme to the system of performance appraisal, promotion, incentives and teacher development system for licensing. The New teacher professional development policy framework should be fully integrated in any new

UTDBE programme design. This will assist in strengthening the linkage between the demands of INSET, mentoring and coaching requirements and teacher professional development along with their appraisal and code of conduct (Action: GES, NTC and TED).

- Any future INSET programming should have much stronger accountability and monitoring systems in place in order to ensure proper implementation and support is provided to UTDBE trainees. This would include stronger oversight from national and regional INSET structures particularly the provision of cluster based meetings and tutorials for UTDBE students and head teacher coaching (GES/TED).
- On the high incidence of drop-outs and its financial implications for the programme, we recommend that efforts be made to reduce the high incidence of drop-out to ensure that the districts derive maximum benefits from the programme so the target of filling all basic schools with trained teachers is met. Reducing the drop out would require that the proper selection and vetting be done by the DEO with a focus on selecting academically qualified and committed teachers (student, assistant, pupil, volunteer etc) already serving in their own communities (Action: District Education Offices and TED).
- We also recommend that potential trainees who are having lower scores on their WASCE and do not have all the necessary requirements should be given an “access” courses to review their basic content particularly in Maths and Science before enrolling on the UTDBE; these access courses should be particularly targeted at female candidates as has been done in the past (GES, TED, and NTC).
- Circuit Supervisors should be given refresher courses on mentoring and coaching. District grants should be better tied to accountability means of ensuring the necessary resources are used to intensify their monitoring and supervision of UTDBE trainees at school level; School report cards and performance data should be tracked and SPAMs should also be used to monitor CS performance through feedback from SMC’s and Head teachers (Director BED, TED and District Director of Education).
- Future UTDBE programmes should ensure that the selected Colleges of Education are within the region where the trainees are stationed. This will reduce the cost for trainees and increase the oversight, support and interaction of trainees with their mentors/coaches while they are at their schools (Action: GES and TED) .
- It is expected that available UTDBE training opportunities should be equitably distributed among deprived districts based on the levels of trained teacher demand to maximise the benefits to the district and programme outcomes. Better targeting is needed to maximise the full benefits to the districts on the programme which would involve a quota system to the most deprived and needy districts based on their trained teacher gap.

It is recommended that gender considerations be factored into the selection criteria. Gender inequities in the trained teaching force at district level should be factored to cater for female pupil teachers who can effectively live and work in these areas and be trained to serve which could enhance girl child retention (GES and TED).

- The fluid nature of admissions qualification into the programme should be carefully examined. It has created an opportunity for Directors to interpret requirements as they find convenient. Some of the trainees on the programme have qualifications far below what is generally accepted for admission to the Colleges of Education. Consequently, tutors complain of the low content absorption rate of the trainees as compared to the traditional DBE students. The handling of these UTDBE trainees appears to be more challenging in view of their low 'readiness to learn' capabilities. Tutors spend more time adapting remedial teaching methods to bring them up to an acceptable level on which new concepts can be built (GES/TED and District Education Offices).
- The UTDBE programme should be adopted as a policy option for teacher training to ensure equity and quality education in Ghana's most deprived communities and districts. The District Assemblies, DEOCs and DEOs should own the UTDBE training programme and increase collaboration with the Colleges of Education in the district or region. A UTDBE policy should be developed and guided by the principle of cost-sharing by all stakeholders including the GOG, District Assemblies, Colleges of Education and beneficiaries themselves. A substantial proportion of the cost should be borne by the District Assembly for training its own teachers who are to serve in these often remote and very difficult areas. This will be in line with the decentralization policy of the government and will help to close the trained teacher gap in the most needy areas of the country.

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ANNEXURE

Annex 1: Endline Impact Assessment Survey Instrument Descriptions

Instrument #	Instrument Name	Description of the instrument	Total Number administered
1	Interview with TED Staff	This instrument was administered to selected GES officials at the Teacher Education Division (TED) including UTDBE coordinators. It gathered information related to the implementation of the UTDBE programme.	3
2	Entry questions to the District offices to verify data and sample	This instrument was administered to UTDBE coordinators at the District Education Office. The purpose of this instrument was to assess the retention and location of teachers before and after the training. It also sought to ascertain the movement of teachers within the district level.	9
3	Interview and data collection instrument for District Education Officers	This instrument was used at the district education office with the District human resource officer to gather information on enrolment, staffing, drop out and retention among pupils and teachers at the district.	9
4A:	Focus Group Discussion (FGD) with Frontline Directors, Teams	This was conducted with frontline Directors (AD Supervision, AD Human Resources, AD Finance and AD Planning) at the district level to ascertain their level of understanding and involvement in the UTDBE programme. It assessed the importance districts attached to the UTDBE programme.	9
4B:	Focus Group Discussion (FGD) with Circuit Supervisors and DTST	This was conducted with Circuit Supervisors, District UTDBE Coordinator, and District Teacher Support team members to measure their level of monitoring and engagement with UTDBE trainees at the district level.	9

5	Interview with District Directors of Education (DED) and the UTDBE District Coordinator	The District Director's interview sought to gather information on the general situation of basic education in the district. Key themes addressed included human resource, the significance of the UTDBE programme and its cost effectiveness.	9
6	Interview with College of Education CoE Principal / Tutors/ UTDBE Coordinator	The CoE Principal or vice principal, and tutors interview focused on looking at the backgrounds of the UTDBE trainees, the selection procedure and the quality of training provided as well as challenges encountered in the implementation of the UTDBE programme.	8
7	Template for costs of UTDBE and DBE	This template gathered cost of training UTDBE trainees from the various colleges of education.	5
8	Template for course content	This template was used at the Colleges of Education to gather data on the course content for DBE and UTDBE programmes respectively for the various years and semesters provided for. This was to enable the team make a comparison on the content knowledge of DBE and UTDBE trainees.	5
9	Template for Examination results	This template gathered exams results to enable the team assess the level of improvement in content knowledge of UTDBE trainees.	5
10	Interview with Head Teachers	This was conducted with heads of schools to assess their understanding of the UTDBE programme, and what support systems were in place for the UTDBE trainees.	173
11	School Checklist	This gathered basic data from each school including number of teachers, enrolment, and dropout rates among others.	180
12	School Observation Note	This enabled the researcher to have a general impression on arrival to each school. Observations were mainly focused on teachers and head teachers' behaviour during the course of the day.	173
13	Lesson Observation Instrument	This instrument helped researchers observe UTDBE trainees and DBE teachers while they taught. Trainees were assessed in the areas of methodology, use of TLM's, use of disciplinary practices etc. Trainees were observed in either Mathematics, English or Science subjects for	400

		one whole lesson	
13A	Exercise Book Checklist	5 exercise each of male and female pupils in the classes observed were assessed to see the number of exercises given, those that have been marked, the question type etc.	
14A	Interview with UTDBE Trainees	This was an in-depth interview with the UTDBE Trainees to assess their level of satisfaction, their general view of the programme and what importance they attach to the programme. It also looked at the challenges trainees face in pursuing the course.	400
14B	Cost-Effectiveness Data for UTDBE trainees	This data gathered cost data from UTDBE trainees undergoing the course.	361
14C	Interview with DBE teachers	This was an in-depth interview with the UTDBE Trainees to assess their level of satisfaction, their general view of the programme and what importance they attach to the programme. It also looked at the challenges trainees face in pursuing the course.	185
14D	Cost-Effectiveness Data for DBE teachers	This data gathered cost data from DBE teachers who were observed	185
15	Questionnaire with all Teachers in the School	This looked at the aspirations of all kinds of teachers found in each school and it tried to look at the types of teachers that were more likely to stay and teach in rural deprived areas.	622
17	Focused Group Discussion with SMC/PTA	SMC/PTA interviews looked at their engagement with schools and what support was available o UTDBE trainees in their communities.	72

Annex 2: Instrument 13: Lesson Observation Instrument

(Fill this instrument during lesson observation sessions for the selected teachers in one of Mathematics, English or Science subjects. Ideally, first fill out your observations and descriptions in your notebook and transfer into the instrument at the end of the day when the two researchers who sat in the lesson delivery have compared and contrasted their notes to agree on the ratings and assessment. NB: Two researchers are to observe every lesson delivery with a UTDBE teacher in English, Mathematics or Science lessons. The lesson observation should be for the full period (45 minutes).

Indicate the start time: _____

End time of the lesson: _____

Name of observer 1:	
Name of observer 2:	

(Instructions for the enumerators: Two people should observe the class together. The Lesson observed should either be English, Mathematics or Science.

SECTION A: Pre-Observation Classroom Check List

Name of District	
Name of School	
Name of Community	
Name of Teacher	
Type of Teacher	UTDBE _____ DBE _____
Gender of Teacher	Male_____ Female_____

Approximate Age of Teacher	Under 20___ 20-25___ 26-30___ 30-40 ___ 40-50___ over 50___						
Residence of Teacher	Lives in the Community___ within five km radius of the community___ over 5km radius of the community___						
Affiliation to the Community	Is from the Community Yes:_____ No: _____ Is not a native to the community but from the District ____ Is not from the district _____						
Language Competency	Speaks the language of the people in the community___ Does not speak or understand the language of the children___						
Approximate number of years the teacher has been teaching?							
What is the training background of the teacher?	DBE _____ UTDBE _____ District Education Office In-service training in the last two years Yes___ No___ Other NGO supported training at district or circuit level in the last two years Yes___ No___ School Based In-service Training within the last two years: Yes___ No___						
What year did the teacher enter the UTDBE program?							
What year did the teacher enter the DBE programme?							
Approx. number of years since the teacher completed their DBE training including the year out.							
Which class was observed (Grade Level)							
Which subject are you observing? (English, Maths or Science)							
a. Is there an assistant teacher?	Yes		No				
b. How is the assistant being used?							
Total number of children on register? (check at end)	Boys		Girls		SEN Boys		SEN Girls
Total number of children present in the class?	Boys		Girls		SEN Boys		SEN Girls

Number of seating places?					
Number of writing places?					
Number of textbooks? (available for subject being taught)					
Number of children with pencils or pen?					
TLMs displayed on the wall?	Yes		No		
TLMs stored in the classroom?	Yes		No		
Type of books storage?	Cupboard		Box		Don't have
Is there adequate lighting in the classroom?	Yes		No		
Is there good air/ventilation in the class?	Yes		No		
Describe the condition of the classroom for children? Mention the space, type of furniture, blackboard, ventilation, light etc... and other factors you observe in the classroom					
<hr/>					

Instruction Planning Skills (Assessment of Lesson Plan)

Objectives	Teacher states objectives which are irrelevant to topics/ sub-topics	Teacher states objectives which are relevant to topics/ sub-topics but in general and abstract terms.	Teacher states clear and appropriate SMART objectives, but not related to evaluations which are stated in lesson plan.	Teacher states clear and appropriate SMART objectives which are closely related to evaluations stated in lesson plan.	Teacher states clear and SMART objectives which include at least 2 profile dimensions in the syllabus (knowledge understanding, application process skills and attitudes)
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
Core Points	Teacher states core points which are irrelevant to topics/ sub-topics	Teacher states core points which are relevant to topics / sub-topics, but not related to main skills and/or concepts to be learnt.	Teacher states core points which are related to main skills and concepts to be learnt.	Teacher states core points which are closely related to lesson objectives	Teacher states core points which clarify main skills / concepts related to pupils' readiness / daily life.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
Describe the teacher's preparation for the lesson and his/her usage of lesson plan for teaching the lesson...					

Teacher Learner Activities	Teacher provides activities but not related to core points/objectives	Teacher provides activities that are related to core points/objectives of lesson, but these are not helpful for pupils to understand new concepts	Teacher provides activities which are relevant to core points / objectives and helps pupils understand new concepts.	Teacher provides activities that encourage pupils to reflect their readiness, existing knowledge and concepts.	Teacher provides activities that encourage pupils to apply new knowledge / concepts for their daily life.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
Use of Teaching Learning Materials	Teacher does not state TLMs	Teacher states TLMs but not relevant to lesson objectives	Teacher states TLMS which are relevant to lesson objectives.	Teacher states TLMS which are indicated in suitable development stages of the lesson.	Teacher states appropriate TLMS which are related to previous lesson / topic / daily life and pupils' readiness.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)

Describe the teacher's preparation and use of teaching learning materials. Did the teacher state the TLMs and are they relevant to the objectives of the lesson? Indicate the teaching and learning materials being used by the teacher.

Teaching Methodology and Delivery					
Subject Knowledge and Content Accuracy	Teacher gives inaccurate information. Teacher appears not to have a clear understanding of the topic / concept taught	Teacher gives accurate information but it is not fully related to the objective of the lesson.	Teacher gives accurate information but some explanations are not clear to learners.	There is clear evidence that the teacher understands the topic and/or concepts. Explanations are appropriate to average student.	Teacher demonstrates a clear understanding of the topic and concepts: explanations, questions and answers are appropriate to the range of abilities in the class.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
Describe the understanding and content knowledge of the teacher on the subject being taught.					
Use of Language	Teacher does not use language appropriate to the level of pupils at all.	Teacher uses language appropriate to the level of average pupils, but not in clear and audible voice.	Teacher uses language appropriate to the level of average pupils clearly and audibly.	Teacher uses suitable level of language for different levels of pupils.	Teacher selects and/or adjusts appropriate level of language in accordance with the understanding of each pupil.

RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
Language of Instruction (indicate Teacher's use of mother tongue)	Few children in the class understand the medium of instruction and teacher does not make allowance for this.	Teacher uses appropriate LoI occasionally to clarify but does not always speak clearly for all students to hear.	Teachers uses LoI appropriate to the average pupils.	Teacher ensures that explanations are geared towards the language needs of different pupils.	Teacher selects and/or adjusts appropriate language in accordance with the understanding of each pupil.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
<p>Describe the Language of Instruction used by the teacher in the classroom: Which language was used mainly during the lesson? How was the teacher using Ghanaian Language or English? How were the students using Ghanaian Language or English? Was the use of Ghanaian Language for clarification only, or was a greater proportion of the lesson being translated from English. (Please also indicate here the language in the text books).</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>					

Use of Generic Skills⁴²	Teacher does not make use of generic skills	Teacher makes use of generic skills that are not related to pupils' learning activities and lesson objectives	Teacher makes use of generic skills related to pupils' learning activities and lesson objectives	Teacher puts pupils' knowledge of generic skills into practice appropriately	Teacher encourages pupils to acquire the generic skills and pupils can solve problems with generic skills by themselves.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
<p>Describe the strategies and methods/activities the teacher uses in the classroom? Is the lesson mainly lectured? Is there teacher/student interaction and if so, describe this. Is there student/student interaction (i.e. paired work, group work), and if so describe this.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>					
Use of Chalkboard	Teacher does not use a chalkboard	Writing on the chalkboard is in appropriate size, colour, strength and clear.	Writing on the chalkboard is well planned with letters, figures, and illustrations which are formed neatly and correctly	Writing on the chalkboard is systematically planned and logically organized.	Chalkboard is systematically used to summarize all important or core points of lesson enough for pupils to understand lesson.

⁴² Technique of teaching involving the use of all senses by the teacher to facilitate learning

RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
Questioning Skills	Teacher does not ask questions at all in lesson.	Teacher asks only low order (recall) and rhetorical questions such as yes-or-no questions	Teacher asks well balanced low / high order questions, pauses and call on volunteers to respond	Teacher asks low / high order questions which promote higher order responses and encourages even non-volunteers to respond or ask questions	Teacher asks low / high order questions one at a time and sequence in order of difficulty which is suited to the level of pupils.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
<p>Describe questioning and pupils responses. Does the teacher use repetition and choral responses from the class? Does the teacher focus mainly on more able students to answer questions or give demonstrations? Is the lesson based mainly on questions from the teacher and responses from students or are learners given the opportunity to work individually or in pairs or groups on more open-ended problem solving or activity based questions?</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>					

Gender Sensitivity	Teacher has little or no interaction with students and is insulting or dismissive of either boys or girls	Teacher's attention is biased towards either boys or girls.	Teacher ensures that questions are distributed evenly between boys and girls	Teacher treats boys and girls equally and encourages both to succeed	TLMs, lesson content and teacher's language are all gender neutral, pupils are catered for according to learning needs.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
Sensitivity to Diverse Learner Needs	Teacher has little or no interaction with students with SEN and is insulting or dismissive	Teacher gives attention to students with SEN but at the expense of others in class – learning activities are not designed for learner needs.	Teacher pairs students with SEN with more able students so that they can support learner with activity	Teacher provides SEN pupils with suitable activities.	Teacher provides activities that are suited to the level of all pupils including those with SEN.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
Feedback to Pupils	Teacher does not offer feedback to pupils' responses at all	Teacher offers feedback to pupils' responses but simply tells pupils if their answers are right or wrong.	Teacher offers feedback to pupils' responses that promotes further or better understanding in lesson.	Teacher gives supportive feedback to pupils who make a wrong response and use the response to promote better understanding.	Teacher offers feedback to pupils' responses that promote active and mutual learning among pupils.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)

Describe teacher's use of positive feedback and praises during the lesson observed. How does the teacher use positive feedback (or praises) to reward students who have made correct or good responses – is positive feedback to students varied or does the teacher use one approach, or phrase or response. How does the teacher use encouragements to assist the pupils who are reluctant to participate?

Use of TLMs	Teacher does not use any TLM in lesson	Teacher uses TLMs but not relevant to lesson objectives.	Teacher uses TLMs which are relevant to lesson objective at appropriate stages in the lesson.	Teacher uses TLMS which are stimulating and attractive for pupils and makes pupils use them actively.	Teacher uses TLMs which are relevant to pupils' previous lesson / topic / daily life and readiness and makes pupils understand new concepts and pose / solve problems through TLMs
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)

Describe the usage of Teaching and Learning Material during the lesson in the classroom.

Pupils' Participation	Teacher keeps talking without involving pupils	Teacher introduces activities which arouse pupils' interests, but demonstrates them by teacher him/ herself.	Teacher introduces activities and pupils participate in it actively and with interest.	Teacher introduces activities that equip pupils with generic skills through problem s solving (Teacher initiates inquiry-based learning)	Teacher introduces activities that encourage pupils to apply new knowledge / concepts for their daily life.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)

Describe what the pupils do during the course of the lesson and what proportion of the learners are involved in the various activities.

Use of Teacher Learner Activities	Teacher uses activities but not related to core points/ objective of lessons	Teacher uses activities that are related to core points / objective of lesson, but these are not helpful for pupils to understand new concept.	Teacher uses activities which are relevant to core points / objectives and help pupils understand new concepts.	Teacher uses activities that encourage pupils to reflect their readiness, existing knowledge and concepts.	Teacher assesses pupils readiness / understanding / achievement in the lesson using appropriate questions based on at least 2 profile dimensions in syllabus (knowledge, understanding, application, process skills, and attitudes)
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
Evaluation of Lesson	Teacher makes no evaluation of lessons	Teacher assesses pupils' knowledge / understanding during the lesson, but the assessment is not related to objectives of lesson.	Teacher assesses pupils' knowledge / understanding during the lesson which are related to objectives of the lesson	Teacher assesses pupils understanding during the lesson (formative assessment) and restructures the development of lesson based on the results of evaluation of pupils' understanding.	Teacher assesses pupils' readiness / understanding / achievement in the lesson using appropriate questions based on at least 2 profile dimensions in syllabus (knowledge, understanding, application, process skills and attitudes).
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)

Describe the teacher's use of time during the lesson. Does the teacher leave the classroom for any reason and if so, for how long?
Does the teacher engage in activities other than interaction with pupils?

Classroom Organisation and Management

Classroom Setting	Teacher does not arrange a classroom to provide lesson.	Teacher arranges a classroom for lesson / activities but pupils are not well organized.	Teacher arranges a classroom to suit activities at the beginning of the lesson and gets pupils well organized.	Teacher arranges a classroom as planned to suit activities before starting lesson in advance.	Teacher arranges a classroom to suit a variety of activities, appropriately, timely and in the right place and classroom arrangement is well organized.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)
Class Control	Teacher allows pupils to do whatever they want	Teacher constantly orders pupils what to do.	Teacher sometimes communicates to pupils on what to do and ensures order in the classroom.	Teacher and pupils communicate with each other and ensures good atmosphere for teaching and learning in class together.	Pupils cooperate with each other in making the class in order and ensure good atmosphere without teacher's control.
RATING:	Poor (1)	Needs Improvement (2)	Satisfactory (3)	Good (4)	Excellent (5)

13 A: Exercise Book Checklist (For the UTDBE and DBE teachers observed)

(Select 10 exercise books – 5 girls and 5 boys at random from the class that has been observed and complete the following table; use the class and the subject which was just observed)

Class level _____

2a Sex of child	2b. Date of 1 st exercise – dd/mm/yy	2c. Date of last exercise – dd/mm/yy	2d. Total number of exercises during the period	2e. Number of marked exercises	Subject of the exercise book you reviewed
1.					
2					
3					
4					
5					
6					
7					
8					
9					
10					

3. General Comments related to all the exercise books scrutinised; (Provide adequate space for comment) Total number of exercise books you reviewed:

3a What number of exercises are based on question and answer (approximately)	
3b. Are questions closed ended (right or wrong answer) or open – ended (opinion, comprehension, application)	
3c. What number of the exercises you reviewed use some kind of closed activity (fill in the gaps)	
3d. What number of exercises you reviewed are copied notes from the blackboard (corrections from the board)	
3e. Is there evidence that the exercises follow a logical progression;	

Annex 3: Lesson Observation with DBE Teachers

Introduction

One DBE teacher per school was observed during the LOS and the Endline surveys so that comparisons could be made between the two categories of trainees in their lesson planning and preparation; delivery; and classroom control and management. Classroom observations were conducted in 193 sampled schools to answer the research question on skills gained in lesson preparation. Table 1 shows the number of lesson observations conducted across the five regions by level of deprivation and by gender. In all, 185, classroom observations were conducted across the 9 sampled districts each lasting between 30 minutes and one hour. Out of the total observed DBE teachers, 50 teachers were located in less deprived schools, 69 were from extremely deprived schools whilst 66 were in deprived schools. The sex distribution indicates that 108 males to 77 females were observed thus, showing a sex ratio of about 1:2.

Table 1: Number of Lesson Observations Conducted across Five Sampled Regions

Region	Total Number of Lessons Observed	Number of Males	Number of Females	Number in Deprived	Number in Less Deprived	Number in Extremely Deprived
Brong Ahafo	41	27	14	20	7	14
Northern	31	20	11	13	13	5
Upper East	57	33	24	15	13	29
Upper West	33	14	19	13	3	19
Western	23	14	9	7	14	2
Total	185	108	77	66	50	69

(Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2015)

Mean rating of classroom observation indicators

Table 8.2 shows the mean ratings for the Midterm assessments of DBE teachers. The observed teachers demonstrated satisfactory performance in 17 out of the 19 indicators except in the preparation and use of TLMs. Further, the teachers performed considerably well in subject knowledge and content accuracy with a mean rating of 3.96.

Table 2: Mean rating of classroom Observation indicators for Baseline and Midline Assessments

Indicator	Sample size	Mean rating
Objectives	185	3.51
Core Points	185	3.45
Teacher Learner Activities	185	3.32
Use of Teaching Learning Materials	185	2.91
Subject Knowledge and Content Accuracy	185	3.96
Use of Language	185	3.72
Language of Instruction	185	3.72
Use of Generic Skills	185	3.18
Use of Chalkboard	185	3.66
Questioning Skills	185	3.40
Gender Sensitivity	185	3.51
Sensitivity to Diverse Learner Needs	185	3.18
Feedback to Pupils	185	3.41
Use of TLMs	185	2.57
Pupils' Participation	185	3.31
Use of Teacher Learner Activities	185	3.42
Evaluation of Lesson	185	3.64
Classroom Setting	185	3.48
Class Control	185	3.67

Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2015

Skills acquisition by Gender

Table 3 shows the mean ratings of classroom observation indicators by gender. The results indicate that there are no significant differences between males and females across the three levels of teaching (lesson preparation, delivery and classroom management) except in the use of TLMs. (and are they significant??)

Table 3: Mean Rating of Classroom Observation indicators by Gender

Indicator	Female	Male
Objectives	3.52	3.53
Core Points	3.53	3.34
Teacher Learner Activities	3.41	3.42
Preparation of Teaching Learning Materials	3.17	2.84
Subject Knowledge and Content Accuracy	3.81	3.72
Use of Language	3.57	3.55
Language of Instruction	3.52	3.59
Use of Generic Skills	3.31	3.02
Use of Chalkboard	3.57	3.48
Questioning Skills	3.40	3.38
Gender Sensitivity	3.43	3.35
Sensitivity to Diverse Learner Needs	3.14	3.25
Feedback to Pupils	3.34	3.24
Use of TLMs	2.97	2.48
Pupils' Participation	3.21	3.28
Use of Teacher Learner Activities	3.29	3.16
Evaluation of Lesson	3.29	3.41
Classroom Setting	2.98	3.02
Class Control	3.34	3.55

(Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2015)

*Note: Numbers in bracket are the sample sizes.(you haven't given these!)

Skills Acquisition by Region

Table 4 shows mean rating of classroom observation indicators by regions. Generally, the DBE teachers performed satisfactorily across all the regions in almost all the indicators. On the use of TLMs (preparation of TLMs), only the Northern (2.59) and Western (2.84) regions had ratings below satisfactory. Further, only the Western region recorded ratings below satisfactory in the use of generic skills, gender sensitivity, feedback to pupils and classroom setting. All five regions scored below satisfactory (needs improvement) in the use of teacher learner materials. The Brong Ahafo, Upper East and Upper West Regions performed satisfactorily on 18 out of the 19 indicators. This shows that performance in teaching is quite high in these 3 regions compared to the other regions (Northern and Western). The Northern region recorded four ratings below satisfactory whilst the Western region showed the least improvement in terms of the ratings recording six ratings below satisfactory.

Table 4: Mean Rating of Classroom Observation indicators by Region - DBE

Indicator	REGIONS				
	Brong Ahafo	Northern	Upper East	Upper West	Western
Objectives	3.36	3.44 (41)	3.80	3.59	3.26
Core Points	3.33	3.29	3.57	3.52	3.26
Teacher Learner Activities	3.36	3.44	3.66	3.24	3.16
Use of Teaching Learning Materials	3.09	2.59	3.16	3.10	2.84
Subject Knowledge and Content Accuracy	3.55	3.78	3.84	3.93	3.58
Use of Language	3.36	3.49	3.64	3.79	3.47
Language of Instruction	3.42	3.66	3.57	3.59	3.58
Use of Generic Skills	3.06	3.12	3.23	3.14	2.95
Use of Chalkboard	3.52	3.41	3.61	3.79	3.05
Questioning Skills	3.33	3.17	3.66	3.59	3.00
Gender Sensitivity	3.45	3.22	3.55	3.55	2.95
Sensitivity to Diverse Learner Needs	3.18	2.85	3.52	3.38	3.05
Feedback to Pupils	3.61	3.15	3.34	3.34	2.74
Use of TLMs	2.73	2.54	2.73	2.66	2.58
Pupils' Participation	3.15	3.17	3.32	3.52	3.05
Use of Teacher Learner Activities	3.09	3.24	3.36	3.14	3.05
Evaluation of Lesson	3.30	3.29	3.59	3.31	3.21
Classroom Setting	3.03	2.93	3.07	3.03	2.95
Class Control	3.48	3.37	3.61	3.34	3.58

(Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2015)

*Note: Numbers in bracket are the sample sizes.

Skills acquisition by Level of Deprivation

Table 5 shows the mean ratings of classroom observation indicators by levels of deprivation. Generally, performance across the three levels of deprivation was satisfactory. Thus, the teachers obtained ratings of 3 or above in almost all the indicators. The best performance was recorded in the extremely deprived schools where the teachers obtained a 'Good' rating (4.02) in subject knowledge and content accuracy. Similarly, the extremely deprived schools obtained satisfactory ratings (3.0 and above) in 18 out of the 19 indicators. The deprived schools also obtained satisfactory ratings in 17 indicators while teachers in the less deprived schools had satisfactory ratings in only 16 indicators. This result deviates from what was expected since teachers in less deprived schools were expected to achieve better ratings than their colleagues in the deprived and extremely deprived schools since such schools have closer proximity to the district capitals and as such are believed to be better resourced than the other schools. Further, all schools across the three deprivation levels obtained ratings below satisfactory in the use of TLMs, indicating the need for improvement in the preparation and use of TLMs amongst teachers at all the levels.

Table 5: Mean rating of classroom observation indicators by level of deprivation

Indicator	Less Deprived	Deprived	Extremely Deprived
Objectives	3.35 (55)	3.54 (56)	3.69 (55)
Core Points	3.27 (55)	3.36 (56)	3.60 (55)
Teacher Learner Activities	3.33 (55)	3.48 (56)	3.44 (55)
Use of Teaching Learning Materials	2.91 (55)	2.84 (56)	3.13 (55)
Subject Knowledge and Content Accuracy	3.56 (55)	3.68 (56)	4.02 (55)
Use of Language	3.45 (55)	3.48 (56)	3.73 (55)
Language of Instruction	3.38 (55)	3.55 (56)	3.76 (55)
Use of Generic Skills	3.16 (55)	3.09 (56)	3.11 (55)
Use of Chalkboard	3.49 (55)	3.38 (56)	3.67 (55)
Questioning Skills	3.36 (55)	3.23 (56)	3.56 (55)
Gender Sensitivity	3.45 (55)	3.13 (56)	3.56 (55)
Sensitivity to Diverse Learner Needs	3.16 (55)	3.14 (56)	3.33 (55)
Feedback to Pupils	3.15 (55)	3.14 (56)	3.55 (55)
Use of TLMs	2.73 (55)	2.63 (56)	2.60 (55)
Pupils' Participation	3.25 (55)	3.20 (56)	3.31 (55)
Use of Teacher Learner Activities	3.18 (55)	3.18 (56)	3.25 (55)
Evaluation of Lesson	3.18 (55)	3.36 (56)	3.56 (55)
Classroom Setting	2.93 (55)	3.00 (56)	3.09 (55)
Class Control	3.47 (55)	3.45 (56)	3.51 (55)

(Source: UTDBE Endline Assessment Field Data, Classroom Lesson Observation Instrument 13, 2015)

*Note: Numbers in bracket are the sample sizes.

Classroom Observation Analysis of Key Indicators

The Lesson Observation Schedule required that two kinds of data were collected by observers, quantitative (grades between 1 and 5) and a description of some indicators. The qualitative data was collected to give more detailed background to what was observed in the classroom and also as a check on the judgements made with regard to the numerical grading. The following section draws on an analysis of these descriptions. In each case, a general overview is given in order to describe performance across all 389 lessons. Performance within different sub-categories such as by gender, district, and level of deprivation are also described.

Lesson Planning and Preparation by Region and Gender

Table 6 shows Endline lesson planning and preparation by region and by gender. Generally, there appears to be a high proportion of DBE teachers preparing average and well prepared lesson notes. On the whole, 35% of the teachers had well prepared lesson notes whilst 30% had satisfactory (average) lesson preparation. Further, 10% of the teachers had no lesson notes implying they were not adequately prepared for the lesson whereas 8% had poorly prepared notes implying that even though they had a form of prepared lesson plan.

Table 6: Lesson Planning and Preparation

Region	Gender	Repeated Lesson		No Lesson Notes		Poor Plan		Average Lesson Plan		Lesson linked to previous		Well Prepared Lesson Plan		Total
Brong Ahafo	Males	0	0%	5	25%	1	5%	3	15%	7	35.0%	4	20%	20
	Females	0	0%	1	8%	2	15%	6	46%	1	8%	3	23%	13
REGIONAL TOTALS		0	0%	6	18%	3	9%	9	27%	8	24%	7	21%	33
Northern	Males	1	3%	2	7%	4	13%	7	23%	2	7%	14	47%	30
	Females	1	9%	0	0%	0	0%	5	46%	2	18%	3	27%	11
REGIONAL TOTALS		2	5%	2	5%	4	10%	12	29%	4	10%	17	42%	41
Upper East	Males	0	0%	2	6%	0	0%	11	34.4%	3	9.4%	16	50%	32
	Females	1	8%	1	8%	1	8%	2	17%	2	17%	5	42%	12
REGIONAL TOTALS		1	2%	3	7%	1	2%	13	30%	5	11%	21	48%	44
Upper West	Males	0	0%	1	8%	2	17%	7	58%	0	0%	2	17%	12
	Females	0	0%	2	12%	2	12%	8	47.1%	1	6%	4	24%	17
REGIONAL TOTALS		0	0%	3	10%	4	14%	15	52%	1	3%	6	21%	29
Western	Males	0	0%	2	14%	2	14%	2	14%	5	36%	3	21%	14
	Females	0	0%	0	0%	0	0%	0	0%	1	20%	4	80%	5
REGIONAL TOTALS		0	0%	2	11%	2	11%	2	11%	6	32%	7	37%	19
OVERALL TOTAL		3	2%	16	10%	14	8%	51	30%	24	15%	58	35%	166

(Source: UTDBE Endline Assessment Field Data, Instrument 13, 2015)

Subject Knowledge and Content Accuracy

Table 7 shows DBE teachers' subject knowledge and content accuracy by region and level of deprivation. The overall findings suggest that DBE teachers' subject knowledge and content accuracy is acceptable, with most teachers' performance grouped around the three descriptors of "satisfactory, good and excellent". The overall rating shows 17.3% satisfactory, 54.1% good and 24.3% excellent. Only 4.3% of the DBE teachers' scores were in the "poor and needs improvement" categories. Similarly, across the three levels of deprivation the teachers' subject knowledge and content accuracy was very encouraging.

The regional findings similarly depict high level of subject knowledge and content accuracy. In Brong Ahafo and Western Regions no DBE teacher performed below satisfactory level of poor or needs improvement. In the Upper West only 5.3% of the teachers in extremely deprived schools scored poorly. In the Northern Region 6.5% scored poorly and 3.2% needed improvement while in the Upper East 3.5% each scored in the poor and in the needs improvement descriptors.

Table 7: DBE Subject Knowledge and Content Accuracy rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived			20.0%	50.0%	30.0%
	Less Deprived			.0%	71.4%	28.6%
	Extremely Deprived			14.3%	42.9%	42.9%
	Total			14.6%	51.2%	34.1%
Northern	Deprived	7.7%	7.7%	23.1%	61.5%	.0%
	Less Deprived	.0%	.0%	23.1%	61.5%	15.4%
	Extremely Deprived	20.0%	.0%	40.0%	40.0%	.0%
	Total	6.5%	3.2%	25.8%	58.1%	6.5%
Upper East	Deprived	.0%	6.7%	46.7%	20.0%	26.7%
	Less Deprived	7.7%	7.7%	23.1%	30.8%	30.8%
	Extremely Deprived	3.4%	.0%	6.9%	58.6%	31.0%
	Total	3.5%	3.5%	21.1%	42.1%	29.8%
Upper West	Deprived	.0%		9.1%	72.7%	18.2%
	Less Deprived	.0%		.0%	66.7%	33.3%
	Extremely Deprived	5.3%		15.8%	42.1%	36.8%
	Total	3.0%		12.1%	54.5%	30.3%
Western	Deprived			.0%	85.7%	14.3%
	Less Deprived			7.1%	85.7%	7.1%
	Extremely Deprived			50.0%	50.0%	.0%
	Total			8.7%	82.6%	8.7%
Overall	Deprived	1.5%	3.0%	22.7%	53.0%	19.7%
	Less Deprived	2.0%	2.0%	14.0%	62.0%	20.0%
	Extremely Deprived	4.3%	.0%	14.5%	49.3%	31.9%
	Total	2.7%	1.6%	17.3%	54.1%	24.3%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2015

Use of Language

Table 8 displays the findings on DBE teachers' use of language in the classroom. It is often argued that if a teacher's language is good it can help convey the subject knowledge and content accuracy. The DBE teachers' subject knowledge and content accuracy is supported by their language use. The findings show the DBE teachers' scores cluster around the descriptors "satisfactory, good and excellent". The overall picture is 35.1% satisfactory, 39.5% good and 20% excellent. The deprived schools show 42.4% satisfactory, 39.4% good and 12.1% excellent. A similar good performance is recorded in the less deprived schools: 28 % satisfactory, 50% good and 16% excellent. In the extremely deprived rural schools the teachers' use of language is not only fairly distributed in the three bands but it also show a better performance than in both the less deprived and deprived schools as over 30% of teachers performed in the excellent category (33.3% satisfactory, 31.9% good and 30.4% excellent).

The regional findings show equally pleasing results. In Brong Ahafo the results show 95.2% were in the satisfactory, good and excellent descriptors: satisfactory 24.4%, good 46.3% and 24.4% excellent. The extremely deprived rural schools show very remarkable performance as 50% of the teachers scored in the excellent category. Similarly, teachers in rural less deprived school had as many as 71.4% in the good

descriptor while 90% of teachers in deprived school scored above satisfactory (satisfactory 30%, good 50% and excellent 10%).

In the Northern Region 6.4% performed below satisfactory indicating that 93.6% were in the satisfactory and above descriptors: satisfactory 51.6%, good 38.7% and excellent 3.2%. In the deprived schools 61.5% scored 'satisfactory' and 38.5% 'good'. In the less deprived 7.7% scored poorly while all the rest performed in satisfactory, good and excellent bands. In the extremely deprived rural schools 20% needed improvement and 40% each scored within satisfactory and good descriptors.

The Western region's performance in use of language is comparable to its performance in subject knowledge and content accuracy. Just as in subject knowledge no teacher scored below satisfactory irrespective of levels of deprivation, a similar performance was replicated in the use of language.

In Upper East the findings show a total of 5.3% in the below satisfactory grades and 94.7% in the satisfactory and above grades. With respect to levels of deprivation the deprived had 6.7% needing improvement, while in the less deprived schools 7.7% performed poorly. However, in the extremely deprived schools, the score is 3.4% needing improvement, while a total of 96.6% scored in the satisfactory and above categories.

Upper West with the least performance had 9.1% within the poor and needing improvement descriptors showing that they have the least number in the satisfactory and above: 90.9%. From these findings it is clear that DBE teachers' use of language is very good.

Table 8: DBE Use of Language rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived	5.0%	5.0%	30.0%	50.0%	10.0%
	Less Deprived	.0%	.0%	14.3%	71.4%	14.3%
	Extremely Deprived	.0%	.0%	21.4%	28.6%	50.0%
	Total	2.4%	2.4% (4.8)	24.4%	46.3%	24.4%
Northern	Deprived	.0%	.0%	61.5%	38.5%	.0%
	Less Deprived	7.7%	.0%	46.2%	38.5%	7.7%
	Extremely Deprived	.0%	20.0%	40.0%	40.0%	.0%
	Total	3.2%	3.2% (6,4)	51.6%	38.7%	3.2%
Upper East	Deprived	.0%	6.7%	40.0%	26.7%	26.7%
	Less Deprived	7.7%	.0%	23.1%	46.2%	23.1%
	Extremely Deprived	.0%	3.4%	34.5%	34.5%	27.6%
	Total	1.8%	3.5% (5.3)	33.3%	35.1%	26.3%
Upper West	Deprived	.0%	9.1%	45.5%	36.4%	9.1%
	Less Deprived	.0%	33.3%	33.3%	33.3%	.0%
	Extremely Deprived	5.3%	.0%	36.8%	26.3%	31.6%
	Total	3.0%	6.1% (9.1)	39.4%	30.3%	21.2%
Western	Deprived			42.9%	42.9%	14.3%
	Less Deprived			21.4%	57.1%	21.4%
	Extremely Deprived			50.0%	50.0%	.0%
	Total			30.4%	52.2%	17.4%
Overall	Deprived	1.5%	4.5%	42.4%	39.4%	12.1%
	Less Deprived	4.0%	2.0%	28.0%	50.0%	16.0%
	Extremely Deprived	1.4%	2.9%	33.3%	31.9%	30.4%
	Total	2.2%	3.2%	35.1%	39.5%	20.0%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2015

DBE Language of Instruction

Table 9 shows DBE teachers' language of instruction rating by Region and levels of Deprivation. The findings on the language of instruction show DBE teachers were rated high and most teachers clustered around the good descriptor (41.1%). The majority of 91.3% were rated within satisfactory and above categories. With respect to the schools within the different levels of deprivation teachers were equally rated high. In deprived and less deprived schools 10.6% and 10% of the teachers respectively scored below satisfactory, while in the extremely deprived rural schools a total of 5.7% were scored within the poor and needing improvement categories. A majority of 89.4% deprived, 90% less deprived and 94.3% extremely deprived were in the three zones of satisfactory, good and excellent.

The regional findings are as good as the overall performance. DBE teachers in all regions performed creditably. The best performance was in Brong Ahafo where only 2.4% were registered as needing improvement and 46.3% scored in the good category. The worst performance was in the Northern Region where a total of 22.6% either score poorly or needed improvement. In the Upper East 50.9% scored 'good'. The Upper West recorded 9.1% poor and 45.5% satisfactory. The western Region performance was similarly very good and it was rated second to Brong Ahafo. The region recorded 4.3% needing improvement while all the rest were in the range of

satisfactory, good and excellent. The regional distribution of the use of language of instruction show in Brong Ahafo that 95% of DBE teachers scored within the three categories of satisfactory, good and excellent. In less deprived and extremely deprived schools all teachers performed within the satisfactory, good and excellent bands.

In the Northern Region the findings were not as good as in the Brong Ahafo Region. In the deprived northern schools as much as 30.8 scored within the categories of poor and needs improvement, with a total of 69.2% in the above needing improvement range. For schools in less deprived areas the findings show 7% each for poor and needs improvement bands. Nevertheless, over 84% performed in the acceptable zones of satisfactory, good and excellent.

In the Upper East, the performance was better in the extremely deprived schools than in both the deprived and less deprived schools. In the extremely deprived rural schools only 3.4% performed poorly while the majority (65.5%) of the teachers scored good and 24.1% scored excellently. The less deprived also performed better than the deprived. While 7.7% needed improvement in less deprived schools but in the deprived schools 6.7% each scored within the poor and needs improvement classifications.

In the Upper West the worst performance was in the less deprived schools where as much as one third of the teachers performed poorly. The best performance was in the deprived schools where 54.5% scored satisfactorily and 45.5% scored 'good'. In the extremely deprived 89.5% scored in satisfactory, good and excellent columns.

In Western Region the extremely deprived schools had 50% scores in both satisfactory and good categories. In deprived schools the scores are spread mainly in the satisfactory, good and excellent brands. However, in less deprived schools, although teachers performed creditably 7.1% still needed improvement.

Table 9: DBE Language of Instruction rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived		5.0%	30.0%	45.0%	20.0%
	Less Deprived		.0%	14.3%	71.4%	14.3%
	Extremely Deprived		.0%	21.4%	35.7%	42.9%
	Total BA		2.4%	24.4%	46.3%	26.8%
Northern	Deprived	23.1%	7.7%	30.8%	30.8%	7.7%
	Less Deprived	7.7%	7.7%	30.8%	30.8%	23.1%
	Extremely Deprived	.0%	20.0%	60.0%	20.0%	.0%
	Total N	12.9%	9.7%	35.5%	29.0%	12.9%
Upper East	Deprived	6.7%	6.7%	13.3%	33.3%	40.0%
	Less Deprived	.0%	7.7%	30.8%	38.5%	23.1%
	Extremely Deprived	3.4%	.0%	6.9%	65.5%	24.1%
	Total UE	3.5%	3.5%	14.0%	50.9%	28.1%
Upper West	Deprived	.0%		54.5%	45.5%	.0%
	Less Deprived	33.3%		33.3%	33.3%	.0%
	Extremely Deprived	10.5%		42.1%	15.8%	31.6%
	Total UW	9.1%		45.5%	27.3%	18.2%
Western	Deprived		.0%	57.1%	28.6%	14.3%
	Less Deprived		7.1%	21.4%	50.0%	21.4%
	Extremely Deprived		.0%	50.0%	50.0%	.0%
	Total W		4.3%	34.8%	43.5%	17.4%
Overall	Deprived	6.1%	4.5%	33.3%	37.9%	18.2%
	Less Deprived	4.0%	6.0%	26.0%	44.0%	20.0%
	Extremely Deprived	4.3%	1.4%	24.6%	42.0%	27.5%
	Total	4.9%	3.8%	28.1%	41.1%	22.2%

Source: UTDBE End Term Impact Assessment Data, Instrument 13, 2015

DBE Use of Generic skills

Table 10 shows DBE Teachers use of Generic skills by Region and levels of Deprivation. Generally, DBE teachers' use of generic skills is positive. The overall findings show 47.6% scored satisfactorily while a total of 17.3% did not perform acceptably. Those in the good and excellent group totaled 35.1%. With teachers scores per levels of deprivation the results show generally positive findings. A total of 86.4% clustered in the three areas of satisfactory, good and excellent scores for schools in deprived areas. Similarly, in less deprived schools DBE teachers scored attractively: 48% satisfactory, 36% good and 4% excellent. However, the scores in the extremely deprived schools are discouraging as compared to deprived and less deprived schools. The findings show a total of 24.6% scored either poor or needs improvement. This is disheartening because most trained teachers refuse postings to the extremely deprived schools. If we already have scarcity of teachers in the extremely deprived schools and those available have approximately a quarter of them performing below average in generic teaching skills, the impact on pupils performance will not be anything to write home about. This implies that a quarter of these teachers are unable to use methods that involve pupils' use of various senses to learn. If pupils cannot use strategies appropriate to their learning skills, very little learning, if any, can take place amongst the pupils in the extremely deprived rural schools.

The regional distribution of DBE teachers' use of generic skills shows variation between regions. While the use of generic skills in some regions can be described as exceptional, in others the performance is deplorable. While the performance in Brong Ahafo is outstanding with as many as 22% in the excellent category and 39% and 31.7% respectively scoring satisfactory and good, in the Upper West where the performance is shameful, as many as one third of the teachers (33.3%) scored within the "poor" and "needs improvement" categories.

In the Northern Region the majority cluster within the satisfactory group (64.5%). The findings in the different levels of deprivation show the least performance in the less deprived schools of the region. As many as 23.1% scored poor while 61.5% scored in the satisfactory group. Similarly in the extremely deprived schools the findings show 20% scored poor with the 80% score distributed between satisfactory (60%) and good (20%). Interestingly, though there were fewer teachers in the poor and needs improvement options in deprived schools, there were many teachers in the good descriptor in the less deprived and extremely deprived schools than in the deprived schools.

The outstanding observation about the areas of deprivation is that 50% teachers scoring within the needs improvement in the extremely deprived schools of Western Region and 36.4% score recorded in the deprived schools of Upper West.

Table 10: DBE Use of Generic skills rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived	5.0%	5.0%	45.0%	25.0%	20.0%
	Less Deprived	.0%	.0%	28.6%	57.1%	14.3%
	Extremely Deprived	7.1%	.0%	35.7%	28.6%	28.6%
	Total	4.9%	2.4%	39.0%	31.7%	22.0%
Northern	Deprived	7.7%	7.7%	69.2%	7.7%	7.7%
	Less Deprived	23.1%	.0%	61.5%	15.4%	.0%
	Extremely Deprived	20.0%	.0%	60.0%	20.0%	.0%
	Total	16.1%	3.2%	64.5%	12.9%	3.2%
Upper East	Deprived	.0%	6.7%	60.0%	26.7%	6.7%
	Less Deprived	7.7%	7.7%	38.5%	38.5%	7.7%
	Extremely Deprived	13.8%	13.8%	44.8%	20.7%	6.9%
	Total	8.8%	10.5%	47.4%	26.3%	7.0%
Upper West	Deprived	.0%	36.4%	54.5%	.0%	9.1%
	Less Deprived	33.3%	.0%	33.3%	33.3%	.0%
	Extremely Deprived	10.5%	21.1%	21.1%	42.1%	5.3%
	Total	9.1%	24.2%	33.3%	27.3%	6.1%
Western	Deprived		.0%	71.4%	28.6%	
	Less Deprived		.0%	57.1%	42.9%	
	Extremely Deprived		50.0%	50.0%	.0%	
	Total		4.3%	60.9%	34.8%	
Overall	Deprived	3.0%	10.6%	57.6%	18.2%	10.6%
	Less Deprived	10.0%	2.0%	48.0%	36.0%	4.0%
	Extremely Deprived	11.6%	13.0%	37.7%	27.5%	10.1%
	Total	8.1%	9.2%	47.6%	26.5%	8.6%

Source: UTDBE End Term Impact Assessment Data, Instrument 13, 2015

Table 11: DBE Teachers' Use of chalkboard rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived		15.0%	15.0%	55.0%	15.0%
	Less Deprived		.0%	42.9%	28.6%	28.6%
	Extremely Deprived		14.3%	14.3%	42.9%	28.6%
	Total		12.2%	19.5%	46.3%	22.0%
Northern	Deprived		23.1%	53.8%	15.4%	7.7%
	Less Deprived		7.7%	46.2%	30.8%	15.4%
	Extremely Deprived		.0%	80.0%	20.0%	.0%
	Total		12.9%	54.8%	22.6%	9.7%
Upper East	Deprived	6.7%	6.7%	26.7%	33.3%	26.7%
	Less Deprived	.0%	15.4%	30.8%	53.8%	.0%
	Extremely Deprived	.0%	3.4%	20.7%	55.2%	20.7%
	Total	1.8%	7.0%	24.6%	49.1%	17.5%
Upper West	Deprived		27.3%	36.4%	27.3%	9.1%
	Less Deprived		.0%	33.3%	66.7%	.0%
	Extremely Deprived		.0%	15.8%	63.2%	21.1%
	Total		9.1%	24.2%	51.5%	15.2%
Western	Deprived		.0%	42.9%	42.9%	14.3%
	Less Deprived		21.4%	14.3%	42.9%	21.4%
	Extremely Deprived		.0%	50.0%	50.0%	.0%
	Total		13.0%	26.1%	43.5%	17.4%
Overall	Deprived	1.5%	15.2%	31.8%	36.4%	15.2%
	Less Deprived	.0%	12.0%	32.0%	42.0%	14.0%
	Extremely Deprived	.0%	4.3%	23.2%	52.2%	20.3%
	Total	.5%	10.3%	28.6%	43.8%	16.8%

Source: UTDBE End Term Impact Assessment Data, Instrument 13, 2015

Table 11 shows DBE teachers' use of chalkboard by Region and levels of Deprivation. Generally, the overall scores show acceptable percentages of teachers scoring in satisfactory and good grades: (satisfactory 43.2%) and 32.4% good). However, a total of 13% scored either poor or needs improvement. Similarly, 11.4% scored in the excellent grade. The findings for the areas of deprivation (!) show the less deprived schools doing better than the deprived and extremely deprived. Ninety four percent of the teachers in the less deprived schools scored in the satisfactory, good and excellent sets. In the deprived schools the results show 13% scoring in the poor and needs improvement bands. The extremely deprived confirmed their less privilege position with a total of 17.4% scoring in poor and needs improvement bands.

The regional findings show the Upper West with the best performance. While teachers in poor and needs improvement categories in the other regions range from 12.3% to 17.4% teachers in the Upper West had only 6% in the same categories. Generally, high scores bunch within the satisfactory band. However in Brong Ahafo,

the majority were clustered in good band (43.9%). Unlike Brong Ahafo the scores in the Western Region show a seemingly dispersed distribution with concentrations in satisfactory and good ratings. The regional findings for the area of depravity show for Brong Ahafo concentration within the grades satisfactory (28.6%) and good (71%). The Northern Region had the same majority numbers (53.8%) in both deprived and less deprived schools. In the Upper East the less deprived schools had concentration in the satisfactory zone (84.6%). In the Upper West the majority cluster within the satisfactory band for deprived (54.5%), less deprived (66.7%) and extremely deprived (47.4%). In the Western Region the results is a fair 50% distribution in satisfactory and good columns.

Table 12: DBE Use of Questioning skills rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived	5.0%	10.0%	25.0%	45.0%	15.0%
	Less Deprived	.0%	.0%	28.6%	71.4%	.0%
	Extremely Deprived	.0%	21.4%	14.3%	28.6%	35.7%
	Total	2.4%	12.2% (14.6	22.0%	43.9%	19.5%
Northern	Deprived	7.7%	7.7%	53.8%	30.8%	.0%
	Less Deprived	.0%	.0%	53.8%	38.5%	7.7%
	Extremely Deprived	.0%	60.0%	20.0%	20.0%	.0%
	Total	3.2%	12.9% (16.1	48.4%	32.3%	3.2%
Upper East	Deprived	.0%	13.3%	53.3%	26.7%	6.7%
	Less Deprived	.0%	.0%	84.6%	.0%	15.4%
	Extremely Deprived	3.4%	13.8%	41.4%	27.6%	13.8%
	Total	1.8%	10.5% (12.3	54.4%	21.1%	12.3%
Upper West	Deprived	.0%	9.1%	54.5%	27.3%	9.1%
	Less Deprived	.0%	.0%	66.7%	33.3%	.0%
	Extremely Deprived	5.3%	.0%	47.4%	42.1%	5.3%
	Total	3.0%	3.0% (6	51.5%	36.4%	6.1%
Western	Deprived		14.3%	14.3%	57.1%	14.3%
	Less Deprived		21.4%	42.9%	21.4%	14.3%
	Extremely Deprived		.0%	50.0%	50.0%	.0%
	Total		17.4%	34.8%	34.8%	13.0%
Overall	Deprived	3.0%	10.6%	40.9%	36.4%	9.1%
	Less Deprived	.0%	6.0%	56.0%	28.0%	10.0%
	Extremely Deprived	2.9%	14.5%	36.2%	31.9%	14.5%
	Total	2.2%	10.8%	43.2%	32.4%	11.4%

DBE Use of Sensitivity to Diverse Learner Needs rating by Region and levels of Deprivation

Table 13 shows DBE Use of Sensitivity to Diverse Learner Needs by Region and levels of Deprivation. The overall results show majority of the DBE teachers scored in the satisfactory band. In terms of acceptable scores the DBE teachers had a total of 77.8% performing within the descriptors of satisfactory, good and excellent while a total of 22.2% scored either in the poor or needs improvement columns. The general performance is a reflection of the performance in the different areas of deprivation. In all areas of depravity the poor and needs improvement grading registered within the range of 20.3% in the extremely deprived to 24.2% in the deprived schools. In all

areas of depravity the simple majority gather around satisfactory. A merging of scores in satisfactory, good and excellent categories give 75.8% in deprived schools; 78% in less deprived schools and 79.7% in extremely deprived schools.

The regional findings show that in Brong Ahafo Region the majority of 43.9 scored in the satisfactory locus, 26.8 in the good and 17.1% in the excellent group. In the less and extremely deprived schools all the teachers scored in the satisfactory, good and excellent columns. There were no teachers who scored in the poor or needs improvement categories. However, in the deprived schools 5% scored poorly and 20% scored needs improvement.

In the Northern Region nearly one third of the teachers (32.3% did not score within the acceptable range. However, 48.4% scored in the satisfactory zone. For the different areas of depravity, the deprived schools registered 53.8% satisfactory; less deprived had 38.5% satisfactory and 60% satisfactory in the extremely deprived schools. In the Upper East the results show 22.8% needs improvement, 45.6% satisfactory and 12.3% and 19.3% respectively for good and excellent sets. In areas of depravity, the less deprived did poorly as 30.8% was recorded in the needs improvement category. In the deprived 60% was scored in satisfactory and 20% each for excellent and needs improvement. In the extremely deprived schools the results show 20.7% scores for needs improvement and excellent and 37.9% satisfactory.

The Upper West did not record any scores in the excellent column. A total of 75.8% was recorded in satisfactory and good columns, while the poor and needs improvement recorded 24.2%. In the deprived schools 36.4% was scored in the needs improvement band and 45.5% satisfactory. In the less deprived schools the scores were concentrated in satisfactory (66.7) and good (33.3%). In the extremely deprived schools the satisfactory registered 42. In the Western Region the overall results show 21.7% needed improvement while 47.8% and 26.1% respectively show performance in “satisfactory” and “good”. The shocking revelation is that all teachers in the extremely deprived schools of Western Region were scored as performing below satisfactory that needs improvement. In the less deprived schools 57.1 % performed satisfactorily while 14.3 needed improvement. The deprived scored 42.9 in the satisfactory category.

Table 13: DBE Use of Sensitivity to Diverse Learner Needs rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived	5.0%	20.0%	50.0%	10.0%	15.0%
	Less Deprived	.0%	.0%	57.1%	28.6%	14.3%
	Extremely Deprived	.0%	.0%	28.6%	50.0%	21.4%
	Total	2.4%	9.8%	43.9%	26.8%	17.1%
Northern	Deprived	7.7%	15.4%	53.8%	15.4%	7.7%
	Less Deprived	7.7%	30.8%	38.5%	23.1%	.0%
	Extremely Deprived	20.0%	20.0%	60.0%	.0%	.0%
	Total	9.7%	22.6%	48.4%	16.1%	3.2%
Upper East	Deprived		20.0%	60.0%	.0%	20.0%
	Less Deprived		30.8%	46.2%	7.7%	15.4%
	Extremely Deprived		20.7%	37.9%	20.7%	20.7%
	Total		22.8%	45.6%	12.3%	19.3%
Upper West	Deprived	.0%	36.4%	45.5%	18.2%	
	Less Deprived	.0%	.0%	66.7%	33.3%	
	Extremely Deprived	5.3%	15.8%	42.1%	36.8%	
	Total	3.0%	21.2%	45.5%	30.3%	
Western	Deprived		14.3%	42.9%	28.6%	14.3%
	Less Deprived		14.3%	57.1%	28.6%	.0%
	Extremely Deprived		100.0%	.0%	.0%	.0%
	Total		21.7%	47.8%	26.1%	4.3%
Overall	Deprived	3.0%	21.2%	51.5%	12.1%	12.1%
	Less Deprived	2.0%	20.0%	50.0%	22.0%	6.0%
	Extremely Deprived	2.9%	17.4%	37.7%	29.0%	13.0%
	Total	2.7%	19.5%	45.9%	21.1%	10.8%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2015

DBE Gender Sensitivity rating by Region and levels of Deprivation

Table 14 shows DBE teachers' Gender Sensitivity rating by Region and levels of Deprivation. Generally, the findings show clustering around satisfactory and good descriptors. The overall findings show 47.6% was scored in the good category while 37.8% were recorded in the satisfactory column. The number scoring poorly stood at 2.7% and those needing improvement recorded 4.9%. In the deprived schools DBE teachers scoring in the satisfactory group numbered 50% and the good and excellent totaled 42.4%. In the less deprived schools 38% scored satisfactorily and another 46% were in the good group and 10% scored excellently. In the extremely deprived schools the scores recorded 58% good, 26.1% satisfactory and 7.2% excellent.

In Brong Ahafo Region, DBE teachers sensitivity to gender issues show a minimum of 2.4% doing poorly, while the rest fall in the three categories of satisfactory (31.7%), good (53.7%) and excellent (12.2%). In the extremely and less deprived schools, DBE teachers did not perform poorly or needed improvement. In the less deprived 42.9% were scored satisfactory, 28.6% each in good and excellent groups. In the extremely deprived 14.3% scored excellent, 64.3% good and 21.4% satisfactory. In the deprived schools 55%, scored 'good', 35% scored 'satisfactory' and 5% each in 'excellent' and 'poor' classes.

In the Northern Region, generally there were no scores in the excellent group. The overall performance show most teachers scored within the 'satisfactory' (51.6%) and 'good' (35.5%) classes. With performance in the areas of depravity the extremely deprived had 20% scoring poorly, while 60% and another 20% were rated respectively as satisfactory and good. In the less deprived schools teachers performed outside the zones of poor and needs improvement. The scores clustered in satisfactory (53.8%) and good (46.2%). In the deprived schools 7.7% scored poorly. 15.4% were rated as 'needs improvement', while 46.2% scored 'satisfactory' and 30.8% scored 'good'.

The findings about DBE teachers' sensitivity to gender issues in classrooms in the Upper East show the majority of 63.2% were rated as 'good'. In the deprived schools 46.7% were rated as satisfactory and 53.3 were rated as good. In less deprived schools the scores show 38.5% satisfactory and 46.2% good. However, in the extremely deprived schools the scores cluster on the 'good' descriptor (75.9%).

Overall, the Upper West DBE teachers' general performance on the subject of gender sensitivity showed 3% performing poorly, 6.1% needed improvement, while 45.5% score satisfactory and 30.3% good. The number scoring excellently stood at 15.2%. In deprived schools in the Upper West, the majority of 63.6% of DBE teachers were rated as satisfactory. The less deprived schools performed creditably as two thirds (66.7%) were rated as 'good' and the other third 33.3% were rated as 'excellent'. In the extremely deprived 5.3% did poorly and the same number needed improvement in their handling of gender issues in the classroom. The remaining DBE teachers in the extremely deprived schools were rated 42.1% satisfactory, 36.8% good and 10.5% as excellent.

In the Western Region, 39.1% and 4.3% were respectively appraised as 'good' and 'excellent' while 43.5% were evaluated as 'satisfactory'. However, 13% were assessed as needing improvement. In the deprived schools no teacher was graded as poor or needing improvement. The majority of 85.7% were categorized as 'satisfactory' and 14.3% ranked as 'good'. The poorest result in Western Region was recorded in the extremely deprived school where 50% were considered as 'needing improvement' and the other 50% classified as 'good'.

Table 14: DBE Gender Sensitivity rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived	5.0%		35.0%	55.0%	5.0%
	Less Deprived	.0%		42.9%	28.6%	28.6%
	Extremely Deprived	.0%		21.4%	64.3%	14.3%
	Total	2.4%		31.7%	53.7%	12.2%
Northern	Deprived	7.7%	15.4%	46.2%	30.8%	
	Less Deprived	.0%	.0%	53.8%	46.2%	
	Extremely Deprived	20.0%	.0%	60.0%	20.0%	
	Total	6.5%	6.5%	51.6%	35.5%	
Upper East	Deprived	.0%	.0%	46.7%	53.3%	.0%
	Less Deprived	7.7%	.0%	38.5%	46.2%	7.7%
	Extremely Deprived	.0%	6.9%	13.8%	75.9%	3.4%
	Total	1.8%	3.5%	28.1%	63.2%	3.5%
Upper West	Deprived	.0%	9.1%	63.6%	9.1%	18.2%
	Less Deprived	.0%	.0%	.0%	66.7%	33.3%
	Extremely Deprived	5.3%	5.3%	42.1%	36.8%	10.5%
	Total	3.0%	6.1%	45.5%	30.3%	15.2%
Western	Deprived		.0%	85.7%	14.3%	.0%
	Less Deprived		14.3%	28.6%	50.0%	7.1%
	Extremely Deprived		50.0%	.0%	50.0%	.0%
	Total		13.0%	43.5%	39.1%	4.3%
Overall	Deprived	3.0%	4.5%	50.0%	37.9%	4.5%
	Less Deprived	2.0%	4.0%	38.0%	46.0%	10.0%
	Extremely Deprived	2.9%	5.8%	26.1%	58.0%	7.2%
	Total	2.7%	4.9%	37.8%	47.6%	7.0%

DBE Feedback to Pupils rating by Region and levels of Deprivation

Table 15 shows the findings on DBE Teachers feedback to pupils rating by region and levels of deprivation. Generally, scores cluster around the descriptors ‘satisfactory’ and ‘good’. The overall performance shows 37.3% ‘satisfactory’ and 31.9% ‘good’. Nevertheless, a sizable proportion of 16.2% were assessed as below satisfactory distributed in the ratio of 4.3% poor to 11.9% needs improvement. Similarly, teachers in schools in areas of depravity are classified within the satisfactory and good descriptors. In deprived schools the assessment show 36.4% in satisfactory class and 30.3 in the ‘good’ class, in less deprived schools the ranking show 48% in ‘satisfactory’ zone and 38% in the ‘good’ grade, while in the extremely deprived the grading classified 30.4% as satisfactory, 29% as ‘good’ and 24.6% as excellent.

The regional findings show for the Western Region a similar clustering with the satisfactory and good except in the results for the extremely deprived where 50% were assessed as excellent and another 50% ranked as satisfactory. The overall ranking show 43.5% satisfactory and 34.8%; ‘good’ but with 8.7% needing improvement. In the less deprived schools the results show equal ranking for satisfactory and good (42.9% each). The results for deprived schools also show 42.9% ranked as ‘satisfactory’ and 28.6% evaluated as ‘good’.

In the Brong Ahafo Region, the findings show 43.9% and 26.8% respectively assessed and classified as ‘good’ and ‘satisfactory’, while 22% were graded as ‘excellent’. Deprived schools in the region had 30% evaluated as ‘satisfactory’, 40% as ‘good’ and 20% ‘excellent’. However 10% were classified as needing

improvement. The less deprived schools had 71.4% categorized as 'good' and 14.3% each graded as 'satisfactory' and 'excellent'. The less deprived had no teachers evaluated as poor or needs improvement. In the extremely deprived schools the results show 35.7 assessed as 'good' while 'satisfactory' and excellent groups recorded 28.6% each.

Generally, the Northern Region DBE teachers did not perform differently from their colleagues in the other regions. The overall assessment shows 45.2% were classified as 'satisfactory', 25.8% as 'good', while 12.9% each were recorded for 'poor' and 'needs improvement'. In deprived schools in the region the performance was discouraging and disheartening. As these schools are either very close to or in the administrative centers and many teachers opt to be posted into these schools than in the less and extremely deprived, the expectation is that teachers in these school should be the best but rather they performed more abysmally than in the less and extremely deprived schools. As many as 30.8% were rated poor and 38.5% and 23.1% were evaluated respectively as 'satisfactory' and 'good'. In both the less and extremely deprived schools no teacher was evaluated as 'poor' though as many as 40% were rated as 'needing improvement' in their feedback strategies to pupils in the classrooms in the extremely deprived schools. Another 40% were rated as 'satisfactory' and 20% were assessed as 'good'. In the less deprived schools the evaluation recorded 53.8% 'satisfactory' and 30.8% 'good'. Teachers within the 'needs improvement' numbered 15.4%.

In the Upper East Region the results seem to show a thinly sparse distribution across all five descriptors. The seemingly high concentration is found in the satisfactory column in the less deprived schools where as many as 69.2 DBE teachers were evaluated as satisfactory. The overall results show 38.6% satisfactory, 26.3% good and 14% excellent, while 15.8% needs improvement. Similarly, the findings in the deprived schools show 26.7% recorded in the descriptors "satisfactory, good and needs improvement. In the extremely deprived schools the results show 31% evaluated as 'satisfactory', 26.3% rated as 'good' and 20.7% classified as 'excellent'.

The upper West results show 36.4% rated as 'satisfactory', 30.3% evaluated as 'good; and 18.2% graded as 'excellent'. The distribution in deprived schools show 54.5% assessed as 'satisfactory', 27.3% 'good' and 18.2% in the needs improvement category. The distribution in the less deprived schools showed equal distribution in the three columns of needs improvement, satisfactory and good (33.3% each). In the extremely deprived schools the distribution covers satisfactory (26.3%), 'good' (31.6%) and another 31.6% 'excellent'.

In the Western Region the results cluster within the satisfactory and good ratings. Overall 43.5% were assessed as 'satisfactory' and 34.8% as 'good'. The excellent group numbered 13%. In the extremely deprived schools 50% were rated excellent and the other 50% evaluated as 'satisfactory'. In the less deprived the dominant ratings were in the satisfactory and good with each recording 42.9%. In the deprived schools 14.3 needed improvement. Another 14,3% were classified as 'excellent', while the 'satisfactory' and good had 42.9% and 28.6% respectively.

Table 15: DBE Feedback to Pupils rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived		10.0%	30.0%	40.0%	20.0%
	Less Deprived		.0%	14.3%	71.4%	14.3%
	Extremely Deprived		7.1%	28.6%	35.7%	28.6%
	Total		7.3%	26.8%	43.9%	22.0%
Northern	Deprived	30.8%	.0%	38.5%	23.1%	7.7%
	Less Deprived	.0%	15.4%	53.8%	30.8%	.0%
	Extremely Deprived	.0%	40.0%	40.0%	20.0%	.0%
	Total	12.9%	12.9%	45.2%	25.8%	3.2%
Upper East	Deprived	6.7%	26.7%	26.7%	26.7%	13.3%
	Less Deprived	.0%	7.7%	69.2%	23.1%	.0%
	Extremely Deprived	6.9%	13.8%	31.0%	27.6%	20.7%
	Total	5.3%	15.8%	38.6%	26.3%	14.0%
Upper West	Deprived	.0%	18.2%	54.5%	27.3%	.0%
	Less Deprived	.0%	33.3%	33.3%	33.3%	.0%
	Extremely Deprived	5.3%	5.3%	26.3%	31.6%	31.6%
	Total	3.0%	12.1%	36.4%	30.3%	18.2%
Western	Deprived		14.3%	42.9%	28.6%	14.3%
	Less Deprived		7.1%	42.9%	42.9%	7.1%
	Extremely Deprived		.0%	50.0%	.0%	50.0%
	Total		8.7%	43.5%	34.8%	13.0%
Overall	Deprived	7.6%	13.6%	36.4%	30.3%	12.1%
	Less Deprived	.0%	10.0%	48.0%	38.0%	4.0%
	Extremely Deprived	4.3%	11.6%	30.4%	29.0%	24.6%
	Total	4.3%	11.9%	37.3%	31.9%	14.6%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2015

DBE Use of TLMs rating by Region and levels of Deprivation

Table 16 present data on DBE use of TLMs by Region and levels of deprivation. DBE teachers overall performance on the use of TLMs is nothing good to write home about. It is unfortunate that qualified trained teachers should perform so poorly on use of TLMs. The overall findings show 30.8% scored ‘poor’ and a further 15.1 % were scored as ‘needs improvement’. This gives a total of 45.9% whose performance is unacceptable. For those with acceptable scored the satisfactory group recorded 27.6%, ‘good’ registered 19.5% and the excellent set showed 7%. In deprived schools a total of 40.9% scored in the unacceptable categories of poor and needs improvement. Scores in the satisfactory group showed 28.8%, that for ‘good’ recorded 24.2% and the excellent group scored 6.1%. In the less deprived schools as much as 40% scored ‘poor’ and the ‘needs improvement’ registered 12% thereby giving a total of 52% unacceptable performance. Similarly, the very deplorable performance was replicated in the extremely deprived schools where 46.4% scored either poor or needs improvement.

Generally, the regional findings on the use of TLMs is poor. In terms of teachers performing below satisfactory level in all five regions, the results show over 30% falling within the unacceptable range. The Upper West is worst hit with 66.7% performing below satisfactory. This is followed by Northern (48.4%), Upper East (45.6%), Western (39.1%) and Brong Ahafo (31.7%). In the satisfactory grade the

results show Northern (32.3%), Upper East (33.3%), Western (39.1%) and Brong Ahafo (17.1%). In the 'good' grade the results show Northern (16.1%), Upper East (15.8%), Western (17.4%) and Brong Ahafo (34.1%) and Upper West (12.1).

The regional findings on levels of deprivation show for Brong Ahafo deprived schools 35% below satisfactory and 65% satisfactory and above. In the less deprived below satisfactory recorded 42.9% and 57.1% for satisfactory and above, while for the extremely deprived the below satisfactory scored 21.4% while satisfactory and above scored 79.6%.

In Northern Region the findings show in the extremely deprived schools 60% below satisfactory and 40% satisfactory and above. In less deprived schools the results show 61.7% performed below satisfaction leaving less than 40% within and above satisfactory. In the deprived schools 30.8% of the teachers performed below satisfactory.

Deprived schools in the Upper East recorded 26.7% below satisfactory and a total of 73.3% satisfactory and above. In less deprived schools 53.9% scored below satisfactory while the percentage scoring satisfactory and above stood at 46.1%. In the extremely deprived schools 51.7% was recorded below satisfactory while 48.3% was scored for satisfactory and above.

In the Upper West, the DBE teachers' performance with regard of the use of TLMs is to say the least very nasty. In deprived schools as many as 90% fell within poor and needs improvement descriptors. In the less deprived schools the performance improved slightly with the group assessed as satisfactory rising from 10% in the deprived to 33.3%, making the unsatisfactory group dropping the score from 90% in the deprived schools to 67% in the extremely deprived schools.

In the extremely deprived schools the results again slightly improved. The unacceptable scores declined further to 52.6% from 67% in the less deprived schools. In areas of depravity in the Western Region the findings show in deprived school 14.3% of DBE teachers teach without using TLMs and the same number require improvement in their use of TLMs. However, 42.9% scored 'good' and 28.6% scored satisfactory. In less deprived schools the findings show 28.6% scored poor and 14.3% needed improvement. The number scoring satisfactory and good stood at 42.9% and 7.1% respectively. The worst scores were recorded in the extremely deprived schools where 50% of the DBE teachers scored poor and another 50% scored satisfactory.

Table 16: DBE Use of TLMs rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived	30.0%	5.0%	10.0%	40.0%	15.0%
	Less Deprived	42.9%	.0%	14.3%	14.3%	28.6%
	Extremely Deprived	14.3%	7.1%	28.6%	35.7%	14.3%
	Total	26.8%	4.9% (31.7	17.1%	34.1%	17.1%
Northern	Deprived	7.7%	23.1%	46.2%	23.1%	.0%
	Less Deprived	46.2%	15.4%	15.4%	15.4%	7.7%
	Extremely Deprived	60.0%	.0%	40.0%	.0%	.0%
	Total	32.3%	16.1% 48.4	32.3%	16.1%	3.2%
Upper East	Deprived	20.0%	6.7%	60.0%	6.7%	6.7%
	Less Deprived	46.2%	7.7%	15.4%	30.8%	.0%
	Extremely Deprived	37.9%	13.8%	27.6%	13.8%	6.9%
	Total	35.1%	10.5% 45.6	33.3%	15.8%	5.3%
Upper West	Deprived	36.4%	54.5%	.0%	9.1%	.0%
	Less Deprived	33.3%	33.3%	33.3%	.0%	.0%
	Extremely Deprived	26.3%	26.3%	26.3%	15.8%	5.3%
	Total	30.3%	36.4% 66.7	18.2%	12.1%	3.0%
Western	Deprived	14.3%	14.3%	28.6%	42.9%	.0%
	Less Deprived	28.6%	14.3%	42.9%	7.1%	7.1%
	Extremely Deprived	50.0%	.0%	50.0%	.0%	.0%
	Total	26.1%	13.0% 39.1	39.1%	17.4%	4.3%
Overall	Deprived	22.7%	18.2%	28.8%	24.2%	6.1%
	Less Deprived	40.0%	12.0%	24.0%	16.0%	8.0%
	Extremely Deprived	31.9%	14.5%	29.0%	17.4%	7.2%
	Total	30.8%	15.1%	27.6%	19.5%	7.0%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2015

Rating of DBE Teachers' Evaluation of Lessons by Region and levels of Deprivation

Table 17 shows results of DBE Teachers' Evaluation of Lessons by Region and levels of Deprivation. The findings on DBE teachers' evaluation of lessons show very encouraging results. Overall, 2.7% performed poorly and some 3.3% needed improvement. In the excellent class 18.4% was recorded and 39.5% and 36.2% were respectively recorded in the satisfactory and good sets. With respect to overall performance in the areas of depravity extremely deprived school teachers showed excellent performance with as many as 30.4% scoring 'excellent' and 36.2% and 26.1% scoring satisfactory and good respectively. Similarly, the teachers in less deprived communities of the region did impressively. All scores were concentrated in the three acceptable categories of satisfactory (48%), good (42%) and (10% excellent. Contrary to expectations, the worst scores were recorded in the deprived schools where resources and support to teachers was higher than in the less and extremely deprived schools because of the proximity of the Administrative Centre. The poor and needs improvement categories each registered 4.5% while the satisfactory scored 36.4%, good 42.4% and excellent 21.1%.

The regional distribution of scores show the Western region topping the list. The region had no teachers, regardless of areas of depravity, scoring within the 'poor' and 'needs improvement' categories. The region averagely scored 47.8% each for 'satisfactory' and 'good'. The extremely deprived had all her teachers scoring

satisfactory. The less deprived scored 42.9% satisfactory, 50% good and 7.1% excellent while the deprived schools scored 42.9% 'satisfactory' and 57.1% 'good'. The Brong Ahafo followed next to the Western Region in terms of teachers' evaluation of lessons. The overall average score show 2.4% within the 'poor' category but with no scores in the 'needs improvement' category. In the excellent class the score was 26.8%. The 'good' recorded 46.3% and satisfactory registered 24.4%. The extremely deprived and the less deprived scored zero percent in the 'poor' and 'needs improvement' categories. In the deprived and extremely deprived the scores bunch in 'good' and 'excellent', while in the less deprived the scores cluster around 'satisfactory'. In the extremely deprived schools the 'good' and 'excellent' both had the same score of 35.7% with 28.6% score in 'satisfactory' column. In the deprived schools the scores were 55% 'good' and 25% 'excellent' with 'satisfactory' registering 15%. In the less deprived schools the results show 42.9% each in satisfactory and 'good' categories.

In the Northern Region the average performance show 3.2 each for 'poor' and 'needs improvement', 67.7% satisfactory and 22.6% 'good'. The areas of depravity the scores bunch within the descriptors of satisfactory and good. The deprived schools show 53.8% 'satisfactory' and 30.8 'good'. In the less deprived the results show 69.2% 'satisfactory' and 23.1 'good', while in the extremely deprived schools all the teaches performed within the satisfactory category (100%).

Teachers' evaluation of lessons in the Upper East show the scores clustering around the three descriptors of satisfactory, good and excellent. The results show satisfactory (33.3%), 'good' (31.6%) and excellent (26.3%). In the deprived schools the results show satisfactory (46.7%), 'good' (26.7%) and excellent (13.3%). The performance in the less deprived was better than in both the deprived and extremely deprived as it showed no scores in 'poor' and 'needs improvement' columns. The results in the less deprived schools stood at satisfactory (38.5%), 'good' (46.2%) and excellent (15.4%). In the extremely deprived many teachers scored within the excellent category (37.9%) as against (24.1%) satisfactory and (27.6%) 'good'. In the Upper West 18.2% scored in the excellent group while 36.4% each scored in the satisfactory and 'good' groupings. In deprived schools of Upper West 9.1% of the teachers needed improvement in their evaluation of lessons while 36.4% scored satisfactory and 45.5 'good'. In less deprived schools scores bunched within the descriptors 'satisfactory' (33.3%) and 'good' (66.7). In the extremely deprived schools 5.3% each scored 'poor' and 'needs improvement' while 36.8% satisfactory and 26.3 each for 'good' and 'excellent'.

Table 17: DBE Evaluation of Lessons rating by Region and levels of Deprivation

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Brong Ahafo	Deprived	5.0%		15.0%	55.0%	25.0%
	Less Deprived	.0%		42.9%	42.9%	14.3%
	Extremely Deprived	.0%		28.6%	35.7%	35.7%
	Total	2.4%		24.4%	46.3%	26.8%
Northern	Deprived	7.7%	7.7%	53.8%	30.8%	.0%
	Less Deprived	.0%	.0%	69.2%	23.1%	7.7%
	Extremely Deprived	.0%	.0%	100.0%	.0%	.0%
	Total	3.2%	3.2%	67.7%	22.6%	3.2%
Upper East	Deprived	6.7%	6.7%	46.7%	26.7%	13.3%
	Less Deprived	.0%	.0%	38.5%	46.2%	15.4%
	Extremely Deprived	3.4%	6.9%	24.1%	27.6%	37.9%
	Total	3.5%	5.3%	33.3%	31.6%	26.3%
Upper West	Deprived	.0%	9.1%	36.4%	45.5%	9.1%
	Less Deprived	.0%	.0%	33.3%	66.7%	.0%
	Extremely Deprived	5.3%	5.3%	36.8%	26.3%	26.3%
	Total	3.0%	6.1%	36.4%	36.4%	18.2%
Western	Deprived			42.9%	57.1%	.0%
	Less Deprived			42.9%	50.0%	7.1%
	Extremely Deprived			100.0%	.0%	.0%
	Total			47.8%	47.8%	4.3%
Overall	Deprived	4.5%	4.5%	36.4%	42.4%	12.1%
	Less Deprived	.0%	.0%	48.0%	42.0%	10.0%
	Extremely Deprived	2.9%	4.3%	36.2%	26.1%	30.4%
	Total	2.7%	3.2%	39.5%	36.2%	18.4%

Source: UTDBE Endline Impact Assessment Data, Instrument 13, 2015

Annex 4: Upper West, Upper East and Western Cost Effectiveness

Analysis

Upper West Region

Starting with Jirapa and Lawra districts in the Upper West region, this section provides a comprehensive district level analysis in relation to the three (3) levels of deprivation across the rest of the three regions that were not included in the main sections of Chapter 6 in the report.

Table 4A: Trainee's expenditure in total cost of training (Upper West)

Expenditure: Student	Jirapa District			Lawra District		
	Less deprived	Deprived	Extremely deprived	Less deprived	Deprived	Extremely deprived
Transport	89	103	101	119	111	79
Additional food cost	55	82	58	93	161	85
Other learning materials	25	33	100	35	41	39
Communication	19	16	25	18	14	22
SRC dues and other cost	32	32	32	32	32	32
Cost at home	170	178	86	138	73	90
Cost per student per semester	390	443	403	434	433	347
Total annual cost per student (Student)	1,170	1,329	1,209	1,302	1,299	1,041

Source: Instrument 14B (2015) and consultant's calculations

Table 4B displays the cost burden for trainees in the Jirapa and Lawra districts in the Upper West region and it can be seen that for those in the Jirapa district, most cost is borne by those in the deprived areas (GH¢443 or US\$117) and are followed by those in the extremely deprived areas who spend GH¢403 (US\$106). Looking at the three areas of deprivation and what really builds up their cost, those in the less deprived and deprived areas all have cost at home ranking highest. It is only those in the extremely deprived circuits that spend slightly most (slightly) on transport and on other learning materials. In comparative terms, while trainees in the less deprived areas in Jirapa district were those who spent most (GH¢422 or US\$111) during the baseline survey, the same district now has those in the deprived areas spending most ((GH¢443 or US\$117) and indicates an increase in expenditure of (GH¢21 or US\$6) and also an implication of the very long distance trainees in this region have to travel to attend face-to-face.

In the Lawra district, unlike Jirapa, those who spend slightly most are trainees in the less deprived areas (GH¢434 or US\$114) and they are followed by trainees in the deprived circuits (GH¢433 or US\$106). For those in less deprived circuits, their expenditure is made up more of cost at home (32%) while those in the deprived areas also spend most on additional food (37%). This, to some extent, can explain either the quantity or nature of food that is given to the trainees which will warrant their having to spend so much on additional food. It can also be seen that trainees in extremely

deprived circuits also spend most on expenses at home. Looking at the districts and their levels of deprivation, it can be seen that trainees who teach in the deprived circuits are those who spend most. In the Lawra district, a similar situation was recorded in both the baseline and endline, where trainees in the less deprived circuits are those who spend most and again had expenditure at home most ranking highest among other cost components

Table 4B: District Level Cost Incidence – Jirapa and Lawra (Upper West Region)

Level of deprivation	GPEG Bears	Student Bears	Total cost per annum	Total cost over 4 years
Jirapa District				
Less deprived	1,624	1,170	2,794	11,176
Deprived	1,624	1,329	2,953	11,812
Extremely deprived	1,624	1,209	2,833	11,332
Lawra District				
Less deprived	1,624	1,302	2,926	11,704
Deprived	1,624	1,299	2,923	11,692
Extremely deprived	1,624	1,041	2,665	10,660

Source: Instrument 7 (2015), Instrument 14B (2015), and consultant's calculations

Table 4C indicates the relative cost burden as regards the cost sharing in the UTDBE system of training teachers. It shows that the annual costs per student in less deprived, deprived and extremely deprived circuits in the Jirapa district are, respectively, GH¢2,794, GH¢2,953 and GH¢2,833 but for those in the Lawra district, annual costs per trainees are GH¢2,926, GH¢2,923 and GH¢2,665 respectively for those in less deprived, deprived and extremely deprived circuits. Moving on to the focus of this sub-section, we can see that the relative cost burden places a larger weight on GPEG than the students. This is because in the Jirapa, District, trainees in all areas of deprivation bear less than 50% percent of the total cost of training and this was rather a different situation during the baseline survey, where trainees in all areas regardless of the level of deprivation rather bore more than 50% of the total cost of training. Even for those in less deprived areas, GPEG's relative cost burden is as much as 58%. A similar situation can be seen in the Lawra district with regard to cost burden, where GPEG again is seen as bearing more than 50% of the total cost of training for trainees at all levels of deprivation. Here also, the situation is felt most in the extremely deprived areas, where GPEG bears as much as 61% of the total cost of training.

Upper East Region

Table 4C: Trainee's expenditure in total cost of training: Talensi-Nabdam and Bongo (Upper East)

Expenditure: Student	Talensi-Nabdam District			Bongo District		
	Less deprived	Deprived	Extremely deprived	Less deprived	Deprived	Extremely deprived
Transport	188	183	248	198	163	175
Additional food cost	109	121	136	136	113	87
Other learning materials	70	31	53	72	28	54
Communication	20	21	19	18	14	21
SRC dues and other cost	12	12	12	12	12	12
Cost at home	180	194	194	172	161	186
Cost per student per semester	579	562	662	608	491	534
Total annual cost per student (Student)	1,738	1,686	1,986	1,824	1,474	1,603

Source: Instrument 14B (2015) and consultant's calculations

The composition of cost for trainees in the Talensi-Nabdam and Bongo districts across levels of deprivation is presented in Table 4D. For trainees in Talensi-Nabdam, those in extremely deprived areas are those who spend most (GH¢1,986 or US\$524) compared to their counterparts in other locations within the district. With the exception of those in the deprived areas, transportation cost most accounted for cost for those in the less deprived (32%) and extremely deprived areas (37%). For trainees in the Bongo district, trainees that spend most (GH¢1,824 or US\$481) are those from the less deprived areas unlike the situation in Talensi-Nabdam where it is those in the extremely deprived areas that spend most. In the Bongo district as well, transportation cost is seen as ranking highest, respectively, for those in the less deprived (33%) and extremely derived areas (33%). The inference that can be drawn from the discussion is that transportation is really a driver of expenditure in these districts and that is the reason why trainees have had to spend more on it.

As to why transportation is the highest driver of cost, a similar reason, as cited during the baseline, will be given in this regard. The underlining fact is that trainees from these districts attend Jasikan CoE in the Volta region which is about 615km (and takes up 9 hours of travel by bus), on the average, UTDBE trainees in Talensi-Nabdam and Bongo commit a chunk of their entire budget on transportation to the CoE for each training session.

Table 4D: District Level Cost Incidence – Talensi-Nabdam and Bongo (Upper East)

Level of deprivation	GPEG Bears	Student bears	Total cost per annum	Total cost over 4 years
Talensi-Nabdam District				
Less deprived	1,624	1,738	3,362	13,448
Deprived	1,624	1,686	3,310	13,240
Extremely deprived	1,624	1,986	3,610	14,440
Bongo District				
Less deprived	1,624	1,824	3,448	13,792
Deprived	1,624	1,474	3,098	12,392
Extremely deprived	1,624	1,603	3,227	12,908

Source: Instrument 7 (2015), Instrument 14B (2015), and consultant's calculations

The total cost of training which has been put together and annualised has been presented in Table 4E. The table shows that it costs GH¢3,362, GH¢3,310 and GH¢3,610 to train UTDBEs in the less deprived, deprived and extremely deprived areas, respectively in the Talensi-Nabdam. Looking at cost of training over the entire duration of the programme, trainees in the less deprived areas bear GH¢6,952 (US\$1,833) while those in the deprived and extremely deprived areas spend GH¢6,744 (US\$1,778) and GH¢7,944 (US\$2,095) respectively. What can also be spotted here is that the trainees in this district bear a bigger part of the cost of training — for all areas, trainees bear more than 50% of the total cost of training.

In the Bongo district, it annually costs GH¢3,448, GH¢3,098 and GH¢3,227 respectively to train a UTDBE trainee from less deprived, deprived and extremely deprived areas of the district. Unlike the situation in the Talensi-Nabdam, those in Bongo district only have trainees in the less deprived areas bearing more than 50% of the cost of training while for those in the deprived and extremely deprived areas, GPEG bears more than 50% of the cost of training across the board.

Western Region

Table 4E: Trainee's expenditure in total cost of training – Wassa-Amenfi (Western Region)

Expenditure: Student	Wassa-Amenfi District		
	Less deprived	Deprived	Extremely deprived
Transport	48	107	99
Additional food cost	107	135	206
Other learning materials	60	108	90
Communication	45	83	39
SRC dues and other cost	57	57	57
Cost at home	240	249	190
Cost per student per semester	557	738	681
Total annual cost per student (Student)	1,670	2,214	2,043

Source: Instrument 14B (2015) and consultant's calculations

Table 4F displays the average expenditure of trainees in the Wassa-Amenfi district in the Western region and it can be seen that trainees in the deprived areas of the district are those who spend most, having a cost per annum of GH¢2,214 (US\$584). For the cost components, in specific terms, trainees in less deprived and deprived circuits of the district spend most (GH¢240 or US\$63) and (GH¢249 or US\$66), respectively, on their home expenses. This is similar to the baseline finding, where trainees in these same locations were found to be incurring most on home expenses. For those in the extremely deprived circuits, they spend most on additional food (GH¢206 or US\$54). Apart from trainees in extremely deprived areas spending most on additional food, their expenditure on extra food is followed by their expenses at home (GH¢190 or US\$50).

Table 4F: District Level Cost Incidence – Wassa-Amenfi (Western Region)

Level of deprivation	GPEG Bears	Student Bears	Total cost per annum	Total cost over 4 years
Wassa-Amenfi District				
Less deprived	1,624	1,670	3,294	13,176
Deprived	1,624	2,214	3,838	15,352
Extremely deprived	1,624	2,043	3,667	14,668

Source: Instrument 7 (2015), Instrument 14B (2015), and consultant's calculations

The relative cost burden between GPEG and UTDBE trainees in the Wassa-Amenfi district is presented in table 14. It shows that the annual cost of training UTDBE teachers in the less deprived, deprived and extremely deprived circuits are GH¢3,294; GH¢3,838 and GH¢3,667 respectively. Just like we found in the baseline study, trainees across all locations of the Wassa-Amenfi district of the Western region bear more of the cost than GPEG does. Specifically, the trainees that bear most of the cost are those in the deprived areas (58%) and are followed by those in the extremely

deprived areas (55%). The only difference is that while trainees in general bore 16% higher than what GPEG bore during the baseline survey, they now are bearing 55% more than what GPEG bears during the endline and this is most accounted for by cost at home.

Annex 5: Teacher Supply across School Levels

Table 5A: Teacher Supply at KG Level by Type, Gender and District

District	Year	Enrolment	Total teachers	Trained teachers						PTTR	TR. DEMAND (PTRNORM 25)
				5	7.8	33	51	38	59		
Talensi – Nabdam	2010/11	8004	64	5	7.8	33	51	38	59	211	320
	2011/12	8238	175	4	2.3	43	25	47	27	175	330
	2012/13	8295	156	4	2.6	48	31	50	33	160	312
	2013/14	9156	184	11	6	65	35	76	41	120	366
	2014/15	8514	196	23	12	76	39	99	51	86	341
Bongo	2010/11	6376	124	12	9.7	25	20	37	30	172	255
	2011/12	6205	119	9	7.6	25	21	34	29	183	248
	2012/13	6364	134	22	16	26	19	48	36	133	255
	2013/14	6715	124	20	16	41	33	61	49	110	269
	2014/15	6758	129	25	19	47	36	72	56	94	270
Jirapa	2010/11	5562	104	1	0.9	31	30	32	31	174	222
	2011/12	5637	86	4	4.7	39	45	43	50	131	225
	2012/13	5640	79	10	13	35	44	45	57	125	226
	2013/14	5444	91	9	9.9	40	44	49	54	111	218
	2014/15	5565	89	14	16	42	47	56	63	99	223
Lawra	2010/11	6322	144	0	0	16	100	16	11	395	253
	2011/12	6308	143	0	0	27	100	27	19	234	252
	2012/13	6418	145	1	0.7	11	7.6	12	8.3	535	257
	2013/14	7572	157	2	0.1	19	12	21	13	361	302
	2014/15	7794	186	5	2.7	28	15	33	18	236	311
B'Yunyoo	2010/11	7841	82	17	21	9	11	26	32	302	314
	2011/12	7737	99	21	21	18	18	39	39	198	310
	2012/13	7755	87	16	18	23	26	39	45	199	310
	2013/14	8558	98	19	19	16	16	35	36	245	342
	2014/15	8867	68	12	18	14	21	26	38	341	355
West Mamprusi	2010/11	9116	98	10	10	30	31	40	41	228	365
	2011/12	11,067	120	13	11	38	32	51	43	217	443
	2012/13	11,771	115	12	10	40	35	52	45	226	471
	2013/14	11928	101	14	14	31	31	45	45	265	477
	2014/15	12756	163	28	17	34	21	72	44	177	510
Nkoranza North	2010/11	2188	89	2	2.2	21	24	23	26	95	88
	2011/12	3969	163	6	3.6	27	17	33	20	120	159
	2012/13	4178	209	4	1.9	46	22	50	24	84	167

	2013/14	4697	234	2	0.9	32	14	34	15	138	188
	2014/15	4829	241	6	2.5	41	17	47	20	103	193
Atebubu	2010/11	8114	184	6	3.3	17	9.2	23	13	353	325
	2011/12	8416	225	5	2.2	47	21	52	23	162	337
	2012/13	8424	308	7	2.3	74	24	81	26	104	337
	2013/14	8910	389	18	4.6	93	24	111	29	80	356
	2014/15	9104	400	22	5.5	100	25	122	31	75	364
Wassa Amenfi	2010/11	16368	300	2	0.7	12	4	14	4.7	1169	655
	2011/12	16714	265	1	0.4	9	3.4	10	3.8	1671	669
	2012/13	16783	275	5	1.8	54	20	59	21	285	671
	2013/14	16818	315	7	2.2	66	21	73	23	230	672
	2014/15	16640	295	12	4.1	78	26	90	31	185	665

Table 5B: Teacher Supply at Primary Level by Type, Gender and District

DISTRICT	YEAR	ENROL LMENT	TOTAL TRS	TRAINED TEACHERS						PTT R	TR. DEMAND (PTRNOR M 25)
Talensi – Nabdam	2010/11	18813	370	147	39.7	82	22.2	22 9	61. 9	82	538
	2011/12	19524	581	188	32.4	97	16.7	28 5	49. 1	69	558
	2012/13	18963	577	185	32.1	95	16.4	28 0	48. 5	68	542
	2013/14	19782	602	199	33.1	11 0	18.3	30 9	51. 3	64	565
	2014/15	20421	540	216	40	10 9	20.2	32 5	60. 2	63	583
Bongo	2010/11	20686	488	205	42	55	11.3	26 0	53. 3	80	591
	2011/12	21036	505	218	43.2	55	10.9	27 3	54. 1	77	601
	2012/13	19059	524	201	38.4	50	9.5	25 1	47. 9	76	545
	2013/14	20290	512	216	42.2	44	8.6	26 0	50. 8	78	580
	2014/15	20800	494	218	44.1	56	11.3	27 4	55. 5	76	594
Jirapa	2010/11	16664	380	120	31.6	89	23.4	20 9	55	80	476
	2011/12	6870	319	115	36.1	76	23.8	19 1	59. 9	88	482
	2012/13	16330	305	107	35.1	74	24.2	18 1	59. 3	90	467
	2013/14	15703	359	94	26.2	69	19.2	16 3	45. 4	96	449
	2014/15	16201	356	100	28.1	74	20.8	17 4	48. 9	93	462
Lawra	2010/11	17816	405	107	26.4	13 2	32.6	23 9	59	75	509
	2011/12	18075	390	116	29.7	40	10.3	15 6	40	116	516
	2012/13	16780	375	99	26.4	13 9	37.1	23 8	63. 5	71	479
	2013/14	17592	427	101	23.7	13 9	32.6	24 0	56. 2	73	502
	2014/15	18466	461	111	24.1	13 4	33.4	24 5	61. 1	75	528
B'Yunyoo	2010/11	24250	548	20	42	17	3.1	24 7	45. 1	98	693
	2011/12	23402	588	247	42	15	2.6	26 2	44. 6	89	669
	2012/13	23389	581	253	43.5	17	2.9	27 0	46. 4	87	668
	2013/14	23348	556	246	44.2	21	3.8	26 7	48	87	667
	2014/15	23687	469	222	47.3	20	4.3	24 2	51	98	677

West Mamprusi	2010/11	23520	465	174	37.4	81	17.4	25 5	54. 8	92	672
	2011/12	26,638	555	177	31.9	82	14.8	25 9	46. 7	103	761
	2012/13	26,864	530	168	31.7	84	15.9	25 2	47. 5	107	768
	2013/14	28480	526	109	20.7	69	13.1	23 8	45. 2	120	813
	2014/15	29817	602	206	34.2	86	14.3	29 2	48. 5	102	851
Nkoranza North	2010/11	4786	136	79	58.1	22	16.2	10 1	74. 3	47	137
	2011/12	8432	331	144	43.5	33	10	17 7	53. 5	48	241
	2012/13	8923	362	137	38.4	29	8	16 8	46. 4	51	255
	2013/14	9157	492	113	23	37	7.5	15 0	30. 5	61	261
	2014/15	9620	433	99	22.9	26	6	12 5	28. 5	77	257
Atebubu	2010/11	15978	450	133	29.6	44	9.7	17 7	39. 3	90	457
	2011/12	15906	505	170	33.7	67	13.2	23 7	46. 9	67	455
	2012/13	15941	687	194	28.2	82	11.9	27 6	40. 1	58	455
	2013/14	16315	947	200	21.1	88	9.3	28 8	30. 4	57	466
	2014/15	16351	918	212	23.1	93	10.1	30 5	33. 2	54	467
Wassa Amenfi	2010/11	35479	786	142	18.1	65	8.2	20 7	26. 3	171	1014
	2011/12	34282	719	122	17	53	7.3	17 5	24. 3	196	979
	2012/13	34307	735	241	32.8	94	12.8	33 5	45. 6	102	980
	2013/14	35868	777	238	30.6	10 0	12.9	33 8	43. 5	106	1024
	2014/15	34775	753	285	37.8	11 9	15.8	40 4	53. 7	86	994

Table 5C: Teacher Supply at JHS Level by Type, Gender & District

District	Year	Enrolment	Total teachers	Trained teachers						PTTR	TR. DEMAND (PTRNORM 25)
				<i>M</i>	%	<i>F</i>	%	<i>T</i>	%		
Talensi – Nabdam	2010/11	5991	296	150	50.7	45	15.2	195	65.9	31	240
	2011/12	6070	345	197	57.1	56	16.2	253	73.3	24	243
	2012/13	6677	424	225	53.1	60	14.1	285	67.2	23	267
	2013/14	6861	473	259	54.8	78	16.5	337	71.2	20	274
	2014/15	7197	448	271	60.5	88	19.6	359	80.1	20	288
Bongo	2010/11	6670	233	138	59.2	30	12.9	168	72.1	40	267
	2011/12	7287	252	158	62.7	41	36.2	199	78.9	37	291
	2012/13	7539	305	189	61.9	43	14.1	232	76.1	33	302
	2013/14	7601	338	210	62.1	47	13.9	257	76	30	304
	2014/15	7827	346	229	66.2	61	17.6	290	83.8	27	313
Jirapa	2010/11	3363	168	81	48.2	22	13.1	103	61.3	33	135
	2011/12	4495	189	96	50.8	30	15.9	126	66.7	36	180
	2012/13	4666	191	107	56	38	19.9	145	75.9	32	187
	2013/14	5106	226	107	47.3	38	16.8	145	64.2	35	204
	2014/15	5418	237	123	51.9	40	16.9	163	68.8	33	217
Lawra	2010/11	6709	314	158	50.3	37	11.8	195	62.1	34	268
	2011/12	7387	289	151	52.2	34	11.8	185	64	40	296
	2012/13	7445	290	170	58.6	42	14.5	212	73.1	35	298
	2013/14	7628	357	152	42.6	41	11.5	193	54.1	40	305
	2014/15	8541	334	175	52.4	45	13.5	220	65.9	39	342
B'Yunyoo	2010/11	3373	225	127	56.4	6	2.7	133	59.1	25	135

West Mamprusi	2011/12	6834	238	131	55	10	4.2	141	59.2	48	273
	2012/13	7298	254	125	49.2	9	3.5	134	52.4	54	292
	2013/14	8317	255	146	57.3	13	5.1	159	62.4	52	333
	2014/15	9,284	242	169	69.8	13	5.4	182	75.2	51	371
	2010/11	7,131	223	149	66.8	21	9.4	170	76.2	42	285
	2011/12	8,331	286	207	72.4	22	7.7	229	80.1	36	833
	2012/13	9,021	337	230	68.2	32	9.5	262	77.7	34	361
	2013/14	8,198	267	186	69.7	25	9.4	211	79	39	328
Nkoranza North	2014/15	9,756	391	256	65.5	48	12.3	304	77.4	32	390
	2010/11	1,927	137	93	67.9	10	7.3	103	75.2	18	77
	2011/12	2377	184	124	67.4	13	7.1	137	74.5	17	95
	2012/13	2372	212	139	65.6	20	9.4	159	75	16	103
	2013/14	3177	261	167	64	22	8.4	189	71.9	17	127
Atebubu	2014/15	3420	292	180	61.6	26	8.9	206	70.5	17	137
	2010/11	3944	251	130	51.8	32	12.7	162	64.5	24	158
	2011/12	4401	252	116	46	41	16.3	157	62.3	21	176
	2012/13	4441	303	208	68.6	40	13.2	248	81.8	18	178
	2013/14	4535	388	253	65.2	49	12.6	302	77.8	15	181
Wassa Amenfi	2014/15	4687	374	255	68.2	52	13.9	307	82.1	15	188
	2010/11	9211	233	148	63.5	32	13.7	180	71.2	52	368
	2011/12	9383	249	153	42.8	30	8.6	183	52.4	51	375
	2012/13	9454	398	236	59.3	50	12.6	286	71.9	33	378
	2013/14	1091	411	233	56.7	46	11.2	279	67.9	37	412
	2014/15	11209	414	261	63	49	11.8	310	74.9	36	448

Table 3.1b: Enrolment of UTDBE trainees in Colleges of Education

CoE	2012/13					2013/14					2014/15				
	M	%	F	%	T	M	%	F	%	T	M	%	F	%	T
AGOGO	1115	53.8	958	46.2	2073	435	49.2	450	50.8	885	342	51.4	323	48.6	665
MONICA	252	77.1	75	22.9	327	386	65.3	205	34.7	591	382	66.1	196	33.9	578
OFFINSO	1531	59.7	1035	40.3	2556	473	54.7	391	45.3	864	537	60.5	351	39.5	888
MAMTECH	718	64.9	388	35.1	1106	582	64.5	321	35.5	903	519	64.3	288	35.7	807
ASHANTI	3616	59.6	2456	40.4	6072	1876	57.8	1367	42.2	3243	1780	60.6	1158	39.4	2938
ATEBU	251	35.3	460	64.7	711	594	60.7	385	39.3	979	565	61.8	349	38.2	914
BA	251	35.3	460	64.7	711	594	60.7	385	39.3	979	565	61.8	349	38.2	914
ABETIFI	0	0	0		0	289	61.2	183	38.8	472	276	66	142	34	418
PWCE	88	47.3	98	52.7	186	392	75.5	127	24.5	519	363	75.5	118	24.5	481
EASTERN	88	47.3	98	52.7	186	681	68.7	310	31.3	991	639	71.1	260	28.9	899
JASIKA	0		0		0	408	58.3	292	41.7	700	396	59.1	274	40.9	670
PEKI	417	79.9	105	20.1	522	317	59.6	215	40.4	532	281	36.9	481	63.1	762
VOLTA	417	79.9	105	20.1	522	725	58.8	507	41.2	1232	677	47.3	755	52.7	1432
ENCHI	241	57.5	178	42.5	419	130	66.7	65	33.3	195	119	64.3	66	35.7	185
WIASO	348	76.1	109	23.9	457	259	64.3	144	35.7	403	246	65.4	130	34.6	376
WESTERN	589	67.2	287	32.8	876	389	65.1	209	34.9	598	365	65.1	196	34.9	561
TOTAL	4961	59.3	3406	40.7	8367	4265	60.6	2778	39.4	7043	4026	59.7	2718	40.3	6744

(Source EMIS/GES 2013/2014)

Annex 5.1b UTDBE Trainee Placement at School by Gender, Class Level and Location of Those Observed

Region			Gender of Respondent		Total
			Male	Female	
Brong Ahafo	Class Level	KG Teachers	2	24	26
		Lower Primary Teachers	12	25	37
		Upper Primary Teachers	23	4	27
		JHS Teachers	2	0	2
	Total	39	53	92	
Northern	Class Level	KG Teachers	1	1	2
		Lower Primary Teachers	14	14	28
		Upper Primary Teachers	24	3	27
		JHS Teachers	17	3	20
	Total	56	21	77	
Upper East	Class Level	KG Teachers	3	14	17
		Lower Primary Teachers	26	10	36
		Upper Primary Teachers	27	3	30
		JHS Teachers	4	1	5
	Total	60	28	88	
Upper West	Class Level	KG Teachers	0	4	4
		Lower Primary Teachers	17	30	47
		Upper Primary Teachers	24	15	39
		JHS Teachers	8	1	9
	Total	49	50	99	
Western	Class Level	KG Teachers	0	4	4
		Lower Primary Teachers	2	10	12
		Upper Primary Teachers	15	4	19
		JHS Teachers	9	1	10
	Total	26	19	45	
Total	Class Level	KG Teachers	6	47	53
		Lower Primary Teachers	71	89	160
		Upper Primary Teachers	113	29	142
		JHS Teachers	40	6	46
	Total	230	171	401	

Source: UTDBE Impact Assessment End line, 2015.

Table 5.9b Challenges Encountered by Trainees Pursuing UTDBE Programme by Districts

Districts	No Challenges Encountered	Delays in Supply of Modules	Time Factor, Not enough time to study in the Colleges	Public Amenities at College very poor	Inability to Attend Cluster Meetings because of Distance	Distance to Colleges too far	Financial Difficulty	Inadequate College Tutors to teach	Total
Atebubu Amantin	14.9%	0%	23.4%	36.2%	0%	0%	23.4%	2.1%	100%
Bongo	0%	0%	8.9%	4.4%	0%	75.6%	11.1%	0%	100%
Bunkpurugu Yunyoo	0%	5.6%	0%	5.6%	0%	69.4%	8.3%	11.1%	100%
Jirapa	2%	0%	14.3%	6.1%	0%	20.4%	57.1%	0%	100%
Lawra	2%	0%	14.0%	6.0%	0%	30.0%	48.0%	0%	100%
Nkoranza North	13.3%	2.2%	15.6%	42.2%	11.1%	0%	15.6%	0%	100%
Talensi Nabdam	0%	4.7%	14.0%	2.3%	0%	62.8%	16.3%	0%	100%
Wassa Amenfi	8.9%	6.7%	24.4%	6.7%	0%	2.2%	51.1%	0%	100%
West Mamprusi	0%	0%	4.9%	19.5%	0%	29.3%	43.9%	2.4%	100%
Total	4.7%	2.0%	13.7%	14.5%	1.2%	30.9%	31.4%	1.5%	100%

Source: UTDBE Impact Assessment Endline, 2016.

Table 6.1b: Sample size: Gender Disaggregated and Level of Deprivation

Levels of Deprivation Gender	Less Deprived			Deprived			Extremely Deprived		
	Female	Male	Totals	Female	Male	Totals	Female	Male	Totals
District									
West Mamprusi	5	9	14	5	7	12	2	6	8
Bunkpurugu-Yunyoo	—	7	7	5	16	21	2	5	7
Regional: Northern	5	16	21	10	23	33	4	11	15
Nkoranza North	1	3	4	13	8	21	11	6	17
Atebubu-Amantin	6	6	12	11	11	22	10	3	13
Regional: Brong-Ahafo	7	9	16	24	19	43	21	9	30
Jirapa	1	9	10	9	5	14	11	10	21
Lawra	6	2	8	10	12	22	12	9	21
Regional: Upper West	7	11	18	19	17	36	23	19	42
Talensi-Nabdam	2	6	8	3	9	12	9	14	23
Bongo	6	3	9	4	3	7	6	23	29
Regional: Upper East	8	9	17	7	12	19	15	37	52
Wassa-Amenfi	6	9	15	5	6	11	6	11	17
Regional: Western	6	9	15	5	6	11	6	11	17
National (Total)	33	54	87	65	77	142	69	87	156

Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Endline (2016)

Table 6.10b: Gender Differences in Cost Incidence

Region	Levels of deprivation	Transport	Food	Other learning materials	Communication	Cost at home	Total
		GHC	GHC	GHC	GHC	GHC	GHC
		Females					
Northern	Less deprived	98	150	49	38	70	405
	Deprived	407	188	66	143	480	1284
	Extremely deprived	130	177	83	15	210	615
		Males					
	Less deprived	264	118	166	273	178	999
	Deprived	172	120	44	21	171	528
	Extremely deprived	153	118	119	31	158	579
		Females					
Upper East		Transport	Food	Other learning materials	Communication	Cost at home	Total
	Less deprived	170	114	7	15	153	459
	Deprived	145	158	22	14	162	501
	Extremely deprived	129	151	48	21	229	578
		Males					
	Less deprived	206	128	103	22	192	651
	Deprived	194	94	34	21	191	534
	Extremely deprived	239	90	56	20	170	575
		Females					
Upper West		Transport	Food	Other learning materials	Communication	Cost at home	Total
	Less deprived	107	91	39	19	100	356
	Deprived	118	79	40	12	71	320
	Extremely deprived	91	81	46	18	82	318
		Males					
	Less deprived	103	64	23	19	193	402
	Deprived	96	181	38	17	158	490
	Extremely deprived	90	57	107	30	95	379
		Females					
Brong-Ahafo		Transport	Food	Other learning materials	Communication	Cost at home	Total
	Less deprived	67	116	56	29	150	418
	Deprived	41	146	47	30	159	423
	Extremely deprived	52	145	51	33	168	449
		Males					
	Less deprived	28	121	79	33	170	431
	Deprived	49	81	67	34	130	361
	Extremely deprived	76	112	48	47	130	413
		Females					
Western		Transport	Food	Other learning materials	Communication	Cost at home	Total
	Less deprived	42	112	50	43	233	480
	Deprived	57	132	95	46	148	478
	Extremely deprived	79	225	88	34	165	591
		Males					
	Less deprived	52	103	64	47	243	509
	Deprived	157	138	120	120	417	952
	Extremely deprived	110	196	91	41	200	638

Source: Instrument 14B (2016), and consultant's calculations

Annex 6: Typical Roll out Plan for the Field Work

25-27 schools with 45 UTDBE teachers to be covered each week in one district

- Each team of 11 enumerators including the supervisor is expected to spend 5 days in each district;
- Each team of 11 will cover about 5 schools per day (2 per team);
- In total, each team is expected to cover 27 schools in each district (team is expected to interview 45 UTDBE teachers across the 27 schools. This means that at least 18 schools of the 27 schools will need to have 2 UTDBE teachers, and in the rest of the 9 schools, we need at least 1 UTDBE teacher);
- When the team arrives in a school, 2 team members will conduct the Lesson Observation together for the UTDBE teacher and then the follow up interviews (with 2 UTDBE Trainees and 1 DBE teacher);
- The team will conduct an interview with the head teacher;
- Another team Conduct the school observation/checklist;
- Then distribute questionnaires to be filled out by all teachers in the school.

Date (Day month and number see below for example)	District/Community number	Actual name of community (once selected can be placed here)	Team 1 research activity Northern	Team 2 research activity Upper East	Team 3 research activity Upper West	Team 4 research activity Brong Ahafo	Team 5 research activity Western	Supervisor
Day 1		Community 1	2 team members visit District Education Office and conduct district level Interviews	2 team members visit District Education Office and conduct district level Interviews	2 team members visit District Education Office and conduct district level Interviews	2 team members visit District Education Office and conduct district level Interviews	2 team members visit District Education Office and conduct district level Interviews	Visit the district offices with the team proceed to the field
			Rest of 9 team members visit 3 schools	Sub teams each visit 1 school	Visit the sub-teams			

Date (Day month and numb er see below for exam ple)	District/Com munity number	Actual name of commu nity (once selected can be placed here)	Team 1 researc h activity Northe rn	Team 2 researc h activity Upper East	Team 3 researc h activity Upper West	Team 4 researc h activity Brong Ahafo	Team 5 researc h activity Wester n	Supervi sor
			and conduc t school level intervi ews	and conduc t school level intervi ews (total of 3 schools)	and conduc t school level intervi ews (total of 3 schools)	and conduc t school level intervi ews (total of 3 schools)	and conduc t school level intervi ews (total of 3 schools)	
Day 2			10 team membe rs split into groups of two and visit 5 schools	10 team membe rs split into groups of two and visit 5 schools	10 team membe rs split into groups of two and visit 5 schools	10 team membe rs split into groups of two and visit 5 schools	10 team membe rs split into groups of two and visit 5 schools	Visit the sub- teams

Annex 7: UTDBE Endline Impact Assessment Survey Team

Overall Research Team	
Impact Assessment Team leader/Lead Researcher	Dr. Leslie Casely-Hayford
Expert Design Consultant	Professor Kafui Etsey
Senior Technical/Resource Consultant	Dr. Alhassan Seidu
Senior Analyst/Consultant	Dr Ruby Avotri
Senior Analyst/Field Team Leader	Ms Florence Daaku
Senior Analyst	Mr Thomas Quansah
Senior Research Manager	Mr Jones Frimpong
Economist and Cost Effectiveness Consultant	Mr Isaac Koomson
Research Analyst	Mr Imranah Mahama Adams TL
Research Analyst	Mr Enock Pufaa
Research Assistant	Mr Awaal Iddrissu
Northern Region	
Imranah Mahama Adams TL	Northern Team Leader
Enock Pufaa	Tamale
Dr. Mamudu A. Akudugu-UDS	Northern Team
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Charity Bukari	Tamale
Ibrahim Abdul-Kabiru	Walewale
Humu Heira Issifu	Walewale
Abdulai Abdul-Shatar	Tamale
Sabratu Mahama	Tamale
Anthony	Bunkpurugu
Upper East Region	
Jones A. Frimpong-Supervisor	Team Leader Upper East
Thomas Quansah	Accra
Aminu Akparibo	Bolgatanga
Jamal-Deen Bakari Ibrahim	Kumasi
Fati Abigail Abdulai	Bolgatanga
Lydia Kowyiga	Tamale
Bushira Gariba	Winneba
Mbela Padmore	Bongo
Linus Amigra	Bongo
Gilbert Tee	Talensi-Nabdam
Ernest Atubinga	Talensi-Nabdam
Anita Ayuah	Accra
Upper West Region	

Dr. Alhassan Seidu	Team Leader Upper West
Dr. Adams Sulemana Achanso	UDS, Tamale
Iddrisu M. Awal	Accra
Dumah Basimaga Irene (Teacher)	Accra
Abdul Samed Abubakar	Damongo
Gordon Dakuu	Tamale
Angelica Nsanalabo Gyogluu	Jirapa
Ferdinard Bagyelliko	Jirapa
Cornelius Bayuo	Jirapa
Rufus Puopele	Lawra
George Zoore	Nandom
Dr. Adams Sulemana Achanso	UDS Tamale
Brong Ahafo Region	
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Abena Asiedu	
Atta Yeboah Alfred	Sunyani
Mantamia Emmanuel	
Bawa Dogo Huzumat	Tamale
Sarfo Godwin	
Joseph Nyarko	
Kwasi Sarfo	
Samuel Kwame Amankwah	
Western Region	
Florence Daaku TL	Western Region Team Leader
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Isaac Koomson	Accra
Rosalind Eugenina Ocran	Accra
Kweku Acquaye	Western region
Faustina Delali Akpabli	Accra
Paul Twumasi Armoh	Wassa Amenfi West
James Kwarteng	Wassa Amenfi West
Essil Aloysius Kay Wassa Amenfi Central	
Stephen M. Debra	Amenfi Central

Annex 8 Baseline Rating of UTDBE Trainees' Subject Knowledge and Content Accuracy by level of deprivation and region

Region	Level of Deprivation	Poor	Needs improvement	Satisfactory	Good	Excellent
Western	Deprived	0%	22.2%	44.4%	33.3%	0.0%
	Less Deprived	4.3%	4.3%	17.4%	69.6%	4.3%
	Extremely Deprived	0%	33.3%	33.3%	16.7%	16.7%
	Total	2.1%	14.9%	29.8%	48.9%	4. %3
Brong Ahafo	Deprived	0.0%	13.9%	30.6%	47.2%	8.3%
	Less Deprived	0.0%	8.7%	21.7%	56.5%	13.0%
	Extremely Deprived	6.7%	6.7%	30.0%	46.7%	10. %0
	Total	2.2%	10.1%	28.1%	49.4%	10.1%
Northern	Deprived	0%	2.9%	22.9%	57.1%	17.1%
	Less Deprived	0%	13. %0	47.8%	34.8%	4.3%
	Extremely Deprived	0%	0.0%	18.2%	63.6%	18.2%
	Total	0%	5.8%	30.4%	50.7%	13.0%
Upper East	Deprived	4.5%	31.8%	13.6%	45.5%	4.5%
	Less Deprived	0.0%	16.7%	22.2%	55.6%	5.6%
	Extremely Deprived	7.1%	28.6%	19.0%	38.1%	7.1%
	Total	4.9%	26.8%	18.3%	43.9%	6.1%
Upper West	Deprived	5.0%	2.5%	52.5%	32.5%	7.5%
	Less Deprived	0.0%	4.8%	42.9%	38.1%	14.3%
	Extremely Deprived	13.5%	16.2%	16.2%	43.2%	10.8%
	Total	7.1%	8.2%	36.7%	37.8%	10.2%
Overall	Deprived	3.8%	11.7%	33.1%	42.9%	8.4%
	Less Deprived	0.9%	9.3%	30.6%	50.9%	8.3%
	Extremely Deprived	8.7%	17.3%	21.3%	42.5%	10.2%
	Total	4.8%	12.8%	28.5%	44.9%	9.0%

