



Impact Assessment of the Untrained Teacher Diploma in Basic Education (UTDBE) Trainees, including Sample Survey of Lesson Delivery

Baseline Report

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Note: This study is based on the 2012 GPEG sponsored cohort of UTDBE trainees

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² Full list of field teams in annex below

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Acronyms

ADEA	Association for the Development of Education in Africa
AfC	Associates for Change
BA	Bachelor of Arts
BDT	Basic Design and Technology
BECE	Basic Education Certificate Examination
BED	Basic Education Division
BSc	Bachelor of Science
CBI	Circuit Based In-service Training
CD	Compact Disk
CoE	Colleges of Education
CSO	Civil Society Organisation
DBE	Diploma in Basic Education
DE	Distance Education
DEO	District Education Office
DEOC	District Education Oversight Committee
EFA	Education for All
EFA GMR	Education for All Global Monitoring Report
EMIS	Education Management Information System
EPS	Educational Professional Studies
FGD	Focus Group Discussion
GCB	Ghana Commercial Bank
GCE A LEVEL	General Certificate Examination Advance Level
GCE O LEVEL	General Certificate Examination Ordinary Level
GER	Gross Enrolment Rate
GES	Ghana Education Service
GETFUND	Ghana Education Trust Fund
GNAT	Ghana National Association of Teachers
GPE	Global Partnership for Education
GPEG	Global Partnership for Education Grant
GYEEDA	Ghana Youth Employment Entrepreneur Development Agency
HND	Higher National Diploma
ICT	Information and Communication Technology
ICT4AD	ICT for Accelerated Development
INSET	In-Service Training

IoE/UCC	Institute of Education/University of Cape Coast
JHS	Junior High School
KG	Kindergarten
L1	Local (ie student's native) Language
LOS	Lesson Observation Sheet
MDG	Millennium Development Goal
MIITEP	Malawi Integrated In-service Teacher Education Programme
MoE /MOE	Ministry of Education
MoESS	Ministry of Education Science and Sport
MSLC	Middle School Leaving Certificate
MUSTER	Multi-Site Teacher Education Research Project
NAB	National Accreditation Board
NAMCOL	Namibia, the National College of Open Learning
NCTE	National Council for Tertiary Education
NEA	National Education Assessment
NER	Net Enrolment Rate
NIOS	National Institute of Open Schooling
NSSCO	Namibia Senior Secondary Certificate Ordinary Level NYEP
NYEP	National Youth Employment Programme
ODL	Open and Distance Learning
OECD	Organisation for Economic Co-operation and Development
PGDE	Post-Graduate Diploma in Education
PRINCOE	Principals of Colleges of Education
PTAs	Parent Teacher Association
PTR	Pupil to Teacher Ratio
PTTR	Pupil to Trained Teacher Ratio
PWCE	Presbyterian Women's College of Education
RME	Religious and Moral Education
RPK	Relevant Previous Knowledge
SBI	School-Based In-service Training
SHS	Senior High School
SMC	School Management Committee
SMS	Short Message Service
SRC	Students' Representative Council
SSA	Sub-Saharan African
SSCE	Secondary School Certificate Examination

TED	Teacher Education Division
TED/GES	Teacher Education Division of the Ghana Education Service
TLM	Teaching and Learning Materials
TTC	Teacher Training Colleges
UCC	University of Cape Coast
UIEP	Universal ICT Education Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UTDBE	Untrained Teacher Diploma in Basic Education
WAEC	West African Examinations Council
WASSCE	West Africa Secondary School Certificate Examination
WBT	Web-Based Training

Executive Summary

Ghana's educational sector is faced with numerous challenges, key among which is the huge number of untrained teachers largely found in the deprived rural areas of the country and often in remote schools. In order to address this challenge the Ghana Government aims to ensure that there are a minimum of 95% trained teachers in basic schools by the year 2020. To achieve this goal, the Government has introduced the Untrained Teacher Diploma in Basic Education (UTDBE) programme, which is aimed at upgrading untrained teachers through distance learning.³ The UTDBE trainees will receive the same qualification (DBE) as those who have followed a conventional teacher training course. The overarching objectives of the programme are to: increase the number of trained teachers in schools, in a more cost effective way than through the conventional Diploma of Basic Education; and meeting the medium term needs of schools by ensuring that trainees pursue the programme while still teaching in their schools. The programme was first introduced in 2004 and its design, which is overseen by the Teacher Education Division of the Ghana education service, largely follows that of the conventional Diploma programme. However, the UTDBE is a four year course whereby trainees teach during the school term and attend college during the school vacations.

This study has been commissioned as part of an evaluation of the 2012 GPEG-sponsored cohort of what was originally 8000 students from the 57 most deprived districts of Ghana. This cohort differs from other UTDBE cohorts recruited since 2004.

Research Questions

The GPEG impact assessment of 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 overall impact evaluation will also investigate trainees' satisfaction and career ambitions. To achieve the objectives of the UTDBE evaluation programme, the following research questions have been formulated.

1. What improvement has occurred in the student teachers' quality of teaching as a result of 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 on the traditional pre-service in the quality of 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?

³ The UTDBE programme does include some elements of distance learning in that 1) trainees are not expected to work through modules on their own between the college based vacation courses; there are also a series of cluster based face to face interactions with District Education officers who provide some ongoing distance tutorial support – with some additional locally-organized subject revision classes. The UTDBE programme at the moment does not access to additional programme components online; and there is no correspondence material.

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?

Research Methodology and Sampling Framework

Due to the longitudinal and exploratory nature of the UTDBE impact evaluation, 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 used. The design of the study also uses both qualitative and quantitative approaches to evaluate the impact the programme is having over time. In line with such a design, data collection instruments were designed and included conducting single face-to-face interviews, focal group interviews, quantitative data collection (eg exam results, financial reports), self-report questionnaires, and classroom observations.

The impact evaluation will be carried out over a one year period – 2014 to 2015. During this period, three main studies are planned: baseline, mid-term and end line. The baseline study reflects an initial exploration into the current situation with regard to the GPEG sponsored UTDBE programme which began in 2012. The mid-term assessment will focus on a second lesson observation of the same UTDBE trainees' classroom practice as well as an assessment of teachers who have participated in the GPEG sponsored NIU INSET programme. The end line assessment will employ similar strategies as the baseline with the additional remit of making comparisons between the UTDBE trainees and recent DBE graduates (i.e. those who have achieved DBE through conventional means between 2011 to 2014).

For this baseline study, site and respondent sampling was done on the basis of both purposive and random sampling according to the nature of the respondent. Therefore the selection of interviewees at the national, (key staff at TED, GES, MoE), College Principals, Tutors and Co-ordinators at UCC/IoE and District Level (UTDBE Coordinators, Frontline Directors) was purposive. The selection of the regions and districts was based on proportional representation in terms of numbers of deprived districts in the region and numbers of UTDBE trainees in each district. Within the districts, relevant school sites were identified according to the presence of UTDBE trainees. Schools were then clustered according to their relative location in the district and specifically with regard to the level of deprivation of that location. Classifications of deprivation fall into three types – less deprived (typically, schools situated in or very near district capitals); deprived (schools further from the capital with fewer social amenities and infrastructure); and extremely deprived (schools in areas with fewest social amenities and little or no infrastructure and usually hard to reach).⁴ In order to meet a broad target of 20% less deprived, 80% deprived and extremely deprived balance of site selection, schools were selected from within these categories on a random basis but the number of schools in each group was controlled. The sample size of UTDBE trainees for the baseline evaluation is 405 which constitutes just over 6% of the cohort of 7000+ and means that 45 trainees are sampled in each of the 9 sampled districts.

⁴ For further information on the deprivation classification see Section 1.4 of main report

The baseline component of the IA exceeded this sample size in terms of the number of UTDBE trainees interviewed at 407 trainees. Across all 9 districts the sample was made up of 242 male trainees (59% of the sample) and 165 female trainees (41% of the sample). The sample is broadly representative in terms of gender and other key characteristics of the entire cohort of GPEG sponsored UTDBE trainees.⁵

Key findings

Teacher Supply, Deployment and UTDBE Enrolment Patterns Across the 5 Sampled Regions

Annual Education Sector Performance Reports (2010 and 2013) reveal that Basic Education subsector has a challenge of filling the trained teacher supply gap. The proportion of trained teachers at the KG, Primary and JHS is estimated to be 51.6%, 69.4% and 83.7% respectively. This implies that the lower primary has fewer trained teachers. There is consequently high PTTRs across most regions. Studies also suggest that the main challenge the Government of Ghana is facing is in relation to the deployment of trained teachers.

In all sampled districts there is a high demand for trained teachers as pupil teachers are found across all levels of basic education. Directors attribute this trend to refusal of trained teachers to accept postings to hard-to-reach communities. It is estimated that 47.2% of teachers at the basic level in all nine sampled districts are untrained. It is also estimated that 44.2% of the untrained teachers have been admitted to the UTDBE program leaving out approximately 56%. This has significant implications for supply of teachers to rural deprived areas given the current policy directive of staffing all schools with trained teachers. In Upper East and Brong Ahafo over 50% of untrained teachers have been enrolled on the program, other regions have below 30%. The baseline findings suggest that there was not enough targeting to ensure that the trained teacher (demand) was fully considered during programme selection in districts.

The baseline data also points to inconsistencies in the targeting of trainees for the GPEG sponsored UTDBE, for example on average there were eight UTDBE trainees in each school visited in the Brong Ahafo region. Each of the other regions has, on average, two UTDBE trainees in each school.

Trainees' Satisfaction with the UTDBE Programme/ UTDBE Trainees' Expectations and Ambitions

Insights into the degree to which trainees are satisfied with the UTDBE programme and their expectations and ambitions was gained through face-to-face interviews. Across the 9 districts a total of 407 trainees were interviewed of whom 283 (70%) said that they were satisfied with the UTDBE programme; just 34 trainees (8%) said that they were dissatisfied. Trainees' justification for satisfaction with the course is in some respects tied to their expectations; 24% of the trainees gave "future job security as a professional teacher under GES" as a reason. Other responses included the fact that they received sponsorship (16%), that they felt their confidence and teaching skills were improved (20%) and that the programme was well structured and time flexible (10%). Those that were dissatisfied, felt that the distance to the

⁵ For further details on the size and analysis of the sample see Section 1.3 of main report

Colleges of Education and the financial burden was too great (4%) and finally pressure of time and money (2%).

With regard to expectations and ambitions, the overall expectation of all trainees is that, having successfully completed the programme, they will be awarded a Diploma which they perceive will ensure them a GES salaried appointment and posting as a trained teacher in the district. In order to ascertain trainees' ambitions, they were asked to describe "where they saw themselves after 5 years". Responses to this question fell into 5 categories: to remain as a teacher in the current district (11%); to be a professional / trained teacher with job security (28%); to remain within the education service but at a "higher" level (JHS, SHS, Tertiary or DEO) (21%); to pursue further education (degree) (38%); and finally 2% said that they would expect to have changed their career or be transferred. In terms of the gender balance of aspirations, there are similar proportions of males and females across 4 of the responses. Where these differ is with regard to ambitions to pursue further studies where there are twice as many males as females who have this aspiration.

Since 2012 the program witnessed a small proportion of UTDBE trainee drop-out across all the sampled districts estimated at 17.6%. This includes 16.4% males and 17.2% females. The low rate indicates trainees' ambition to succeed in spite of challenges being experienced.

Trainees' Content Knowledge

Interviews were conducted with the Principals, UTDBE Coordinators, and Tutors from five of the Colleges of Education. Findings from these interviews and from the exam results of the UTDBE trainees and current cohort of conventional DBE students indicate that while there is clear evidence that the majority of UTDBE trainees have improved their content knowledge since beginning the programme (82.8% of those sampled showed improvement in English and 57.9% an improvement in Science), performance of conventional DBE students is generally better than that of the UTDBE students. The mean results of similar Science exams indicate that conventional DBE students achieve a higher average score and an analysis of the grades achieved by the two groups shows that higher percentages of conventional DBE students achieve higher grades (C to A grades).

This finding is buttressed by College tutors and Principals with the caveat that the entry profile of UTDBE trainees is different from conventional DBE entrants (lower grades and less recently graduated from SHS), that they have far less time to study and are therefore under greater pressure to cover course content during the face-to-face sessions at Colleges of Education.

With regard to the overall content of the UTDBE course, Principals and Tutors interviewed in the Colleges of Education felt that this should be reviewed and revised. Aspects of the course which caused particular concern were the requirements for subject content knowledge which they felt overreached the requirements for students training on the job and resulted in trainees having to "cram" for examinations at the expense of gaining a proper understanding of the subject and how it can be taught. Furthermore, timing of modules – most methodology modules are delivered in the latter 2 years of the programme – means that trainees are getting little input from the college on their classroom practice for the first 2 years but also that tutors have little opportunity to reflect with trainees once they have had the opportunity to put teaching strategies into practice in their own schools.

Cost Effectiveness and Efficiency of the Untrained Teachers' Diploma in Basic Education (UTDBE) Programme.

In order to calculate the cost effectiveness and efficiency of the UTDBE programme, data was gathered from several sources including TED, CoEs and UTDBE trainees. Overall 407 trainees were interviewed and after cleaning, 387 questionnaires completed the questionnaires fully; an analysis of costs to trainees was done on the basis of 387 completed interviews.

Findings from the analysis of the financial data provided by TED, CoEs and trainees themselves show that the UTDBE programme is cost effective in that each DBE achieved by a UTDBE route costs less to Government, than a DBE trained teacher achieved by the conventional full-time route⁶. To ascertain whether the UTDBE programme is also cost efficient, it is necessary to compare the unit cost to DBE graduation by UTDBE mode and by standard CoE residential mode. In this baseline evaluation we rely for conventional DBE costs on Murphy's (2012) study. Murphy's study established a unit cost to government (adjusting to 2014 US\$ prices) of US\$9,137 per conventional DBE graduate.⁷ Analysis shows that the overall cost to GPEG is GH¢3,716 (US\$1,226) per UTDBE, thus giving an efficiency ratio of 1:7.

It costs GPEG GH¢929 (US\$306) per annum to train a UTDBE student.⁸ Feeding at the CoE is the largest component (34%), then examination fees and modules (33%). Costs met by GPEG are constant for all trainees irrespective of region, district, gender, or distance from home. Costs arising from factors related to trainees' context must be met by trainees themselves and vary between trainees according to which region they are in. These costs include: transport (costs vary with distance of trainee from CoE), Assessment and SRC dues, other learning materials (refers mainly to the 'hand-outs' sold by tutors at CoEs), communication, additional food, and costs at home.

When costs to GPEG and costs to trainees are totalled the resulting sum indicates that it costs GH¢2,285 (US\$754) annually and GH¢9,140 (US\$3,017) to train over the 4-year period. However, the overall cost to GPEG is GH¢3,716 (US\$1,226) while the trainee bears GH¢5,424 (US\$1,791). Students thus bear about 59% of training costs. 301 trainees in the sample (representing 78%) argued that they find it difficult paying for the indirect and some direct cost of training. In other words, about 78% of the trainees face challenges paying the GH¢5,424 (US\$1,790) which represents their cost commitment towards the entire training process over a four year period. Overall, the study finds that the unit cost per conventionally trained DBE graduate is seven times higher than the UTDBE graduate.

Lesson Observation

The cost efficiency and effectiveness of the programme are also aligned to the extent to which outcomes and outputs are met and whether overall aims are achieved. Inherent in the aim of producing trained teachers is the ability of the system to ensure that standards of teaching and learning are improved. The effectiveness of any training programme can

⁶ Cost effectiveness is the capacity of a system to attain the goals set by a system, cost efficiency measures the extent to which a programme or system produces particular outputs or outcomes at a minimum cost (Rumble, 1986; Vivier, 2008).

⁷ His study was done in 2012 when the exchange rate was US\$1= GH¢1.68. However, the current (August, 2014) Bank of Ghana exchange rate is US\$1= GH¢3.03. This means, GH¢15,350 in 2012 now values at GH¢27,685.

⁸ Exchange rate used for this study (applicable at date of collecting the data) is US\$1= GH¢3.03.

therefore be judged on the quality of teaching performance of the trainees or graduates. In order to assess this aspect, classroom observations were carried out in 187 schools of 389 lessons. Overall 235 male and 154 female trainees were observed across the 9 districts. Generally science, English and maths lessons were observed mainly at the Primary level.⁹

An analysis of the quantitative data (the numeric ratings awarded for each area assessed in the lesson observation schedule) showed that overall trainees demonstrated satisfactory skills in six areas where the mean ratings were 3.0 and above. These areas are: Subject Knowledge and Content Accuracy, Use of Language, Language of Instruction, Use of Chalkboard, Gender Sensitivity and Class control. These findings are indicative of the content of the UTDBE course the trainees have so far completed. In particular satisfactory performance with regard to subject knowledge and content accuracy reflects the emphasis on subject content knowledge particularly in the subjects: English, Maths and Science – the subjects that the majority of trainees were observed teaching. Analysis of the ratings showed further that the rest of the 13 areas assessed need improvement especially in the use of teaching and learning materials (TLMs).

Analysis of the qualitative or descriptive data gathered in lesson observations indicates that trainees are yet to acquire adequate skills with regard to skills related to teaching methodology – in particular using pupil-centred strategies. **Lesson Planning** – 18% of trainees presented a satisfactory lesson plan and 35% a good plan that was clearly linked to learning objectives and previous learning. The remaining trainees either had no plan to present, delivered a repeated lesson drawn from an old plan, or presented a poor plan. **Language of Instruction** was generally satisfactory with many teachers, particularly at the lower primary level, using mother tongue to deliver the lesson or clarify ideas for the pupils. **Teaching Methodology** used by trainees varied but most used teacher-centred strategies - lecture method (35%), question and answer/discussion (25%), demonstrations with question and answer (30%). Just 14% of trainees used activity based learning (11%) or some kind of group work (4%), both of which could be reasonably described as more pupil-centred strategies. **TLMs** – just half of the teachers used TLMs that were relevant to the objectives of the lesson or stimulated pupils' participation or improved learning.

As is clear from the description of teachers' methodology, many teachers used verbal **Questioning** to promote pupils' participation and check understanding. However, across 70% of the classrooms observed these questions took the form of closed low order questions that required either a yes or no response or a recalled answer. **Classroom Control and Use of Time** during the lesson were both generally good with the vast majority of trainees (over 95%) demonstrating good strategies to maintain order in classrooms and remaining in the classroom actively teaching. **Disciplinary Practices** used by trainees were satisfactory with very little evidence of harsh verbal or physical punitive behaviour and only 15% of trainees were observed to use poor strategies for maintaining order in the classroom. The extent to which trainees were able to facilitate **Participation** was generally good, at least half of the pupils were involved in classroom activities, discussions, etc in 80% of classes observed. Interviews with District Education Officers, involved with monitoring trainees, reflect the findings of the evaluation classroom observation.

This is a baseline evaluation and at this point it should be noted that the majority of course content the trainees have so far covered is related to subject content knowledge with just a

⁹ A detailed breakdown of lessons observed is provided in Chapter 6 of the main report.

few modules focused on pedagogy. This assessment of trainees’ teaching skills demonstrates this. Further assessments of trainees’ classroom practice as they progress through the UTDBE course are expected to show a development in the acquisition of higher order pedagogical skills so that strategies and methods are more child-centred and that trainees are less likely to fall back on “lecture method”.

Support for UTDBE Trainees

District Education Officers and Head teachers provide professional support to the trainees. Interviews with Deputy Directors reveal that Circuit Supervisors visit the schools where trainees are teaching. They are observed in the classroom and have appraisal meetings with the trainees. Furthermore trainees are given the opportunity to attend tutorials which are designed to support their understanding of modules in preparation for face-to-face sessions at the Colleges of Education. However, these tutorial sessions are inconsistently organised and delivered across the 9 districts and are dependent on the availability of properly qualified tutors and their organization by the DEO. Almost all the Deputy Directors interviewed claimed that Head teachers have been tasked to support the trainees through guiding them in the preparation of lesson notes, teaching methodology and lesson delivery.

According to the trainees, 297 (73%) said that they received some form of support. This generally takes the form of District Education support (monitoring visits from CSs and tutorials) (33%), Cluster Based Inset sessions (8%), School Based Inset sessions (12%), support from Head Teacher (39%) and trained colleagues (24%) - this usually takes the form of guidance with regard to lesson notes preparation and handling difficult subjects.

There is clearly a strong role for head teachers to play in the mentorship and support of the UTDBE trainees but evidence from field research indicates that strength of head teacher leadership was inconsistent across the 197 schools visited. In the first instance, on the day of research 9% of head teachers were absent from the school. Scrutiny of the behaviour of head teachers who were present showed that just 40% of the head teachers monitored classes to ensure that teachers were at post or watch them teaching during the course of the school day. It is interesting to note that when asked about the support they receive around 40% of UTDBE trainees indicated that they were given guidance (with regard to lesson planning and teaching “difficult topics”) by their Head Teachers.

Retention of Teachers

In order to gain some understanding of patterns of retention across different types of teachers evaluation field research included a questionnaire to be completed by teachers in the school who are NOT part of the focus group of GPEG sponsored UTDBE trainees. Overall 645 teachers completed these questionnaire in the 197 schools sampled. As the following table illustrates, this sample included 265 (41.1%) females and 380 (58.9%) males.

Table 1: Distribution of “Other” Teachers by Region by Gender

Regions	Male	Female	Total	%
Brong Ahafo	95	86	181	28.1%
Northern	93	39	132	20.5%
Upper East	112	66	178	27.6%
Upper West	54	63	117	18.1%
Western	26	11	37	5.7%
Total	380	265	645	100.0%

%	58.9%	41.1%		
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Source: UTDBE Impact Assessment Baseline Study, 2014

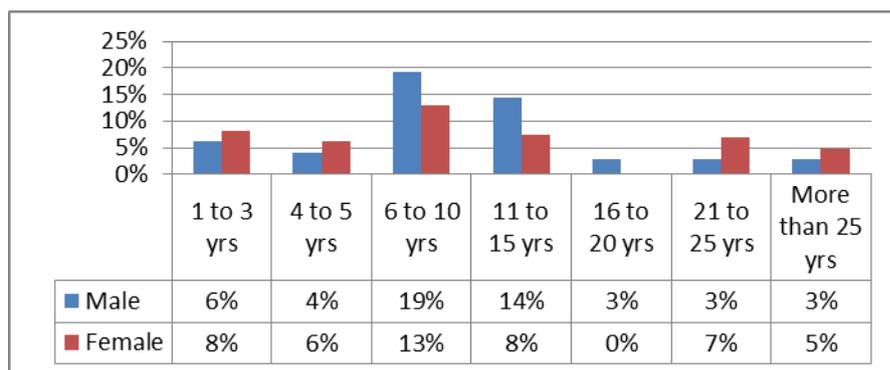
A detailed report of the analysis of the data from this questionnaire is included in Chapter 8 of the full report and includes details of teachers’ residence (whether they lived in the community or not), length of service, level of qualification, and aspirations, among other factors, across the different groups of teachers which include trained, pupil teachers, and volunteers.

The aspect of this most pertinent to the question of retention, particularly of trained teachers with DBE, is the comparison between retention of teachers who gained DBE through the conventional route (full time) and those who trained while teaching and completed a distance DBE (including previous UTDBE programmes). As part of the questionnaire, teachers were asked to list their qualifications and state simply if they had gained them as a “full time” (this was understood to be the 3 year conventional DBE route) student or “distance” (any DBE course that was pursued while the teacher was at post and course took place during vacation). Responses that indicated that the teacher had achieved a DBE qualification were analysed to make a comparison between retention behaviour of these two groups.

Evidence from this analysis indicates that, with respect to number of years teaching and number of years teaching in village schools, a higher proportion of female distance DBE graduates are not just remaining in the teaching service in deprived districts for longer periods of time, but that this longer service is translated into time in rural schools (those that have been categorised in this study as deprived and extremely deprived).

The following figure illustrates the percentage of the **total number of distance DBE graduates** according to their gender and length of service. With regard to 1 to 3 years, 4 to 5 years, and more than 25 years, there is near parity with regard to the percentages of males and females. There are no female teachers in the 16 to 20 year category, and a higher proportion and number of female distance DBE graduates in the 21 to 25 year category.

Figure 1: Percentage of Distance DBE Graduates by Length of Service and Gender

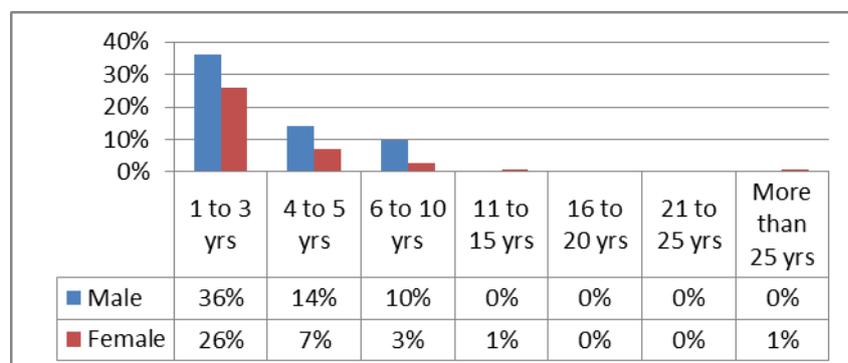


Source: UTDBE Impact Assessment Baseline Study, 2014

The table below shows similar data but with regard to the **full time DBE graduates**. Once again the percentages are expressed as a proportion of the **total number of full time DBE graduates**. There is overall a lower proportion of females in this sample but what is clear is that the proportion of females who are retained for longer periods decreases dramatically between 1 to 3 years and 4 to 5 years with just 4 female full time DBE graduates having

served for 6 to 10 years and only 1 in each of the 11 to 15 years and more than 25 years categories.

Figure 2: Percentage of Full Time DBE Graduates by Length of Service and Gender



Source: UTDBE Impact Assessment Baseline Study, 2014

The following tables illustrate length of service in rural (deprived or extremely deprived) schools and the picture is fairly similar to the trend described for total years of service as just 17% of the sampled DBE graduates have spent zero years in a rural school. The key finding from this data is that these teachers who have, at some time in the last 14 years, graduated from a DBE course which they pursued by distance and therefore were trained while teaching are registering longer service in schools and longer service in rural schools. Furthermore, there are relatively high numbers of females across all the categories of service periods. There are higher percentages and numbers of female graduates than male graduates in the 1 to 3 years and 4 to 5 years, a much higher percentage of males in the 6 to 10 year category, but similar numbers of males and females who have served for more than 20 years.

Table 2: Number of years of Service in Rural (Deprived or Extremely Deprived) Schools – Distance by DBE

	0 years	1 to 3 yrs	4 to 5 yrs	6 to 10 yrs	11 to 15 yrs	16 to 20 yrs	21 to 25 yrs	More than 25 yrs	Total number of respondents
Sex									
Male	10	10	6	26	16	4	3	3	78
Female	14	13	12	12	10	0	4	3	68
Male	7%	7%	4%	18%	11%	3%	2%	2%	146
Female	10%	9%	8%	8%	7%	0%	3%	2%	

Source: UTDBE Impact Assessment Baseline Study, 2014

Of the full time DBE graduates, there is a slightly higher percentage who have never taught in a rural school and no graduates either male or female who have served in rural schools for a period of more than 15 years and only one female who has served for more than 10 years.

Table 3: Number of Years of Service in Rural (Deprived or Extremely Deprived) Schools for Full Time DBE

Sex	0 years	1 to 3 yrs	4 to 5 yrs	6 to 10 yrs	11 to 15 yrs	16 to 20 yrs	21 to 25 yrs	More than 25 yrs	Total number of respondents
Male	15	50	21	12	0	0	0	0	98
Female	13	31	9	3	1	0	0	0	57
Male	10%	32%	14%	8%	0%	0%	0%	0%	155
Female	8%	20%	6%	2%	1%	0%	0%	0%	

Source: UTDBE Impact Assessment Baseline Study, 2014

Conclusions

At this point in the longitudinal study of the evaluation of the UTDBE programme, baseline data is presented that will necessarily be built upon during the course of the mid-term and end line evaluation exercises. However, conclusions based on analysis of the data collected during this study indicate that, in order for progress to be made towards the stated aims of the programme, certain policy and operational changes could be considered.

With regard to improvement in trainees' practical and subject knowledge, this question will be finally assessed at the end line. However, given the timing of this baseline and the fact that trainees assessed have completed 3 semesters of the programme, it is appropriate to look critically at the extent to which the course has impacted on their levels of knowledge and skills. An analysis of improvement in subject content knowledge in the 2 subjects where this was possible (English and Science) indicates that overall trainees have made progress. However, when these results are compared to those of conventional DBE students who have completed similar units of work and therefore similar exams, it is clear that UTDBE trainee performance is generally lower than that of their conventional DBE counterparts. Furthermore, an assessment of classroom practice showed that generally trainees are performing less than satisfactorily across many of the indicators assessed. What is clear, however, is that in the area of subject content knowledge, and general classroom management issues (e.g. lesson planning, class control and discipline, language of instruction), the majority of trainees demonstrated satisfactory performance. Those interviewed on the comparison between the classroom practice of trainees compared to trained teachers (specifically conventional DBE graduates) generally felt that trained teachers were better able to "handle" a wider range of subjects and topics and that their teaching strategies tend to be more pupil centred or interactive. However, given that the UTDBE trainees are still at an early stage of their training, this is unsurprising. A rigorous comparison will be made between these two groups towards the end of the UTDE programme in order to assess the amount of progress made by the trainees.

After an analysis of the costs of the course both to Government (or GPEG) and the students, it is clear that the overall cost of sponsoring a UTDBE trainee for four years is far lower than a conventional DBE student who completes in three years. However, this comparison was made using financial data from previous studies and a more rigorous comparison will be made at the end line. Further evaluation of cost efficiency at the end line will also need to be based on the extent to which the UTDBE programme produces teachers who are capable of improving the quality of education in their respective classrooms/schools. At this stage of the evaluation, though, it is clear that a key finding from an analysis of costs is that much of the financial burden falls on the trainees themselves, and that this burden is further exacerbated

by the fact that few trainees in this GPEG cohort are employed as pupil teachers, and therefore the majority have no income.

Another expected outcome of recruiting teachers already in schools and training them to a professional standard is that this will not just result in improved quality but that it will increase the likelihood that teachers will evince higher levels of commitment that will translate into long periods of retention particularly in the more deprived or remote school communities. It is not possible at this baseline stage to evaluate the extent to which this is true for the current cohort of UTDBE trainees, although they were encouraged to discuss their aspirations and expectations. However, an analysis of the behaviour of DBE graduates in the schools who trained while teaching as part of previous distance programmes indicates that, in the first instance there are a substantial number of these in the schools visited and furthermore, duration of their service (particularly in rural and remote schools) far exceeds that of DBE graduates in the sampled schools who completed by pursuing the conventional programme.

Responses from UTDBE trainees themselves indicate high levels of commitment to completing the programme because they believe it will lead to the eventual security of trained and salaried teacher status in GES schools. Most attest to having long term aspirations to remain in the teaching field but with the additional possibility of promotion to “higher” grades and the opportunity to further their education to degree level or further. The general understanding among trainees is that the policy in the deprived districts sampled requires that sponsored UTDBE trainees are required to remain in the district for 3 to 4 years after graduation. However, evidence from interviews with District officers indicates that trainees are not required to sign any kind of undertaking or bond to this effect.

Recommendations

The high motivation of trainees to be professional teachers and their level of commitment in schools needs to be nurtured and this can be done through additional support. The support comes in various forms:

- Head teachers should be effectively trained and officially assigned to the trainees who are teaching in their schools to guide and mentor them as well as report on their performance.
- Cluster meetings should be regularised and made accessible to trainees across all districts with a stronger role being played by tutors from the Colleges of Education.
- The timing of cluster meetings should be reviewed so that they do not interfere with the normal school timetable.

It is the view of Tutors and Principals of the Colleges of Education that the UTDBE Course has been structured programme with too much emphasis on subject content knowledge in the initial stages. It is therefore recommended that:

- Course content and organisation is reviewed so that it is tailored more towards the needs of the practising teacher - pursuing pedagogical and methodological practice from the outset, and teaching subject content alongside the practical teaching skills, rather than doing it in sequence.

- Given the proportion of trainees placed at the KG and Lower Primary levels of Basic Schools, more emphasis should be placed on equipping teachers with the skills to teach early grade reading and maths.

The cost burden to the trainees is high and is cited by many trainees (especially those that have no income) as the greatest challenge they face. However, this does not appear to have caused decreased levels of commitment by the UTDBE trainees.: It is therefore recommended that:

- Colleges of Education are re-zoned to where the trainees have easy access to attend face-to-face. This can be done effectively if the districts, Colleges of Education, TED and GPEG are brought together in the design and admission of trainees to closer Colleges of Education.
- Regularising trainees onto the government payroll as pupil teachers, since they are in fact all teaching full time in GES schools.
- Facilities and other services such as meals, at Colleges of Education should be reviewed to ensure that overcrowding of trainees is avoided and that meals and provision of water is adequate for their needs.

General recommendations also include:

- Improving the content of the UTDBE programme in order that primary teachers are able to learn the basic skills of teaching reading, writing and numeracy.
- Improving the exposure of UTDBE trainees at the CoE to a variety of teaching methods and modelling of child friendly best practices in order to build on their experiences in the classroom.
- Strengthening communication and collaboration between TED, GES (DEOs), Colleges of Education and the trainees themselves so that all departments are aware of relative progress of the trainees and that the trainees themselves are kept up to date in a timely manner of recent exam results or other assessments.
- Better targeting of the UTDBE programme in order to assist the most deprived areas where trained teachers are unwilling to serve. Providing a quota based on the teacher resource gap in some districts.
- Supporting particularly female UTDBE trainees during their face to face at the College of Education by providing a more female friendly environment particularly for trainees with young children.

Chapter 1: Introduction

1.1 Introduction and Background

One of the major challenges facing Ghana's education system is the presence of a large number of untrained teachers particularly in the rural and deprived areas of the country. In 2011, almost 70,000 untrained (and 123,000 trained) teachers were teaching in Government basic schools in Ghana¹⁰. A study by the World Bank (2011) found that learning outcomes for pupils in basic schools were closely related to the availability of trained teachers. Bressoux, Kramarz and Prost (2008) also found that teacher training improved test scores in Mathematics. Other studies (Lee et al., 2005; Spreen and Fancsali, 2005) reveal that teachers' subject knowledge increases students' test scores. Evidence from Rockoff's (2004) study suggests that raising teacher quality is a key instrument in improving student outcomes. The Education for All (EFA) Global Monitoring Report (EFA GMR, 2010) found that what students achieve in school is greatly influenced by classroom practices and teacher skills (UNESCO GMR, 2010).

On the basis of compelling evidence, Ghana's Education Strategic Plan sets out a policy to achieve a minimum of 95% trained teachers in basic schools by 2020. Across Ghana, while pupil to teacher ratios are reasonable in Government basic schools (28:1), the pupil to trained teacher ratio (PTTR) is inadequate at primary (54:1) and KG (96:1) levels. These ratios worsen in the Northern and Western Regions and across the rural areas of the country.

In order to upgrade eligible untrained teachers in schools, particularly in the rural deprived areas of the country, the Ghana Government introduced the Untrained Teachers Diploma in Basic Education (UTDBE) programme in 2004. The UTDBE uses Open and Distance Learning (ODL)¹¹ to support untrained teachers studying for the Diploma in Basic Education, while they continue to teach in their schools. Residential periods of training are offered locally as a more efficient way of organizing training, and increasing the likelihood that teachers remain in schools after their training. To date, more than 27,000 teachers (of which 44% are female) have enrolled in the UTDBE programme; completion rates are high; and the costs are one-fourth the pre-service diploma programme. An evaluation of the UTDBE was carried out by Akyeampong et al. (2010) and recommendations from the evaluation have been taken into account in preparing further versions of the programme. Subsequently, in 2012, an assessment building on this evaluation and quantifying costs and completions was carried out for the Global Partnership for Education (GPE) (Murphy, 2012).

As part of the Global Partnership for Education Grant (GPEG), the Ministry of Education (MoE) secured funding of US\$15.06 million over three years (2012 - 2015) from the GPEG in order to enable untrained teachers to gain skills and qualifications by re-launching the

¹⁰ This includes teachers from KG to JHS3.

¹¹ It should be noted that the UTDBE programme has some elements of ODL courses in that the trainees are expected to work through modules on their own between the college based vacation courses; they also receive some ongoing distance tutorial support to review the modules at the cluster based workshops organized by the District Education offices. At the moment, UTDBE does not offer any access to additional programme content online and there is no correspondence material.

UTDBE programme. GPEG is expected to support the upgrading of up to 8,000 untrained teachers in 57 deprived districts. The upgrading improves children's learning during the training period and is an efficient way to get trained teachers in the more remote/deprived schools. It is also expected that teachers will remain in these schools after graduation.

The UTDBE programme was designed by the Teacher Education Division (TED) of the Ghana Education Service (GES). It began in 2004 and has been run in four phases across Ghana. The UTDBE takes four years to complete and the quality control is overseen by the University of Cape Coast's Institute of Education (IoE/UCC). The Institute of Education, University of Cape Coast (UCC) also oversees the quality of the full-time three-year pre-service Diploma in Basic Education (DBE) courses provided by the Colleges of Education (CoEs).

Most trained teachers gain their teaching diploma through the conventional three year full-time DBE course which they complete before starting to teach. On this course the trainees reside mainly at the CoEs with the exception of end of semester vacations, when the UTDBE students move in and for much of the third year when student teachers are posted to schools. This course is fully paid for by the Government, and in addition the trainee teachers receive a stipend¹². The quality of DBE is also overseen by UCC. The students follow the same curriculum as UTDBE and the final examinations are designed to test teacher trainees at the same levels. For the current UTDBE course, a first cohort of students was enrolled in August 2012, and the course began in December 2012 with the full cohort. A total of 7,817 student teachers are currently enrolled from deprived districts, with 41% being females.

The Millennium Development Goal 2 (MDG 2) urges countries to achieve universal primary education by 2015. In other words, by 2015, children of school-going age should complete a full course of primary schooling. Common indicators for effective assessment of universal participation of children in educational systems are the gross and net enrolment rate.¹³ The recent MDG Report (2010) argues that Ghana has made significant progress regarding primary school enrolment over the past few years due to the educational policy initiatives and programmes such as the implementation of the school feeding programme, capitation grant and free school uniforms. In fact, enrolment increased by 16% in response to the introduction of the capitation grant and the school feeding programme in basic schools (UTDBE Handbook, 2012). Data from the 2013 Education Sector Performance Report shows a year-on-year increases in both NER and GER at Kindergarten (KG) and primary school levels over the past 5 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 also

¹² The passage of the College of Education Act (Colleges of Education Act 847, 2012) paved the way for the upgrade of the teacher training colleges in Ghana to attain tertiary institution status. This tertiary status necessitated the need to review regulations governing CoEs to conform to those of other tertiary institutions. This practically meant that government could no longer continue to pay stipend (allowances) to tertiary students as all other tertiary students are not paid stipend. This is why the government announced in 2013 a decision to scrap the payment of allowances to teacher trainees. Thus from the beginning of 2013/2014 academic year, the payment of stipend to teacher trainees was cancelled. Teacher trainees are now given the option of applying to the Students Loan Scheme for loans to finance their education.

¹³ Gross enrolment rate (GER) measures the number of pupils/students at a given level of schooling irrespective of age as a proportion of the number of children in the relevant age group while net enrolment rate (NER) measures enrolment of the official age – group for a given level of education expressed as a percentage of the corresponding population (UNESCO Institute for Statistics, 2013).

postulate similar behaviour where enrolment increased from 63.6% in 2008/09 to 74.8% in 2012/13 denoting a rise of about 17.6%. With regard to primary level, while GER increased from 94.9% in 2008/09 to 105% in 2012/13 (representing about 10.6%), NER dropped from 88.5% in 2008/09 to 81.7% in 2011/12. It however modestly increased to 84.1% in 2012/13 (MoE, 2013).

However, it is important that increases in enrolment should not be accompanied by any worsening of the pupil to teacher ratio which is often seen as a rough proxy measure for quality of education. In other words, quality may suffer if the number of teachers decreases or remains static, while enrolment increases sharply as has happened over the period of (and partly as a result of) the MDGs. A diagnostic analysis of the MDG Report (2013) shows a decline in the national PTR which would suggest an improvement in the quality of education. That notwithstanding, there exists an excess demand for teachers and meeting the teacher demand still remains a major challenge to the Government of Ghana owing to the insufficient supply of trained teachers in matching its rising demand especially in basic schools in deprived rural areas. Opoku–Agyemang (2014) contends that significant number of untrained teachers exists across the country where about 52% and 69% of teachers at the KG and primary levels are trained.

The quest to increase the number of teachers in classrooms has led to the design and implementation of various modes of teacher training in most countries including Ghana where there is a shortage of trained teachers. Given the renewed interest of bridging the PTR, many countries have introduced Open and Distance Learning (ODL) as a way of supplementing the traditional pre-service route to teacher training. In the case of Ghana, the implementation of the Untrained Teachers' Diploma in Basic Education (UTDBE) programme in 2004 was a policy response to the teacher demand–supply gap with over 12,000 teachers enrolled is meant partly to address the shortfall in trained teacher statistics (Opoku–Agyemang (2014). The UTDBE uses the ODL in supporting untrained teachers studying for the Diploma in Basic Education (DBE), while they continue to teach in their various schools. It is thus a combined initial and in–service teacher training which spans over a 4-year period after which trainees obtain a DBE certificate. However, most trained teachers obtain their teaching diploma certificate through the traditional 3–year full–time DBE course which comprises two years' full time College training followed by one year of teaching practice in schools.. In their first two years of this course, the trainees reside mainly at the College of Educations (CoE) with the exception of end of semester vacations, when the UTDBE students move in for their residential face–to–face session. However, both training modalities offer the same course modules offer by the Institute of Education of the University of Cape Coast (IoE–UCC).

1.2 Research Questions

The GPEG impact assessment of 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 will also investigate trainees' satisfaction and career ambitions. To achieve the objectives of the UTDBE evaluation programme, the following research questions have been formulated.

1. What improvement has occurred in the student teachers' quality of teaching as a result of 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 on the traditional pre-service in the quality of 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 trainee's satisfaction with the course work of the UTDBE programme?
9. How can the current UTDBE programme be improved?

The impact evaluation will be carried out over a one year period – 2014 to 2015. During this period, three main studies are planned: baseline, mid-term and end line. The baseline study reflects an initial exploration into the current situation with regard to the GPEG sponsored UTDBE programme which began in 2012. The mid-term assessment will focus on a second evaluation of UTDBE trainees' classroom practice as well as an assessment of teachers who have participated in the GPEG sponsored NIU INSET programme. The end line assessment will employ similar strategies as the baseline with the additional remit of making comparisons between the UTDBE trainees and recent DBE graduates (ie those who have achieved DBE through conventional means between 2011 to 2014).

1.3 Research Methodology and Sampling Framework

Due to the longitudinal and exploratory nature of the UTDBE evaluation study, a cross-sectional survey design in which data collected reflects the views and observations of participants regarding the UTDBE at several points in time is being employed. The design of the study uses both qualitative and quantitative approaches to evaluative research. In line with such a design, data collection instruments were both single face-to-face interviews and summated close and open-ended Likert-type scale self-report questionnaires. This research also used classroom observation methods.

A variety of analytical techniques including inferential, descriptive and narrative analysis have been used in analysing data collected from the field. For example, the research team employed the Likert-type questionnaire to collect quantitative data from UTDBE trainees and other teachers. Another questionnaire also enabled the research team to gather data on the relative costs of the UTDBE training strategies among the UTDBE trainees. 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 of the 9 sampled districts¹⁴.

¹⁴ 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 interviews at the CoE also allowed for rich, in-depth qualitative data to be collected and analysed giving fuller meanings and explanations to support the findings from the quantitative approach. We believe that the issue under investigation is complex and one evaluative approach alone cannot adequately supply all the answers that we are seeking. This explains the varied use of instruments to triangulate the data such that the weaknesses of one approach are potentially compensated for by the strength of the other. We acknowledge that investigating an issue such as the effectiveness of teacher education interventions involves value judgments, particularly regarding the validity and reliability of data due to moral issues that may combine to create social desirability effects (Howard-Rose and Winne, 1993; Bong, 1996).

For the teachers, the research team used an existing TED/NIU lesson observation instruments with some modifications from AfC's lesson observation schedule (LOS) to assess their teaching, lesson notes planning/preparation as well as to observe their classroom teaching to determine the quality of their methodology and classroom organization and management, and their content knowledge.

This same approach is expected to be used again after the current cohort of UTDBE trainees are in their final year so that the two data sets of teacher trainees can be compared and progress against project indicators evaluated. One assessment will be made in the interim period between baseline and end line in order to provide data for continuous assessment. These research events will be in less depth and will take the form of classroom observations using the same adjusted lesson observation schedule (LOS) as for the baseline assessment but a less detailed interview instrument. Please refer to Annex 1 for a full summary of the instrumentation used in the baseline assessment.

Sampling Framework and Site Selection for UTDBE Evaluation

The research team employed a multi-stage sampling technique to select samples that were representative of characteristics (e.g. UTDBE trainees, DBE graduates) of the population from which they were drawn. Ideally, selected school had DBE graduates who have graduated within the last 3 years (so that the time span DBE graduates have spent in school is similar to that of the UTDBE trainees who are at post for the duration of the 4 years of the UTDBE programme) in order that comparisons can be made between these two groups at the end line. However, given that UTDBE trainees are generally drawn from deprived districts and remote schools within those districts where there is an identified shortage of trained teachers, the research team encountered a few challenges identifying schools for the sample that include in their teaching population UTDBE trainees sponsored under the GPEG initiative, and DBE graduates that fulfil this criteria. The sampling also took into account the locality and level of deprivation (i.e. deprived, less deprived and extremely deprived) as well as gender considerations. Both purposive and random sampling techniques were used to select targeted samples. Random sampling techniques were employed to select UTDBE trainees in the selected districts. Key stakeholders involved in the teacher training/UTDBE Programme in the country which included UCC/IOE, TED and CoE principals and tutors were purposively sampled for the research. Pupils and SMC/PTA's were also selected randomly for focus group discussions (FGD) in the sampled schools.

Although GPEG aimed to support 8,000 UTDBE graduates from the 57 deprived districts to be trained within the period of the intervention, nationwide data from the 13 designated CoE

show that as at the August, 2013 long vacation, 7,043 students from the 57 deprived districts remained registered for the training programme (out of the total of 11,696 students in those CoE). Krejcie and Morgan's (1970) approach to determining sample size for research activities indicates that for a population of 7,000+ 6% should be sampled. The research team aimed at a sample size of 405 trainees in order to ensure that the number of UTDBE trainees to be tracked through the life of the assessment programme will not fall short of the 364 sample size which represents 6% of the 7043 trainees in the cohort.

In each district the number of schools visited ranged between 17 and 28 schools. The original sample size for the evaluation was intended to cover 405 UTDBE trainees across the nine sampled districts (45 UTDBE trainees per district). This target was slightly exceeded as the research team covered a total of 407 UTDBE Trainees across the nine sampled districts. Overall, there were 59% Male and 41% females interviewed. Also in the original sample, the evaluation team intended to cover 80% rural and 20% urban trainees. The final sample included 74% of trainees from rural areas (this include UTDBE trainees from deprived and extremely deprived schools) and 26% from urban areas. See Table 1.1 below for the number of trainees interviewed across the nine study districts.

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

District	Number of Schools	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	45	14	31%	17	38%	14	31%
Nkoranza North	47	8	17%	24	51%	15	32%
Bunkpurugu Yunyoo	43	10	23%	24	56%	9	21%
West Mamprusi	46	16	35%	12	26%	18	39%
Bongo	44	7	16%	15	34%	22	50%
Talensi Nabdam	40	8	20%	10	25%	22	55%
Jirapa	48	10	21%	12	25%	26	54%
Lawra	47	8	17%	20	43%	19	40%
Wassa Amenfi	47	23	49%	18	38%	6	13%
Totals	407	104	26%	152	37%	151	37%

Source: UTDBE Impact Assessment Baseline, 2014.

Sample size of teachers posted to the different school levels was determined by proportional representation. That is to say, numbers of trainees teaching at KG, Primary and JHS was verified at the district level and site selection was determined as far as it is practicable on the basis that reasonably representative numbers of teachers are located in these schools. Analysis of the sample revealed that the majority of UTDBE trainees interviewed are teaching at the primary level. Across the nine sampled districts, 77% of UTDBE trainees interviewed were teaching in primary schools, 11% were in KG level and another 11% were in JHS. This was fairly representative as this does not deviate very much from the national picture of trainees working at these levels. There were no UTDBE trainees interviewed at the KG Level in the Bunkpurugu-yunyoo district in the Northern Region and Lawra district in the

Upper West Region. Also there was no UTDBE trainee interviewed at the JHS level in the Atebubu Amantin district in the Brong Ahafo Region. See Table 1.2 for further details.

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	
	Count	Percentage	Count	Percentage	Count	Percentage
Atebubu Amantin, Brong Ahafo	13	29%	32	71%	0	0%
Nkoranza North,	11	23%	35	74%	1	2%
Bunkpurugu Yunyoo	0	0%	23	53%	20	47%
West Mamprusi	4	9%	37	80%	5	11%
Bongo	8	18%	31	70%	5	11%
Talensi Nabdam	5	13%	34	85%	1	3%
Jirapa	1	2%	45	94%	2	4%
Lawra	0	0%	44	94%	3	6%
Wassa Amenfi	4	9%	34	72%	9	19%
Totals	46	11%	315	77%	46	11%

Source: UTDBE Impact Assessment Baseline, 2014.

According to statistics provided by TED for numbers of trainees enrolled at 2013 long vacation, 39% of trainees are female; selection at the school level also sought to reflect this gender balance. The research team exceeded its initial target of reaching 25% female UTDBE trainees and 75% male UTDBE trainees in each of the sampled districts. Overall, there were 59% Male and 41% females interviewed. Nkoranza North District had the highest representation of female UTDBE trainees at 60%. The next highest was Lawra district, where 50% of trainees interviewed were females. Bunkpurugu Yunyoo district had the least female trainees interviewed. There were just 16% of female UTDBE trainees interviewed in the district. These figures are all largely reflective of the gender representation of UTDBE trainees undergoing the programme across the sampled regions. The rationale for this selection is based on the reality of the scarcity of trained teachers in rural schools, particularly females, especially in the deprived districts. See Table 1.3 below on the rest of the 9 sampled districts.

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
	Count	Percentage	Count	Percentage	
Atebubu Amantin	20	44%	25	56%	45
Nkoranza North	19	40%	28	60%	47
Bunkpurugu Yunyoo	36	84%	7	16%	43
West Mamprusi	28	61%	18	39%	46
Bongo	31	70%	13	30%	44
Talensi Nabdam	28	70%	12	30%	40
Jirapa	29	60%	19	40%	48
Lawra	21	45%	26	55%	47
Wassa Amenfi	30	64%	17	36%	47

	Number of male trainees		Number of female trainees		Total number of trainees
Totals	242	59%	165	41%	407

In line with the rationale underpinning the UTDBE, 389 classroom observations in mathematics, literacy or science were conducted using the TED/NIU lesson observation sheet (LOS). Data collection at the school and district level was done in collaboration with a TED/GES team of data collectors. TED administrators of UTDBE programmes and principals/vice principals and tutors across 5 colleges of education were interviewed on their perceptions of both the UTDBE and DBE programmes.

1.4 District Selection

The evaluation of UTDBE is mainly focused on outcomes and effectiveness in terms of those teachers trained from what have been classified as deprived districts. There are 57 such districts in Ghana located in 8 of the 10 regions. Nine of the 57 districts (approximately 15%) were sampled; and of the 7,043 trainees in the UTDBE programme, 405 (about 6%) were sampled. In order to ensure that the sampled trainees are representative of the cohort of teachers as a whole, site selection took into account the relative numbers of trainees and districts across the 8 regions.

The table below illustrates a breakdown of the numbers of trainees in each region. Of the 8 regions, the highest numbers of trainees are found in the Northern and Brong Ahafo Regions. There are just 25 trainees recorded as attending the programme in Eastern Region from 1 district. With a sample size of 405 trainees across 9 districts, it was necessary to visit at least 45 trainees in each district. As the number of teachers in the Eastern Region is less than this, this district was not included in the sample both for reasons of proportional representation and logistical concerns. A total of 5 regions were visited: Northern, Upper East, Upper West, Brong Ahafo and Western Regions. The research team visited 2 districts in the Northern Region, Upper East and Upper West Regions in the Northern zone. Also in the Brong Ahafo Region, representing the middle zone, 2 districts were selected and one district from the Western Region in the southern zone. In total 9 districts were selected across the five regions.

Table 1.4: Breakdown of Numbers, Percentage and Proportion of Trainees in Deprived Districts by Region

Region	Total Number of Trainees	Female	Male	Number of trainees as a percentage of total	Percentage of trainees as a proportion of 15 districts	Number of districts	Number of districts as a percentage of total	Percentage of districts as a proportion of 15	Number of Districts Selected from Region
Northern	1978	580	1398	28.1%	4.2	19	33%	5.0	2
Upper East	596	228	368	8.5%	1.3	8	14%	2.1	2
Upper West	893	357	536	12.7%	1.9	8	14%	2.1	2
Volta	532	215	317	7.6%	1.1	5	9%	1.3	0
Brong Ahafo	1897	924	973	26.9%	4.0	8	14%	2.1	2
Western	598	209	389	8.5%	1.3	4	7%	1.1	1

Ashanti	524	256	268	7.4%	1.1	4	7%	1.1	0
Eastern	25	9	16	0.4%	0.1	1	2%	0.3	0

Source: UTDBE Deprived District Statistics as at Long Vacation 2013

Calculations indicate that while the Northern Region has the highest number of deprived districts, the numbers of trainees coming from that region is similar to that of Brong Ahafo. Equally Brong Ahafo Region has the same number of deprived districts as both the Upper East and Upper West but has a substantially higher number of trainees. The numbers of districts was therefore chosen to take account of these proportions. Therefore the following numbers of districts will be sampled from each region:

Table 1.5: Number of Districts Selected per Region

Northern Zone		Middle Zone		Southern Zone	
Regions	Number of Deprived Districts	Regions	Number of Deprived Districts	Regions	Number of Deprived Districts
Northern	2	Brong Ahafo	2	Western	1
Upper East	2				
Upper West	2				
Totals	6		2		1

Source: UTDBE Impact Assessment Baseline, 2014.

All districts have been classified as deprived using the same criteria; therefore it can be assumed that all are comparable. Selection of the sampled districts was done on the basis of which districts had the highest numbers of trainees.

Other key considerations for district sample selection included the following criteria:

- Representative approach for three regions including northern, middle and southern zone including proportion of UTDBE trainees in the districts/regions;
- Large numbers of UTDBE teachers present in a district with at least 90 UTDBE trainees or more per district;
- Availability of longitudinal data from AfC's research on quality of education and other teacher studies; and
- Accessibility of the district particularly in the rainy season and proximity of the two districts to each other for ease of movement by the teams.
- Availability of DBE graduates to enable a comparative study during end line evaluation.

School/Community selection where both UTDBE trainees and DBE graduates are present used the following criteria:

- At least 15-20% of schools in the urban localities of the district and 80% in the rural areas of the district;
- Based on the national and regional gender indices: 25% of female UTDBE trainees and 75% of male trainees were targeted in each district;
- Balance where possible between KG/Primary and JHS levels (aimed to target lower and upper primary levels where possible);
- At least two UTDBE trainees in each school; and

- Where possible selected schools had one DBE; (newly graduated from training college within the last few years inclusive of the out year).

Final selection of the community /school used a deprivation analysis by grouping the schools into clusters and insuring that at least 1 cluster of schools was in a less deprived part of the district, 2 clusters of schools were in deprived areas and 1 or 2 clusters of schools were in extremely deprived areas. The approach and criteria for this categorization is discussed in section 1.4 below.

1.5 Data Quality Assessment

A thorough quality analysis was done for the data collected before analysis. There were 18 instruments used for data collection. After the data entry, each file was checked for data entry errors. A few data entry errors were detected and corrected. Some missing and blank cells were detected but the missing data was not large enough to influence the data analysis. In terms of validity, data was collected by qualified people. The majority of the data collectors have a first degree qualification with a few second and third degree holders. Data collectors were in five groups with a supervisor. Before data collection began, a one-day training was organized for all data collectors and another day was used in training/preparing for field work with data collectors at the regional level. On the whole, the quality of the data collected showed that the training provided the data collectors with the skills and competencies needed.

For reliability, the data collection process was consistent from location to location and from data source to data source. Data is properly stored and can be retrieved any time for analysis. In terms of integrity, data entry clerks were professionals and were supervised. No evidence of data manipulation or collusion was found. Based on the assessment, the overall quality of the data is high.

1.6 Typology of Levels of Deprivation

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.

Table 1.6: Characteristics of Levels of Deprivation

Location	Characteristics of deprivation
Less deprived (e.g. district capital) -	<ul style="list-style-type: none"> -Urban centre - Often having access to social and economic services - Pipe borne water - Some have electricity - Market - Health services (some level) - Cluster of schools - Good accommodation
Deprived (Rural in nature)	<ul style="list-style-type: none"> - Containing some towns/ villages - Often based on subsistence farming - Accessible with most schools along the main road - Water facilities limited (sometimes teachers also drinking out of streams) - No electricity in some cases - Schools in variable condition - Very few trained teachers available
Extremely deprived	<ul style="list-style-type: none"> - No potable water - No electricity - Difficulty finding accommodation for teachers - Poor or No access roads - Sometimes inaccessible particularly in rainy season - Markets are far away and food is not easily accessible - Often no trained teachers available

(GES, 2001; Casely-Hayford with Wilson, 2001)

1.7 Description and Rationale for the UTDBE Programme

The incorporation of UTDBE into the mainstream teacher education programme in Ghana is primarily aimed at upgrading eligible untrained teachers in schools in rural communities in order to improve the quality of basic school teachers in remote areas through the use of Open and Distance Learning (ODL) to support untrained teachers studying for the DBE, while they continue to teach in their schools. Residential periods of training are offered locally as a more efficient way of organizing training, and increasing the likelihood that teachers will remain in schools after their training. The theoretical framework that underpins our study is derived from the social psychological concept of behavioural change (McGuire, 1986) and the social psychological structure of interaction analysis in observation of classroom teacher behaviour (i.e. Flanders' interaction analysis). In this study the term behavioural change refers to changes in teaching quality including lesson planning/preparation; teaching methodology; classroom organization and management; and content knowledge of the UTDBE teachers. The use of the classroom observation instrument helps explain classroom teacher behaviour.

The theoretical framework for this study makes several assumptions, as follows. First, the quality of teaching is determined not just by the quality of the teachers – although that is clearly critical – but also by the environment in which they work. Able teachers are not necessarily going to reach their potential in settings that do not provide appropriate support or sufficient challenge or reward (OECD, 2005: 9 quoted in Day and Gu, 2010: 9 as quoted in Yates, 2013: 4). Second, teachers are not born with the attitudes to reject postings to rural areas but rather, they acquire them. Third, lesson planning/preparation; teaching

methodology; classroom organization and management; and content knowledge of what to teach can be acquired through training. In other words training to the DBE level, whether by the conventional mode or the UTDBE mode, tends to improve teacher skills and knowledge with time. Fourth, improved teacher qualification and skills are evaluative; qualifications and skills are a means by which we judge progression in lesson planning/preparation; teaching methodology; classroom organization and management; and content knowledge of practicing teachers. Finally, these qualifications and skills can influence behaviour, such as whether to remain or move out of rural remote areas into urban or vice versa.

This study has also taken into consideration the gender dimension by focusing all analysis on the differentiation between male and female teachers across the study. Casely-Hayford and Wilson (2001) confirm that in many parts of rural Ghana there are significant barriers to female teachers accepting postings to these rural and often deprived areas therefore reinforcing a cycle of deprivation among girls and boys in basic education. The lack of female teachers also reinforces their lack of interest particularly in girls entering the teaching field therefore reproducing a cycle of underdevelopment. Most girls from deprived rural communities are unable to complete primary to senior high school due to the lack of role models and potential mentoring support. This study used a deprivation analysis to identify the locations where female teachers could and could not be found. A similar deprivation analysis was adopted for this study.

In summary therefore, our theoretical framework assumes that rural teachers, motivated and supported to acquire teacher qualifications and skills, will be influenced in their choice to remain and teach in the rural setting more than students who are trained by conventional face-to-face methods. The number of female trained teachers in rural deprived areas might also be substantially increased due to the UTDBE model. In the same sense, changing or manipulating one of the components should enable change to the others. The UTDBE programme, with its motivation and support mechanisms, is aimed first at upgrading the rural teachers' qualifications as well as improving the teachers' lesson planning/preparation, methodology, classroom organization and management, and content knowledge. Teachers qualifying through this route will, we believe, have greater sympathy and empathy for other rural families and children. If the training is successful, we would expect these rural teachers, both male and female, to be more motivated to remain working in the rural areas where they trained, qualified and practiced. In other words, the extent to which these teachers will remain in rural areas or take leave for urban areas will depend in part on the effectiveness of the UTDBE programme.

1.8 Literature Review and Impact of Similar DE Programmes Across SSA

Education for All reports indicate that global targets for numbers and levels of expertise of trained teachers will not be reached if countries rely solely on conventional teacher training approaches (face to face full time pre-service courses) (Crichton, 2003). The implementation of quality educational policies and programmes in the sub-Saharan African (SSA) countries has been noted as a major impetus behind any fundamental change or transformation. The education system is characterised by the traditional face-to-face interactions between teachers and learners, structured courses of study, fixed locations for learning, fixed time schedules, and a certification system (Onyemaechi, 2013). It has been argued however, that none of the sub-Saharan African countries has by implementation fulfilled the promise of providing

education for all through the traditional or conventional education system (Association for the Development of Education in Africa (ADEA), 2002). It is the search for an alternative implementation mechanism to achieving boost in access and quality of education delivery that gave rise to the evolution of the Distance Learning (DL) system in sub-Saharan African countries. The ODL system contributes to providing access to quality education and equity in educational opportunities, meeting special needs of employers by mounting special certificate courses for their employees at their workplaces, encouraging internationalization, especially of tertiary education curricula and ameliorating the effect of internal and external brain drain in tertiary institutions by utilizing local experts as teachers regardless of their locations or places of work (Onyemaechi, 2013).

There is no universally accepted definition of distance education despite several attempts by some scholars. Most definitions appear to portray the possibility of communication between participants in a learning system across time and space through technologies (Onyemaechi, 2013). Perraton (1993) explains distance education as “an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learners”. Similarly, Holmberg (1990) defines distance education as the various forms of teaching and learning at all levels which are not under the continuous, immediate supervision of tutors present with their learners in lecture rooms. For Crichton (2003), distance learning is an education process in which teachers and learners are separated in space and/or time for some or all of the time of study and in which the learning materials take over some of the traditional role of the teacher. A combination of the two terms appears to have given rise to the currently operating term, open and distance learning.

Leary (2007) asserts that there are approximately 150 distance education programmes working in SSA with most of them led by in-country universities whose Distance Education (DE) programmes began in the 1990's, though some began as early as the 1950's. That the best DE programmes in Africa are large in scope, often spanning several countries and even multiple continents because they depend on the economies of scale to become financially sustainable. Programmes with low numbers of students and high levels of investment per student struggle to be financially viable without major donor aid. He further opines that the most successful DE programmes also take advantage of resources offered by the international donor and development community, mainly the World Bank and UNESCO and at the same time they network with numerous partnering associations that are supporting DE programmes in SSA. Successful DE programmes utilize a blended learning system that has a primary emphasis on print material with some level of correspondences and additional communication by radio, text, and email in some countries. It also has a relatively low dependence on e-learning delivery systems. Leary (2007) argues that despite the emphasis on print and other forms of delivery, DE programmes in SSA are constantly finding ways to integrate more ICT into their programmes without abandoning traditional delivery systems and often utilise a network of tutor-led learning centres throughout the country or region. Cornille (2004) argues that DE centres serve as a study area with library facility; both a paper and digital library resources, a place to view tutorial videos and listen to audio recordings, guidance centre, place for students to meet and work together, a centre to access computers and other technology and a place for assessments of students. It is evident that successful DE programmes take advantage of many external resources since the ultimate key to their success is to overcome cost barriers is by serving a large population (Leary, 2007).

There are several mediums of delivery for an effective DE programme including print, audio, and video. Although there is increasing advancement in connectivity and access to new ICTs in most SSA countries, print and conventional face-to-face continues to be a primary delivery method for distance education (ADEA 2002). The rapid increase in the adoption and utilization of computers and the Internet in several SSA countries including Senegal, Ghana, Uganda, Cameroon, Kenya, Tanzania, Malawi, Zambia, Botswana, Gabon, and Zimbabwe, among others, provide great potential in using web-based-training (WBT) for DE in improving the quality of education (Leary, 2007).

Good Practices of DE in SSA

There are several government and donor supported DE initiatives across SSA which aim at improving the quality and increasing access to education. Common ways of enhancing DE include “equipping schools with ICT, networking amongst schools, schemes awarding teachers who excel in using ICT, capacity building for teachers, and e-mail communication between students and teachers” (Onguko & Hennessy, 2010, p.29).). Also, the Presidential Special Initiative on Distance Learning in Ghana which is transmitted on national television on a daily basis has been a successful strategy that could be very effective in overcoming internet access difficulties in other developing contexts as the materials can be reproduced on CDs at low cost and accessed on stand-alone computers (Onguko & Hennessy, 2010).

Onguko and Hennessy (2010) argue that Mauritius is another SSA country at the forefront of digital development with a substantial segment of its ICT policy being dedicated to education. In 2006, the country approved the Universal ICT Education Programme (UIEP) which aimed at providing hardware, internet connectivity and computer proficiency skills to students and other target groups through ICT skills courses in 59 training centres located within schools across the country (Isaacs, 2007 as cited in Onguko & Hennessy, 2010) with the aim to train all the 5400 primary school teachers to be able to use ICT as a pedagogical tool in teaching by 2006. This approach could enhance the capacity of teachers and improve the pedagogical methods of teaching.

Some countries within the SSA have initiated policies to promote DE education. In Ghana, the Ministry of Education (2009) asserts that the ICT for education policy and ICT for Accelerated Development (ICT4AD) are useful in building the human capacity of the trainer and trainee in the 21st century workplace. Mangesi (2007) argues that Ghana has made significant progress in increasing access to and usage of educational technologies at the tertiary level. Despite these policies, the sustenance of such integration is inhibited by challenges including inequality in accessing ICTs throughout the country, the limited capacity of teachers and educators to deliver in ICT; and there is a general lack of adequate collaboration between the Ministry of Education and Ghana Education Service and other implementing agencies including departments and agencies and inadequate partnerships and collaboration with the private sector (Mangesi, 2007). Inferring from Mangesi (2007), there are a variety of factors which impeded the integration of ICT into the UTDBE programme.

Traxler and Dearden (2005) argue that mobile technologies have the capacity to deliver and enhance learning in developing countries where reliable electricity supply, computer hardware and internet connectivity still remains a challenge. This is an aftermath of a study in Kenya where a DE programme was implemented to support in-service teacher training nationally with a distance learning programme through mobile SMS. The programme is delivered through print based material and supported by multimedia (audio, video and radio).

Inferring from Traxler and Dearden, it can be argued that the SMS approach is efficient and reduces teacher absenteeism as face-to-face contact with tutors is limited and learners absolutely learn while on post.

Factors Affecting Unit Costs and ODL Experiences across the World

Ehrmann and Milam (1999) outlines five factors in analysing cost of distance education: identifying all costs associated with teaching a variety of distance learning courses; comparing the costs of anytime/anywhere and site-based formats; determining costs associated with distance learning staff time and services in order to develop a price sheet for departmental charge backs; determining costs associated with teaching on-campus versions of the selected courses; and identifying revenue benefits of distance learning courses. It is, however, imperative to note that the opportunity costs for the two approaches are likely to differ, from the standpoint of both trainees and CoE. The fact that teachers are not taken out of the school while they study on the conventional method may have particular attractions especially where trainees on pre-service are given a stipend (Perraton, 2010). Creed (2001) notes the following as some differences in expenditure patterns.

Table 1.7: Sources of Differences in Expenditure

Expenditure	Conventional Method	Open Distance Learning (ODL)
Residence	Likely to be a significant proportion of total costs.	Cost likely to be reduced where students are in residence for a smaller part of total study time.
Grants, allowances	Often paid to full-time students.	Maybe paid only for short periods of residence.
Staffing	Staff time dominated by face-to-face teaching.	A proportion of staff time required for development of materials and for tutoring at a distance.
Materials, media, communication	Costs likely to be modest.	Costs likely to be higher and influenced by sophistication of media chosen; economies of scale are possible.

Student support	Level of expenditure determined by amount of field supervision provided.	Significant expenditure often needed for isolated students and to supervise classroom work.
Annualised capital	Cost of teachers colleges and facilities likely to be a major capital item.	Some capital required for distance-education activities but offset by reductions in costs of college accommodation.
Opportunity costs: For students	Students forgo notional income by attending college.	Teachers may forgo income from private tuition while studying.
For Ministry of Education	N/A	If students teach while they study ministries avoid costs of funding their replacements.
Income: Student fees	Rarely charged	Are sometimes charged, especially where students are voluntarily upgrading their qualifications.

Source: Creed (2001)

Evaluating the courses and programmes is an important activity of any distance learning institution. Four major but related metrics can be identified when evaluating distance education learning programmes: cost efficiency, level of trainee satisfaction, learning resources and outcomes. Of these issues, cost effectiveness of ODL has been gaining much attention in literature because some institutions failed to implement distance learning programmes due to the ill-thought financial plans (Morgan, 2000).

India's Experience

In the Indian setting, the amended National Policy on Education in 1976 holds that: the then existing conventional institutions and the systems they followed were not designed and could not be geared to meet the challenges facing secondary education, and no amount of conventional supplementary support was likely to meet the range of these changes vis-à-vis the diversity of the target group that abound within the size of operations that contribute

education in India (Rumble and Koul, 2007). As the challenges¹⁵ of the conventional teacher training approach continue, it became clear that there was a need to introduce an alternative learning approach with the aim of improving educational outcomes in India hence the introduction of the National Institute of Open Schooling (NIOS). The NIOS has the mandate of providing relevant continuing education at school stage up to the pre-degree level through the ODL system as an alternative to the conventional system and to prioritised client groups, in pursuance of the national policy and uses various institutions as study and/or work centres for its students (Rumble and Koul, 2007).

After its inception, the first study on the cost effectiveness of NIOS was done by the Northern India Regional Council in 1986. Results from their study reveal that the open school managed a student at less than half the cost incurred by the conventional schools especially in 1983 - 1984 and marginally increased more than half the cost it incurred in 1984 to 1985. Further evidence shows that though the open school appeared to be superior over the conventional method in terms of cost-wise and access, it did not have any significant advantage with regard to issues on equity. For instance, while 72% of the trainees were males, only 28% were females.

As a follow up, Gaba (1997) analysed the cost effectiveness of the NIOS (then open school) for only 1997. Findings from the study reveal that the recurrent cost per student kept fluctuating until 1992/1993 but recorded systematic increases in subsequent years. In particular, this cost stood at INR 697.56 in 1990/1991, INR 905.20 in 1991/1992, INR 708.67 in 1992/1993, INR 820.27 in 1993/1994, INR 1030.00 in 1994/1995 and INR 1112.95 in 1995/1996 thus denoting about a 36% rise between the period 1993/94 to 1995/1996. Increases in these costs was attributed to the various policy measures aimed at improving the quality of printed study materials as well as increasing the number of contact programmes per course module. Gaba (1997) further compared the unit cost of students on the open with those on the traditional method and found that cost per student on the open school was well lower than that of the conventional approaches implying that the open school was more cost-efficient than the alternatives.

After two decades of its inception, the NIOS, in 2006 conducted its own study on the cost structure and found that under the conventional methods, while the average cost funded by the Indian Government per student per year was INR 35,121 and INR 12,000 on Navodaya Vidyalaya Samiti Schools and Kendriya Vidyalaya Sangathan Schools respectively, it cost the Government only INR 1,906 per year to train a student on the NIOS. The overall conclusion is that the ODL is relatively much cheaper to run and cost-efficient as compared to the conventional schooling systems.

Namibia's Experience

In the case of Namibia, the National College of Open Learning (NAMCOL) was established in 1993 and has the responsibility for overseeing not only distance education programmes, but also for face-to-face components of the Ministry of Education's continuing education programme. To improve the student performance and educational outcomes, a number of strategies were instituted: increasing the amount of face-to-face teaching above its current level of 2 hours per subject per week; increasing the number of tutorial centres so that more

¹⁵ These were identified to include inaccessible nature of conventional method resulting in low participation rates; lack of financial resources; highly bureaucratic nature of the educational system; poor quality of education resulting from inadequate infrastructure and other teaching and learning materials.

trainees who opt for non-contact option can get face-to-face sessions; changing the nature of the medium of teaching by using more radio as well as introducing television programmes into the teaching system and focusing on the quality of the lesson given (Rumble and Koul, 2007). However, such strategies are not neutral of cost implications. As such, Rumble and Koul (2007) investigated the cost efficiency of NAMCOL as opposed to the formal conventional methods – the Junior Secondary (JS) and Namibia Senior Secondary (NSSCO) curricula based on 2007-2008 budget. Key findings from their study are presented in Table 1.8 below.

Table 1.8: Cost Comparison between Formal Secondary School System and NAMCOL

Item	Formal secondary school system			NAMCOL		
	Cost (NA\$)			Cost (NA\$)		
	JS	NSSCO	All	JS	NSSCO	All
Cost per student	5,346.12	5,346.12	5,346.12	1,320.33	1,208.95	1,261.73
Actual workload	606.82	909.2	n/a	603.03	323.57	n/a

Source: Rumble and Koul (2007)

Results from these estimates reveal that the overall cost per student on both the JS and NSSCO stood at NA\$ 5,346.12 as the unit cost of a student on both modes remain the same. However, for the NAMCOL, the cost per student on JS (NA\$ 1,320.33) is slightly higher than that of NSSCO (NA\$ 1,208.95) with an overall unit cost of NA\$ 1,261.73 giving an overall efficiency ratio of 0.236. Thus, a comparison of the unit costs show that training a student under the ODL is cost-efficient since its cost per student is much lower than the alternative. However, by comparing the actual workload, it can be seen that while the load of JS under the conventional and ODL remain fairly the same, the actual load of NSSCO under the ODL is about 180% less than the traditional method – an indication that either the management of the conventional method does more work than that of the ODL or the former has more workload than the latter.

Other African Experiences

By relying on purely qualitative data based on focus group discussion, David, Rotimi and Kayode (2006) investigated the cost effectiveness of ODL in Nigeria. Their key research interest was to determine the perception of the recipients of what the cost effectiveness of ODL is. Results from their study show that the ODL is a cost effective approach to higher education in Nigeria.

Kunje (2002) argued that the Malawi Integrated In-service Teacher Education Programme (MIITEP), a programme incorporating limited residential study while relying mainly on distance education, was three (3) to four (4) times cheaper than the conventional teacher training in Malawi. Although Kunje (2000) contends that there were areas of the intervention which could be made significantly more efficient, he concludes that the MIITEP was the only realistic way to train more teachers.

Ghana's Experience

In the Multi-Site Teacher Education Research Project (MUSTER), Akeampong, Furlong and Lewin (2000) investigated the costs and financing of teacher education in Ghana. While contending that financing education in Ghana is shared by government, students, bilateral and multilateral agencies including the World Bank, Akeampong et al. (2000) note that education's share of the national discretionary recurrent budget increased from 17% in 1984 to 35% in 1998. Of these, the share of teacher education substantially increased from 2.7% in 1989 to 6% in 1998.

By adjusting for price changes and using 1996 constant US\$ prices, further results from Akeampong et al. (2000) study reveal that among all the levels of education¹⁶, the unit cost of training a student under the teacher education scheme increased steadily at least over their study period. In particular, the annual average cost of teacher education increased by about 80% between 1992 and 1995; and about 40% between 1995 and 1998. Further results show that staff costs, ancillary and stipend to trainees account for about 77% of the cost per student while the remaining is attributed to administrative and other miscellaneous costs. However, the cost efficiency of the pre-service training could not be ascertained because of the non-existence of an alternative modality to the conventional method.

Consequently, in the aftermath of the implementation of the UTDBE in 2004, Akyeampong, Mensa and Adu-Yeboah (2010) provided a diagnostic analysis of the cost of training a trainee under the UTDBE for the period spanning 2005 to 2009. Results from their study revealed that the government incurred a total cost of GH¢100,600 (US\$59,880.95)¹⁷ in enrolling 5,187 teachers in 2005 thus giving a cost per trainee of GH¢19.39 (US\$11.54). Public costs per trainee increase annually and was GHC125 representing about a 547% increase over the 5-year period. Nonetheless, Akyeampong et al. (2010) concluded that the cost of training a teacher under the UTDBE is much lower (US\$88 per trainee per year) compared to the conventional method (\$133 per trainee per year). However, while noting the low costs per student borne by the government, the majority of the remaining costs are met by the students hence putting an enormous pressure on their budgets.

Further results from Akyeampong et al.'s (2010) study revealed that about 93% of trainees report significant difficulties in bearing the cost of training as they have to meet other pressing financial commitments. Among the expenses borne by the trainees, 62% were more concerned with the fee on boarding and lodging which they found beyond their ability to pay and often "outrageous". To them, their rather low salaries would not permit them to expend on these without difficulty. An area much disliked about the UTDBE training was the food trainees were served. In particular, about 58% were clearly unhappy about the low standard of food provided. The intuition is that students believe they could get relatively better meal elsewhere at a cost well below those charged by the schools. However, Akyeampong et al. (2010) argued that careful thought should be given to providing expenses or subsistence to teachers attending training events to motivate them in continuing with the programme. The authors rather warned that the provision of incentives and other financial benefit should not be teachers' primary impetus for attending training on the UTDBE. Notwithstanding these, Akyeampong et al. (2010) study typically focused only on the public or costs of training

¹⁶ Primary, Junior Secondary, Senior Secondary, Vocational/Technical, Teacher Education, Polytechnic and University.

¹⁷ This is based on US\$1= GH¢1.68 exchange rate.

under the UTDBE and only assessed the direct cost of training. In addition to not providing the respective cost components, Akyeampong et al. (2010) could not reveal the costs borne by the government and the indirect costs trainees incur in both training modules.

A relatively comprehensive study was done by Murphy (2012). By gleaning data from the Teacher Education Division (TED) and supplementing it with data from 473 trainees at the Presbyterian Women’s College of Education (PWCE), Murphy (2012) among others assesses the cost effectiveness of both UTDBE and DBE modules using 2011 as a reference. He divided the cost components into fixed and variable costs where time spent on CoE building was used to determine the fixed costs – cost incurred irrespective of the number of trainees or level of productive activity.

Under the UTDBE, Murphy estimates GH¢32,000 (US\$19,047.62)¹⁸ per college as the annual cost of using the buildings and GH¢32 (US\$19.05) per student. However, for the DBE module, this cost was estimated at GH¢160,000 (US\$95,238.10) per year and GH¢338 (US\$201.19) per student given the student population under consideration. It is worth noting that fixed costs are borne by the government and thus seen as public costs. Variable cost is seen as the cost that varies with the number of students or changes with the level of productive activity. By dividing the variable cost into staff cost, academic and other miscellaneous cost, for the UTDBE, Murphy calculates a total variable cost to be GH¢535 (US\$318.45) per student where staff costs accounts for GH¢231 (US\$137.5) while academic and other miscellaneous costs constitute GH¢304 (US\$180.95) per student. Because the UTDBE is self-instructional and ODL trainees tend to bear all the costs associated with academic and other miscellaneous. In fact, out of the academic and miscellaneous costs of GH¢304 (US\$180.95), trainees pay GH¢189 (US\$112.5) representing 62% towards boarding and lodging. The rather high cost is indicative of a call for concern. This concern was revealed earlier during Akyeampong et al.’s (2010) study where they found that the majority (62%) of these trainees complained about the high lodging fee during residential face-to-face meeting.

However, under the traditional DBE module, total variable cost was estimated as GH¢5,402 (US\$3,215.48) per student. Of these, staff costs amounts to GH¢1,012 (US\$602.38) whereas academic and other miscellaneous costs stood at GH¢4,390 (US\$2,613.1) per student. It is imperative to note that, out of the GH¢4,390 (US\$2,613.1), student stipends constitutes ¢3,198 (US\$1,903.57) where all costs associated with staff costs, academic and other miscellaneous costs are borne by the government. Notice from the above analysis that, while the government incurs an annual cost of GH¢263 (US\$156.55) on student training under the UTDBE, it cost GH¢5,740 (US\$3,416.67) for training just one student under the DBE module. Details on the burden of the individual costs are presented in the Table 1.9 below.

Table 1.9: Cost Efficiency: Comparison of Cost Incidence

	UTDBE		DBE	
	GH¢	GH¢	GH¢	GH¢
Average fixed costs:				
Government bears	32		338	
Student bears	0		0	
Average fixed costs		32		338

¹⁸ Exchange rate during his study was US\$1 = GH¢1.68.

Average variable cost:				
Staff cost				
Government bears	231		1,012	
Student bears	0		0	
Academic and other miscellaneous				
Government bears	0		530	
Student bears	304		0	
Other costs (food, stipend, services)				
Government bears	0		3,860	
Student	N/A		0	
Average variable costs		535		5,402
Average cost		567		5,740
Government bears		263		5,740
Student bears		304		0
Average cost		567		5,740

Source: Murphy (2012)

While students use 3 years to complete the DBE, it takes 4 years for a student to complete training and graduate with a diploma on the UTDBE. Thus it would cost the government about GH¢1,052 (US\$626)¹⁹ to finance a teacher via the UTDBE. Because students on the conventional DBE go on teaching practice in their third year, the government bears the full average cost of their first 2 years and their monthly stipend during their 3rd year which is usually higher than before because they do not have to pay for their feeding. Thus the total average cost to produce a teacher under the conventional DBE is GH¢15,350 (US\$9,137) showing an overall efficiency ratio of 1:15 – an indication that per unit cost of training on the conventional DBE is about 15 times the cost of training on the UTDBE. Consistent with earlier studies, Murphy (2012) concludes that training on the UTDBE is more cost efficient and relatively inexpensive for the government to deliver by comparison with the traditional mode of training. Totto et al. (1991, 1993) noted in Sri Lanka that the institutional costs component of ODL were the lowest – about 4.5 to 6 times more cost effective in training teachers for their roles than the other alternatives. They however argued that pupils taught by teachers from the CoE performed relatively better than those taught by distance education. They also noted that training under the CoE are the most expensive, but are more effective in the longer term in producing high-quality teachers. Others (Kruijer, 2010; Nielsen, 1991) have argued that distance education costs much less than the conventional training partly because the costs are borne by trainees themselves.

It can be seen from the above that not many studies have been done to examine the relative cost efficiency and effectiveness of the UTDBE and the conventional DBE programmes. Even the few existing studies have failed to capture the qualitative responses of the trainees as well as gender and deprivation levels. In addition to analysing the qualitative responses of trainees, the aim of this chapter is to provide a comprehensive analysis on the cost

¹⁹ Exchange rate during his study was US\$1=GH¢1.68.

effectiveness and efficiency of the UTDBE programme while taking into consideration the gender and levels of deprivations of trainees. A detailed methodology for this is presented in Chapter 5.

1.9 Female Teacher Situation in Ghana

Studies in Ghana suggest that there are extremely low numbers of trained female teachers available in rural deprived areas of the country (World Bank, 2011; Casely-Hayford, 2001). This has significant implications on girls' education and inclusive quality education in general. Low achievement and performance of girls at SHS particularly in Math and Science prevents access for many women to the teaching profession (Casely-Hayford and Wilson, 2001). Between the 1989/1990 and 1999/2000 academic years, a decline in the number of women accessing the Colleges of Education in Ghana was witnessed. Throughout the 38 Colleges of Education, female enrolment sharply dropped from 41.4% in 1989/90 to 32.8% in 1997/98. Female enrolment was at 39.02% in 1999/2000. Casely-Hayford (2002) attributed this decline to the new entry requirements of credit grade in Mathematics and fewer females passing out of training colleges compared to males – 40% females compared to 60% male in 1999/2000. The main reasons why females are not entering the teaching profession are based on their poor performance at SHS level. Casely-Hayford and Wilson (2001) found that girls are not performing at the SSSCE and many girls are unable to pass the entrance requirements for Colleges of Education particularly girls from rural deprived districts of Ghana. The study also found that the vast majority of female teachers are at the nursery, KG and Primary levels, the majority of which are untrained (Casely-Hayford and Wilson, 2001).

The 2008 Education Management Information System (EMIS) data on teacher training colleges in Ghana (2007/2008 academic year) reveals that out of the 26,100 students admitted in the 38 Colleges of Education, 13,813 representing 52.9% male and 47.1% female students graduated. This is an improvement in gender terms over the previous academic year where 53.7% of admitted students were male and 46.3% female. The table below illustrates teacher enrolment in the Colleges of Education from 2006/2007 to 2007/2008 academic years.

Table 1.10: Enrolment in Teacher Training Colleges (TTC) by Sex, 2006/2007-2007/2008

Gender	2006/2007		2007/2008		Change
	Number	Percentage	Number	Percentage	
Male	13,978	53.7%	13,813	52.9%	-1.2%
Female	12,047	46.3%	12,287	47.1%	2%
Total	26,025	100%	26,100	100	0.3%

Source: EMIS Project, 2008.

The three northern regions have the lowest number of female teachers (22.5%) as against the national female teacher participation rates of about 47% in 2007/08 (MOESS, 2006 and MOESS, 2008 cited in Casely-Hayford, 2009). Casely-Hayford (2009) further argues that the Northern Region has a gender achievement gap of about 40% (69.86% boys and 30.14% girls), while Central and Eastern Regions have about 15% achievement gap between girls and boys (MOESS, 2006 and MOESS, 2008). More recently the total training college enrolment

in the last two years has increased to 27,580 (2011/12) of which the female proportion is 42% which signifies a drop in female participation from the 2006/07 period (ESR, 2013).

Several reasons influence the posting of female teachers and their acceptance to either rural or urban communities. Casely-Hayford (2007) argues that untrained teachers appeared to have limited choice about where they are posted since they were often recruited primarily for the purpose of serving in rural communities where the pupil teacher ratio is high. Although the marital status and location of one's husband and the background of a teacher are often considered when posting them, the distance of the school from the district capital and accessibility to the teacher's town and whether the community had a reasonable level of social services are factors considered in most instances. Casely-Hayford (2007) further argues that for newly trained female teachers to be comfortable and not go away from teaching, careful consideration was also made of their ability 'to cope with difficult circumstances'.

Socio-cultural challenges and family/home constraints facing women in the teaching profession (Casely-Hayford and Wilson, 2001) requires female teachers in Ghana to make a range of adjustments in order to meet the demands of their professional life while maintaining their family and home life. Several changes in a female teachers' working life such as marriage, childbearing and child rearing roles have a tremendous impact on their professional performance and ability to cope.

1.10 The Characteristics of the Sample

Overall, 197 schools were visited across the 9 sampled districts. 26% of these were schools in less deprived areas, and 37% were schools in both deprived and extremely deprived areas. The Upper East Region had the highest percentage of schools in extremely deprived areas visited with Talensi Nabdam recording 60% and Bongo 48%. The Upper West Region had the next highest number of schools located in extremely deprived areas. In Jirapa district, 47% of schools visited were extremely deprived locations whereas in the Lawra district, they were 39%. Wassa Amenfi recorded the least number of extremely deprived schools. This could be attributed to the poor and sometimes inaccessible road networks in the district. The data contained in the next few sections are based on interviews with 407 UTDBE teachers across the 197 school sites. See Table 1.11 for the full picture of the sample across all nine districts.

Table 1.11: Number of Schools Visited in each District and Proportion at Each Level of Deprivation

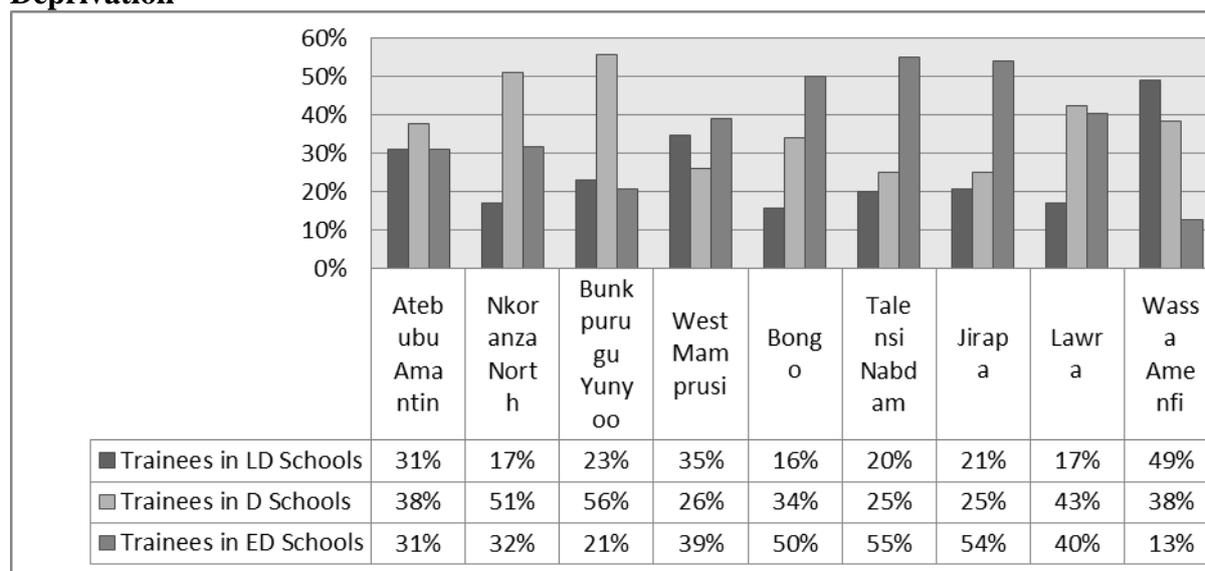
	Number of Schools visited	% of Less Deprived Schools	% of Deprived Schools	% of Extremely Deprived Schools
Brong Ahafo Region				
Atebubu Amantin	17	35%	29%	35%
Nkoranza North	20	25%	45%	30%
Northern Region				
Bunkpurugu Yunyoo	25	24%	52%	24%
West Mamprusi	28	29%	32%	39%
Upper East Region				

Bongo	23	17%	35%	48%
Talensi Nabdam	20	20%	20%	60%
Upper West Region				
Jirapa	19	21%	32%	47%
Lawra	18	17%	44%	39%
Western Region				
Wassa Amenfi	27	44%	41%	15%
Totals	197	26%	37%	37%

(UTDBE Baseline Study, 2014)

The original sample for the evaluation was intended to cover 405 UTDBE trainees across the nine sampled districts. This target was achieved as the research team interviewed 407 UTDBE trainees across the nine sampled districts²⁰. The final sample included 74% of trainees from rural areas (this includes UTDBE trainees from deprived and extremely deprived schools) and 26% from urban areas (which were classified as less deprived for the purposes of the research). See Table and figure below for details on the various districts covered.

Figure 1.1: Percentages of Trainees from Schools in Areas of each Level of Deprivation



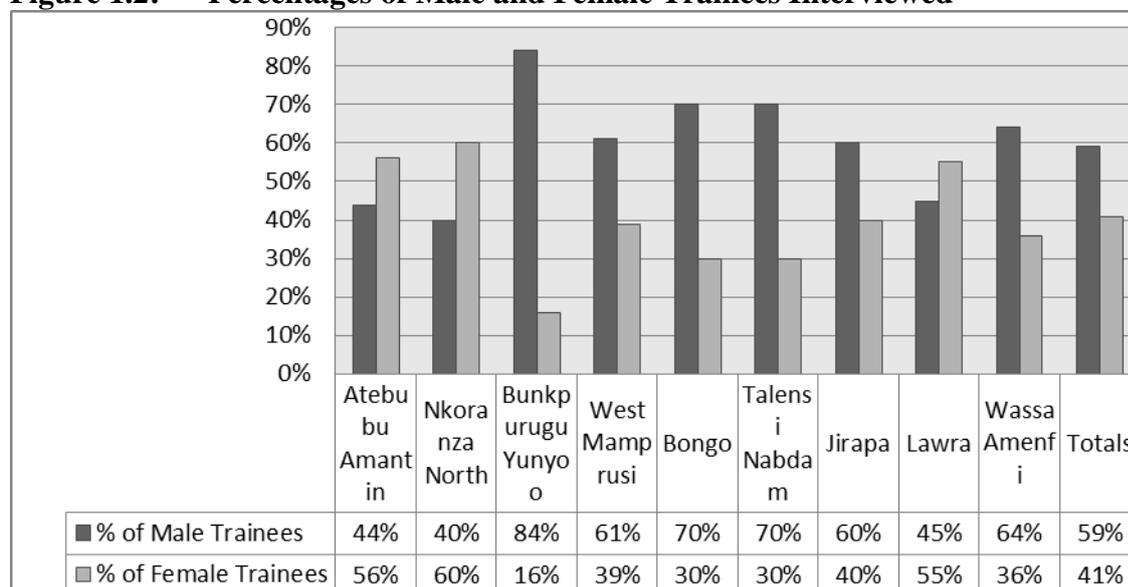
(UTDBE Baseline Study, 2014)

With regard to the gender balance of the sample, the evaluation team exceeded its target of reaching 25% female UTDBE trainees and 75% male UTDBE trainees in each of the sampled districts. Nkoranza North District had the highest proportion of female UTDBE trainees interviewed, 60% of trainees interviewed in the district were females. In Lawra district 50% of trainees interviewed were females. Bunkpurugu Yunyoo district had the smallest proportion of female trainees interviewed; just 16% of the UTDBE trainees interviewed were females. These figures are all largely reflective of the proportional

²⁰ Also in the original sample, the evaluation team intended to cover 80% rural UTDBE trainees and 20% urban trainees.

representation of male and female UTDBE trainees undergoing the programme across the sampled regions. See Figure 1.2 on the rest of 9 sampled districts.

Figure 1.2: Percentages of Male and Female Trainees Interviewed



(UTDBE Baseline Study, 2014)

School types and classes

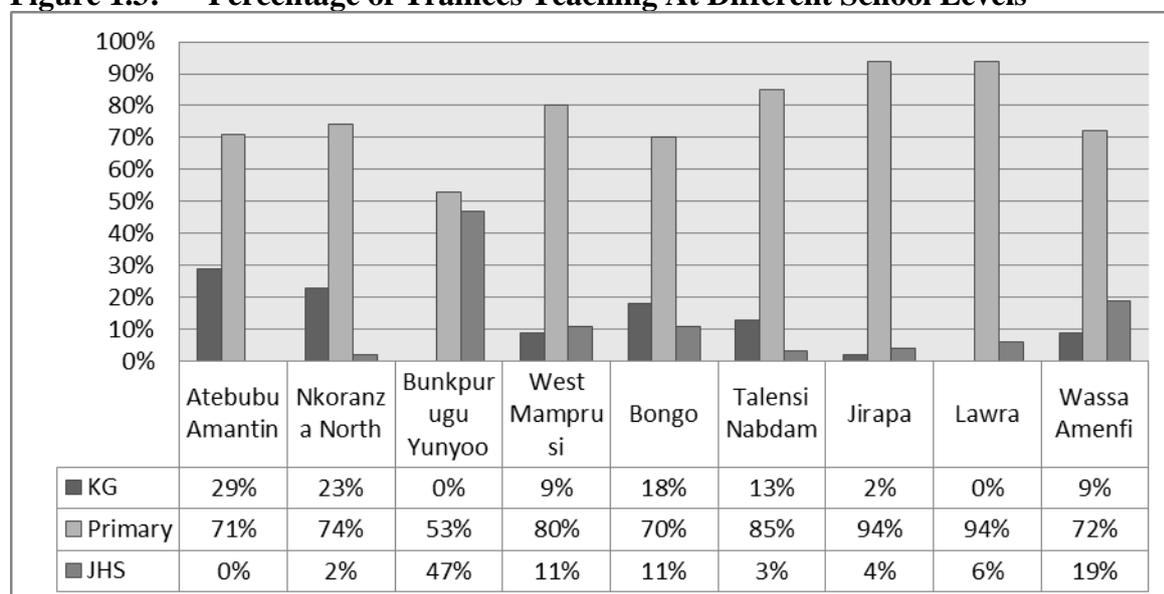
The majority of UTDBE trainees interviewed are teaching in primary schools. Across the nine sampled districts, there were 77% of trainees in primary schools, 11% were in KG level and another 11% were in JHS. This is representative as just over 80% of the current cohort of UTDBE trainees are teaching at the primary level. There were no UTDBE trainees interviewed at the KG Level in the Bunkpurugu-yunyoo district in the Northern Region and Lawra district in the Upper West Region. Also there was no UTDBE interviewed at the JHS level in the Atebubu Amantin district in the Brong Ahafo Region.

Table 1.12: Number and Percentage of Trainees Teaching At Different School Levels

	Number and percentage of KG trainees		Number and percentage of Primary trainees		Number and percentage of JHS trainees	
	Number	Percentage	Number	Percentage	Number	Percentage
Atebubu Amantin	13	29%	32	71%	0	0%
Nkoranza North	11	23%	35	74%	1	2%
Bunkpurugu Yunyoo	0	0%	23	53%	20	47%
West Mamprusi	4	9%	37	80%	5	11%
Bongo	8	18%	31	70%	5	11%
Talensi Nabdam	5	13%	34	85%	1	3%
Jirapa	1	2%	45	94%	2	4%
Lawra	0	0%	44	94%	3	6%
Wassa Amenfi	4	9%	34	72%	9	19%
Totals	46	11%	315	77%	46	11%

(UTDBE Baseline Study, 2014)

Figure 1.3: Percentage of Trainees Teaching At Different School Levels



(UTDBE Baseline Study, 2014)

Findings from the sample show that 93% of the UTDBE trainees sampled across the nine districts have been teaching for 2 years or more. Only 7% of the sampled trainees have been teaching for 1 year or less. West Mamprusi district had the highest proportion of trainees (20%) who have been teaching for 1 year or less. This confirms the claim that at the time of recruitment, a number of people who were not currently in place as teachers (volunteers or pupil teachers) were enrolled on the programme in the district.

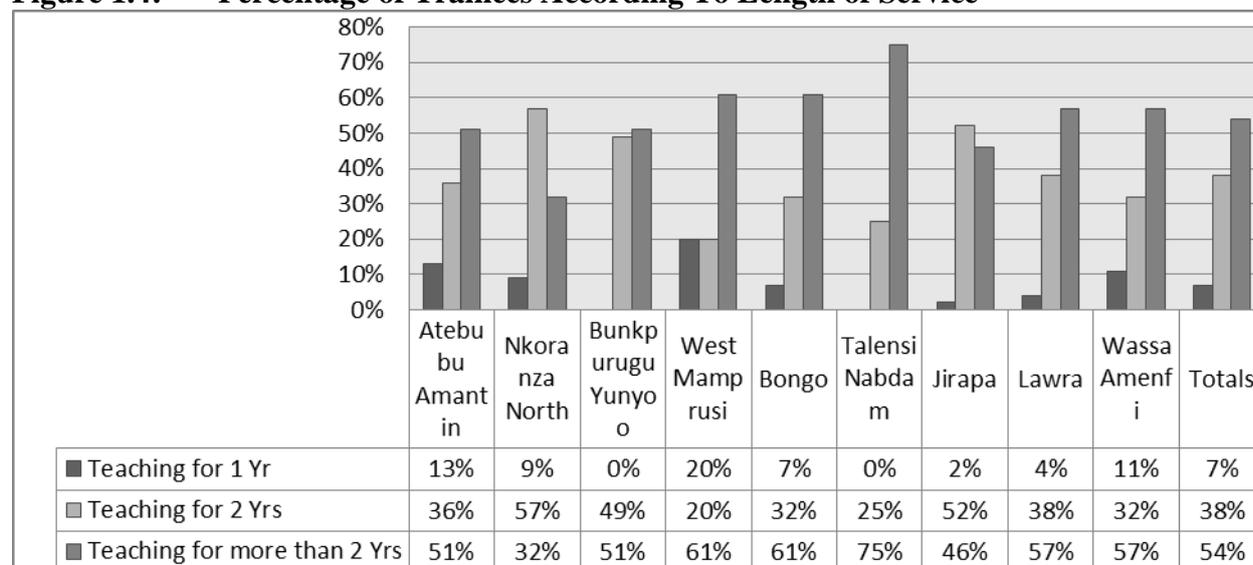
Table 1.13: Number and Percentage of Trainees According To Length of Service

	Number of Trainees teaching for 1 year		Number of Trainees teaching for 2 years		Number of Trainees teaching for more than 2 years	
	Number	Percentage	Number	Percentage	Number	Percentage
Atebubu Amantin	6	13%	16	36%	23	51%
Nkoranza North	4	9%	27	57%	15	32%
Bunkpurugu Yunyoo	0	0%	21	49%	22	51%
West Mamprusi	9	20%	9	20%	28	61%
Bongo	3	7%	14	32%	27	61%
Talensi Nabdam	0	0%	10	25%	30	75%
Jirapa	1	2%	25	52%	22	46%

	Number of Trainees teaching for 1 year		Number of Trainees teaching for 2 years		Number of Trainees teaching for more than 2 years	
Lawra	2	4%	18	38%	27	57%
Wassa Amenfi	5	11%	15	32%	27	57%
Totals	30	7%	155	38%	221	54%

(UTDBE Baseline Study, 2014)

Figure 1.4: Percentage of Trainees According To Length of Service



(UTDBE Baseline Study, 2014)

Context of Sampled Schools and Deprivation Analysis

As part of the baseline assessment activity, enumerators collected information about the school, including relative distance from the district capital, enrolment of pupils and information about staff. Overall 407 UTDBE trainees were interviewed in 197 schools, however due to various factors background information was collected in 180 schools. This shortfall is due in some cases to the absence of the head teacher on the day of the researchers' visit. In West Mamprusi where there is a much larger shortfall, it is because the trainees who were interviewed were not in their own schools on the day of the visit as they were taking part in a sports activity. Notwithstanding, the majority of schools were canvassed and the overall coverage was 91% of the sampled schools.

Schools were sampled for the baseline research on the basis of the context. This was done in order to ensure that the socio economic, geographic and other factors were taken into account when assessing the trainees. The data collected for the checklist also included a question about the location of the school relative to the district capital. The deprivation classification is relatively complex but includes references to distance from the main urban centre in any district, i.e. the district capital and access to social amenities such as water and electricity. Head teachers were asked to describe these distances so that assumptions about remoteness could be triangulated. On the assumption that schools located in the district capital are the least deprived, those within an hour or just beyond experienced higher levels of deprivation and those that are hard to reach are the most deprived, it is fair to assume that those schools

that fall into the categories listed in Table 1.14 below – “within one hour radius of the district capital” and “beyond one hour radius of district capital” could be associated with either the deprived or extremely deprived classification used during sampling.

On the basis of this Tables 1.14 and 1.15 below show that, in fact, in all of the districts except Atebubu Amantin and Lawra, a number of the schools that have been classified as less deprived are in fact located outside of the district capital which corresponds to the categorization by the District Education Offices.

Table 1.14: Number of Schools Visited Per Region District and Deprivation Level by Proximity to the District Capital

REGION	DISTRICT	District Capital	Within One Hour Radius Of District Capital	Beyond One Hour Radius of District Capital	Considered Extremely Deprived And Hard To Reach
Brong Ahafo	Atebubu Amantin	5	5	4	1
	Nkoranza North	1	11	7	0
Northern	Bunkpurugu Yunyoo	5	10	4	5
	West Mamprusi	2	9	4	2
Upper East	Bongo	1	12	8	2
	Talensi Nabdam	2	6	8	2
Upper West	Jirapa	3	7	6	1
	Lawra	4	11	2	1
Western	Wassa Amenfi	0	10	12	3
Overall Total		23	81	55	17

(Source: School Checklist, Instrument 11, 2014)

Table 1.15: Number of Schools Targeted Per District and Deprivation Level by Availability of Social Amenities

REGION	DISTRICT	Less Deprived	Deprived	Extremely Deprived
Brong Ahafo	Atebubu Amantin	3	7	5
	Nkoranza North	3	10	8
Northern	Bunkpurugu Yunyoo	7	12	6
	West Mamprusi	9	6	2
Upper East	Bongo	5	8	11
	Talensi Nabdam	4	3	11
Upper West	Jirapa	4	5	8
	Lawra	3	8	7
Western	Wassa Amenfi	11	10	4
Overall Total		49	69	62

(Source: School Checklist, Instrument 11, 2014)

Average Enrolment

Table 1.16: illustrates the average enrolment for KG across the sampled schools. This enrolment includes both KG1 and KG2 classes and gives an indication of the relative size of

the KGs at the sampled schools by level of deprivation. With the exception of Atebubu Amantin, all of the schools located in the least deprived areas have lower numbers of pupils enrolled at the KG level than those schools in either the Deprived or extremely deprived zones. The current advice on pupil teacher ratio for KG is that there should be 1 teacher for 35 pupils. The table therefore illustrates the relative demand for teachers at the KG level in each of the sample districts.

Table 1.16: Average Pupil Enrolment in KG per School, by District and Deprivation Level

REGION	DISTRICT	Less Deprived	Deprived	Extremely Deprived
Brong Ahafo	Atebubu Amantin	183	97	97
	Nkoranza North	60	97	116
Northern	Bunkpurugu Yunyoo	35	43	58
	West Mamprusi	115	141	333
Upper East	Bongo	63	102	98
	Talensi Nabdam	15	74	112
Upper West	Jirapa	17	140	69
	Lawra	86	91	102
Western	Wassa Amenfi	44	79	86

(Source: School Checklist, Instrument 11, 2014)

Table 1.17 shows the average primary school enrolment across the various levels of deprivation for each region and districts. Less deprived primary schools in the Brong Ahafo Region recorded the highest enrolment. Across the deprivation levels of the other districts there does not appear to be large disparities in the size of primary schools across the sampled schools. Again, it should be noted that this enrolment includes all 6 primary classes. So a primary school with an enrolment of 310, such as those in the extremely deprived zone of Atebubu Amantin will have an average class size of just over 50 children. Those with an enrolment of 164, such as those in the less deprived zone of Nkoranza North will have an average class size of around 27. This therefore gives an indication of the relative class sizes that UTDBE trainees are expected to handle.

Table 1.17: Average Pupil Enrolment in Primary School by District and Deprivation Level

REGION	DISTRICT	Less Deprived	Deprived	Extremely Deprived
Brong Ahafo	Atebubu Amantin	591	278	310
	Nkoranza North	164	186	181
Northern	Bunkpurugu Yunyoo	335	269	351
	West Mamprusi	350	278	388
Upper East	Bongo	325	291	379
	Talensi Nabdam	386	353	298
Upper West	Jirapa	476	349	333
	Lawra	327	233	272
Western	Wassa Amenfi	205	211	246

(Source: School Checklist, Instrument 11, 2014)

Table 1.18 shows the average pupils enrolment in Junior High Schools (JHS) across the sampled schools. Where the average is given as zero there were no JHS schools sampled as part of the baseline assessment. Also, it should be noted that at the time of assessment there

were no JHS3 students on roll because they had left after completing BECE. Each enrolment needs therefore to be divided by two in order to ascertain the average class size. Enrolment across all the sampled schools in Brong Ahafo is very low, with potentially only 7 students in a class in the extremely deprived zone of Atebubu Amantin. Bunkpurugu Yunyoo demonstrates the highest enrolment.

Table 1.18: Average Pupil Enrolment in JHS by District and Deprivation Level

REGION	DISTRICT	Less Deprived	Deprived	Extremely Deprived
Brong Ahafo	Atebubu Amantin	0	22	14
	Nkoranza North	32	13	30
Northern	Bunkpurugu Yunyoo	123	79	105
	West Mamprusi	50	26	0
Upper East	Bongo	55	0	35
	Talensi Nabdam	0	87	0
Upper West	Jirapa	0	0	0
	Lawra	0	0	23
Western	Wassa Amenfi	17	52	36

(Source: School Checklist, Instrument 11, 2014)

Staff data was collected across many of the schools in the sample but data collection was inconsistently applied and so therefore it is problematic to make assumptions about the presence of trained teachers across the entire sample. However, on the assumption that most primary schools should have a staff of more than 6 teachers, those schools that are reported as having 7 teachers or more have been included in the analysis for the following table. Table 1.19 indicates the average percentage of trained teachers in the sampled schools by level of deprivation and district. The general trend buttresses assumptions that there are fewer trained teachers in the least deprived parts of the district. However, in the case of Atebubu Amantin this trend is reversed. A close scrutiny of the data however indicates that in these schools there are very high numbers of UTDBE trainees and so the overall total of teachers is inflated which reduces the percentage share of the trained teachers. The implication of the dearth of trained teachers in some of these schools is that UTDBE trainees are less likely to have encountered models of good practice or received support from more experienced colleagues.

Table 1.19: Percentage of Trained Teachers in Sampled Schools, by District and Deprivation Level

REGION	DISTRICT	Less Deprived	Deprived	Extremely Deprived
Brong Ahafo	Atebubu Amantin	11%	33%	36%
	Nkoranza North	52%	45%	47%
Regional Average		32%	39%	41%
Northern	Bunkpurugu Yunyoo	66%	56%	37%
	West Mamprusi	53%	46%	9%
Regional Average		59%	51%	23%
Upper East	Bongo	52%	55%	59%
	Talensi Nabdam	49%	45%	41%
Regional Average		51%	50%	50%
Upper West	Jirapa	0%	71%	42%
	Lawra	60%	52%	36%
Regional Average		30%	62%	39%
Western	Wassa Amenfi	42%	41%	24%

REGION	DISTRICT	Less Deprived	Deprived	Extremely Deprived
Regional Average		42%	41%	24%
Overall Average		43%	49%	35%

(Source: School Checklist, Instrument 11, 2014)

Conclusions

A scrutiny of the context of the schools that trainees are placed in provides another perspective to the potential challenges that UTDBE trainees face during the course of the programme. Most of the schools that responded are located at a distance from the district capital where District Education Office support is most readily available, particularly the cluster meetings. Class sizes across the entire sample, especially at Primary and KG level are higher than national standards. Furthermore, what is clear from the foregoing analysis is that assumptions about the presence of trained teachers as being limited, especially in the extremely deprived schools, holds true which has implications for support to the UTDBE trainees themselves.

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

2.0 Introduction

Ghana has recorded increased enrolment rates over the last decade. This was as a result of the introduction of various policy interventions such as the Ghana School Feeding Programme, capitation grant, scholarship schemes among others. Although enrolment rates have consistently increased over the years, learning outcomes of pupils particularly at the basic level have fallen short. The recent National Education Assessment results (NEA Report, 2014) revealed that in English, only 28.4% of pupils achieved proficiency at P3 and 39% at P6. In Maths, only 22.1% of P3 and 10.9% in P6 achieved proficiency levels. The three Northern Regions and Brong Ahafo remain the worst performing regions in Ghana.

2.1 Trained Teacher Supply

Data from Annual Education Sector Performance Reports between 2010 and 2013 show an increase in the supply of trained teachers across all levels of basic education. Despite these increases, there are still high PTTR's across most regions in the country. The recent Education Sector report (2013) reveals that 51.6%, 69.4% and 83.7% of teachers at public basic schools at KG, Primary and JHS levels are trained. The situation is worse in deprived districts where only 34.3%, 49.7% and 72% of teachers at KG, Primary and JHS are trained teachers. The implication of these trained teachers levels suggests that there are far fewer qualified teachers at the lower primary level.

Regional Level Trained Teacher Supply-

In all the sampled regions and districts there is a high demand for trained teachers. All regions have a high proportion of pupil teachers engaged by GES to help close the teacher supply gap in schools. The pupil teachers are found across all the levels of basic education. The pupil Trained Teacher Ratio (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. Upper West has PTTR of 70 with KG having 206, primary 84 and JHS 35. Northern Region has PTTR of 86. KG has PTTR of 234, Primary 96 and JHS 39. Brong Ahafo has a ratio of 52 with KG having 134, Primary 62 and JHS 19. Western Region has the highest PTTR of 126. Ratio at the KG level 594. Primary has a ratio of 145 and JHS 43. Table 2.1 provides details of teacher supply situation.

Table 2.1: Regional Summary of Trained Teacher Supply in Sampled Regions (2010/11, 2011/12, and 2012/13)

Region	Level	Ave. Enroll	Ave. No Teachers	Ave. Trained	%	PTTR	Ave. Teacher Demand	Trained teacher ShortFall
Upper East	KG	7,249	129	43	33.3	169	290	161
	PRIMARY	19,680	508	263	75	75	563	55
	JHS	6,706	310	222	71.6	30	268	(42)
	TOTAL	33,635	947	528	55.8	64	1,121	174
Upper West	KG	5,981	117	29	24.9	206	239	122
	PRIMARY	17,089	362	219	60.4	84	488	126
	JHS	5,678	240	161	67	35	227	(13)

	TOTAL	28,748	719	409	56.9	70	954	240
Northern	KG	9,215	100	41	41	224	369	269
	PRIMARY	24,677	545	258	47.3	96	705	160
	JHS	6,998	261	178	68.2	39	280	19
	TOTAL	40,890	906	477	52.6	86	1354	448
Brong Ahafo	KG	5,882	196	44	22.4	134	153	(43)
	PRIMARY	11,661	412	189	45.9	62	333	(79)
	JHS	3,277	223	171	76.7	19	131	(92)
	TOTAL	20,820	831	404	48.6	52	617	(214)
Western	KG	16,622	283	28	9.8	594	665	382
	PRIMARY	34,689	747	239	32	145	991	244
	JHS	9,349	327	215	65.7	43	374	47
	TOTAL	60,660	1357	482	35.5	126	2030	673

(Source EMIS/GES, 2010-2012)

The situation in our sampled districts very much reflects the case of the deprived district situation stated earlier. Data from the 5 sampled regions reveal that the percentage of trained teachers in Northern, Upper East and Upper West Regions is 52.6%, 55.8% and 55.9% respectively. In the Brong Ahafo region 48.6% of teachers were trained teachers and 35.5% of teachers had achieved trained status in the Western Region.

There are marked disparities in the distribution of trained teachers across the various levels of basic education. JHS levels almost always have the highest percentage of trained teachers compared to the primary and KG levels. Except for the Northern Region where there is a higher proportion of trained teachers (75%) at the Primary level than the JHS (71.6%) level across the sampled schools, all other regions had more trained teachers in JHS than at Primary and KG Levels.

District Level Trained Teacher Supply

The trained teacher supply situation across the sampled districts is not different from the regional level teacher supply as Table 2.2 indicates. Directors across all sampled districts reveal that there is a high demand for trained teachers but Districts are often unable to attract and retain them. They all cited KG level as the worst affected with very few trained teachers, followed by primary and JHS. Apart from the Talensi Nabdham District where there were more trained teachers in the primary (52.1%) than the JHS (28.5%) all other districts had more trained teachers in JHS than in Primary and KG levels. Districts with the highest rates of trained teachers at the primary level included: Jirapa and Lawra Districts in the Upper West followed by Talensi Nabdham and Bongo in the Upper East. The districts with the lowest rates of trained teachers at primary level included: Bunkpurugu Yunyoo and West Mamprusi in the Northern Region and Atebubu Amantin District in Brong Ahafo and Wassa Amenfi in the Western Region.

Table 2.2: District Summary Of Trained Teacher Supply (2010 – 2012)

District	Level	Ave. Enroll	Ave. No Teachers	Ave. Trained	%	PTTR	Ave. Teacher Demand	TR ShortFall
Talensi-Nabdham	KG	8179	132	46	34.8	178	327	195
	PRIMARY	19100	509	265	52.1	72	546	37
	JHS	6246	355	244	28.5	26	250	(105)
	TOTAL	33525	996	555	55.7	60	1123	127
Bongo	KG	6315	126	40	31.7	158	253	127
	PRIMARY	2026	506	261	51.6	7	579	73
	JHS	7165	263	200	76	36	287	24
	TOTAL	15,506	895	501	55.9	31	1119	224
Jirapa	KG	5613	90	40	44.4	140	224	134
	PRIMARY	3898	335	194	57.9	21	486	151
	JHS	4175	183	125	68.3	33	167	(16)
	TOTAL	13686	608	359	59	38	877	269
Lawra	KG	6349	144	18	12.5	353	254	110
	PRIMARY	17557	390	244	62.6	72	501	(11)
	JHS	7180	298	197	66.1	36	287	11
	TOTAL	31086	832	459	55.2	68	1042	210
B'Yunyoo	KG	7778	89	35	39.3	222	311	222
	PRIMARY	23680	572	260	45.5	91	677	105
	JHS	5835	239	136	56.9	43	233	(6)
	TOTAL	30293	900	431	47.9	70	1221	321
West Mamprusi	KG	1065	111	48	43.2	22	426	325
	PRIMARY	25674	517	255	49.3	101	734	217
	JHS	8161	282	220	78	37	326	44
	TOTAL	34900	910	523	57.5	67	1486	576
Nkoranza	KG	3445	154	35	22.7	98	138	(16)
	PRIMARY	7380	276	149	53.9	50	49	(227)
	JHS	2292	178	135	75.8	17	92	(86)
	TOTAL	13117	608	319	52.5	41	279	(329)

District	Level	Ave. Enroll	Ave. No Teachers	Ave. Trained	%	PTTR	Ave. Teacher Demand	TR ShortFall
Atebubu	KG	8318	239	52	21.8	160	333	94
	PRIMARY	15942	547	230	42	69	456	(91)
	JHS	4262	269	206	76.6	21	171	(98)
	TOTAL	28522	1055	488	46.3	58	960	(95)
Wassa Amenfi	KG	16622	280	28	10	594	665	385
	PRIMARY	34689	747	239	32	145	991	244
	JHS	9349	327	215	65.7	43	374	47
	TOTAL	60,660	1354	482	35.6	126	2030	676

(Source: EMIS/GES 2010-2012)

In all the districts sampled for study, KG level has the lowest proportion of trained teachers with very high PTTR. This implies that most of the teachers at this level are untrained making it challenging to lay the foundation for cognitive development of early grade pupils. District Directors interviews complained of the poor quality of teachers at the KG level since the vast majority were not “trained”.

Responses by District Directors interviewed across the nine sampled districts indicated that the UTDBE programme is expected to address the issue of trained teacher scarcity in their districts in order to facilitate quality educational delivery. They argued that most of the trained teachers posted to their districts refuse to report owing to the deprivation status of their communities and schools. They anticipate that the programme will impact on quality of educational delivery in their districts. Interviews with Directors suggest that the UTDBE programme was having a positive impact on ensuring that they were able to retain trained teachers in some of the most deprived areas of the district. They commented that the number of trainees is gradually changing the poor quality of pupil teachers in the deprived rural communities.

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

Data gathered across the nine sampled districts indicate that 47.2% of teachers at the Basic Level are untrained. The GPEG-sponsored additional UTDBE cohort of 2012 was specifically targeted at these untrained teachers, to enable them to perform effectively in classroom. Out of a total number of 4,246 untrained teachers across the nine sampled districts, 1,876, representing 44.2% of untrained teacher force in these districts, have been admitted to the UTDBE programme. This implies that approximately 56% of untrained teachers are still not enrolled on the UTDBE programme which has significant implications for the supply of teachers to rural deprived areas given the current policy direction.

Table 2.3 below demonstrates that, except for Upper West and Brong Ahafo Regions where over 50% of untrained teachers were admitted to the programme, the other regions (Northern, Upper East and Western Regions) all enrolled below 30% of their untrained teachers on the 2012 GPEG-sponsored UTDBE Programme. For Instance, in the Upper East, only 176 or 18.1% of untrained teachers were enrolled onto the UTDBE programme. Currently 972 which is 45.8% of teachers in the Upper East are untrained. In Upper West, 56% of untrained teachers have gained admission to the UTDBE programme. In the Northern Region, 895

(47%) teachers are untrained of whom 247 have been enrolled on the GPEG sponsored UTDBE programme leaving another 648 untrained teachers in that Region. By contrast 85.3% of Brong Ahafo's untrained teachers have been enrolled onto the UTDBE leaving only 161 untrained. Similarly, Brong Ahafo has 1099 untrained teachers which represents 50.6% of the current teaching force and has close to 85.3% who are on the UTDBE programme. Western region has 728 untrained teachers which is 51.7% of all teachers with only 206 or 26.3% being admitted to the programme.

These baseline data suggests poor targeting in the admission process of UTDBE. These baseline data raise the issue whether the admission process for the 2012 GPEG-sponsored UTDBE programme correctly targeted the Regions and Districts with the highest numbers and proportions of untrained teachers. However it should be noted that the above data derived from EMIS do not take full account of a separate UTDBE programme run by six Colleges of Education in the northern regions, which recently (August 2014) graduated a substantial UTDBE cohort. These newly qualified trained teachers are already improving the PTTR in those northern regions, as will eventually be shown in the EMIS database.

Notwithstanding, the baseline data does point to inconsistencies in the targeting of trainees for the GPEG sponsored UTDBE as, for example, school level interviews suggest that there are, on average, eight UTDBE trainees in each school visited in the Brong Ahafo region, and data collected from TED indicates that in some schools in the sample districts there are between 10 and 19 UTDBE trainees. Each of the other regions has, on average, two UTDBE trainees in each school. Data from EMIS also suggests that there are far fewer trained teachers in Northern, Upper East, and Western regions compared to the Brong Ahafo Region. The Baseline results indicate that there are a disproportionate number of trainees in regions which are in less need and this suggests poor targeting in the UTDBE programme particularly in the Northern region where the need appears to be the greatest. Interestingly, there were far fewer female UTDBE Trainees across all sample districts except for the Brong Ahafo Region where there is a slightly higher proportion of females (43.3%) than males (42%).

Table 2.3: Admission Pattern of Untrained Teachers to UTDBE Programme by Region District and Gender

DISTRICT	Total Number of Teachers	Number of Trained Teachers	Number of Untrained Teachers	% of untrained	Untrained Teacher Admission Pattern					
					M	%	F	%	T	%
Talensi-Nabdam District	1157	617	540	46.7	58	10.7	29	5.4	87	16.1
Bongo District	963	531	432	44.9	59	13.7	30	6.9	89	20.6
Upper East Region Total	2120	1148	972	45.8	117	12	59	6.1	176	18.1
Jirapa District	575	371	204	35.5	89	43.6	48	23.5	137	67.1
Lawra District	810	462	348	43	102	29.3	70	20.1	172	49.4
Upper West Region Total	1385	833	552	40	191	34.6	118	21.4	309	56
Bunkpurugu-Yunyoo District	922	443	479	51.4	82	17.1	24	5	106	22.1
West Mamprusi	982	566	416	42.4	96	23.1	45	10.8	141	33.9

District										
Northern Region Total	1904	1009	895	47	178	19.9	69	7.7	247	27.6
Nkoranza District	783	377	406	51.9	134	33	156	38.4	290	71.4
Atebubu District	1388	695	693	49.9	328	47.3	320	46.2	648	93.5
Brong Ahafo Region Total	2171	1072	1099	50.6	462	42	476	43.3	938	85.3
Wassa Amenfi West District	1408	680	728	51.7	139	19.1	67	9.2	206	28.3
Western Region Total	1408	680	728	51.7	139	19.1	67	9.2	206	28.3
TOTAL	8988	4742	4246	47.2	1087	25.6	789	18.6	1876	44.2

Source: UTDBE Impact Assessment Baseline, 2014.

Based on this data alone, there appears to be no correlation between the needs (demand) and provision (supply) of teachers in these areas. One would expect that for the purpose of equity, the relative rates of untrained teachers should correspond with the rates of admission to the UTDBE programme, but this is clearly not the case and it appears that untrained teachers from Brong Ahafo have a disproportionate access to the programme. Upper East has the lowest rate of untrained teachers who were enrolled on this particular UTDBE programme, even though the region records an estimated 45.8% of untrained teachers. Similarly Northern Region has one of the highest rates of untrained teachers yet one of the lowest rates of UTDBE Trainees at 27.6%. The worst affected is the Western Region which has 51.7% untrained teachers across the region with only 28.3% admitted to the UTDBE programme. Regions with high rates of admission are Upper West and Brong Ahafo with 56% and 85.3% respectively. Upper West has a low rate of untrained teachers but high admission rate. Brong Ahafo also has a low rate of untrained teachers with a very high rate of admission to the programme.

Some of the other reasons for the low “demand for the UTDBE programme in some districts are the higher proportion of unqualified teachers who had the minimum starting qualifications – a) academic results, as specified below; and b) pupil teacher status and salary. In some Districts sampled there were few existing pupil teachers, and the classrooms were manned by community volunteer teachers whose SHS qualifications fell below the UTDBE-defined threshold.

The trend as observed in the regions is similar to what is found in the sampled districts. Talensi-Nabdam has 46.7% untrained teachers but has the lowest admission rate of 16.1% to the programme. B’Yunyoo also has 51.4% untrained teacher but with only 22.8% admission rate to the programme. Wassa Amenfi West has the highest rate of untrained teachers estimated at 51.7% but has only 28.3% admission rate to the programme. Jirapa also has the lowest rate of untrained teachers estimated to be 35.5% but has a high rate of programme admission of 67.1%. Nkoranza North and Atebubu have high rates of untrained teachers estimated to be 51.9% and 49.9% respectively but have admission rates of 71.4% and 93.5%. This is possibly due to the close proximity of training colleges to the UTDBE trainees residence and lower costs related to participation/transportation.

Table 2.4 demonstrates district patterns of untrained teacher and admission rates across all the sampled regions and districts. The number of trainees is 1876 of which 1087 are males and 789 females. Talensi-Nabdam has 87 (4.6%) trainees, Bongo 89 (4.7%) Jirapa 137 (7.3), Lawra 172 (9.2%), B'Yunyoo 106 (5.7%), West Mamprusi 141 (7.5%), Nkoranza North 290 (15.5%), Atebubu 648 (34.5%), and Wassa Amenfi West 206 (11%). Allocation for Upper East is 176 (9.3%), Upper West the 309 (16.5%). Northern Region has 247 (13.2%) Brong Ahafo has 938 (50%) and Western 206 (11%). Upper West and Brong Ahafo have the highest number of trainees. Of all the districts, Atebubu and Nkoranza North have the highest number of trainees.

Table 2.4: Distribution Pattern of Enrolment of Untrained Teacher, Gender to UTDBE Programme by Region & District 2012/2013

District	Untrained Teachers	%	Number/% enrolled on UTDBE					
			M	%	F	%	T	%
Talensi	540	12.7	58	5.3	29	3.7	87	4.6
Bongo	432	10.2	59	5.4	30	3.8	89	4.7
Upper East	972	22.9	117	10.7	59	7.5	176	9.3
Jirapa	204	4.8	89	8.2	48	6.1	137	7.3
Lawra	348	8.2	102	9.4	70	8.9	172	9.2
Upper West	552	13	191	17.6	118	15	309	16.5
B'Yunyoo	479	11.3	82	7.5	24	3	106	5.7
West Mamprusi	416	9.8	96	8.8	45	5.7	141	7.5
Northern	895	21.1	178	16.4	69	8.7	247	13.2
Nkoranza	406	9.6	134	12.3	156	19.7	290	15.5
Atebubu	693	16.3	328	30.2	320	40.6	648	34.5
Brong Ahafo	1099	25.9	462	42.5	476	60.3	938	50
Wassa Amenfi	728	17.1	139	12.8	67	8.5	206	11
Western	728	17.1	139	12.8	67	8.5	206	11
TOTAL	4246	100	1087	100	789	100	1876	100

Source: UTDBE Impact Assessment Baseline, 2014

Analysis of data from the sampled districts indicates that regions and districts with low untrained teacher rates tend to have high admission rates whereas the reverse is the case in other districts as observed in district admission in Table 2.3.

The regions which have an untrained teacher rate over 20% do not have their corresponding admission rate increase except for Brong Ahafo which records 25.9% untrained teacher rate as against 50% admission rate. Regions with less than 17% untrained teachers have less admission rate except Upper West which has 16.5%.

At the district level, Jirapa and Lawra have low untrained teacher rates but high admission rates of 7.3% and 9.2% respectively. Similarly, Nkoranza and Atebubu have high untrained teacher rates of 9.6% and 16.3% but high admission rate of 15.5% and 34.5% respectively. Other districts which have high untrained teacher rates have very low admission rates. These districts are Talensi-Nabdam and Bongo with untrained teacher rates of 12.7% and 10.2% as against admission rate of 4.6% and 4.7%; B'Yunyoo and West Mamprusi have untrained

teacher rates of 11.3% and 9.8% with admission rates of 5.7% and 7.5%. Similarly Wassa Amenfi has an untrained teacher rate of 17.1% as against 11% admission rate. Distribution patterns as observed are inequitable among the districts. Four districts have benefited more than others. This is likely to affect the rate of untrained teacher status transformation in some districts to accelerate quality classroom delivery.

2.3 Programme Quality Assurance

There are several quality control checks in place to ensure that the UTDBE Programme delivers high standard and quality training to trainees. All nine sampled districts have UTDBE coordinators in place to ensure efficient implementation of the programme. Most District Directors and other key staff such as circuit supervisors at the district level were involved in ensuring the smooth running of the UTDBE Programme. Although there were clearly articulated criteria for the selection of prospective UTDBE trainees, not all districts adhered to these criteria. Of the 407 UTDBE trainees interviewed as part of the Baseline study, 185 indicated that they had been teaching for 2 years or less. This implies that they were not in post as either volunteer teachers or Pupil Teachers at the point in time when enrolment to the GPEG sponsored UTDBE programme took place. A major criterion for selection for the programme was that prospective candidates should ideally be serving as GES salaried pupil teachers, or other untrained teachers who meet the specification to be taken on as pupil teachers by virtue of having appropriate Senior High School qualifications. Interviews with frontline directors and other key staff across district offices reveal that they did not appear to know who was involved in the selection process of UTDBE Trainees, or how. Interviews with Directors indicate that selection guidelines were not consistently complied with. There is no indication that all sampled Districts with the exception of Jirapa had in place the recommended 5 member committee to select suitable candidates, The normal trend in the Districts was that applications were sent to the District Director for consideration.

The following are criteria for selecting UTDBE trainees as indicated in the Trainees' Handbook:

- “Prospective trainees should have either of these GCE O/A level, WASSCE/SSCE, City and Guilds and any post SSCE certificate.
- The candidate must be a pupil teacher on GES payroll and should not be more than 50 years on the day of application”.

A committee at the district level comprising two representatives of DEO (AD HRM and AD Supervision), one representative each from GNAT, DEOC and TED was expected to be established. This committee was expected to interview candidates and vet their certificates for authenticity before admission. The involvement of GNAT and DEOCs and TED was envisioned to ensure transparency in the selection of capable candidates for the UTDBE programme.

The selection of UTDBE trainees was extended by some Directors to include CSO supported Volunteer Teachers, NYEP/GYEEDA supported teachers and non-teaching staff at the DEOs and unemployed SHS graduates. All Districts with an exception of Talensi-Nabdam have defaulted in complying with the selection guidelines as stated above. In all nine districts there were more UTDBE trainees located in rural areas than in urban areas except the two districts in the Brong Ahafo region.

The quality assurance aspect of the UTDBE programme was assessed by the University of Education, Winneba. The main purpose was to assess the quality of key components of the UTDBE programme such as the professional training to produce teachers who have a clear grasp of intended outcomes of the teaching activities, and the level of skills in providing rich learning opportunities for their students. All nine out of the 11 colleges of education where the UTDBE programme is running were assessed by the quality control team over a period of 3 separate visits. Only the Colleges of Education in Agogo and St Monica in the Ashanti region were not sampled. The findings highlighted the need to improve the number of invigilators appointed to supervise examinations, adjust timing for releasing the examination results, review the policy on examination re-sitting and enhance the conditions at colleges during residential sessions.

Location of UTDBE Trainees

Interviews with Directors and Coordinators reveal that most of the trainees are from deprived rural communities with a few of them from District capitals. It is estimated that 15% of the trainees are resident in the District capital with the exception of Atebubu which has 35% UTDBE trainees being resident in the District Capital. It also has 25% of trainees in urban centres. 40% of trainees are located in deprived rural areas in all districts with the exception of Atebubu which has 20%. The findings suggest that over 60% of trainees are found in extremely deprived areas of the district. Atebubu is the only district with only 25% trainees in the extremely deprived areas. This trend demonstrates the importance Directors attach to addressing the issue of trained teacher resource gaps in various schools in deprived areas. The District Directors and Coordinators report that trainees are expected to stay and teach in their school throughout the four (4) year course duration. The exposure that trainees are experiencing at the CoEs makes them better teachers than when they were engaged as pupil teachers. At least they are aware of the rudiments of teaching methods and efforts are being made to practice them.

2.4 Rates of Drop-out and Removal from the Programme

Interviews with Directors of Education and UTDBE Coordinators across the sampled districts reveal that there have been some drop outs since the beginning of the UTDBE programme.²¹ Table 2.4 does not distinguish between the different reasons for trainees to drop-out²², but it does analyse the total drop-out rates by gender and district. In 2012/13 the total number of trainees admitted for the UTDBE programme across the 9 sampled districts was 1,876. This figure comprises 1,087 males and 789 females.

In 2013/14 the number of trainees remaining on the programme stands at 1,563 with 909 males and 653 females. The total number of drop-outs is 314 being 16.7% of UTDBE trainees comprising 178 males and 136 females dropped out of the programme. The rate for males and females was 16.4% and 17.2% respectively. Brong Ahafo region recorded the highest drop out rate of 27.8% with 31.8% of the males and 23.9% of the females dropping

²¹ It is important to note that drop-out comprises three key categories: a) removal from the programme during the second semester, when the authorities decide to impose stricter criteria on prior academic qualifications – this is by far the largest category; b) individuals removed subsequently for failure of attendance or failure to pass exams; and c) individuals voluntarily dropping out even though they had successfully completed the previous semester (a very small category).

²² Interviews at the CoEs indicate that trainees that are unable to achieve a passing grade in exams after resitting are dismissed, drop-out is therefore not always voluntary.

out of the programme The second region with a high rate is Northern Region where 6.9% of the original trainees dropped out, consisting of 4.5% of the males and 13.1% of the females. The third region is Upper West which has a rate of 6.8% with males recording 6.3% and females 7.3%. The Upper East region recorded the lowest drop out rate of 2.3% with 1.7% of the males and 3.4% of the females. Generally, drop-out rates were higher among females than their male counterparts.

Bongo and Jirapa districts in the Upper East and Upper West Regions did not record any drop outs in 2013/14. Atebubu district recorded the highest drop-out rate across the nine sampled districts at 39.7%. Lawra and West Mamprusi districts in the Upper West and Northern Regions recorded drop out rates of 12.2% and 9.9% respectively. Nkoranza North district recorded the lowest rate of 1.4%. It is important to note that of the original 141 trainees recruited in West Mamprusi, 14 (7%) were removed from the programme after successfully completing their examinations at the end of the first semester, because a review of their SHS certifications did not reveal proof of adequate academic prior qualifications. Since the first removal of trainees, the enrolment fell by only 4 more by September 2014 as a result of failure to pass exams or personal reasons. Overall the findings suggest that the consistency of attendance is remarkably high given the demanding nature of the teaching/training programme and the financial hardships which most trainees have to endure.

Table 2.4: Drop-Out among UTDBE Trainees by Gender and District

District	2012/13			2013/14			Drop-outs			% - Drop-outs		
	M	F	T	M	F	T	M	F	T	M	F	T
Talensi	58	29	87	56	27	83	2	2	4	3.4	6.9	4.6
Bongo	59	30	89	59	30	89	0	0	0	0	0	0
Upper East Region Total	117	59	176	115	57	172	2	2	4	1.7	3.4	2.3
Jirapa	89	48	137	89	48	137	0	0	0	0	0	0
Lawra	102	70	172	90	61	151	12	9	21	11.8	12.9	12.2
Upper West Region Total	191	118	309	179	109	288	12	9	21	6.3	7.6	6.8
B'Yunyoo	82	24	106	79	24	103	3	0	3	3.7	0	2.8
West Mamprusi	96	45	141	91	36	127	5	9	14	5.2	2	9.9
Northern Region Total	178	69	247	170	60	230	8	9	17	4.5	13	6.9
Nkoranza North	134	156	290	134	152	286	0	4	4	0	2.6	1.4
Atebubu	328	320	648	181	210	391	147	110	257	4.5	3.4	39.7
Brong Ahafo Region Total	462	476	938	315	362	677	147	114	261	31.8	23.9	27.8
Wassa Amenfi West	139	67	206	130	65	195	9	2	11	6.5	2.9	5.3
Western Region Total	139	67	206	130	65	195	9	2	11	6.5	2.9	5.3
TOTAL	1087	789	1876	909	653	1562	178	136	314	16.4	17.2	16.7

Source: (District Education Offices in the Baseline Sample, 2014)

2.5 Policy Implications

Efforts are being made across all the nine districts to ensure that trainees remain in the district and where possible the same school for the entire duration of the UTDBE programme. Various policies are put in place at the District level to ensure trainee retention in the district during the UTDBE training at the CoEs. By the UTDBE programme guidelines, the trainee

before selection should agree to stay in the district for the course duration of four (4) years. In all the districts, the Directors keep trainees at their same schools from the time of selection to the end of the UTDBE programme and beyond. The trainee is expected to stay there until circumstances as determined by the Director that dictate otherwise.

The District Directors of Education indicated that their trainees are selected depending on the deprivation status of the school and the community where trained teachers refuse posting. Interviews with Coordinators reveal that transfers are not entertained during the four (4) year course duration. It is an exception and not a norm for a trainee to be transferred; however Wassa Amenfi West and Lawra district treat transfer during the UTDBE training as a norm. This trend in the two districts may not ease monitoring and supervision of trainees as data stability on training may keep changing.

The Directors and Coordinators claim that the length of stay in their school and district after trainees graduation varies with the districts, and is often between 3 and 5 years. Interviews with District Directors reveal that UTDBE trainees are also expected to teach in the district for at least three years after completion of the UTDBE programme. In the Atebubu district, it is extended to at least five years. In Talensi-Nabdam, Bongo, Lawra, B'Yunyoo, Wassa Amenfi West, graduate trainees are expected to stay in the schools which have supported their training. The situation is not clear with West Mamprusi, Nkoranza North and Atebubu. In districts where there are no transfers it is possible for a trainee to be expected to stay in the same **community school for not less than 8 years**. This is because the trainee may have been teaching as a pupil teacher for at least one year before selection on the programme; the programme takes 4 years during which time the district ensures that the trainee stays at the school where he/she was selected. After the course, GES condition of service states that the trainee has to report to his/her school and serve there for 3 years before transfer can be considered. This is to ensure that these UTDBE trainees are retained in schools/districts where their services are most needed. Adherence to this trend will promote trained teacher retention in the deprived rural schools to gradually address scarcity of trained teachers. In **districts** where transfers become a norm the length of stay of the trainee after graduation in a district is at least 8 years.

Conclusions

Over the years Ghana Government has put in place policies to improve provision of quality education in the country. This has resulted in increased enrolment rates at the expense of quality. Poor quality educational delivery is especially pronounced in deprived rural areas. In spite of heavy investment in teacher education provision, demand for trained teachers particularly in deprived rural areas is still very high. Efforts by Education Managers to address pupil teachers/trained teacher imbalance in deprived rural areas have not been successful as most trained teachers do not accept postings to these rural areas. Data collected across the sampled Districts indicate that there are still high numbers of teacher vacancies estimated at over 200 teachers per district. It is also observed that as a result of trained teacher scarcity and high school enrolment, PTTR is very high indicating high demand for them. In view of the high trained teacher demand for delivery of quality education, the interviews across the sampled districts show that many administrators are looking to the UTDBE programme as a key measure to narrow the trained teacher supply gap that has existed in deprived districts for many years.

The category of teachers selected for the UTDBE programme appears to hit the mark since most of the trainees have had some practical teaching experience before enrolling onto the programme. There is a high level of motivation among Trainees to become professional teachers and serve their communities. However, some districts' inability to comply with set guidelines poses serious challenge in relation to UTDBE's retention and ability to complete the full four year course. Selection has also not been transparently done as recommended. The provision of setting up a 5-member committee in each District comprising of Two(2) representatives of DEO (AD-HRM & AD SUPERVISION), One (1) representative each of GNAT, DEOC and TED have not been complied with.

Interviews with DDE's suggest that trainees have exhibited signs of gradual improvement in classroom lesson delivery. They are more committed to the school work than the trained teachers. They are punctual and regular in school attendance. They have slightly improved in their lesson notes planning and preparation, even though most of them do not have up-to-date notes. Lesson notes are also submitted to the Head teachers late for vetting. It is observed that the trainees are aware of various teaching methods but their application seems to be a challenge.

Retention rates among UTDBE trainees across sampled districts appear to be high. Teacher retention in the District and School appears high among the trainees because they feel they have an obligation to their communities where they are natives and the in-built strategies of the programme as well as conditions of service promote their retention in the deprived school and districts. It is estimated that in districts where trainees are not transferred, the trainees are likely to be in their schools for at least 8 years but in districts where transfers are not rigidly regulated the trainees' length of stay in the school will not be less than 8 years.

The programme has also witnessed dropouts across all sampled districts and it is estimated that 17.6% of the original enrolment have dropped out. This includes 16.4% of male trainees and 17.2% of females. Drop-outs, either from failure to pass exams or from personal reasons, have been remarkably low. The rate indicates the high level of trainees' ambition to succeed in spite of some challenges being experienced.

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

This section examines the characteristics of the UTDBE trainees, their selection and support, and their content knowledge based on data from the 9 selected deprived districts and 5 Colleges of Education where the UTDBE programme IA field work was carried out.

3.1 Enrolment of UTDBE Trainees across 11 Colleges of Education

Data gathered from the Teacher Education division revealed that, as of August 2013, a total of 7,043 UTDBE trainees were enrolled on the UTDBE programme across 11 Colleges of Education. 39.4% of these trainees were females and 60.6% were males. The Presbyterian College of Education (PWCE) in Aburi had the least percentage of female (24%) trainees whereas Agogo College of Education in the Ashanti Region had the highest percentage of females (51%) (Table 3.1). This is quite positive for the future of Ghana Education Service. AfC's study on Tackling Educational Needs Inclusively (2013) found that the absence of female teachers especially in the deprived remote rural had direct consequences on girls' education especially their retention and transition to JHS. In terms of numbers and accommodating the 'females' life course events', the UTDBE programme provides a unique opportunity for the GES to attempt to address the gender inequity across basic schools by ensuring that more women are participating in teacher training and upgrading their skills.

Table 3.1: Numbers of UTDBE Trainees from all 57 Deprived Districts

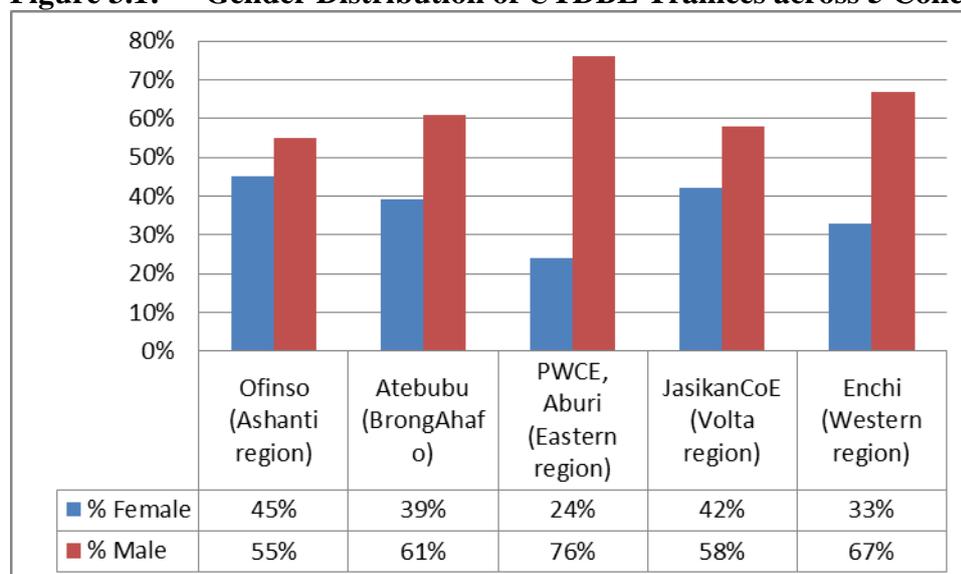
Name Of College	Female	Male	% Female	% Male
Agogo (Ashanti region)	450	435	51%	49%
Monica (Ashanti region)	205	386	35%	65%
Ofinso (Ashanti region)	391	473	45%	55%
Mamptech (Ashanti region)	321	582	36%	64%
Atebubu (Brong Ahafo)	385	594	39%	61%
AbetifiCoE (Eastern region)	183	289	39%	61%
PWCE, Aburi (Eastern region)	127	392	24%	76%
JasikanCoE (Volta region)	292	408	42%	58%
Peki (Volta region)	215	317	40%	60%
Enchi (Western region)	65	130	33%	67%
Wiawso (Western region)	144	259	36%	64%
Total across all 11 CoE's	2,778	4,265	39.4%	60.6%

Source: Teacher Education Division, GES, 2013

With regard to the distribution of students from the deprived districts across the eleven Colleges of Education where the UTDBE programme is run, there is an average of 640 students in each college, with some colleges falling far below this average; for example, Enchi which is accommodating GPEG sponsored students from just Wassa Amenfi West and Amenfi Central districts accounts for only 195 UTDBE trainees. On the other hand, Atebubu College of Education which is hosting GPEG sponsored UTDBE trainees from seven

different districts across the Brong Ahafo and Northern regions accounts for 979 students (Table 3.1).²³

Figure 3.1: Gender Distribution of UTDBE Trainees across 5 Colleges Visited



Source: Colleges of Education, UTDBE Impact Assessment Baseline

One of the gender objectives of the Pre-tertiary professional development and management policy framework (2012) is that ‘females’ life course events such as marriage, pregnancy and childbirth shall not be used to prevent any candidate from attending a continuous teacher education programme’. While the average female-male UTDBE trainee ratio is 2:3; the figure from the colleges visited shows wide variations among them. Female trainees constituted just a quarter of the trainees at PWCE at Aburi College of Education, Eastern region while female trainees formed the majority of students constituting 52% at Jasikan College of Education in the Volta region. (Figure 3.1)

Enrolment at the Colleges of Education

An important finding that emerged from the baseline study was that most UTDBE trainees, particularly those from the three Northern Regions, were travelling extremely long distances (often over 10 hours) to attend their ‘face to face’ sessions at the various CoE’s in Southern Ghana. Only two out of the five Colleges of Education visited (Atebubu College of Education and Enchi College of Education) are serving the UTDBE trainees from the same district as those where the UTDBE trainees teach. Their proximity makes monitoring and support by the CoE staff more feasible. However, this was not possible for the three other training Colleges of Education because of the long distance between the Colleges and the schools where the UTDBE participants were located.

According to the explanation from the Teacher Education Division, two factors account for this. Firstly, at the time the Colleges of Education were being approached to host this phase of the UTDBE programme, most CoE’s in the three Northern regions were already running

UTDBE programmes. This meant that at the time the GPEG UTDBE programme started, these Colleges in the three northern regions already had a full complement of UTDBE students. There was thus the need to send students to different regions for the programme. Another reason was that some of the CoEs in Southern Ghana were also running different modules of sandwich programmes. As a result, trainees were shuffled between the 11 available colleges. This process was done without proper assessment of the capacity of the facilities and the number of available spaces in the 11 colleges targeted to run the UTDBE programme, so some trainees had to be relocated to different colleges after the first face to face session.

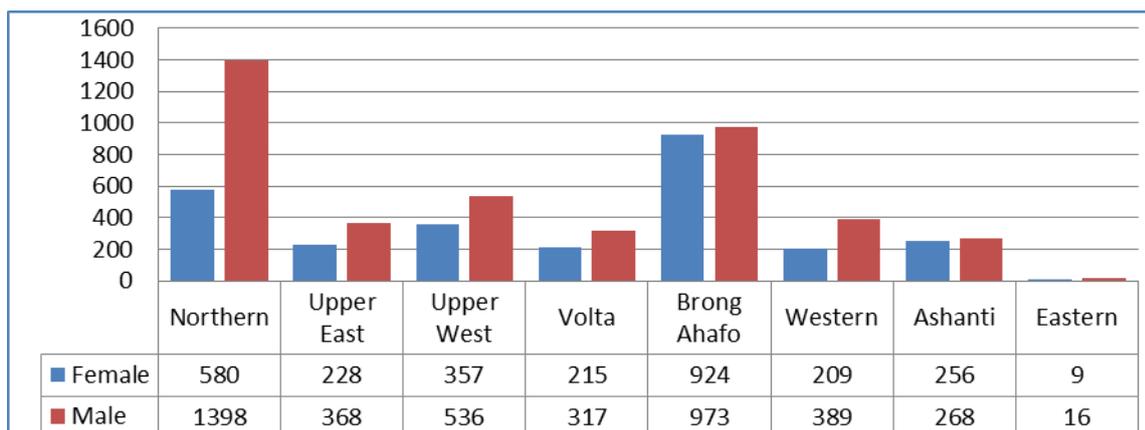
Focus group discussion with tutors, interviews with UTDBE coordinators and Principals of the five sampled Colleges of Education revealed details about the realities of the trainees as far as their comportsment, recruitment and coping strategies were concerned. Beside the long distance, trainees also face congestion at the colleges. For instance, the case of Atebubu College of Education which accommodates 424 regular DBE students has also hosted nearly a 1000 students. The consequence of the increase in the student population has overstretched facilities and sanitation has deteriorated. The Field research team found that classes and examinations for some subjects were organised under improvised sheds. This was often compounded for some of the female trainees who are pregnant or have young babies with them at the College during the face to face sessions. Aside of the personal challenge the nursing mothers face, there is the problem of accommodation and feeding of their nannies which often poses difficulties for the colleges. The positive side of this programme to the Colleges of Education has been the expansion of physical infrastructure. On many of the campuses visited, new structures of classrooms and examination centres were under construction or had just been inaugurated for use.

3.2 Regional Distribution of Teachers

As discussed elsewhere in this report, there are regional and district disparities in the number of UTDBE trainees admitted across the 57 deprived districts. Analyses of the data reveal that Northern and Brong Ahafo Regions have the highest proportion of UTDBE trainees with each having over 25% of the total number of trainees for the programme. The Upper East, Volta, Ashanti and Western Regions have a similar share at about 8% of UTDBE trainees and the Eastern Region has less than 1% of Trainees admitted to the programme.

Gender disparities were greatest in the Western, Northern Upper East and Upper West Regions. In each of these four regions the percentage of females falls below the national average of around 40%, particularly the Northern Region where less than 30% of the UTDBE trainees are female. Both Brong Ahafo and Ashanti Regions have near parity between females and males trainees. Upper East, Upper West and Volta Regions percentages all reflect the national average which is around 40% females (Figure 3.2).

Figure 3.2: Numbers of UTDBE Trainees by Region as Reported by Colleges of Education August 2013



Source: Teacher Education Division of GES, 2013.

3.3 Criteria for Selection of DBE and UTDBE Trainees into Colleges of Education

Findings from the assessment reveal that there were variations in the application of the standard requirements and criteria for entry into the College of Education for UTDBE and DBE programmes. Findings from the baseline reveal that several of the districts were using their own criteria of between 3 to 5 passes in the core subjects and electives to enrol the UTDBE participants. This was in sharp contrast to the entry requirements of the DBE participants at the CoE who were selected by University of Cape Coast criteria and vetting.

According to several of the District Directors of Education and Tutors across the Colleges, the following entry into the UTDBE Programme was required of candidates:

- The prospective Trainee must have had 2nd cycle education with 5 passes (3 Core and 2 Electives) at WASSCE/SSCE. This varied across some districts reporting 3 passes in English, Math and one elective subject;
- Must be a pupil teacher working in one of the public schools in the district; and
- Must be on the Government payroll (although this varied as well with a significant proportion of UTDBE trainees not yet confirmed on government payroll).

Interviews with Principals of Colleges of Education revealed that some district Education offices did not follow these criteria diligently. As a result there were several trainees who got onto the UTDBE programme without the requisite qualifications. The common reason cited for this failure was the fact that some districts did not have enough pupil teachers on the GES payroll and therefore proposed candidates who did not meet the criteria (this was particularly the case in the Northern, Upper East and Upper West regions).

For conventional **DBE candidates**, the processes were more robust and competitive. To qualify for entry into the programme, one must possess credits in five subjects including, Mathematics, English Language and Science with a total aggregate of not more than thirty (30). The aggregate varied across the colleges with some colleges having a cut off of aggregate 24 depending on the demand for entry. Based on interviews with Principals at the College of Education, the following list outlines the process for admitting DBE candidates to the various Colleges of Education:

- Advertisement by the Conference of Principals of Colleges of Education (PRINCOE) calling for eligible applicants to apply for consideration.

- The application process is online to reduce the incidence of bias selection and ensuring that the best qualified candidates are admitted for the programme.
- Successful candidates whose WASSCE/SSSCE results meet the criteria are shortlisted and the results verified by the West African Examinations Council (WAEC).
- Names of shortlisted applicants are sent to their first choice College of Education for further processing, interview and selection.

Interviews with Principals of Colleges of Education 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 Colleges of Education. According to some of the Principals of Colleges interviewed, the females are given preference since once they are admitted their retention rate is higher than their male counterparts once they qualify. Female DBE Trainees form about 30%-35% of all trainees across the colleges of education under study.

3.4 Differences between UTDBE and DBE Trainees Based on College of Education Tutors and Coordinators

Interviews with Tutors at the Colleges of Education reveal that there are identifiable differences between UTDBE and conventional DBE trainees. Most of these differences relate to their background knowledge, the nature of their course, and their practical teaching experiences. There are two significant findings from the interviews conducted with tutors and Principals across all the CoE:

- Tutors believe that the course content is not always appropriate for the UTDBE trainees and often beyond their grasp since the UTDBE trainees come from a background in which they have passes that are lower quality and there is a longer period of time between SHS graduation and entry to CoE.
- The limited time that the UTDBE trainees have at the face to face sessions and structure of the course restricts the UTDBE trainees from fully improving on their methodological practices in the classroom. There is very little methodology taught in the first 2 years of the course and the trainees are not able to fully apply what they are learning to their classroom setting. There is also very little modelling of good practice teaching by the tutors at the CoE due to the limited time for the face to face compared to the DBE programme.

The findings from interviews with CoE tutors reveal that because the UTDBE programme is not a full time course, trainees on the UTDBE do not spend enough time reading their course modules. There are circumstances where tutors conduct crash programmes during the face to face because there is just not enough time. Also, UTDBE trainees are expected to study and at the same time teach when they return to their home districts. This appears to be a huge challenge for most of the UTDBE trainees due to not just their professional, but also their family and social obligations. Interviewees across all the colleges of education explained that “their programme is distance learning which requires a lot of reading but a number of them do not get enough time to read their modules”. Tutors explained that due to their parental and social obligations in their communities such as attending funerals, and others who are nursing mothers who have to spend a lot of time with their babies, they don’t have enough time to study the modules and often do this during their classroom time at the school.

Another difference identified between UTDBE and conventional DBE trainees is that most of the UTDBE trainees who have taught in remote rural schools for several years usually have some content problems particularly in Mathematics, and therefore had challenges coping with the course content at the college of Education. This was also found in other research studies on “long serving” teachers in rural areas (Casely-Hayford and Wilson, 2001)²⁴.

Interviews with Tutors across the colleges of education revealed that UTDBE trainees, due to their practical experience in teaching were able to make more meaningful contributions to discussions in topics related to education. The UTDBE trainees, sometimes, can relate their experience in teaching to the lessons being taught at the College level. According to the Tutors and UTDBE Coordinators interviewed across the five training colleges, conventional DBE trainees understand more content related areas and concepts from the subject units more easily because they are “fresh” from SHS. They complained that the UTDBEs do not understand these subject units so easily particularly in the Maths. As a result, some UTDBE trainees form study groups in order to facilitate their learning. It was revealed at both Enchi and Atebubu colleges of education that the 2012/2013 cohort of UTDBE trainees are performing better than the previous cohort from 2004/05 who were mainly Middle School leavers.

3.5 Differences in the UTDBE and Conventional DBE Course Content

There are 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, Math and Science Education with some very limited courses on methodology. It is not until year 2 of the DBE course and year 3 of the UTDBE programme that the majority of units on classroom methods and child development are taught.

Several of the courses which are taught related to subject knowledge are geared towards JHS teachers and are far too advanced for primary school or KG curriculum content. There is no course on the teaching of reading and writing for young children at the KG to P3 levels which are the core needs at these levels for primary children. Please see Annex 4 for the details of some of the courses taught on the UTDBE programme year 1 and year 2.

3.6 UTDBE Trainee Teacher’s Content Knowledge Based on Examination Results

UTDBE trainees’ improvement in Content Knowledge was assessed based on examination results among UTDBE trainees in English and Science.²⁵ Both courses have content in Year one of the UTDBE programme (2012/13) which are continued in Year two (2013/14) and have available results that can be analysed to check for improvements in content knowledge of UTDBE Trainees. The modules for which the examination results are analysed are listed below and indicate the subject, the module code and time they were delivered:

²⁴ Often teachers have been serving in rural areas for over 5 years.

²⁵ Results for English and Science exams were provided by Colleges of Education – not all exam results were collected from the Colleges at the time of writing this report. A more rigorous assessment of improvement in Subject Knowledge and comparison between UTDBE and conventional DBE will be made at the end line.

English	Integrated Science
Year 1 Semester 1 (FDC 114)	Year 1 Semester 1 (FDC 111)
Year 2 Semester 1 (FDC 124)	Year 2 Semester 1 (FDC 121)

Basic Assumption

A study of the topics covered shows that the content of the second year courses is of a higher level than the first year courses. A good understanding of the first year content is necessary for good performance in the second year. Data on the results of the trainees were taken from the various CoE. Tests on the performance and improvement of trainee were conducted based on the presumption that a student who obtains the same grade in the second year as in the first year or a higher one is deemed to have improved in content knowledge. The analysis was done 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.

English Language (Course code: FDC 111 for Year 1 and FDC 121 for Year 2)

The analysis for English is based on scores available from Enchi College of Education, (Western Region) with data from 122 trainee teachers.

A paired sample *t*-test of significance was first conducted to find out if there is a significant improvement in English content knowledge. The result is shown in Table 1.

Table 3.2: Results of the Paired Sample *t*-test

Course Code	Mean	N	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
FDC 111 (Year 1)	2.48	122	1.344	.122	-4.67	121	.000
FDC 121 (Year 2)	2.99	122	1.250	.113			

(Source: Enchi College of Education, Baseline Sample, 2014)

This test is conducted under the null hypothesis that, 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. Our decision is based on the fact that we reject null hypothesis if the computed *t*-test statistic exceeds the critical value. In other words, we argue that there is improvement in performance if the probability value (*p*-value) is less than 5% significance level.

Table 3.2 shows that the result is statistically significant ($t_{0.025,121} = -4.67$; $p < 0.05$). This implies that, in general, performance in the English language has improved from Year 1 to Year 2 for UTDBE trainees

Table 3.3: Improvement Status in English by District

	Indication of improvement in English		
District	No improvement	Improvement	Total

Atebubu Amantin (Brong Ahafo)	7.9% (3)	92.1% (35)	100% (38)
Wassa Amenfi (Western Region)	28.9% (13)	71.1% (32)	100% (45)
West Mamprusi (Northern region)	12.8 % (5)	87.2% (34)	100% (39)
Total	17.2% (21)	82.8% (101)	100% (122)

Figures in brackets () are the absolute number of trainees

Source: Examination result data provided by sampled CoEs

Table 3.3 shows improvement in the three districts. While 92% of the trainee teachers improved in the Atebubu Amantin district, 71% of them improved in the Wassa Amenfi district with 87% improving in the West Mamprusi district. Conversely, only few trainees (17%) have not experienced any improvement in English Language. It is worthy of note that, among the trainees with no improvement, about 29% of them are from Wassa Amenfi in the Western region with Atebubu Amantin in the Brong Ahafo having the least.

Table 3.4: Improvement Status in English by Gender

Gender	Indication of improvement in English		Total
	No improvement	Improvement	
Female	10.0% (5)	90.0% (45)	100% (50)
Male	22.2% (16)	77.8% (56)	100% (72)
Total	17.2% (21)	82.8% (101)	100% (122)

Source: Colleges of Education in the Baseline Sample, 2014

Table 3.4 shows improvement by gender. While 90% of the female trainee teachers improved in content knowledge in English, about 78% of the males improved in content knowledge.

Table 3.5: Improvement Status in English by Level of Deprivation

Level of Deprivation	Indication of improvement in English		Total
	No improvement	Improvement	
Deprived	18.2% (8)	81.8% (36)	100% (44)
Extremely Deprived	28.9% (4)	71.1% (26)	100% (30)
Less Deprived	12.8 % (9)	87.2% (39)	100% (48)
Total	17.2% (21)	82.8% (101)	100% (122)

Source: Examination result data provided by sampled CoEs

Table 3.5 shows that the level of deprivation does not affect improvement in content knowledge in English. While about 82% of the trainee teachers in the deprived areas improved in content knowledge in English, 71% in the extremely deprived areas improved and 87% from the less deprived areas also improved.

In general, the statistics shows that trainee teachers from Enchi College of Education have improved in English content knowledge. About 83% have shown improvement by either obtaining the same grade in Year 2 or a higher grade.

Integrated Science

The analysis for Integrated Science is based on scores available from Atebubu, Offinso, Jasikan, and Enchi Colleges of Education with data from 337 trainee teachers.

Table 3.6: Improvement Status in Integrated Science by District

District	Indication of improvement in Integrated Science		Total
	No improvement	Improvement	
Atebubu Amantin	15.9% (7)	84.1% (37)	100% (44)
Bongo	69.0% (29)	31.0% (13)	100% (42)
Jirapa	22.7% (10)	77.3% (34)	100% (44)
Lawra	51.2% (22)	48.8% (21)	100% (43)
Nkoranza North	28.6 % (12)	71.4% (30)	100% (42)
Talensi Nabdham	83.8% (31)	16.2% (6)	100% (37)
Wassa Amenfi	48.9% (22)	51.1% (23)	100% (45)
West Mamprusi	22.5 % (9)	77.5% (31)	100% (40)
Total	42.1% (142)	57.9% (195)	100% (337)

Source: Examination result data provided by the sampled CoEs

Table 3.6 shows improvement in the Integrated Science content knowledge by districts. Out of the eight districts, five recorded improvements. In Wassa Amenfi, a little over 50% of the trainee teachers showed improvement, in Atebubu Amantin, Jirapa, Nkoranza North and West Mamprusi over 70% of trainees showed improvement. Bongo, Lawra and Talensi Nabdham districts however, did not show any improvements in Integrated Science content knowledge.

Table 3.7: Improvement Status in Integrated Science by Gender

Gender	Indication of improvement in Integrated Science		Total
	No improvement	Improvement	
Female	35.4% (52)	64.6% (95)	100% (147)
Male	47.4% (90)	52.6% (100)	100% (190)

Total	42.1% (142)	57.9% (195)	100% (337)
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Source: Examination result data provided by sampled CoE

Table 3.7 shows improvement by gender. While about 65% of the female trainee teachers improved in content knowledge in Integrated Science, about 53% of the males improved in Integrated Science content knowledge.

Table 3.8: Improvement Status in Integrated Science by Level of Deprivation

Level of Deprivation	Indication of improvement in Integrated Science		Total
	No improvement	Improvement	
Deprived	41.0% (48)	59.0% (69)	100% (117)
Extremely Deprived	44.6% (58)	55.4% (72)	100% (130)
Less Deprived	40.0% (36)	60.0% (54)	100% (90)
Total	42.1% (142)	57.9% (195)	100% (337)

Source: Examination result data provided by sampled CoE

Table 3.8 shows that the level of deprivation does not affect improvement in content knowledge in Integrated Science. While 59% of the trainee teachers in the deprived areas improved in content knowledge in Integrated Science, 55% in the extremely deprived areas improved and 60% from the less deprived areas also improved.

In general, the statistics shows that trainee teachers from the four Colleges of Education have improved in Integrated Science content knowledge. About 58% have shown improvement by either obtaining the same grade in Year 2 or a higher grade.

3.7 Comparison of DBE and UTDBE Examination Results

Another analysis was conducted as part of the Baseline study which involved comparing conventional DBE and UTDBE students from year 1 to year 2 of the programme across the five sampled training colleges in the study. The results of the content knowledge assessment were based on 2111 College of Education students in Integrated Science. The analysis was done 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 3.9: 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: Examination result data provided by sampled CoEs

To further analyse the performance of DBE to UTDBE trainees in Integrated Science, we did a test of the two independent samples by replicating the above approach.

Table 3.10: 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			

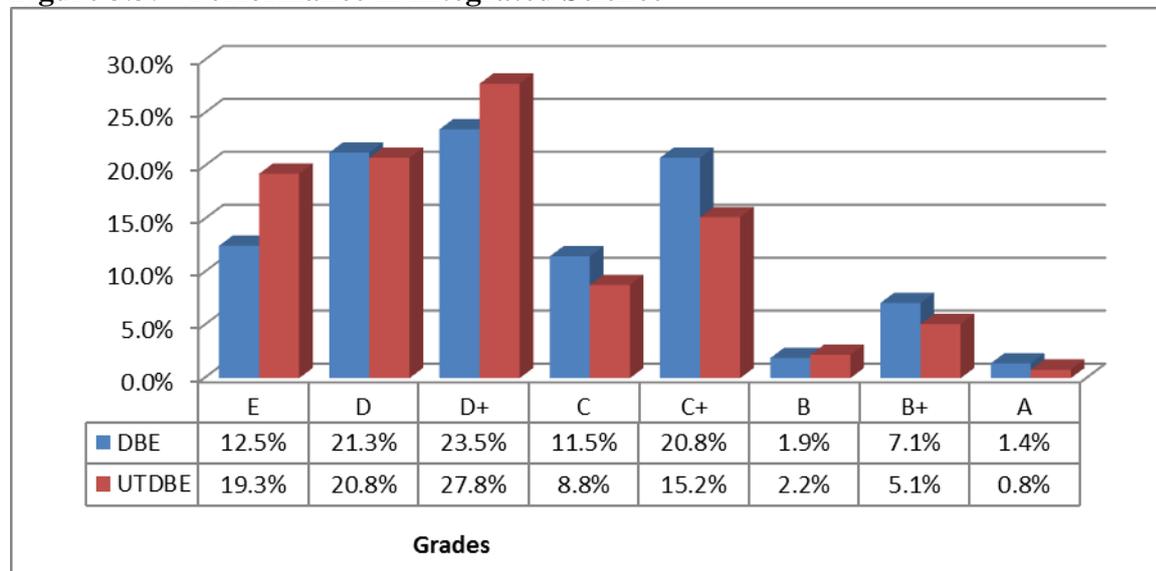
Source: Examination result data provided by sampled CoEs

Results from the test suggest that DBE trainees performed better than the UTDBE trainees in Integrated Science. This is seen in the higher mean performance of DBE compared to their counterparts.

A test of significance of this was also conducted based on the null hypothesis that differences in the performance in Integrated Science is insignificant. Results from this analysis reveal that the difference in performance is significant. Table 3.10 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 3.3 depicts graphically the performance by DBE and UTDBE students in Integrated Science. 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 3.3: Performance in Integrated Science



The UTDBE trainees' level of experience and qualifications, according to the 25 tutors interviewed across the 5 Colleges of Education, had an effect on their performance at the colleges while they undertook the programme; hence the poorer performance of UTDBE when compared to the DBE students who sat for a similar exam. However, interviews with the UTDBE Coordinators as well as Tutors from the colleges across the regions reveals that

the UTDBE trainees bring on board their experience from the classrooms which help them understand the subjects, especially the Education modules. What the performance improvement analysis indicates is that although some female trainees have significant family responsibilities even as students (e.g. “nursing mothers”) they are performing better than the males. Table outlines the main perceptions that CoE staff have of UTDBE trainee performance across the core subjects:

Table 3.11: Views by Tutors and UTDBE Coordinators Regarding: Level of Subject Knowledge of UTDBE Trainees

Tutors			
Maths	English Language	Science	Education
Average	Below average	Below average	Excellent
UTDBE Coordinators			
Maths	English Language	Science	Education
Average	Average	Good	Excellent

Source: FGD with COE Tutors and Interview with UTDBE Coordinators

3.8 UTDBE Trainees and District Education Views of their Performance at College of Education

The 407 UTDBE trainees were also directly interviewed and given the opportunity to assess their academic weaknesses according to subjects they find difficult to understand during the face-to-face sessions at the colleges of education and district cluster meetings. Their responses to these questions were aggregated on a College basis and gender basis. From the female trainees’ perspective, nine subjects were listed (Table 2.11) as being challenging. Only one in ten (12%) of the female UTDBE trainees indicated that they had no learning challenges in any subject. About a third of female trainees (29%) experienced learning challenges in multiple subject areas. Nearly a third of them (28%) mentioned mathematics as the subject they find most difficult. When the data is aggregated by college, there are clear variations. The colleges where the female trainees were weakest in mathematics was Offinso College of Education (38%) nearly twice the proportion for Jasikan College of Education (16%).

Table 3.12: Female UTDBE Trainees’ Subject Learning Challenges by College

Subject	Atebubu	Enchi	Jasikan	Offinso	PWCE	Total
Art	-	1	-	1	-	2
Education	-	-	1	3	-	4
English	1	-	4	5	-	10
Ghanaian Language	2	2	-	7	3	14
Mathematics	9	4	4	28	1	46
Multiple subjects	21	3	9	13	2	48
No learning challenge	3	3	4	9	1	20
Pre-vocational skills	-	1	2	3	1	7
RME	2	-	-	1	-	3

Science	3	2	-	4	-	9
Social Studies	-	1	1	-	-	2
Total	41	17	25	74	8	165

Source: UTDBE Impact Assessment Baseline, 2014.

For the male UTDBE trainees, they listed as many as eleven subjects in which they face learning challenges (Table 3.12). Every two out of ten male trainees (23%) had multiple subjects learning challenges. About 16% had no learning challenge in any subject. The subject most male trainees mentioned as posing learning challenges for them was Ghanaian language (18%). From the colleges, every six out ten male trainees (61%) at PWCE at Aburi in the Eastern region found Ghanaian language difficult. It is significant to note that all the trainees enrolled at Aburi PWCE were teaching in the Upper East region where the implementation of the L1 policy already faces an uphill challenge due to the numerous numbers of dialects in the region.

Table 3.13: Male UTDBE Trainees' Subject Learning Challenges by College

Subject	Atebubu	Enchi	Jasikan	Offinso	PWCE	Total
Art	-	2	-	1	-	3
Basic Design and Technology (BDT)	-	-	-	1	-	1
Education	-	1	3	5	-	9
English	5	2	6	9	-	22
Ghanaian Language	3	6	3	9	22	43
ICT	3	-	1	-	-	4
Mathematics	8	7	8	7	2	32
Multiple	17	2	20	10	6	55
No challenge	5	2	10	16	5	38
Pre-vocational skills	-	1	1	3	-	5
RME	2	-	1	-	-	3
Science	4	6	6	6	-	22
Social Studies	1	1	-	2	1	5
Total	48	30	59	69	36	242

Source: UTDBE Impact Assessment Baseline, 2014.

Trainee participation in the UTDBE programme has its own challenges as identified during interviews with the Directors and the frontline officers. They report that some of the trainees particularly those not on the GES payroll do not have adequate financial resources to support their efforts to obtain a professional Teacher Certificate. District Education Officers interviewed also claim that the trainees complain of the poor handling of Math, Science and English subjects. The trainees are alleged to be complaining about how tutors at the CoEs are "handling them". The tutors lecture the trainees on the basis that they already have a grasp on the fundamental concepts being taught. They do not take cognizance of the weak academic background of the trainees. Consequently the trainees complain that they find math, science and English extremely difficult. In addition some of the trainees complain that some of the Ghanaian Languages such as Dagaare do not have modules which the trainees can read. Consequently trainees find it difficult to cope with the subjects. In spite of these challenges

the trainees, according to the officers interviewed find satisfaction in pursuing the UTDBE programme.

Subject Knowledge Needs of Trainees in Relation to the Course Content

The UTDBE Coordinators at CoEs revealed that, the mastery of the course content facilitates effective classroom delivery. They further stated that, before the implementation of the UTDBE programme, experts were assembled to identify relevant content knowledge for the trainees in relation to basic school needs. The course content therefore reflects the needs of the trainees in the classroom.

However, a few of the UTDBE Coordinators interviewed think that the course content does not really reflect the needs of the UTDBE trainees in relation to methodology and considering the level the trainees teach, some of the subjects were too difficult for the level required for basic schools.

The Tutors interviewed are also of the opinion that the subjects being taught are of general value and useful to teachers teaching at the Primary/JHS levels. However, the structure of the subject content is more beneficial to JHS and Upper Primary than Lower Primary and KG teachers. Furthermore, the Tutors, think that the course content is too loaded for the time allowed, so that most of the trainees are “simply learning to pass their exams”. Also the Tutor interviews revealed that the time allotted to the course is too short. Whereas DBE Trainees have three months per semester, the UTDBE trainees are given the same amount of work in only one month. Tutors therefore feel that trainees are just “memorizing facts”.

In order to ameliorate this, tutors suggested effective and regular cluster meetings should be organized by the District Education Offices (DEO) to supplement the face to face sessions at the colleges of education. Unfortunately very few Districts have been organizing these sessions on a regular basis.

3.9 Level of Discipline of UTDBE Trainees

In assessing the level of discipline of the UTDBE trainees, majority of the Principals interviewed affirm that when the UTDBE trainees first came to Colleges, they did not rigidly comply with the College of Education regulations because they are mature. Some of them went to town without permission and there were instances of littering or not taking care of the College grounds. The DBE Trainees, on the other hand, are younger and submit to College rules and regulations from the onset. They spend more time at the institution (ie 4 months per semester) and can be monitored closely. The longest time the UTDBE trainees spend on campus is 28 days.

UTDBE Co-ordinators and Tutors agree with this assessment of trainees’ discipline. However, they point out that most UTDBE trainees are mature and have been independent before admission to the programme. There is also the issue of those female trainees who have family responsibilities and therefore bring young children and carers with them whose needs also need to be accommodated.

3.10 Academic and Professional Needs of the UTDBE Trainees

A number of academic and professional needs were identified by the Principals from the 5 colleges of education visited. These include the following: subject content knowledge, pedagogy, teaching skills, professional needs, lesson notes planning and preparation, developing TLMs and lesson presentation. However, the Principals of the colleges visited, indicated that the main thrust should be subject content knowledge. Acknowledging the fact that the UTDBE trainees find it difficult to study on their own, the Principals recommended that trainees be supported and guided in their studies.

According to them, addressing some of the above-mentioned needs depends on the subject area in question. However, it could be done by involving trainees or using the participatory approach, the tutorial approach, practicum time (field practical in the 3rd year) and giving trainees assignments.

Other needs mentioned are financial support to purchase materials for the programme, extra time to study, the need to meet in groups and learn. Since the trainees work and study at the same time, they need to be given guidance and counselling to help them set time aside for study. Head teachers must be advised to release them for cluster group tutorials. It is important that their coordinators visit them to see whether they are applying what they learnt in the classroom.

Furthermore all the 5 Principals interviewed recommend that the District Cluster meetings need to be organized in a more regular and systematic manner. According to them effective organization, supervision and monitoring of the cluster meetings are not being done as expected.

3.11 The Impact of the Schedule and 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 trainees receive in the course of their study. In assessing how the schedule and duration of the DBE and the UTDBE programmes impact on quality delivery of training there is the need to examine the entry requirements for both programmes.

With regard to quality, the admission requirement for the DBE programme is more rigid than that of the UTDBE programme. In order to be enrolled on the DBE programme, one needs to have 5 credit passes in 3 core subjects and 2 electives. This requirement is strictly enforced.

On the matter of the duration of training, the DBE trainees have more residential time for their semester (ie 16 weeks) to interact with their tutors and colleagues. They have libraries and the internet to do research. While on the other hand, the UTDBE programme is a short course which has been structured in such a way that trainees should do the majority of the content through self-study of the modules. This should be supplemented with cluster meetings. The Residential 'face to face' lasts 21-28 days (ie January – 21 days, March – 21 days and August – 28 days) formerly, according to the Principals, Colleges of Education supervised and monitored the organization of the cluster meetings but currently the organization and supervision are done by the District Education Offices. The quality of what is being done is outside the responsibility of the Colleges of Education. The moment the

school term is over, the trainees have to rush to campus to attend the “face to face”. Interviews with UTDBE participants suggest that some leave two weeks in advance of the school term ending.

Also interviews with majority of Tutors are of the view that as a result of the short duration of the UTDBE programme, they (ie Tutors) are obliged to rush through the syllabus. Furthermore the weak background of the UTDBE trainees also slows the progress of teaching. They contend that if the duration is extended, the weak students can be taken care of. Overall tutors felt the DBE course produces better quality teachers.

The Coordinators concur with Principals and Tutors. They also added that the fact that the UTDBE course schedules have exams attached to them, makes the programme tedious and stressful. For example during the August face to face, the trainees learn for three weeks and write exams in the fourth week. Furthermore, certain times of the schedule include Christmas and Easter which are Christian festivals normally spent with families. Unfortunately, during such occasions trainees have to leave their families behind. This is not favourable to them. The fact that some Colleges of Education located in the southern sector have to take on trainees from the Northern Sector poses a problem of distance away from their mother districts. This affects the provision of field support.

There are however challenges when it comes to selection of prospective UTDBE trainees. Concerns were raised by the colleges over the fact that they are not involved in the selection process of prospective trainees; hence, the likelihood of districts to present unqualified candidates for the UTDBE programme. The Colleges were not able to refuse any would-be trainee posted to their colleges whether that trainee has the requisite academic background or not. The moment anybody comes with a pupil teacher’s appointment letter from the District Education Office, the College of Education is obliged to admit that person.

3.12 Relationship and Level of Communication between College of Education and District Education Offices

Interviews across the colleges of Education with the Principals suggest that there is a cordial relationship between the District Education Offices and the Colleges of Education. 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 Colleges of Education to the DEOs.

3.13 Relationships and Levels of Communication between Key Stakeholders Involved in the UTDBE programme.

In order to ensure the smooth implementation of the UTDBE programme, effective communication and collaboration among stakeholders is vital. Key stakeholders engaged in ensuring the effective implementation of the UTDBE programme include the Basic Education Division, National Council on Tertiary Education, Institute of Education (UCC) and Teacher Education Division all under the Ghana Education Service.

Interviews with key stakeholders across these institutions revealed that there is collaboration going on among them. Interviews at the National level suggest that the NCTE oversees activities of the Colleges as Tertiary Institutions. Therefore, feedback on performance of trainees is given to TED.

Findings suggest that there is constant communication between TED and CoEs regarding issues of examination results, behaviour patterns of trainees, provision of TLM's, discipline and issues on feeding grants for trainees. The Professional Board, which includes representatives from CoEs, TED, 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 diploma to the trainees upon completion. The institute also serves as the mentoring body of the Colleges of Education and organizes workshops for administrators at the colleges on how to conduct examinations and assessments.

3.14 Challenges of College of Education in the Implementation of the UTDBE Programme

The administration of data collection instrument in the entire sample CoE revealed similar challenges with few peculiar cases. The challenges include but not limited to poor conditions of living due to overcrowding, nonconformity with entry behaviour, inconvenience of nannies of female trainees, lack of three square meal, limited time, and indiscipline among some trainees etc.

In the entire sample CoE, meals became a serious problem as UTDBE trainees received two meals instead of three. The brunch instead of breakfast is served and their supper is also served. This challenge the principal at the Offinso CoE attributed to the high cost of living and inconclusive negotiation on the new feeding fees per students between the TED and the CoE.

The facilities at the CoE are overburdened by the high numbers of UTDBE trainees admitted for the programme. Interview with the UTDBE coordinators at the Atebubu CoE reveals that the facilities at the college has a carrying capacity of less than 400 students and that represents the number of DBE students, the UTDBE in the college are 930 which represents more than double the number of the DBE students. During administering the college observation instrument, it observed that some of the classrooms have been converted to dormitories for trainees and uncompleted structures are used as lecture theatre. This situation the UTDBE coordinator at the Atebubu CoE also attributed to the fact that some of the female trainees come with babies and nannies and the all depend on the school facilities including meals.

3.15 Strategies and Mechanisms in Place to Ensure that Trainees are able to Transfer what they Learn at the College of Education to the Classroom.

The Principals and UTDBE Coordinators at the college level outlined a number of strategies and mechanism which they felt if adhered to could go a long way to ensure the transfer of skills and knowledge learnt by trainees at the colleges to the classrooms.

The Principals interviewed admit that it is their duty to go and check on the UTDBE trainees to see whether they are able to transfer what they learn at the College to the classroom. Unfortunately, they have the problem of transport. According to the Principals, it is the District Education Office using their Circuit Supervisors and District Teacher Support Teams which are responsible for ensuring that such a transition takes place. In certain cases, tutors make unannounced visits to the classroom to see the UTDBE trainees at work. Normally, the UTDBE Coordinator at the College level relates with the District UTDBE Coordinator to find out about the trainees' performance. The Colleges intend sending questionnaires to the respective Districts to find out trainees performance in the classroom now that trainees are in their 2nd year of their training. They are of the opinion that students must be made directly responsible for their studies. To them, the tutors are leading now. There seems to be no distinction between distance learning materials and direct teaching.

3.16 Mentorship of DBE and UTDBE Trainees at School

The Tutors and Principals interviewed recommended that for the DBEs, the Colleges train Head teachers as lead mentors to mentor trainees at school level. Nothing has been put in place for the UTDBEs yet but the Principals recommend the training of Head teachers, trained teachers and Circuit Supervisors to play their roles well in the mentorship of UTDBE trainees just as it is done for the DBEs during their practical attachments. The Circuit Supervisors are to ensure that the Headteachers and all trained teachers are at post to play this role well.

The Tutors like the Principals interviewed recommended that UTDBE trainees be provided with mentors at school level. In this regard, they suggest that Headteachers and trained teachers be given refresher training to effectively mentor trainees at school level. Apart from this, the Tutors suggest 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.

3.17 Level of Satisfaction of Trainees regarding the UTDBE programme

For the majority of the Principals the level of satisfaction for the DBE trainees is good because of the job prospects and opportunities. The trainees know that they can still improve on their academic standard. This is a stepping stone to other areas. For the majority of Principals the level of satisfaction for the UTDBE trainees is very good because it is a great opportunity for them to upgrade themselves. It provides job security for them. It is a great opportunity for trainees to become professional. It is an improvement in their financial

status. Some of them become presiding members of Assemblies, Assemblymen and they can also become Church leaders.

3.18 Modifications or Changes Recommended for the UTDBE Programme

The Principals, Tutors and the UTDBE Coordinators at the districts levels proposed a number of recommendations to improve the UTDBE programme.

The Principals of the Colleges of Education recommended that the Colleges of Education must be involved in the running of cluster classes to increase the effectiveness of such meetings. Tutors should be given the opportunity to visit the trainees in their schools to monitor their application of concepts learnt at the College of Education during the residential session. It was also recommended that funds for the programme should be released on time and there was the need for an upward review of the tuition and feeding fees in order to place tutors of the UTDBE programme at par with other model programmes and to meet the increasing cost of living in the country. The CoE in trainees region of residents should be chosen for the face-to-face session instead of the selecting colleges front her regions which are far from the trainees' district. This would help reduce the cost trainees spend on traveling to and from the colleges.

Tutors were of the view that there should be a baseline qualification or selection criteria with trainees' results being certified by WAEC before enrolling them on the UTDBE programme. This would enhance the entry behaviour of trainees to meet both the minimum entry requirement of the CoE and the NAB.

Furthermore Teaching/Learning materials should be supplied for the training of the UTDBE trainees on time especially as most of them are teaching in deprived communities which lack such TLMs. Also workshops on new methods of teaching especially ICT should be organised for tutors to increase the tutors' ability to adapt to the use of ICT enhanced teaching methods like the use of a projector for lecture.

The college UTDBE Coordinators also seek to suggest the need for all these divisions (CoE, TED and DEO) to create and share common e-mail addresses for correspondence and regular communication. They recommend the organisation of refresher courses for head teachers to mentor trainees at the schools level. The Teacher Education Division should be in the field to monitor the organisation of the field support rather than sending officers to the Colleges of Education to gather information on these activities in the districts.

Colleges of Education should be made to admit trainees instead of leaving this to the DEOs. This would prevent the incident of admitting trainees without the entry requirement for the programme. Certificates should thoroughly be vetted by WAEC and trainees interviewed before admitted in to the UTDBE programmes. Funding should be paid to the Colleges of Education instead of the DEOs for onward transmission to the Colleges of Education. Feeding fees should be increased so that trainees can be fed three times daily instead of two as it is the case now.

Conclusion

Looking closely at the entry requirements of the two categories of teachers, it is apparent that the DBE trainees have a better academic background than the UTDBE trainees. However,

the ultimate aim of the programme is to train the UTDBE Trainees to be at par with DBE trainees at the end of the programme. Therefore there is the need to improve on the entry requirements of UTDBE trainees to bring them to the level of the Regular Students. This is in line with what the Colleges of Education are recommending. Those without the required entry requirements should be given a certain course to prepare them for entry into the Colleges of Education.

Trainees should also be given guidance and counselling to manage their time well and to set time apart for study. Cluster-level training must be rigorously pursued and Circuit Supervisors should pay more visits to these trainees to support them to deliver. Logistics support should also be given to the Tutors to ensure that they help the trainees.

Principals at College of Education level felt there should be an increased emphasis on teaching methodology and pedagogy particularly child centred. Therefore content knowledge should be combined with the teaching methodology and pedagogy to increase the teaching skills of the UTDBE trainees. This has significant implications of the UTDBE programme in assisting teachers' becoming more child centred in their classroom.

Chapter 4: Background Characteristics, Motivation and Aspirations Of UTDBE Trainees Observed and Interviewed

4.1 Introduction

The Untrained Teacher Diploma in Basic Education (UTDBE) trainees come from all walks of life. While they share the fact that they are teaching in the “most deprived districts” in the country, many characteristics and factors impact on their performance and training in several different respects. This chapter highlights some of these characteristics at the national, regional, district, school and individual levels. Factors such as gender, availability of social services and deprivation/location will be explored in order to show how they impact on the performance of the trainees at the colleges of education, teaching outcomes at their schools and teacher retention within the deprived districts.

This section of the Baseline Survey report will focus on specific indicators considered to play a significant role in the lives of the UTDBE beneficiaries, the pupils, schools, districts and educational outcomes. Some of these indicators include national characteristics like the size of the cohort of trainees at college level, district level, gender and rural-urban areas. Other indicators that will be highlighted in this chapter include trainees’ motivations for becoming a teacher, performance and participation at school, and aspirations of the UTDBE trainees from gender, geography and social services perspectives.

Finally the chapter will also explore the level of satisfaction UTDBE trainees experience with the programme and their likelihood of retention in the community, school and district they currently serve in.

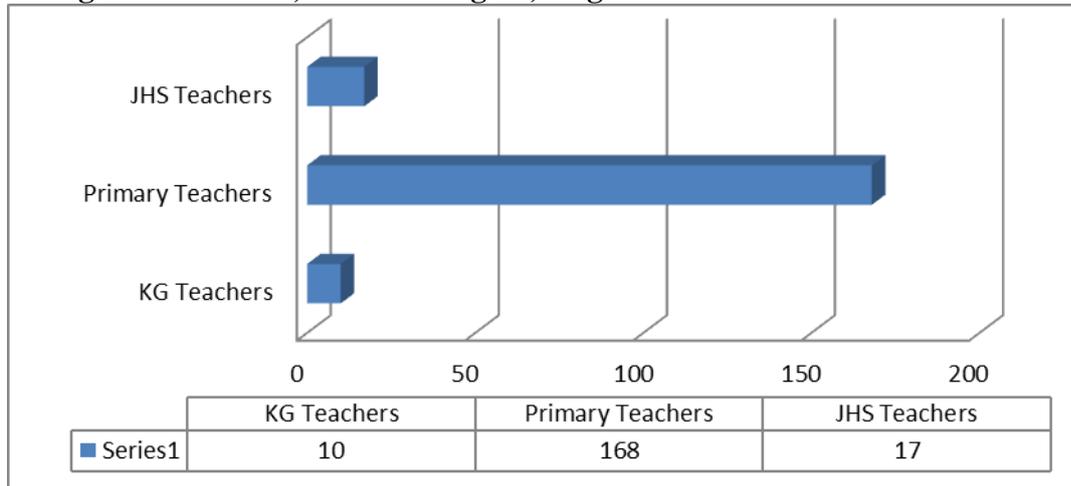
4.2 Proportions of Teachers at Each Grade Level

Teacher placement at the school level plays an important role in education. Head teachers have often reported that they place the most qualified teachers at the upper primary levels due to their experience so that children can benefit. There is a policy that the level within the educational structure a teacher teaches reflects not just hierarchy but also the level of prestige and qualification of the teacher. Thus all teachers are categorised into 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 designed 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. Firstly, persons holding the Senior High School (SHS) certificate with three credits, including English and Mathematics. Secondly, persons with a diploma from accredited polytechnics and other non-teaching tertiary institutions (e.g. HND); and thirdly, University graduates (without certificates in education).

Data with regard to proportions of teachers at each grade level is not available for most of the districts during the inception period. However, Enchi College of Education’s report from the August 2013 face-to-face indicates that the majority of trainees are teaching in the Primary phase with just a few at KG and JHS. Further data is needed across the other districts and colleges to further assess the overall numbers of teachers at each grade level at both the national, regional and district levels.

Figure 4.1: Numbers of UTDBE Trainees by Grade Level as reported by Enchi College of Education, Western Region, August 2013



Source: Teacher Education Division of GES, 2013.

Out of the 407 UTDBE trainees interviewed, the majority of 384 (94%) were class teachers, just 23 (6%) of them were subject teachers. The implication of the latter category on the study was that enumerators in some cases were compelled to observe other subjects rather than the prescribed Mathematics, English and Science as these trainees could not teach any other aforementioned subjects. Implications for quality educational delivery and importantly trained teacher retention would border on their transferability or mobility from their current schools to teach in other schools as class teachers. This implication refers to trainees teaching in primary and KG schools and not in JHS where all teachers are already subject specialists.

The academic background of trainees varies with the overwhelming majority of trainees possessing WASSCE/SSSCE (94.4%), followed by DBS with 2.5%, GCE Ordinary Level certificate 1% and HND (0.2%). This means all the UTDBE trainees indeed fall into the GES category of non-professional teachers and by their minimum teaching academic qualifications of SSSCE or WASSCE can only be placed at the basic school level.

Table 4.1 shows that more than half of the trainees (51.8%) were placed at the KG and lower primary level of the basic school level while little over a third (36.9%) were placed at the upper primary. Just one out of ten UTDBE trainees interviewed (11.3%) was placed at JHS level. It is significant to observe some variations in placement between males and females especially at the lower and upper ends of the basic level. At the Kindergarten level, 94% of the trainees placed at this level are females with 6% being males. Conversely, male trainees placed at the upper primary and JHS levels constitute 83% and 91% respectively with just 17% and 9% each being females. At the lower primary level the proportions of male and female trainees are 38% and 62% respectively. Further, Table 4.1 illustrates that the majority of trainees in the sample were placed in rural schools. The analysis across the nine regions also shows that the majority of the trainees who were interviewed were placed at upper primary.

Table 4.1: UTDBE Trainee Placement at School by Gender and Geography of Those Observed

Placement	Sch %	Fem %	Mal %	Rural %	Urban %	Brong Ahafo %	NR %	Upper East %	Upper West %	WR %
KG	11.5	10.8	0.7	9.8	1.7	0.2	6.1	1.5	1.2	2.2
Lower Primary	40.3	22.4	17.9	35.6	4.7	6.6	8.8	6.9	10.8	3.7
Upper Primary	36.9	6.4	30.5	32.9	3.9	9.8	5.7	9.1	11.1	4.7
JHS	11.3	1.0	10.3	9.6	1.7	5.9	1.2	3.2	0.2	1.0
Total	100	40.6	59.4	87.9	12	22.5	21.8	20.7	23.3	11.6

Source: UTDBE Impact Assessment Baseline, 2014.

Number of GPEG Sponsored Trainees at District Analysis

The number of GPEG sponsored UTDBE trainees in each of the 57 most deprived districts varies widely, further investigation needs to be made as to how numbers of trainees in each district were arrived at. The gender representation also varies with some districts having as few as 14% female trainees. Furthermore trends across districts in terms of gender representation do not consistently reflect those of the region they are part of. Further research needs to be undertaken in order to understand the context of districts where percentage representation by females are either substantially lower than the overall trend or substantially higher. (see Annex 3 for the number of UTDBE trainees across the 57 most deprived districts).

Analysis of the numbers of trainees posted to schools in districts across the 5 sampled regions shows a wide variation. Atebubu District has the highest average number of trainees per school (6.6 per school) while Bongo and Builsa each record the least (1.4 per school). This finding is not surprising given the high (low) number of UTDBE trainees in Atebubu (Bongo and Builsa) Districts. Although Wa West District has a relatively higher number of trainees compared to Jirapa, both districts have an average number of trainees of about 1.8 per school. Lawra and Talensi-Nabdam Districts have the same (1.5) average number of UTDBE trainees per school.

4.3 Characteristics of the UTDBE Trainees based on the Baseline Sample at District and School Level

This section reports on the analysis of data on UTDBE trainees across the school sites and districts; it focuses on indicators such as gender representation, the school situation in terms of whether the school is in an urban or rural zone of the district, and also the average number of trainees found in schools in particular districts.

4.4 Interviews of UTDBE Trainees Observed in the Classrooms at the Schools

Across all the baseline schools, a total of 389 lessons were observed mostly Mathematics, English and Science across 197 basic schools in the 9 sampled districts in 5 regions of Ghana. In these schools, at least one UTDBE trainee and up to 6 UTDBE trainees (Amanten EA Basic Schools in the Atebubu-Amanten District) were observed. This provides an average of 2.1 UTDBE trainees observed per school.

There were 70 schools in all constituting 35.5% of all schools sampled where just 1 UTDBE trainee each was observed; 2 UTDBE trainees each observed in 69 schools (35%); 3 UTDBE trainees each observed in 39 schools (19.8%); 4 UTDBE trainees each observed in 14 schools (7.1%); 5 UTDBE trainees each observed at 4 schools (2%); and 6 UTDBE trainees observed at one school (0.5%). This means between one and two trainees were observed in 7 out of every 10 schools sampled thus there was an even spread of the lessons observations among the sampled schools in the 9 districts. This reflects the national average across the country with respect to the number of UTDBE trainees. On average there were between 1-2 UTDBE trainees across 70% of the schools in the national cohort. Rural urban calculations were based on the UTDBE interviewees own assessment of whether the school has been identified as rural or urban (question 14).

Chapter 6 presents the key findings from the lesson observation of trainees across the five regions sampled.

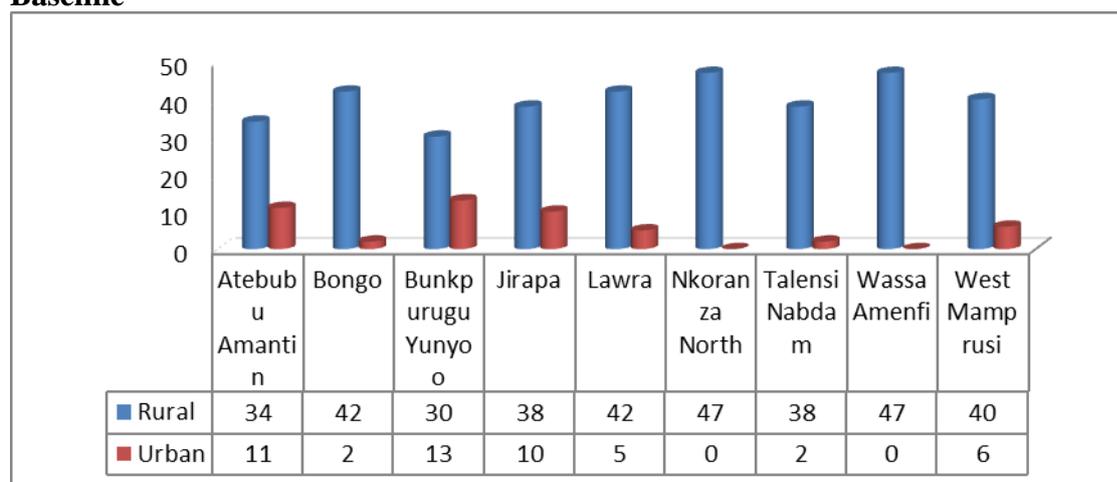
4.5 Rural-Urban Dichotomy of Trainee Posting

Analysis of the background of the UTDBE trainees observed during the Baseline indicates that nearly every 9 out of 10 trainees (358 – 88%) was posted and teaching in a rural school, just 49 trainees (12%) were teaching in the urban schools which mostly turned out to be located in the district capitals. There was an exception in the Brong Ahafo region where there was no urban school in the whole Nkoranza North district. This is perhaps the only district among the 9 sampled districts where the only tarred road is the one connecting the district capital, Busunya to Nkoranza Municipal capital, Nkoranza. It is significant that in analysing the rural-urban spread of the Baseline Study, the focus is on factors that impinge on teacher retention and learning outcomes rather than the mere geography of the place. According to the typology that guided the sampling and selection of both circuits and schools for inclusion in the observation, at least schools selected in each district must fulfil 80% rural and 20% urban spread. The basic objective was to understand the actual conditions consisting of both economic and social factors which impinge on teacher retention and learner outcomes. On the evidence of the schools and communities observed, schools sampled for the survey in the 9 districts satisfied the first criteria of 80% rural and 20% urban communities.

Variations however occurred in different districts. For instance, in Atebubu-Amantin District, 11 (64.7%) out of the 17 schools visited were in urban locations at Atebubu and Amantin, 3 (17.6%) were found in peri-urban locations and just 4 (23.5%) of schools visited were in typical rural communities. On the contrary, not even a single school was selected from Nkoranza North district capital, Busunya. It must be stated that there is actually no settlement in Nkoranza North district that qualified or that can be described as an urban location and for that reason, the typology did not fit into this district. Despite the poor accessibility, the district was adjudged the best in the 2013/14 BECE results league. Both districts also exhibited characteristics of teacher (all categories of teachers including UTDBE trainees) overstaffing. This shows that trying to understand factors accounting for differences in education requires an examination of variety of issues some of which are common across the board while other may be specific to certain localities and schools.

At the same time, a second typology called extremely deprived, deprived and non-deprived must be satisfied by the sampled schools underlined by the provision and availability of social services. The rural and urban divide was based on the interviewers and researchers identification of rural and urban schools based on social services, location and characteristics of rurality. For instance in Atebubu the majority were mainly in the urban town areas while there was no urban school in Nkoranza North District.

Figure 4.2: Rural-urban Spread of Schools Sampled in 9 Districts for the UTDBE Baseline



Source: UTDBE Impact Assessment Baseline, 2014.

Table 4.2 provides detailed information on the number and the corresponding percentages of male and female trainees' distribution in both the nine districts and the five regions where the study was conducted. Overall, four out of every ten UTDBE trainees interviewed (40.5%) was female compared to 59.5% who were male trainees. The highest percentage of female trainees was from Nkoranza North district (17%) and Brong Ahafo region (32.1%). Conversely, Bunkpurugu Yunyoo district (4.2%) and Northern/Upper East regions (15.2%) respectively were the least figures of female trainees interviewed at these levels. Among the male trainees interviewed, Bunkpurugu Yunyoo (14.9%) and Nkoranza North (7.9%) districts recorded the highest and lowest interviews among males. At the regional level, Upper East (26.4%) and Brong Ahafo (16.1%) constituted the highest and lowest male trainee interviews conducted. For both male and female trainees interviewed, Jirapa District (11.8%) and

Talensi-Nabdram (9.8%) were the highest and lowest interviews while the Upper West region recorded the overall highest interviews (23.3%).

Table 4.2: District, Region, and Gender of UTDBE Trainees

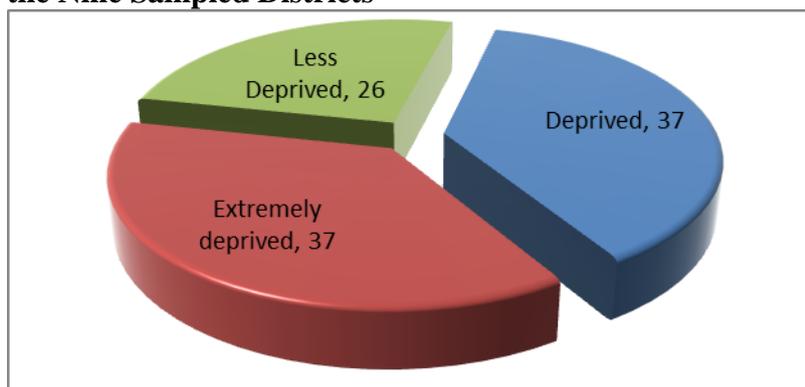
District/Region	Female	Male	Total
Atebubu-Amantin	25 (15.2%)	20 (12.4%)	45 (11.1%)
Nkoranza North	28 (17.0%)	19 (7.9%)	47 (11.5)
Bongo	13 (7.9%)	31 (12.8%)	44 (10.85)
Talensi-Nabdram	12 (7.3%)	28 (11.6%)	40 (9.8%)
West Mamprusi	18 (10.9%)	28 (11.6%)	46 (11.3%)
BunkpuruguYunyoo	7 (4.2%)	36 (14.9%)	43 (10.6%)
Jirapa	19 (11.5%)	29 (12.0%)	48 (11.8%)
Lawra	26 (15.8%)	21 (8.7%)	47 (11.5%)
Wassa Amenfi West	17 (10.3%)	30 (12.4%)	47 (11.5%)
<i>Brong Ahafo</i>	<i>53 (32.1%)</i>	<i>39 (16.1%)</i>	<i>92 (22.6%)</i>
<i>Upper East</i>	<i>25 (15.2%)</i>	<i>64 (26.4%)</i>	<i>89 (21.9%)</i>
<i>Northern</i>	<i>25 (15.2%)</i>	<i>59 (24.4%)</i>	<i>84 (20.6%)</i>
<i>Upper West</i>	<i>45 (27.3%)</i>	<i>50 (20.7%)</i>	<i>95 (23.3%)</i>
<i>Western</i>	<i>17 (10.3%)</i>	<i>30 (12.4%)</i>	<i>47 (11.5%)</i>
Total	165 (40.5%)	242 (59.5%)	407 (100.0%)

Source: UTDBE Impact Assessment Baseline, 2014.

4.6 Perceptions of Deprivation based on Interviews with UTDBE Trainees

The use of non-monetary deprivation indicators greatly complement the understanding of the context and to identify the communities with unacceptably high levels of deprivation and the extent to which this impinges on teacher retention and learning outcomes. 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 services indicators used to measure living standard proved very useful. These indicators are connection to electricity, improved sanitation facility, having access to safe drinking water, type of flooring, type of cooking fuel and overcrowding in the sleeping (at least 3 people per room). Small towns are in a unique position as they are places still rooted in rurality but have adequate contact with the urban networks and their influences. They are therefore potential host centres for development initiatives targeting the rural areas where a greater proportion of the population resides (Owusu, 2005). The baseline sample reveals that an equal portion of communities and schools fell into the categories of deprived and extremely deprived communities.

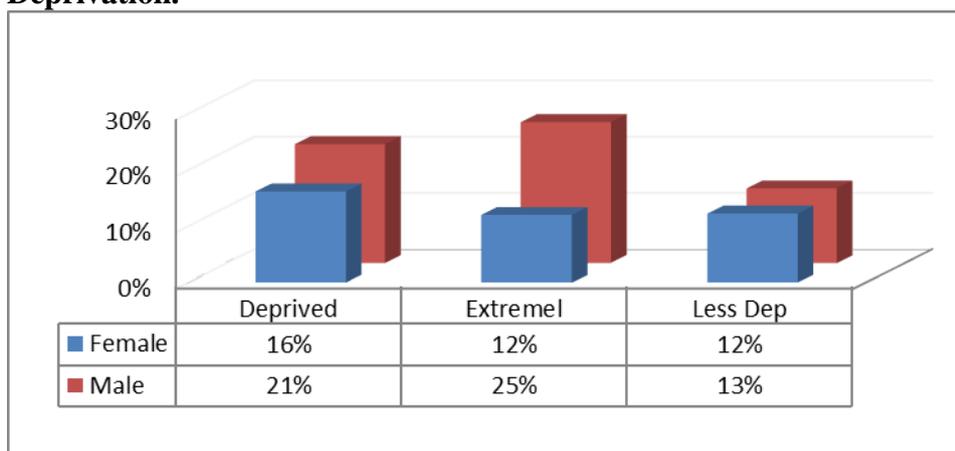
Figure 4.3: Percentage of Communities in each of Three Levels of Deprivation across the Nine Sampled Districts



Source: UTDBE Impact Assessment Baseline, 2014.

Figure 4.4 reveals that there are nearly twice as many males as females across the sample working as UTDBE teachers within the extremely deprived areas. There is only a 5% difference between males and females UTDBE participants found within the deprived rural areas.

Figure 4.4: Percentage of UTDBE Participants Sampled by Gender and Zones of Deprivation.



Source: UTDBE Impact Assessment Baseline, 2014.

In order to assess how the UTDBE trainees themselves perceive the community where they serve regarding the extent of being deprived in comparison with other communities, we asked them to classify by categories of being ‘deprived rural school/ community’, ‘extremely deprived school/ community’, and ‘non-deprived school/ community’. They were made to provide reasons for their choices. These ranged from school-based, social, economic and personal reasons. Some of these reasons are recapped here in the trainees’ own voices:

“This school is deprived because of inadequate classrooms, weak classroom blocks, lack of ICT centre (not ready), weak school feeding kitchen, and inadequate toilet facilities.”

There are no teachers; pupils don't have books, pencils, uniforms. Pupils come without bathing or eating. Some of them will bring torn uniforms. If you give them home work, they

don't do it because they don't have people to help them do it. They are staying with grandparents. Some come to school very late.”

“This is a deprived school because all the pupils are lying on their stomachs which make effective teaching and learning very difficult.” “My school is deprived because the number of trained teachers to untrained is so huge. Can you imagine a school with a population of over six hundred (600) pupils having only five trained teachers?” “This community is deprived due to the bad nature of road, lack of portable drinking water, poor communication network, and no banking facilities and hospital.”

I think the community is deprived because basic things like school infrastructure are lacking and most parents seem not to understand education and do not encourage pupils to attend school regularly. Distance between Education Office and school is far and therefore affects school supervision and supplies negatively. In the rainy season, you cannot easily come here. Even not in the rainy season, the road is very bad. Also, there is no electricity in the community and the school which greatly impedes teaching and learning.”

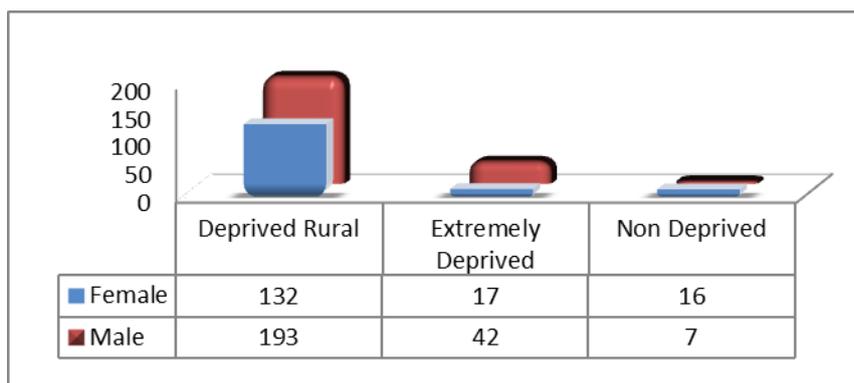
Most of these responses confirmed the baseline characteristics of deprivation and the categorisation of communities.

Analysis of the question ‘how would you describe this school/community in relation to other school/communities in the district’ produced a great deal of information and knowledge about the way the trainees think of the community they serve in. Eight out of every 10 UTDBE trainees (79.9%) interviewed described their teaching post as deprived rural school or community; 14.5% described their schools as being located in an extremely deprived community and 5.7% described their school/community as non-deprived. This description cuts across both urban and rural schools.

Of the trainees in rural schools or communities, 82% described their schools as rural deprived schools, 16% were described as extremely deprived schools with just 2% being described as non-deprived schools or communities. For the urban based UTDBE trainees, 67% described their community as deprived, 4% extremely deprived schools with nearly a quarter (29%) being described as non-deprived communities. It is significant to note here that a deprived community or school does not necessarily connote rural or urban location per se.

From the gender perspective, 80% of both female and male trainees were serving at schools or communities they described as “deprived rural” while 10% of female trainees were serving at non-deprived schools compared with 3% of male trainees. In schools they viewed as “extremely deprived communities”: 17% male trainees were found compared with 10% of female trainees. Overall, there were 59% male trainees to 41% female trainees.

Figure 4.5: Male and Female Trainees Serving in Various Zones of Deprivation Based on their Perceptions of Deprivation



Source: UTDBE Impact Assessment Baseline: Interviews with UTDBE trainees, 2014.

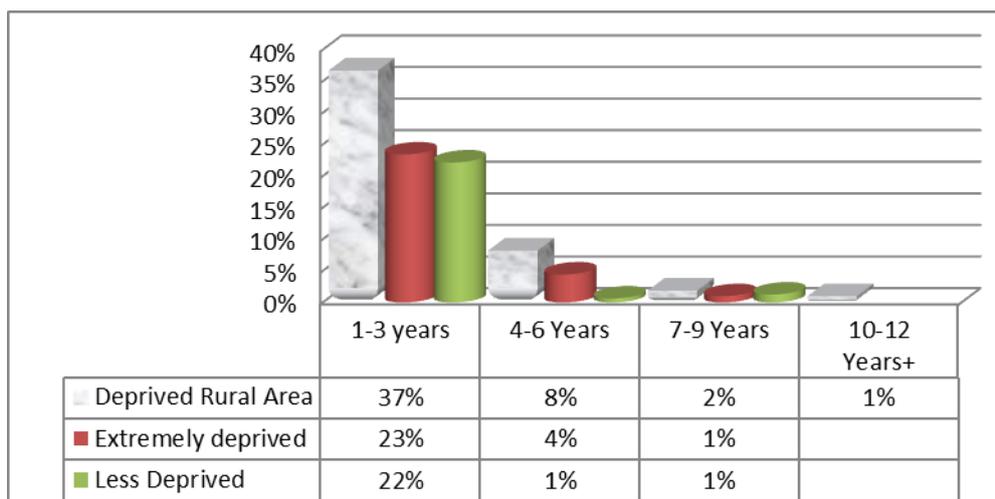
The perceptions of the UTDBE trainees on zones of deprivation contrasted the sampling framework developed for the study and based on the knowledge of district officials to levels of access to public social/economic/health services and distance from the district capital. Nearly every 8 out of 10 trainees (80%) perceived their schools or communities where they are serving as a deprived rural area while just 14% perceived their communities as extremely deprived and a further 6% perceived their schools to be non-deprived. This suggests that the vast majority of UTDBE trainees interviewed had a very negative view about the conditions they were working in since the vast majority viewed their circumstances as “deprived”.

The Brong Ahafo region had nine out of every ten trainees (89%) viewing their school as “deprived”, followed closely by UTDBE trainees in the Western region (87%), Upper East region (86%), and 71% each in Northern and Upper West regions. Conversely, Upper West (21% & 8%) and Northern (20% & 9%) represented the highest percentage of trainees in extremely deprived and less deprived communities respectively. The Brong Ahafo (9% & 2% and Western (9% & 4%) had the least postings in the two zones of deprived areas while the Upper East region had 11% and 4%.

Number of years that UTDBE trainees have worked

Figure 4.6 shows that by far most UTDBE trainees had worked for between 1 and 3 years in the teaching service. The majority of the UTDBE trainees serving in deprived rural areas had over 3 years of teaching experience and could be considered “long serving”. With the current training being provided and the hope of migrating from non-professional to professional status upon completion of the programme, there is assurance that both the areas perceived and described by UTDBE trainees as deprived rural schools and extremely deprived communities will have the benefit of having many trained teachers to serve their wards and schools.

Figure 4.6: Number of Years Trainee has Served in the Zone of Deprived Area



Source: UTDBE Impact Assessment Baseline, 2014.

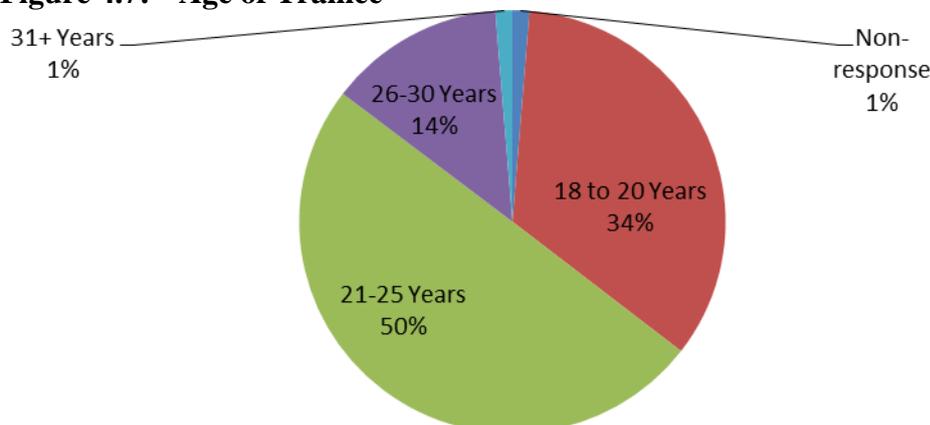


Figure 2.10
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4.7 Background Characteristics of UTDBE Trainees: Age and Length of Service in Community and District

How long a teacher stays in the teaching profession can reveal much 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. Whether this is the result of better pay (teachers could earn more as an external hire than through moving up in teaching via a promotion) or just a change in environment, teacher retention is a serious challenge confronting the educational system since most teacher remain in teaching after College training for only 4 years (MUSTER, Hedges, 2000). For teachers in Ghana, the value-addition 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.

Figure 4.7: Age of Trainee

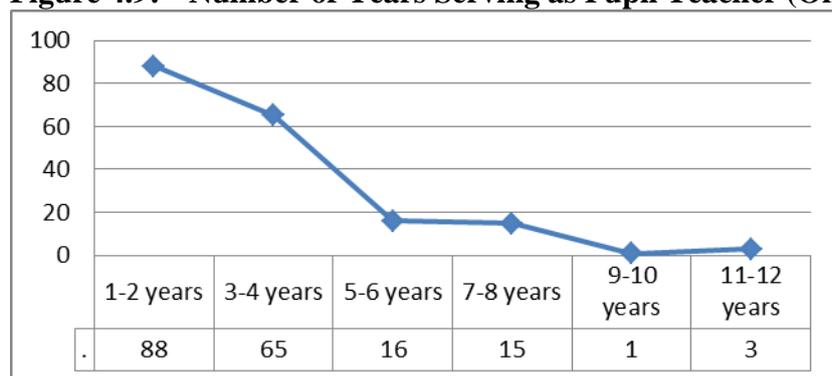


Source: In-depth Interviews with UTDBE Trainees: UTDBE Impact Assessment Baseline, 2014.

Figure 4.7 refers to the ages of the trainees and indicates that 50% are aged between 21 and 25 and the 18-20 age cohort constitute 34%. Those aged 26-30 years constitute 14%. This finding suggests that there is not much difference between the UTDBE and regular DBE trainees as 84% are under the age of 25 years. This means that by 2016 when they are expected to graduate and migrated from non-professional to professional teachers, they could potentially remain active in the teaching for over 30 years if they stay in the teaching profession.

Figure 4.9 provides a snapshot of the length of time the trainees have taught. The years range from under 1 year to over 12 years. The majority of UTDBE trainees have been teaching for between 1 and 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 develop themselves by upgrading their skills academically and are thus absorbed into the service as professional teachers or alternatively branch off into another career and leave teaching altogether. Thus those who have been serving for ten years or more may not necessarily be valuable assets to the service by way of quality.

Figure 4.9: Number of Years Serving as Pupil Teacher (On and Off Payroll)



Source: Interviews with UTDBE trainees; UTDBE Impact Assessment Baseline, 2014.

4.8 Motivational Factors for Becoming a UTDBE Teacher Trainee

The motivational factors helps us to understand reasons responsible for some UTDBE trainees working harder than others and possibly having more likelihood of retention in rural deprived communities despite being equally talented and academically qualified. Motivation consists of two types, intrinsic and extrinsic. Intrinsic motivation is the internal capacities of individual, primarily emotional and cognitive, which gives rise to feelings, aspirations, perceptions, attitudes and thoughts emancipating from within the individual that can be motivating or de-motivating. The crucial factor of motivation lies within the individuals themselves. Extrinsic motivation on the other hand refers to the manipulation of positive and negative reinforces, that is by external forces such as rewards and sanctions. Therefore motivation related to the forces that maintain and alter one's direction, quality and intensity of behaviour. Understanding the motivational factors can also help us to predict the quality of teaching and whether the trainees are likely to stay in these rural deprived areas after completion of their programmes.

This section of the 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, to 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 motivations 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 an area or district for a long period of time while others are not able to stay. It aims to ascertain or summarise the types of motivations UTDBE trainees described for joining the teaching profession.

Results of the data analysis are based on interviews with 407 UTDBE trainees across 197 communities; the data suggests that the key motivational factor frequently identified by trainees as important included “they have the passion for teaching... and a dream of wanting to be a teacher” (31%), secondly, “they want to serve as a native to the community – working with children or youth” (14%), “opportunity to teach subjects that were of interest and so love to help them (the children) to achieve their full potentials” (14%), “only last resort to earn money - lack of funding of education or salary and benefits” (12%), “to help or share or impart knowledge” (9%) and “making a difference in people’s live” (7%). The rest were “inspired or influenced or advised to teach by a role model” (6%), “due to absence or inadequate number of teachers” (4%), “due to respect the community accords teachers” (2%), and “a call to duty” (1%). The following are some examples of reasons given by trainees during interview:

“This was my school, when I completed SHS ... I realised the teachers were not enough, so I spoke with the head teacher and he gave me the opportunity to come and assist. I feel attached to the school because there is no class you will not find my relative there. I actually could sacrifice at the primary as well but it’s not possible” – (Male UTDBE trainee, Kalsagri JHS, Jirapa, Upper West Region).

“I like teaching; I can't stand the sight of blood, so I think teaching is what I can do best” – (Female UTDBE trainee, Nyeni DA Primary, Jirapa).

Teaching as a “passion” clearly stands out as the main motive for trainees in deprived rural areas, followed by being a native of the community and wanting to give back to the community as a volunteer at the initial stage. These findings are similar to the findings from the Study on the Value addition of Volunteer Teachers in Northern Ghana and the reasons pupil teachers gave for becoming a teacher (Associates for Change, 2014).

UTDBE trainees across the Upper West and Western regions said the following:

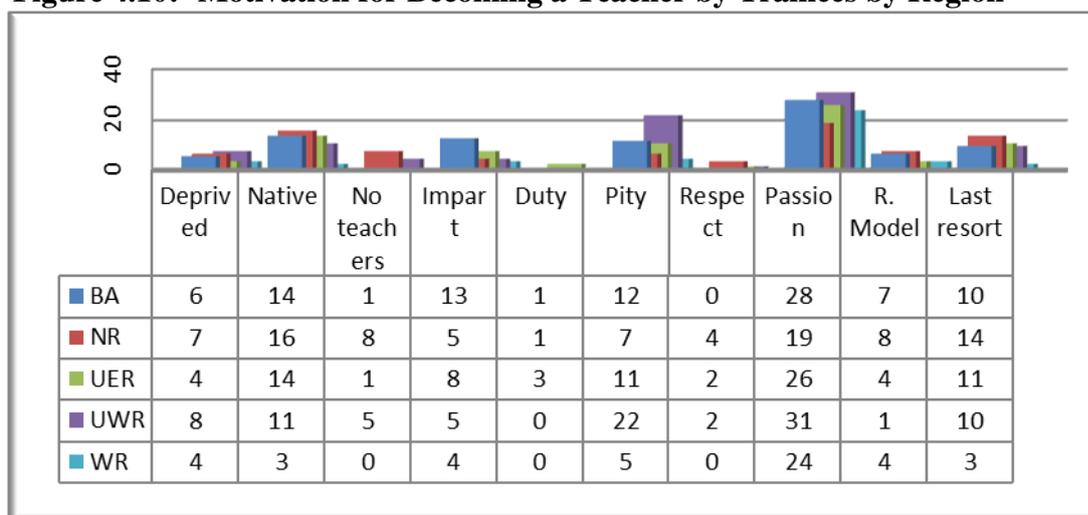
“I realised that my community school lacks teachers so my younger brothers and sisters are not enjoying the fullest benefit of education and that motivated me to become a teacher. I also want to improve myself academically through the teaching” – (Male UTDBE trainee, Nyanyaari DA Primary, Lawra, Upper West region).

“I want to learn more from the pupils and to become fixed in the community” – (female UTDBE trainee, Babile DA Primary, Lawra, Upper West).

“I chose teaching as work/profession so that I can contribute to development of education in my community” – (Female trainee, Adjakaa Manso DA Primary, Wassa Amenfi West, Western region).

“I am interested in the teaching profession and I have already decided to choose teaching as my future career. This is because during vacations I can do extra work in addition to teaching to earn extra income to cater for my family well” – (Male UTDBE Trainee, Mmrakrom DA Primary, Wassa Amenfi West, Western Region).

Figure 4.10: Motivation for Becoming a Teacher by Trainees by Region



Source: UTDBE Impact Assessment Baseline, 2014.

Responses across the five regions studied suggest that the main response was that the UTDBE trainees wanted to become professional teachers because they were native to the community and wanted to assist their community. A large proportion also said that teaching was their “last resort” and they had “pity” on the community with the poor standard of education. Some of the responses from the **Upper East region** are as follows:

“I was inspired by my Primary 5 teacher whom I refer to as a role model” – (Male UTDBE trainee, Tongo DA Primary, Talensi-Nabdam).

“I was idle at home, so decided to come and help my brothers and sisters” – (male UTDBE trainee, Gbeogo Primary B or St. Thomas Primary, Talensi-Nabdam).

“I have the interest in bringing up young ones in the rural areas to be like their counter parts in the urban areas” – (Male UTDBE trainee, Goo DA Primary, Bongo).

“Because I have no other job to do, but I am developing interest in it” – (Female UTDBE trainee, Balungu DA Primary, Bongo).

Northern Region

“I want to help my brothers and sisters to have an education. People have taught me and I owe it a responsibility to teach others” – (Male UTDBE trainee, Gbima RC Primary, West Mamprusi).

“I like this profession. I want the children to learn. I want to enlighten the children about the world. I desire to make teaching my career” – (Female UTDBE trainee, Yagaba RC Primary, West Mamprusi).

“I admire teachers and that is why I also want to become a teacher” – (Female UTDBE trainee, Nanyiar DA Primary, Bunkpurugu Yunyoo).

“I decided to become a teacher because the DBE teachers posted to my district perceive it as a war zone area and therefore are not ready to serve our people and so this situation makes our district to lack trained teachers” – (male UTDBE trainee, EA Primary School, Bunkpurugu Yunyoo).

Brong Ahafo region

“I like teaching, especially Twi, what I have learnt; I want to transfer that knowledge to those young ones” – (male UTDBE trainee, Dwenewoho Azaria Islamic Primary, Nkoranza North).

“I wanted to help the people acquire knowledge. I also wanted to get the opportunity for further education” – (female UTDBE trainee, Dromankese Islamic Basic School, Nkoranza North).

“I would like to help my little brothers in the community who cannot read and write” – (Male UTDBE trainee, Amanten EA Primary, Atebubu-Amanten).

I have passion for the profession even during my school time. Teaching deals with children and it is a job that allows you to close early and do other things” – (Female UTDBE Trainee, Atebubu Owusu Asare DA Primary, Atebubu-Amanten).

Interviews with District Directors of Education across the sample districts asserted that trainees have high ambitions of becoming professional teachers after years of marginalization and relatively “poor treatment” as pupil or volunteer teachers. The GES conditions of service for pupil teachers stipulate that their services can be terminated when a trained teacher is available or at any time that the GES deems fit. It is therefore necessary for a pupil teacher who is eager to take teaching as a career to have access to CoE to upgrade their professional development. The majority of Pupil Teachers who have taught for more than one year have the ambition of choosing teaching as a career and therefore are putting in efforts to become professional teachers. This ensures job security and respect from other trained teachers. Director of Talensi-Nabdam cites a comment of a trainee, “Now that I am in CoE nobody can sack me”. Hard work in schools and CoEs underpin their determination and ambition to be professional teachers.

What also needs to be taken into account is the extent to which commitment and motivation levels may change according to teachers’ status. Directors, Deputy Directors and Circuit Supervisors during interviews claim that trainees show more commitment to their schools and their work compared to the trained teacher who feel secure in their jobs. Bongo Circuit Supervisors are of the view that some of the “trained teachers” exhibit arrogant characteristics. The trainees are regular and punctual to school as most of them are resident in communities where their schools are located. Talensi-Nabdam Director and his Circuit Supervisors estimate that the majority of the UTDBE trainees show more commitment to their work. They are more keen to take part in non-curricula activities than the trained

teachers are. Nkoranza North Circuit Supervisors are of the view that absenteeism is common among UTDBE trainees not on the GES payroll. The District has a number of non-pupil teachers on the programme. It is observed that the Directors are struggling to put them on the GES payroll by using their annual quota for teacher employment.

4.9 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. The majority of studies on the quality of education in Ghana reveal that trained teachers have and 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 ratio of trained teachers. To find out the commitment level of the UTDBE trainees, we sought to know more about living conditions especially the community where they currently reside when the school where they teach at is in session. We also wanted to know whether their job was a factor in the choice of residence or the trainees simply chanced on it by accident. That is, the trainees are natives of the community or the district.

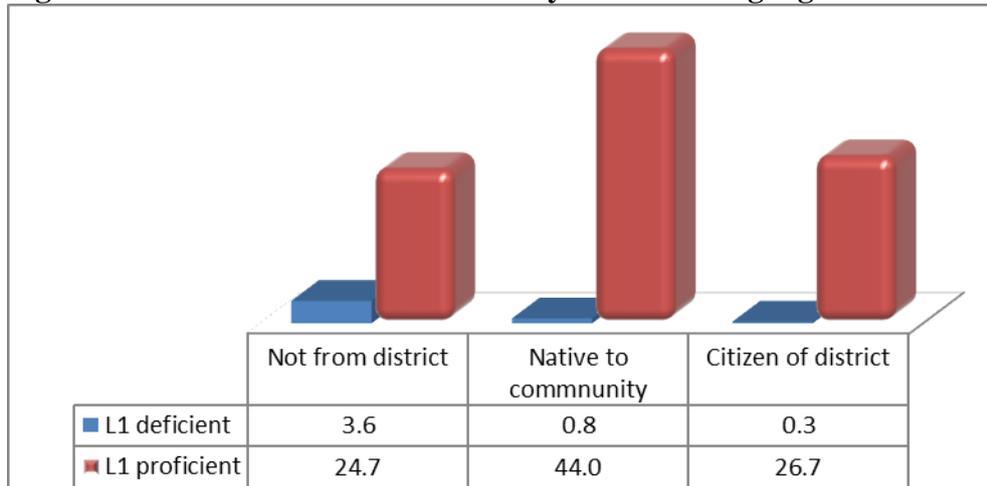
Analysis of the background data on the trainees observed in the classroom shows that nearly half (49.9%) were aged between 21 and 26 years, followed by a third (34.2%) aged 20 years and younger, then a little over a tenth (13.4%) was aged between 27 and 31 years with just 1.3% aged 41 years and above. About 1.3% of the trainees did not give their ages. This means nearly all UTDBE trainees observed (97.5%) were within the age bracket 20 to 31 years. This is the phase in life when vital decisions including career and marriage choices are made. The fact that trainees have opted to pursue this programme clearly shows their desire and determination to become more responsible citizens as professional teachers. This commitment and driving force however could change over years to come as their circumstances change, nonetheless, it is a good sign that retention of trained teachers in these deprived districts could be well on course for at least the next 5 to 10 years.

It is of great interest to analyse the data to find out if the trainees are engaged in a step-wise residential arrangement. That is commuting initially from a small nearby town to attend school in a village but will finally end with them living in the district capital. The real crux of the argument is that unless efforts are made to improve the lot of the small towns and rural areas, there is the likelihood that a large pool of trained teachers in these areas would swell the population of the urban centres.

The way a UTDBE trainee teaches and his or her view of what good teaching is will reflect his or her cultural background and personal history, the context in which he or she is working. The issue is neither being necessarily a native speaker of the local language nor a native-like command of a local language in order to teach it well. It is about understanding and possessing the language-specific competencies that an UTDBE trainee needs in order to teach effectively. These include the ability to comprehend texts accurately, provide good language models, maintain the fluent use of the local language in the classroom, give correct feedback on learner language, provide input at an appropriate level of difficulty and provide language-enrichment experiences for learners.

Figure 4.11 explores the relationship between community affiliation of UTDBE trainees and proficiency in the local language. Although just less than three quarters of trainees observed (71.8%) hailed from those districts, nearly all the remaining trainees (28.3%) were proficient in using the local language of the district or the mother tongue. Overall, just 3.6% of all UTDBE trainees had some difficulty in the use of the local language. Generally, the majority of the trainees (both natives to the district and those coming from outside the district) were fluent and proficient in the local language.

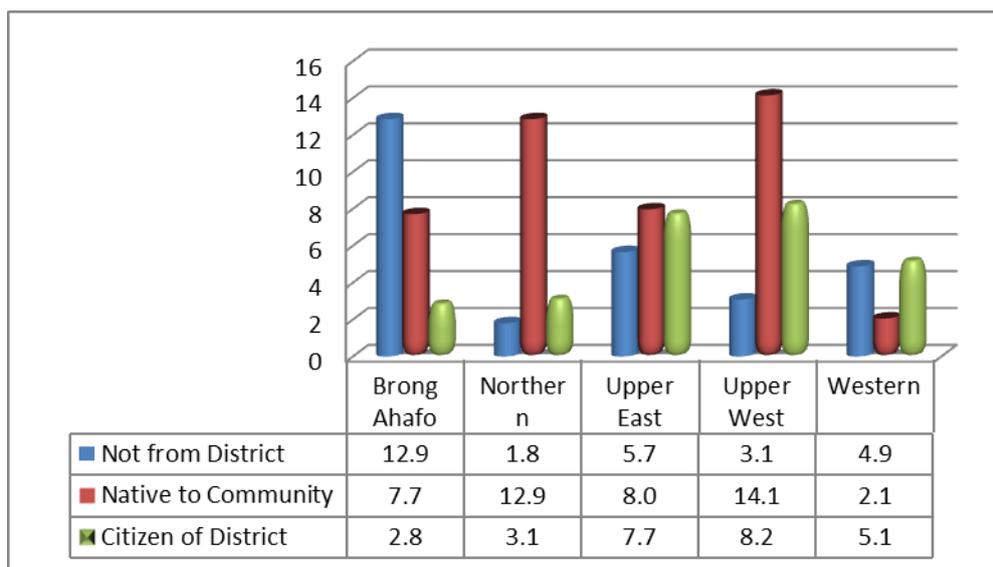
Figure 4.11: Affiliation and Proficiency in Local Language of Trainees



Source: UTDBE Impact Assessment Baseline, 2014.

Figures 4.12 and 4.13 portray the regional and district distributions of UTDBE trainees who are “native” to the community where they serve, citizen to the district in which they teach and not coming from the district. At the regional level, the Brong Ahafo region has more of the trainees coming from outside the districts. On the other hand, the Upper East region and Upper West region have a high percentage of their trainees hailing from within the districts. The Northern region and Upper West region also have the highest percentage of trainees being natives of the communities. Brong Ahafo also has quite high percentage of the trainees coming from the communities where they teach.

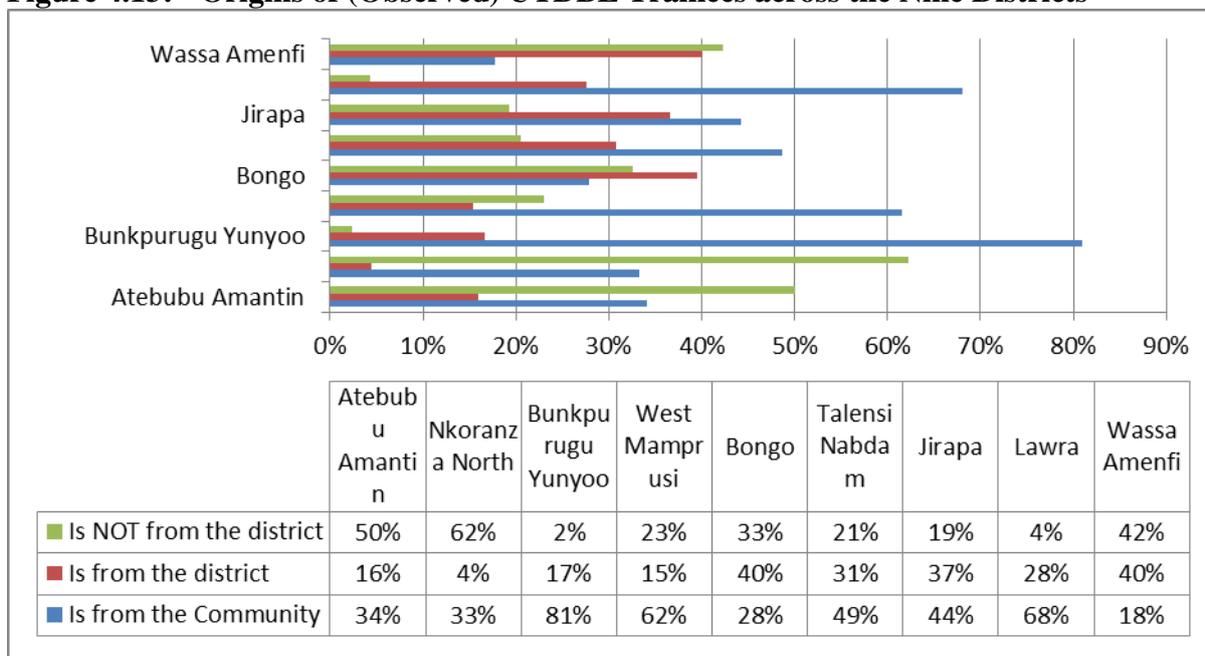
Figure 4.12: Regional Dimensions of Trainees According to Affiliation



Source: UTDBE Impact Assessment Baseline, 2014 UTDBE trainee Interviews.

At the district level, Nkoranza North and Atebubu-Amanten in Brong Ahafo region and Wassa Amenfi West districts registered the highest distribution of trainees who do not hail from the three districts. This is understandable when viewed from the geographical positions of districts. These districts are in the transitional zone between the savannah and forest 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, Jirapa and Lawra while Wassa Amenfi West, Bongo and Jirapa command the greatest number of trainees coming from within the districts.

Figure 4.13: Origins of (Observed) UTDBE Trainees across the Nine Districts



Source: UTDBE Impact Assessment Baseline, 2014.

Figure 4.13 reveals that a higher proportion of the trainees who were observed are actually from the community in very high endemic poverty zones like Bunkpurugu Yunyoo, Lawra and Jirapa in the Northern, Upper East and Upper West regions respectively compared to districts and regions with less deprived communities such as those in the Brong Ahafo and Western regions.

Interviews with Circuit Supervisors across district offices revealed that the trainees relate better to the school communities than trained teachers many of whom are not natives of the communities where they teach. Interviews during field work reveal that most of the UTDBE trainees are natives of the communities and are therefore 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 children to benefit from them. This was seen as one of the reasons that contributed to the high level of commitment exhibited by these UTDBE trainees.

4.10 Level of Satisfaction with the UTDBE Programme among Trainees

Satisfaction in teaching refers to an internal state of the positive and negative feelings and attitudes, which in this instance the UTDBE trainees hold about their work. In other words, it is the extent to which the trainee favours his/her teaching post. Thus positive attitudes toward teaching are equivalent to trainee satisfaction, whereas negative attitudes represent trainee dissatisfaction. Trainee satisfaction is a complex phenomenon and depends on many work-related as well as personal factors. That means personal factors such as age, gender, experience, and characteristics of the job influence a trainee's degree of teaching satisfaction. Considering that trainee teaching satisfaction and life satisfaction are related positively and reciprocally to each other, it means a trainee with positive feelings about his/her family and personal life will be likely to develop a positive attitude toward teaching and vice versa. This section explores the view that UTDBE trainees who are satisfied with teaching to a high extent, are very motivated and do not prefer to leave the teaching profession and to some extent the school or community where they are posted to serve.

Table 4.3: The Extent to which Trainees Enjoy the UTDBE Programme

Rating UTDBE	No. of trainees	Percent (%)
Enjoy UTDBE	396	97.3
Don't enjoy	2	0.5
No Response	9	2.2
Total	407	100

Source: UTDBE Impact Assessment Baseline, 2014.

Table 4.3 clearly shows that the overwhelming majority of the trainees claimed to enjoy the UTDBE programme and this is good because it helps to sustain interest among trainees to remain on and graduate.

According to Table 4.4, a third of the trainees interviewed attributed the source of

this satisfaction with the programme to the assurance that on successful completion of the programme, they will become professional teachers under GES payroll. If this reason together with similar assurances such as sponsorship and career are linked to the motivations assigned for becoming a teacher, then it becomes clearer that finance and job security play a very important role in teacher retention and professional development in relation to the UTDBE programme.

Table 4.4: Reasons Why UTDBE Trainees are Satisfied and Enjoy the UTDBE Programme

Reasons for enjoying UTDBE	No. of trainees	Percent (%)
Were provided a (part) scholarship	76	19
Well-structured programme to improve my skills & competence as a teacher	81	20
Will become a professional teacher (job security, paid and respect from the community)	134	33
Helps to pursue further studies to impart knowledge	72	18
Admission procedure was simple compared to the DBE...	31	8
Does not enjoy UTDBE programme	4	1
No response	9	2
Total	407	100

Source: UTDBE Impact Assessment Baseline, 2014.

Closely connected to interest in teaching is the level of satisfaction derived from the programme. Table 4.5 reveals that for every 7 out of the UTDBE trainee interviewed expressed satisfaction with the pursuance of the programme. Once again, sponsorship and promise of job security as a professional teacher appeared to be the main drivers influencing the level of satisfaction. Financial and non-financial incentives serve as a source of giving a sense of meaning and purpose in the trainees' work.

Table 4.5: Level of Trainee Satisfaction with the UTDBE Programme

Level of Satisfaction	Frequency	Percent (%)
Yes Satisfied with UTDBE	283	70
Dissatisfied with UTDBE	34	8
No response	90	22
Total	407	100

Source: UTDBE Impact Assessment Baseline, 2014.

Table 4.6 illustrates that financial factors such as pay and benefits, were mentioned by UTDBE trainees as a major source of satisfaction with the UTDBE programme, and are a vital part of the employment deal, especially in the poverty endemic zones. Considering that a large proportion of the trainees receive no base compensation (e.g. no paid salary) and are considered "volunteer teachers" in their communities; the Ghana Education Service can leverage the satisfaction level of trainees with non-financial incentives mentioned so as to

effectively boost the affected UTDBE trainees commitment and productivity for quality education.

Table 4.6: Reasons for UTDBE Trainees’ Satisfaction with the UTDBE Programme

Reasons for a high level of satisfaction with UTDBE	Frequency	Percent (%)
Sponsorship	65	16
Future job security as a professional teacher under GES	102	25
Improvement in self-confidence and teaching skills	80	20
Programme well structured and time flexible	40	10
Dissatisfied due to distance & financial burden	18	4
Dissatisfied because of pressure of time and money	9	2
No response	93	23
Total	407	100

Source: UTDBE Impact Assessment Baseline, 2014.

Across the sampled colleges of education, all the principals interviewed on the level of satisfaction of the UTDBE trainees on the programme revealed that the programme is good as it would contribute to teacher retention in deprived communities. The programmes would also give trainees equal opportunity for further studies after completing successful. Most of the Principals see the programme as an opportunity for trainees to become professional teachers as well. For most of the principals interviewed, both the DBE and UTDBE give trainees equal opportunity to professional development and further education.

4.11 Aspirations of the UTDBE Trainees

Teacher turnover in the teaching profession involves leaving the profession altogether or moving from one position or level to another within the profession. In some causes the turnover among teachers include the teachers going on “further studies”, availability of employment in a non-teaching position; marriage or full-time home making (in the case of female teachers); ill-health; home conditions necessitating full-time attention; dissatisfaction with teaching; retirement and failure on the job. Aspirations of UTDBE trainees border on opportunities for promotion that include higher salaries or the opportunity for salary increases, lower living costs, reduced teaching load, better opportunities for professional improvement, greater security, more desirable living conditions, or better instructional facilities. Teacher retention is a function of the trainee’s personal characteristics, educational preparation, commitment to teaching, and professional integration into teaching and external influences (like employment climate).

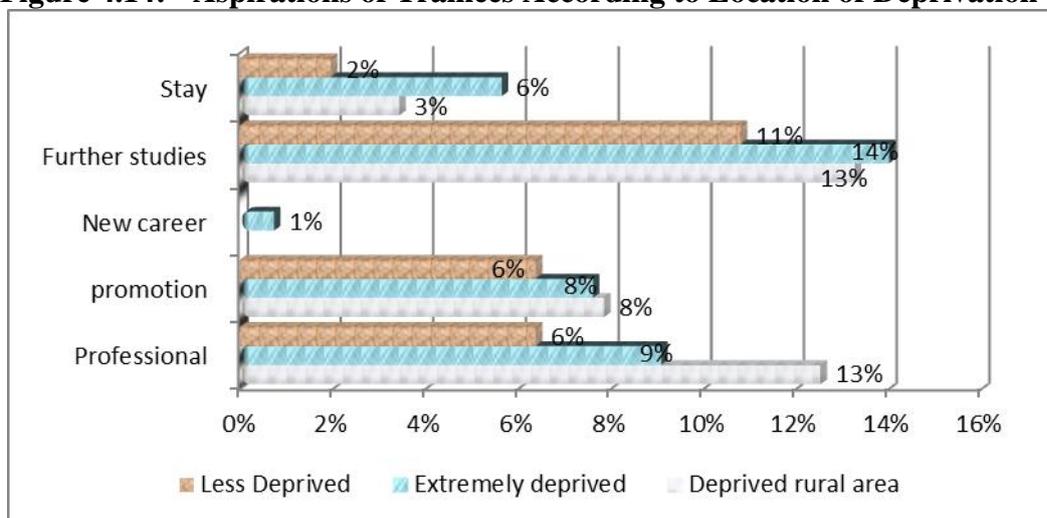
Analysis of UTDBE trainees’ responses to the question on ‘where trainees see themselves in the next 5 years’ revealed five broad aspirations of the trainees. These were:

- to become a professional or trained teacher – job security (28%);
- to attain higher placement or promotion (21%);
- change career or transfer (2%);

- pursue further education – degree (38%); and
- continue to remain in the current district (11%).

The findings reveal that nearly two-thirds (60%) of the aspirations listed by the UTDBE trainees interviewed are aligned to teaching and education. In relation to location of the trainees by way of zones of deprivation, Figure 4.14 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, value the quality of work and provide chances for learning in order to have loyal and engaged trainees. This will help to retain the trainees and narrow the trained teacher gap between the districts in Ghana.

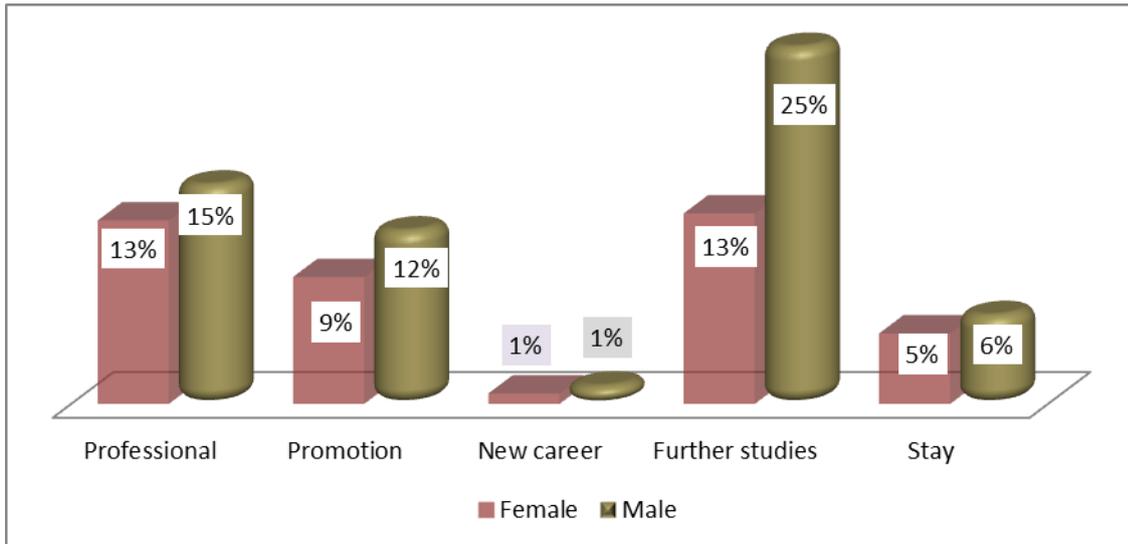
Figure 4.14: Aspirations of Trainees According to Location of Deprivation



Source: UTDBE Impact Assessment Baseline, 2014.

There was significant difference in the desires of the male trainees and female trainees regarding furthering their education. A quarter of all male trainees (25%) interviewed aspired to further their studies towards attainment of a degree or higher in the next 5 years compared with 13% of female trainees. This translates into 42% of males interviewed or 65% of trainees who expressed the desire to pursue further studies compared to 33% of all female trainees interviewed or 35% of trainees seeking to further their education. The finding shows that education authorities must appreciate the uniqueness of gender and its impact on attributes such as values, interests, skills, knowledge, style, and work/life balance needs and accelerate policies or programme aimed at promoting learning, mentoring, training and on-the-job development opportunities.

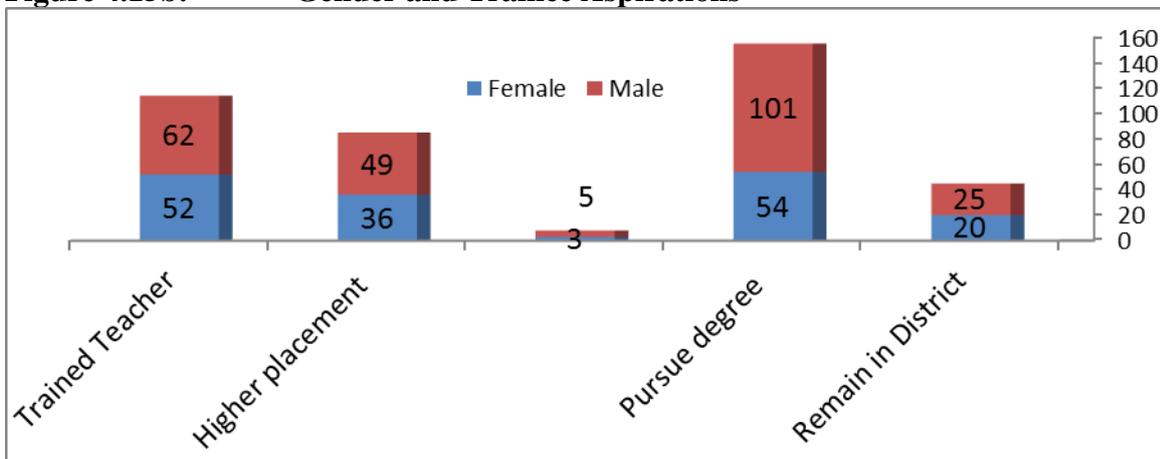
Figure 4.15: Gender and Trainee Aspirations



Source: UTDBE Impact Assessment Baseline, 2014.

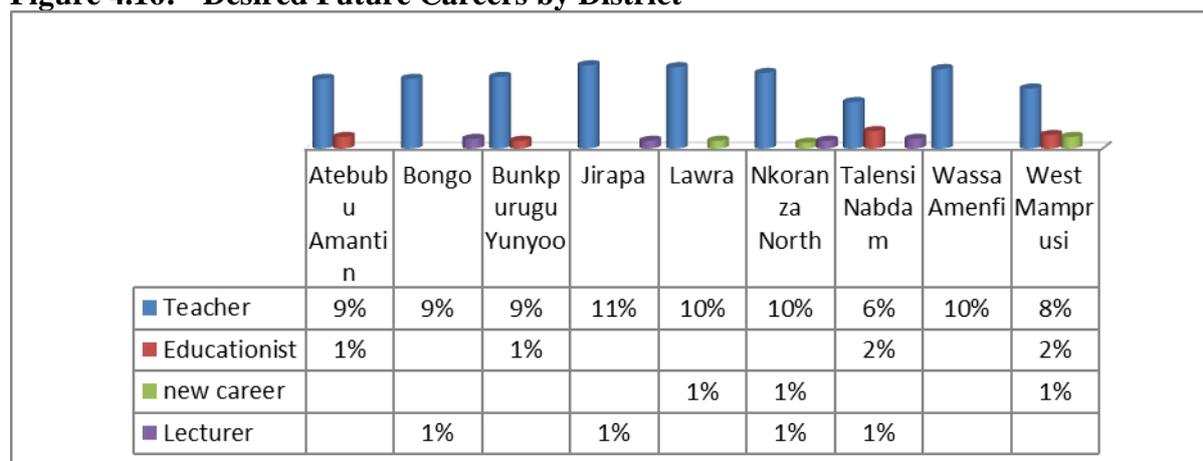
The desired future careers of the trainees did not signal any significant shift among the trainees. The majority of trainees (81%) desired to continue in the teaching profession, followed by 7% as educationist or work at some level of education but outside the classroom as a teacher, then 6% desired to lecture or continue in teaching but move higher up from the basic level to the tertiary level and just 5% of the trainees desired to change careers from education entirely.

Figure 4.15b: Gender and Trainee Aspirations



From the district perspective, Figure 4.16 shows that the majority of the trainees in Jirapa district (10%) Upper West aspire to be a teacher. This means that 90% of trainees interviewed in the district of trainees who desired to continue to teach are from Jirapa compared to Talensi-Nabdam (Upper East) with just 6% translating of the trainees interviewed in the district expressed the desire to keep to teaching. This finding indicates that geography and perhaps other socio-cultural factors underpin trainees' desired careers which also influence the decision regarding retention rates. The implication for the education sector is that assessing and giving frequent feedback to the UTDBE trainees in relation to performance, reputation and networks will enable management to anticipate the future of teacher retention. Such knowledge can help to align the UTDBE trainees' goals and aspirations with the mission and strategies of the Ghana Education Service and the Ministry of Education.

Figure 4.16: Desired Future Careers by District



Source: UTDBE Impact Assessment Baseline, 2014.

Table 4.7: Desired Future by Zones of Deprivation

Desired Career	deprived rural	extremely deprived	non deprived	Total
Teacher	265	46	18	329
Educationist	22	7	1	30
Change career	16	3	2	21
Lecturer	22	3	1	26
Total	325	59	22	406

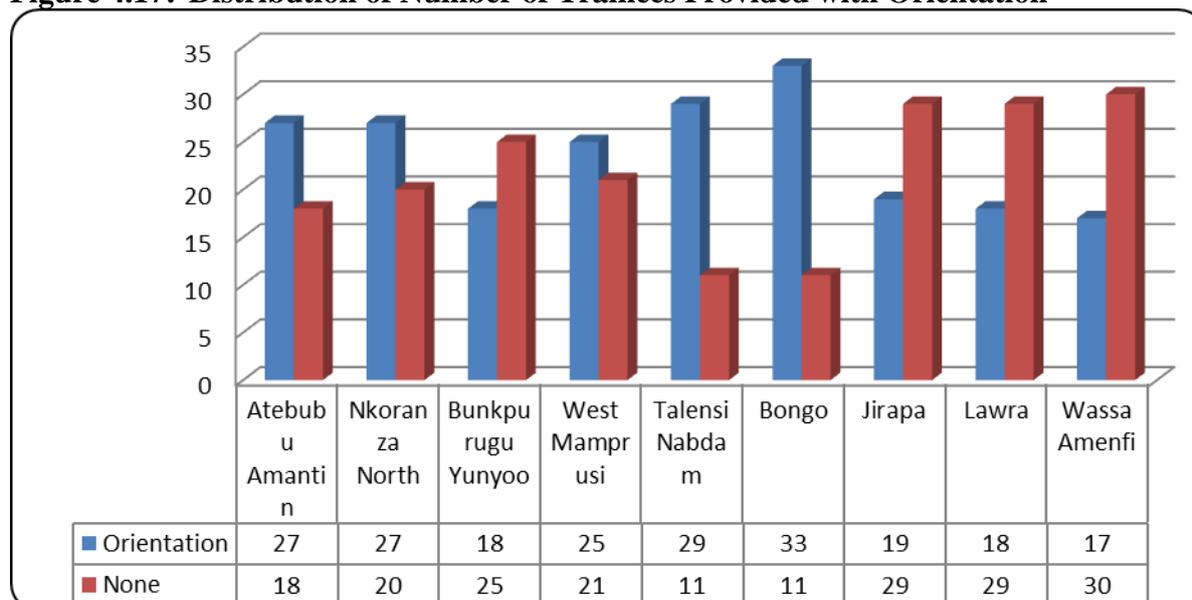
Source: UTDBE Impact Assessment Baseline, 2014.

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

Untrained teachers like UTDBE trainees, typically lack effective means and, to some extent, the self-confidence to handle the management and organisation of their classrooms. 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 significantly 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 could often suffer high levels of stress and symptoms of burnout. Disruptive classroom behaviour could significantly account for reasons why trainees leave the profession.

UTDBE trainees interviewed were asked about the preparation provided prior to the assumption of the post to teach. Analysis of the data shows more than half (52%) of the 407 trainees received orientation to equip them for their work while 48% of trainees had no training. On a regional basis, the Upper East region had the highest percentage (15%) of trainees who said they had received orientation while the Upper West region provided the least percentage of orientation (9%) to the trainees. On the other hand, the Upper West region had the highest percentage of trainees (14%) who claimed they had no orientation when recruited and the Upper East region had the least percentage of trainees (5%) who received no orientation prior to assumption of work in the classroom.

Figure 4.17: Distribution of Number of Trainees Provided with Orientation



Source: UTDBE Impact Assessment Baseline, 2014.

Figure 4.17 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. The highest percentage of trainees (8%) who were trained before starting was in the Bongo District while the least percentage of training (4%) occurred in Wassa Amenfi West (Amenfi Central inclusive) and Lawra respectively. Regarding the distribution of percentages of UTDBE trainees who claimed they were not equipped for their work by their respective districts, three districts constituting 21% of all trainees came top. Wassa Amenfi West, Lawra and Jirapa each registered 7% of trainees respectively who indicated that they were not given orientation. Two districts, Talensi-Nabdam and Bongo registered 3% each of trainees who had no orientation. This shows that the Upper East region offered the highest level of orientation to trainees while the Western and Upper West regions are the worst culprits 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 their ability to effectively manage classroom behaviour and this can contribute to the low educational achievement of pupils they teach.

FDG with tutors at the CoE reveal that head teachers and other professional teachers to mentorship to UTDBE trainees at the school levels. It was however clear that there is no any such arrangement between the CoE and the DEO to that effect. The principals of the colleges of education also asserted to trained teachers and head teachers mentorship to UTDBE trainees just as it is done for the DBEs during their practical attachments. The principals however recommended that head teachers should be empowered on mentorship and should be oblige to seeing the mentorship as their responsibility. FDG with tutors also confirmed the need for UTDBE trainees to have mentors at the school level. The tutors suggest 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.

Conclusion

The findings made in relation to the profiles and background characteristics of the UTDBE trainees across the nine deprived districts and five regions reveal diversity and yet unity of purpose. 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 the country. The most significant challenge confronting trainees appears to be how to combine learning on the job when they are already disadvantaged by virtue of being untrained. For GES management, the conclusion in relation to retention and improving quality is what is next for sustaining the interest of trainees in teaching in deprived areas after the completion of the programme. Beyond the UTDBE programme, there is the need to focus on some other new projects that would help the trainees to further develop new competencies. Building a learning environment that supports a variety of learning methods related to the objectives of the ESP will keep the UTDBE trainees engaged.

Chapter 5: Cost Effectiveness and Efficiency of the Untrained Teachers' Diploma in Basic Education (UTDBE) Programme

5.1 Introduction

The rather scarce resources in developing countries, have triggered much attention in literature as academics and policy-makers try to find the most cost effective and efficient method for teacher training. To the extent that Ghana's financing of education at the CoE level is largely cost sharing between the student and government, it is important to analyse the relative cost burden of these two parties under each teacher training method. This is necessary in juxtaposing and subsequent identification of the method capable of producing a trained teacher at the lowest possible cost. In addition to providing a comprehensive analysis of the costs of each teacher training mode, by comparing the costs of the two modes (UTDBE and DBE), the aim of this chapter is to identify the most cost effective and efficient modality taking into account the level of deprivation and gender disaggregation of trainees.

This chapter is comprised as follows: a review of related literature on the ODL and regular teacher training; section 5.3 outlines methodology for the cost effectiveness analysis; section 5.4 presents analysis and discussions of the findings including the cost effectiveness and efficiency of the UTDBE programme while section 5.5 concludes the study.

5.2 Cost Effectiveness and Cost Efficiency in ODL and Conventional Education

While cost effectiveness is taken to imply the capacity of a system to attain the goals set by a system, cost efficiency measures the extent to which a programme or system produces particular outputs or outcomes at a minimum cost (Rumble, 1986; Vivier, 2008). Thus efficiency implies the reduction in the cost of inputs for a given level of outcome. In her study on the use of distance education for teachers, Creed (2001) argues that one of the crucial questions on the cost effectiveness analysis is how to draw a comparison of the costs of distance education with that of the conventional modality. Also arguing along the same line, Bartley and Golek (2002) is concerned with the determination of the cost effectiveness of both models. Rumble (2001) maintains 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. It has been claimed that distance education is the more cost effective means for allocating educational resources, and that it is especially capable of reaching large numbers (Orivel, 1987; Perraton, 2000). But some studies (Hulsmann, 2000; Rumble 2001; UNESCO, 2002) found the unit cost of a trainee on ODL to be more expensive than the pre-service training. The intuition is that, given the level of technology used in each modality, the ODL is often associated with rising costs owing to its capital intensive nature and thus has some cost implications. For instance, UNESCO (2002) found that ODL is not necessarily the most cost efficient approach. However, its greatest advantage over the traditional mode lies in its ability to reach out to certain target audiences.

The comparison of cost effectiveness between ODL and the conventional method is done using their respective unit costs which largely depends on the expenditure pattern of both methods. This is expected given the differences in their methods of delivery. Thus differences

in the pattern of expenditure often translate into variations in the cost per trainee. Moon et al. (2006) argued that the cost effectiveness and cost efficiency of pre- and in-service training must be based on cost per module or cost per graduate rather than cost per trainee, due to the likely high rate of non-completion. They also suggested that opportunity costs of training on the ODL should be carefully accounted for because trainees on the ODL offer savings over residential training not only by avoiding room, board and travel costs, but also by not disrupting the untrained teacher employment. Kruijer (2010) contends that in sub-Saharan Africa (SSA) it was more cost effective to train teachers without taking them out of the classroom, using a training centres model. Kruijer (2010) called for the need to include the frequently neglected budgets for mentors' salaries, management support and teaching materials. He suggested that an efficient solution could combine effective support from mentors while students were teaching in schools, alternated with short periods of residential face-to-face education not far from where they teach. Thus, in this model, financing of organisation, learning materials and salary payments for support and mentoring constitute the greater part of the unit costs.

Holmes et al. (1991) presents an alternative form of distance learning in which radio was used to transmit teacher training in Nepal. Their study suggests that training via radio appear to be an inexpensive method of training teachers than the face-to-face alternative only if more than 3,000 teachers were enrolled and the course was successfully managed.

While noting the differences in the cost effectiveness of both modes, it is imperative to identify the major sources of such gaps in order to guide policy decision. In this study of Ghana's UTDBE system we have used the following approach: the baseline study compares both the UTDBE modality of ODL with the standard College of Education, it does not cost by module but does take into consideration the indirect costs for the UTDBE trainee. For instance, because a fixed cost does not depend on the number of productive activities, its control may prove difficult as compared to variable cost. Hence there is the need to identify the key variables affecting unit costs.

Factors affecting Unit costs in UTDBE

Nielsen (1991) noted that the cost effectiveness and efficiency of distance education might vary depending on other factors. For instance, Nielsen (1991) argues that a distance education programme designed for training in languages and pedagogy is more cost effective than those engaged in teaching mathematics because mathematics appears to be more difficult to teach through distance education. Since cost effectiveness is measured based on the relative magnitude of the cost per trainee, by observing the above cost relationships and empirical literature, three (3) factors affecting cost per trainee were identified in the case of Ghana.

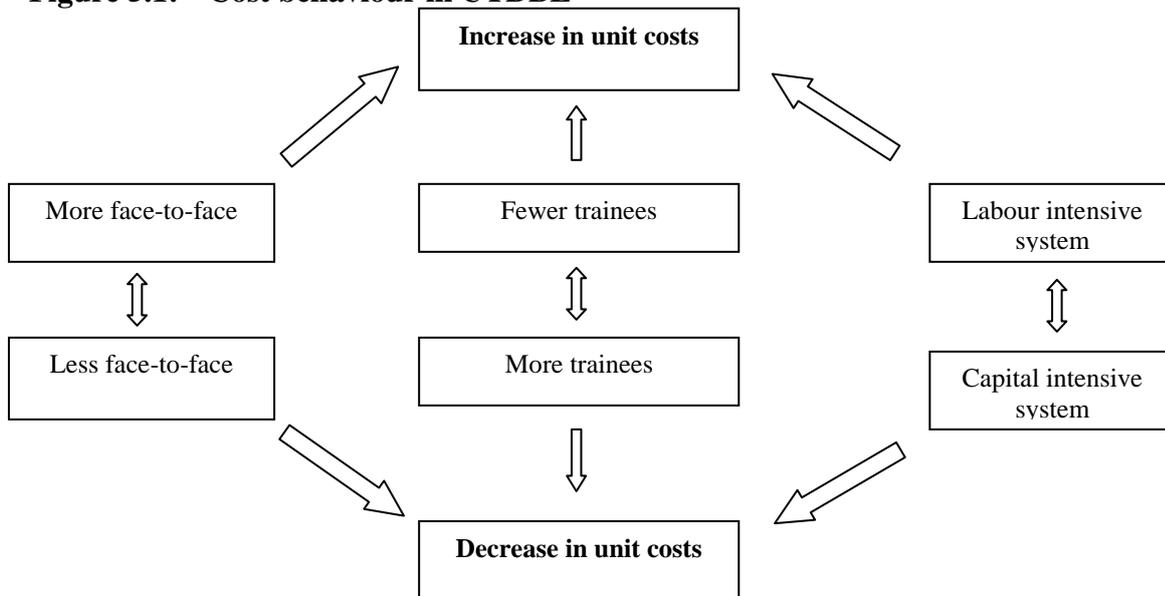
1. The pattern of expenditure on the UTDBE differs from that of the DBE with different levels of relationships between fixed and variable costs. Under the conventional DBE, staff costs are generally the highest single expenditure because the mode of learning or knowledge transmission is largely face-to-face hence involving an intensive amount of labour. However, under the UTDBE learning is largely self-instructional where learning materials and course modules are printed by students using available technology. Thus the cost of training an additional student on the UTDBE may be negligible because, unlike the DBE, the UTDBE is more capital intensive and has lower variable costs as fewer teacher contact hours are devoted. By closely interrogating this factor, it is possible to expect the unit cost of a

trainee to decrease as the number of trainees increase – a situation known as economies of scale.

2. Two factors influence the fixed cost per trainee: the number of trainees and the number of options available for trainees under each module. Given that average fixed cost is the ratio of total fixed cost to the number of student trainees, as the number of students increase, total fixed cost is spread over a larger number of students hence cost of trainees fall. Secondly, if trainees are given no option and thus pursue the same course structure by implication, it means that the cost of developing different course modules is minimized. However, the unit cost of course development rises with the number of options available to trainees. Findings from the baseline study suggest that there are only minor variations in the course modules in Mathematics and Science but more significant differences in the English modules.

3. The number of years over which a course is presented without any changes to the materials will affect the annualised cost of development. The greater the course life, the longer the time frame over which these costs will be spread. The above metrics can be illustrated in Figure 5.1 below.

Figure 5.1: Cost behaviour in UTDBE



Source: Modified from Perraton (1996)

5.3 Types of Data Used in the Chapter

The study utilized both primary and secondary data. The latter was gleaned from the Teacher Education Division (TED) of the Ghana Education Service (GES). Data on the various expenditure of GPEG was taken from TED and the various colleges of education (CoE) where UTDBE trainees attend. However, the main tools employed in gathering primary data were observation, semi-structured interviews and questionnaires and with the UTDBE trainees and several other community /district based stakeholders.

Two sets of structured questionnaires were developed for collecting background, performance and cost efficiency data from respondents – one set for the UTDBE trainees and the other for CoEs. The latter was geared towards soliciting data on expenditure they incur at

the college level including registration fees, student representative council (SRC) and other development dues. The former questionnaire comprised of two parts. Recognising that variations in the demographic and socio-economic traits of trainees affect each trainee in a unique way, the first part of the questionnaire was clearly categorised to reflect such differences including but not limited to gender, age, educational background, school and class trainee teachers, circuit of the school, district, region and the CoE trainee attends. Part 1 also captured data on the composition of trainees' school fees and net monthly salary (if on government payroll) since they teach/work while studying.

Part 2 was however designed to capture all the necessary expenditure and cost information trainees incur in order to attend residential face-to-face training. This included transportation costs, feeding, other learning materials, communication and costs at home and was gender responsive. In furtherance to this, qualitative responses were sought on the trainees' ability to pay the remaining cost of training, their satisfaction levels and views on the UTDBE programme in relation to the conventional modality. An interview with each respondent was conducted and this proved useful in providing rich qualitative data to augment quantitative data sets. The study thus employed mixed approaches such that the weaknesses of one approach were compensated for by the strength of the other.

Diagnostic Checks and Method of Data Analysis

As a robustness check, each completed questionnaire was cleaned and those with missing responses removed from the sample. This was necessary in order to avoid bias results resulting from incomplete data. As a consequence, a total of 387 questionnaires passed the diagnostic checks and were subsequently used in the analysis. The study thus used questionnaires where complete data was available and where appropriate, tables and charts were used by employing Microsoft Excel 2007. As much as possible, data was analysed in relation to gender differences and levels of deprivation including less deprived, deprived and extremely deprived areas.

To analyse as well as present costing models on the cost effectiveness and efficiency of the UTDBE and DBE modules, full information about the cost components of all activities is a crucial step towards cost-effectiveness analysis. In this quest, the study relies on the following stages:

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 comparing costs with those of alternatives, we assess all costs incurred per face-to-face. In other words, we establish not only the annual cost incurred for each mode but a consistent or constant currency since expenditure for both the UTDBE and DBE may be in more than one currency. To arrive at a constant currency, the study controls for the prevailing exchange rate at the time of expending.

The study uses the total costs of training students in computing the cost per trainee. The derivation of the average costs permits the comparison of the two modalities. A work out of the efficiency ratio gives an indication of which system is more efficient. The efficiency ratio

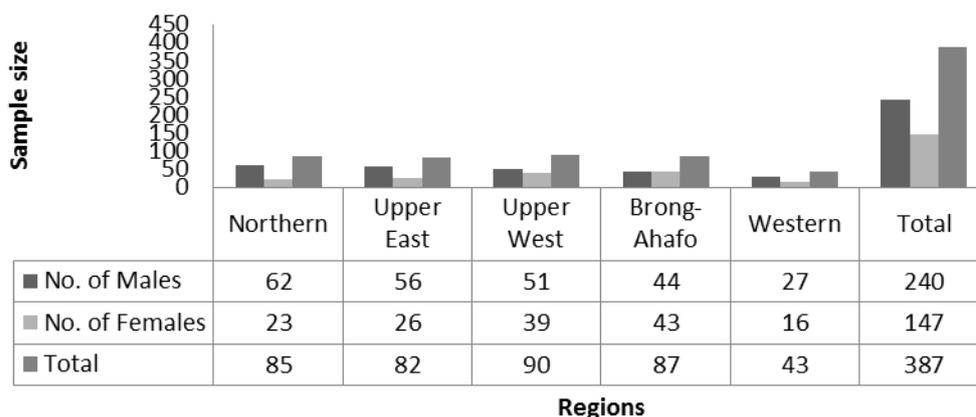
– defined as the ratio of unit cost of trainee on UTDBE to that of the DBE has the value that it can compare the relative efficiency of any distance teaching method with the conventional systems within the same jurisdiction hence allowing comparisons to be drawn across jurisdictions. For instance, a value greater than one (1) indicates that UTDBE is less efficient than the DBE, and a value less than one (1) indicate that UTDBE is more efficient than the DBE. However, a value of one (1) implies that UTDBE is as efficient as DBE.

This section provides a comprehensive analysis of the findings from the baseline study. It focuses on both the gender dimension of trainees as well as the deprivation levels.

5.4 Gender Analysis of UTDBE Based on Cost Effectiveness Data

This section discusses the sample size for the cost efficiency data selected in relation to gender. The study selected UTDBE participants based on an average male to female ratio per region. In the total population of UTDBE trainees approximately 39% were females while 61% were males.

Figure 5.2: Sample Size According to Gender and Region



Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

Figure 5.2 above presents the total sample size disaggregated into gender and region. It shows that, of the 387 respondents, 90 and 43 were respectively drawn from the Upper West and Western regions and this represented the highest and lowest number of trainees sampled across all the 5 regions. The rather low sample size in Western region is expected since only 1 district was selected as opposed to 2 from the other regions. A sample size of 87, 85 and 82 were selected from Brong-Ahafo, Northern and Upper East regions respectively. Further results reveal that, of the 387 trainees sampled, 147 representing 38% were females with Brong-Ahafo and Western regions drawing the highest (29%) and lowest (11%) respectively. However, Northern region had the highest number of male trainees and this represented about 26% of the total male sample. While 56 male trainees were drawn from Upper East, 51 and 44 were respectively selected from Upper West and Brong-Ahafo regions region.

Given the total sample size, one can see a 1: 1.6 female–male UTDBE trainee ratio. Interestingly, among the 5 regions, only Brong-Ahafo region shows the lowest and well-balanced 1: 1 ratio with Northern region having the highest (1: 2.7).

Table 5.1: Sample size: Gender Disaggregated and Level of Deprivation

Levels of Deprivation:	Less deprived			Deprived			Extremely deprived		
Gender:	Males	Females	Total	Males	Females	Total	Males	Females	Total
Districts:									
West Mamprusi	9	5	14	8	4	12	10	6	16
Bunkpurugu-Yunyoo	7	2	9	21	5	26	7	1	8
Regional: Northern	16	7	23	29	9	38	17	7	24
Nkoranza-North	5	3	8	13	12	25	8	4	12
Atebubu-Amantin	5	10	15	8	11	19	5	3	8
Regional: Brong-Ahafo	10	13	23	21	23	44	13	7	20
Jirapa	3	5	8	8	7	15	18	3	21
Lawra	1	6	7	5	15	20	16	3	19
Regional: Upper West	4	11	15	13	22	35	34	6	40
Talensi-Nabdam	6	3	9	7	1	8	19	11	30
Bongo	4	2	6	9	5	14	11	4	15
Regional: Upper East	10	5	15	16	6	22	30	15	45
Wassa-Amenfi	10	10	20	11	6	17	6	0	6
Regional: Western	10	10	20	11	6	17	6	0	6

Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

The table above shows the composition of the sample based on gender and level of deprivation where trainees were located. The results show that, of the 387 trainees, 156 representing 40% are from the deprived areas while 135 (representing 35%) come from extremely deprived areas (hard to reach, limited social/economic service including trained teachers and beyond 2 hours from the district capital). The remaining trainees were, however, sampled from less deprived zones (often within town or district capitals or within a 5 km radius of the district capital with access to basic social/economic services).

Since the study was to investigate the retention rates of UTDBE trainers and graduates in comparison to the DBE participants the study covered more trainees from deprived rural areas where “trained DBE teachers” are often less likely to stay. Of these, females comprise 33% of trainees from the deprived areas while the rest are males. Further results reveal that, out of the 135 trainees from extremely deprived areas, about 26% are females while the share of females in less deprived areas is 48%.

An assessment of the sample in terms of gender and level of deprivation show that, in comparison to the males, many females are found in less deprived areas often within the district capital where social amenities and other essential infrastructure are available and easily accessible (e.g health posts, educational facilities and security). Relatively few females are posted to deprived and extremely deprived areas often with limited public services and hard to reach areas compared to the less deprived areas. This however varies from region to region. In particular, while the majority of the females from Western region are in less deprived circuits, the majority of UTDBE trainees in the Northern, Brong-Ahafo and Upper West regions are in the deprived areas. Only Upper East region has much of its female trainees in extremely deprived areas but this could be due to the differences in relation to

distance and accessibility from the regional and district capitals to these relatively “hard to reach areas” compared to other regions. In comparison to the males, about 74, 67 and 52% of the males are posted to the rather extremely deprived, deprived and less deprived areas respectively.

Regionally, while Northern and Brong-Ahafo regions have the same number of trainees from less deprived areas, they differ remarkably in terms of gender composition. For instance, in the Northern region, only 7 out of the 23 (representing 30%) trainees are females while Brong-Ahafo has 13 representing 57%. Upper West and Upper East regions also reveal similar patterns to Northern and Brong-Ahafo. Only Western region has a well-balanced 50:50 gender ratio of trainees from less deprived areas. This ratio is however different when compared to deprived and extremely deprived areas. A somewhat balanced ratio is noticed for deprived trainees in Brong-Ahafo region which also has the highest number of trainees from this level of deprivation followed by Northern region. Interestingly, of the 38 trainees in deprived Northern region, 29 (76%) are males. In the Upper West region, out of the 35 trainees from deprived areas, females comprise of 63% while the remaining form the male population. This dynamic is however different when compared to the Western region where male trainees form the highest (65%) number of trainees in deprived areas.

Anecdotal evidence shows that females form a relatively lower percentage of trainees from extremely deprived areas. Specifically, of the 45 and 40 trainees from Upper East and Upper West regions respectively, male composition persistently dominates that of the female. In particular, males comprised of 67% and 85% of those from the extremely deprived areas in the Upper East and Upper West respectively. This pattern is the same in other regions except for Western which has no female trainee in its extremely deprived areas. It is imperative to note that, while the gender composition in the levels of deprivation varies from region to region, so do the districts. In particular, for all the districts in Northern and Upper East regions including Nkoranza-North in the Brong-Ahafo region, the number of females in each level of deprivation is consistently lower than their male counterparts. The reverse is true in Atebubu-Amantin, Jirapa and Lawra but only for the less deprived and deprived areas.

5.5 GPEG Sponsorship Package and Composition of Trainee Expenditure

UTDBE training is a type of ODL and the composition of its expenditure somewhat varies from that of the conventional modality. Unlike the conventional teacher training modality, UTDBE trainees incur the cost of transportation to the CoE and cost at home for staying away to attend the face-to-face residential training.. Transport costs are more of fixed cost to individual trainees depending on their home location to the CoE unless a woman needs to pay for a second person to travel for purposes of childcare. These costs are often incurred during each training session but the actual amount often differs from trainee to trainee and from one locality or region to the other. There are also additional costs incurred on communication in order to stay in touch with one’s family at home, feeding, facility user fee, modules, internal assessment, examination fees and external monitoring often done by TED. Unlike the conventional, the academic year on the UTDBE programme comprises of three face-to-face training sessions which often occurs in December, April and August each year. While trainees spend 21 days in the December and April sessions, they spend 28 days in the August training session due to the long vacation. Thus, annual cost of each component is found by adding each like-expenditure over the entire face-to-face residential training sessions. To the extent that training on UTDBE is cost sharing, trainees bear certain costs on expenditure in

the training process while the rest are borne by GPEG. Table 5.2 below outlines the average annual cost GPEG incurs to support one UTDBE student trained.

Table 5.2: Expenditure Borne by GPEG

Expenditure: GPEG	Annual cost per student
GH¢	
Facility user fee	84
External monitoring (TED)	35
Examination fee	200
Feeding cost	315
Staff costs (including field support)	98
Adm. & support services	84
Internal assessment/stationery	9
Modules	104
Total annual cost per student (GPEG)	929

Source: TED and consultant's calculations

Table 5.2 shows that it cost GPEG an average amount of GH¢929 (US\$306) per annum to train a UTDBE student.²⁶ Feeding cost as the highest expenditure component forms about 34% of the average cost of financing. This is followed by examination fee and cost on modules which jointly account for about 33% of the annual average cost of training. It is worthy of note that the annual cost of training borne by GPEG stays constant for all trainees irrespective of gender and level of deprivation. This therefore implies that differences in the total cost of training result from differences in costs borne by trainees and this, among others, varies in relation to the district and level of deprivation where the trainee is located. 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 following table provides the **regional and district planned budget and releases** for 2013 and 2014 from the GES financial controller.

Table 5.2b : Region/District Budget and Releases 2013 And 2014

Region/District	Year	Budget (GHC)	Release (GHC)	% Variance
Ashanti	2013	499494	373361.46	(25%)
	2014	372168	170575.95	(54%)
Brong Ahafo	2013	2306900	1217654.6	(47%)
	2014	1375749	790887.21	(43%)

²⁶ Exchange rate is US\$1= GH¢3.03.

Eastern	2013	27081	112326.5	315%
	2014	21900	8541.76	(61)
Northern	2013	2150432	1319802.69	(39%)
	2014	1425964	974657.44	(32%)
Upper East	2013	643926	429170.04	(33%)
	2014	449673	325384.54	(28%)
Upper West	2013	968898	635455.77	(34%)
	2014	660588	483252	(27%)
Volta	2013	578731	377741.6	(35%)
	2014	374194	279829.01	(25%)
Western	2013	664989	430905.49	(35%)
	2014	434704	315869.96	(27%)
National Total	2013	15015913	4896418.15	(67%)
	2014	9795176	6382125.78	(35%)

The UTDBE programme from its inception in 2013 to 2014 seems to have suffered from shortform in its bugetary releases. In 2013 the release for the programme implementation fell short of 67% for required budget for districts. Only Eastern Region registers a release which is higher than the planned budget with a positive percentage variance of 315%. However in 2014, 65% of the planned budget was released for the implementation of the program. Shortfalls as recorded in annual releases have significant impact on the efficient and effective implementation of the program. Data gathered from the districts suggest that a considerable number of cluster meetings expected to supplement the residential face to face sessions were dysfunctional owing to the non-payment of allowances of tutors/district education officers engaged to teach. Consequently the cluster meetings have registered a high level of trainee absenteeism across the sampled districts. Data gathered from the field also indicate that all the districts experienced shortfall in their budgetary releases. It is reported that districts received their releases late and these are often inadequate.

5.6 National Costs for the UTDBE Programme

The average national cost of training on the UTDBE is computed from a gender perspective. Student Representative Council (SRC) dues are payments trainees' make to remain an active member of the student body. These amounts go to the coffers of the student council and are used to run the day-to-day affairs of the council. Other costs include development levy paid by students for the maintenance of the CoE. It is imperative to note that these costs are compulsory and paid at the various CoE. An important indirect cost UTDBE trainees incur is cost at home. Because the majority of the UTDBE trainees are usually older and have dependents, they remit some monies to their dependents to live on while they stay away for the training. Furthermore, female trainees with children who would otherwise not send their wards to the CoE will have to leave behind their children with a nanny at home hence incurring some amount of home cost. To the extent that trainees incur different amount on expenditure and hence different burden of cost, an establishment of the national cost incidence along gender lines deserves far more nuanced and in-depth analysis.

Table 5.3: National Cost of UTDBE Modality of training – Gender disaggregated

	Annual cost per student (GH¢)
Expenditure: GPEG bears	
Facility user fee	84
External Monitoring (TED)	35
Examination Fee	200
Feeding cost	315
Staff cost	98
Adm. & support services/staff	84
Internal assessment/stationery	9
Modules	104
Total annual cost per student (GPEG)	929

Expenditure: Student bears²⁷	Female		Male	
	GH¢	GH¢	GH¢	GH¢
Transport	80		90	
Additional food cost	73		79	
Other learning materials	52		44	
Communication	20		18	
SRC dues and other cost	32		32	
Assessment	100		100	
Cost at home ²⁸	95		91	
Total cost per student per semester	452		454	
Total annual cost per student (Student)²⁹		1,356		1,362
Total annual cost (GPEG + Student)		2,285		2,291
TOTAL COST OVER 4 YEARS		9,140		9,164
Total cost over the 4 years (Student bears)		5,424		5,448
Total cost over the 4 years (GPEG bears)		3,716		3,716

Source: Instrument 14B, TED and consultant's calculations.

From Table 5.3 above, it can be seen that, with the exception of assessment cost and SRC dues, there are differences in the relative spending of female and male trainees. For instance, female and male trainees respectively spend GH¢95 (US\$31) and GH¢91 (US\$30) on cost at home for every residential training session. Similarly, while male trainees spend relatively higher on transport and other food cost, females on the average spend slightly higher on other learning materials than their male counterparts. However, on the average male and female trainees annually incur GH¢1,362 (US\$450) and GH¢1,356 (US\$448) thus giving a total

²⁷ Throughout this chapter, these are the average costs incurred by a typical UTDBE trainee.

²⁸ It is imperative to understand that cost at home is only incurred by those with dependents or caretakers hence these denote the average cost a trainee with dependent incurs.

²⁹ These costs are found by multiplying average cost per face-to-face by three (3).

average cost of GH¢2,291 (US\$756) and GH¢2,285 (US\$754). In furtherance to this, while the cost to GPEG stays the same for both gender, it respectively cost a male and female trainee GH¢5,448 (US\$1,798) and GH¢5,424 (US\$1,790) (both representing about 59% of total cost) revealing that a male trainee spends GH¢24 (US\$8) higher than a female student over the lifetime of the training process. It must be stated that all the costs analysis and incidence are based on the assumption that each trainee successfully completes and graduates from the course.

5.7 Average Unit Cost of a UTDBE trainee

Table 5.4 below reveals that, on the average, UTDBE trainees incur GH¢75 (US\$25) and GH¢86 (US\$28) on food and transportation respectively. It further shows that assessment cost forms about 22% of trainees' budget. On the aggregate, it costs GH¢2,285 (US\$754) annually and GH¢9,140 (US\$3,017) to train over the 4-year period. However, the overall cost to GPEG is GH¢3,716 (US\$1,226) while the trainee bears GH¢5,424 (US\$1,791). Students thus bear about 59% of training costs. As a background note, 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\$9.8 million (GH¢29.7 million) to achieve the set target.

Table 5.4: National Average Cost of Producing a UTDBE Trained Teacher

	Cost per student GH¢	
Expenditure: GPEG bears		
Facility user fee	84	
External Monitoring (TED)	35	
Examination Fee	200	
Feeding cost	315	
Staff costs	98	
Adm. & support services/staff	84	
Internal assessment/stationery	9	
Modules	104	
Total annual cost per student (GPEG)		929
Expenditure: Student		
Transport	86	
Additional food cost	75	
Other learning materials	47	
Communication	19	
SRC dues and other cost	32	
Assessment	100	
Cost at home	93	
Total cost per student per semester	452	
Total annum cost per student (Student)		1,356
Total annual cost (GPEG + Student)		2,285
TOTAL COST OVER 4 YEARS		9,140
Total cost over 4 years (Student bears)		5,424

Total cost over 4 years (GPEG bears)	3,716
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Source: Instrument 14B, TED and consultant's calculations.

5.8 Cost Efficiency

To ascertain whether the UTDBE programme is cost efficient, we need to compare the average amount it costs GPEG or government to train just one student on the distance modality to that on the conventional modality. During this baseline study, while we have established the unit cost of producing a teacher on the distance modality, the unit cost of training on the DBE is yet to be established during the endline. That notwithstanding, we rely on Murphy's (2012) recent study in making such a comparison. Murphy (2012) established GH¢15,350 (US\$9,137) as the overall cost to government for training a student on the regular teachers' college.³⁰ By adjusting for changes in exchange rates and annualising the cost over the lifetime of the course, the cost to government is GH¢27,685 (US\$9,137) compared to GH¢3,716 (US\$1,226) for UTDBE thus giving an efficiency ratio of 1:7 (that is 0.14). The implication is that to get a student trained on the conventional mode, it costs the government 7 times the cost of training a teacher trainee using the UTDBE modality. Thus training using the distance education mode is very cost efficient. It is imperative to recall that the average cost of training on the regular mode, and hence the efficiency analysis, is based only on Murphy's (2012) study.

5.9 Regional Level Comparison Across the Five Sampled Regions

Table 5.5 below presents an analysis of the regional average cost of producing a teacher on the UTDBE programme. The main aim of this section is to identify the regions where it is expensive or inexpensive to train a student. To the extent that GPEG sponsorship to trainees remain the same irrespective of the region the trainee is coming from, it shows that over the entire UTDBE programme, the costs to a trainee from Upper East and Upper West regions are GH¢5,832 (US\$1,925) and GH¢5,016 (US\$1,655) respectively. Intuitively, given the rather "fixed" sponsorship package, trainees from Northern and Western regions respectively bear GH¢6,024 (US\$1,988) and GH¢6,060 (US\$2,000) of the training cost. This implies that it is relatively expensive training a student in Western and Northern. However, our results also show that it is inexpensive to a UTDBE trainee in Brong-Ahafo as they bear the lowest cost of training (GH¢4,428). This finding is not surprising given the proximity of trainees to their CoEs as much of the variation in costs is attributed to transport and cost at home.

Table 5.5: Cost Incidence and Regional Comparison of Average Cost Training

Expenditure: GPEG	Annual cost per student
Facility user fee	84
External Monitoring (TED)	35

³⁰ His study was done in 2012 when the exchange rate was US\$1= GH¢1.68. However, the current (August, 2014) Bank of Ghana exchange rate is US\$1=GH¢3.03. This means, GH¢15,350 in 2012 now values at GH¢27,685.

Examination Fee	200
Feeding cost	315
Staff cost	98
Adm. & support services/staff	84
Internal assessment/stationery	9
Modules	104
Total annual cost per student (GPEG)	929
Total cost over the 4 years (GPEG)	3,716

Expenditure: Student	Northern	Upper East	Upper West	Brong-Ahafo	Western
Transport	134	129	80	34	35
Additional food cost	97	74	64	60	88
Other learning materials	40	48	45	42	71
Communication	16	19	17	20	26
SRC dues and other cost	31	11	30	33	54
Assessment	100	100	100	100	100
Cost at home	84	105	82	80	131
Cost per student per semester	502	486	418	369	505
Total annual cost per student (Student)	1,506	1,458	1,254	1,107	1,515
Total annual cost (GPEG + Student)	2,435	2,387	2,183	2,036	2,444
Total cost over the 4 years (Student)	6,024	5,832	5,016	4,428	6,060
Total cost over the 4 years	9,740	9,548	8,732	8,144	9,776

Source: Instrument 14B, TED and consultant's calculations.

Recall that, as opposed to two (2) districts in other regions, this analysis used only one (1) district in Western region. It is therefore imperative to note that the average cost students' in Western region may change if the number of districts are increased to two (2). This means that our established burden of cost to trainees may be misleading and conclusion on Western region should be done with some degree of caution.

5.10 District Level Cost Analysis across the Five Regions

This section presents two comprehensive districts which contrasting experiences in relation to the demand and supply of UTDBE and trained teachers--- Northern region where the demand for trained teachers remains very high despite UTDBE and Brong Ahafo where the UTDBE has been able to capture a larger number of untrained teachers; three (3) levels of deprivation across all five regions which were sampled. The other three (3) regional and district level analysis are presented in the Annex 5: the Upper East, Upper West and Western region.

Northern Region

Table 5.6: Trainee's Expenditure in Total Cost of Training: Bunkpurugu-Yunyoo and West Mamprusi (Northern Region)

Expenditure: Student	Bunkpurugu-Yunyoo District	West Mamprusi District
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	Less deprived	Deprived	Extremely deprived	Less deprived	Deprived	Extremely deprived
Transport	170	163	183	88	91	115
Additional food cost	111	93	146	95	87	79
Other learning materials	49	36	42	42	41	39
Communication	20	17	64	13	16	13
SRC dues and other cost	33	33	33	20	20	20
Assessment	100	100	100	100	100	100
Cost at home	206	64	59	47	62	92
Cost per student per semester	689	506	627	405	417	458
Total annum cost per student (Student)	2,067	1,518	1,881	1,215	1,251	1,374

Source: Source: Instrument 14B and consultant's calculation

Table 5.6 shows the cost incidence in Bunkpurugu-Yunyoo and West Mamprusi districts both in the Northern region. Inconsistent with our earlier findings, it can be seen that 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. Bunkpurugu-Yunyoo has a distinction of being the only district where the proportion of total UTDBE costs met by trainees themselves exceeds two-thirds. The results also reveal differences in costs relating to what constitutes the greater proportion of the budget of an average trainee in Bunkpurugu-Yunyoo. For instance, while trainees in deprived and extremely deprived areas spend more on transport, trainees in less deprived areas incur higher costs at home. This finding is particularly expected given their relative cost of living and respective distance to the CoEs. There are however less variations in the cost incurred on other learning materials; and cost on communication borne by trainees from extremely deprived areas is somewhat an outlier compared to those in less deprived and deprived areas. Conversely, on the average, a trainee from less deprived circuits spend GH¢689 per face-to-face which is relatively higher than those from deprived and extremely deprived areas where a typical trainee spends GH¢506 and GH¢627 respectively. The relative weights of transport and cost at home are undoubtedly the sources of differences in the cost of financing and consequently the burden of cost. This evidence is pretty much different from West Mamprusi. Specifically, in this district, on the average trainees in extremely deprived areas expend more than their counterparts in deprived and less deprived areas with the latter incurring the least average cost per face-to-face. Two (2) reasons may account for the difference in these two (2) districts regarding which category of trainee pays more than the other.

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. To the extent that trainees from each district attend different CoEs in different regions is indicative of variations in transport cost. The average transport cost for these two (2) districts confirm this. The second reason lies in the absolute amount of what forms a greater proportion of a trainee's budget. While cost incurred at home by trainees from less deprived circuit in Bunkpurugu-Yunyoo is their highest expenditure and

comprise of 30% of the students' budget, assessment cost which forms about 25% of the budget for a less deprived circuit trainee in West Mamprusi is the highest expenditure component. This clearly translates into differences in average costs of trainees per face-to-face session. The next section presents the cost incidence over the entire training period.

Table 5.7: District Level Cost Incidence – Bunkpurugu-Yunyoo and West Mamprusi (Northern Region)

Level of deprivation	GPEG bears	Student bears	Total cost per annum	Total cost over 4 years
Bunkpurugu-Yunyoo District				
Less deprived	929	2,067	2,996	11,984
Deprived	929	1,518	2,447	9,788
Extremely deprived	929	1,881	2,810	11,240
West Mamprusi District				
Less deprived	929	1,215	2,144	8,576
Deprived	929	1,251	2,180	8,720
Extremely deprived	929	1,374	2,303	9,212

Source: Instrument 14B, TED and consultant's calculations.

The relative burden of cost between GPEG and trainees in Northern region is presented in Table 5.7 above. It can be seen that the annual cost per trainee from less deprived, deprived and extremely deprived areas in Bunkpurugu-Yunyoo is GH¢2,996, GH¢2,447 and GH¢2,810 respectively while those in West Mamprusi cost GH¢2,144, GH¢2,180 and GH¢2,303. Of each of these, GPEG bears less than half (GH¢929) of the cost leaving the majority of the total cost to trainees. There are also differences in the cost burden among trainees across all the levels of deprivation within each district. In particular, when costs are calculated over the 4-year period, trainees from less deprived, deprived and extremely deprived areas in Bunkpurugu-Yunyoo bear about GH¢8,268, GH¢6,072 and GH¢7,524 respectively. However, trainees from less deprived, deprived and extremely deprived areas in West Mamprusi bear GH¢4,860, GH¢5,004 and GH¢5,496 respectively. This clearly reveals that trainees from Bunkpurugu-Yunyoo and those less deprived areas in particular bear the brunt of the cost of training. That notwithstanding, irrespective of the level of deprivation, each trainee in the Northern region spends at least GH¢1,144 (US\$378) higher than GPEG when total expenditure is annualized over the entire training period.

Brong Ahafo Region

Table 5.8: Trainee's Expenditure in Total Cost of Training – Atebubu-Amantin and Nkoranza-North (Brong Ahafo Region)

Expenditure: Student	Atebubu-Amantin District	Nkoranza-North District
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	Less deprived	Deprived	Extremely deprived	Less deprived	Deprived	Extremely deprived
Transport	28	16	35	41	33	32
Additional food cost	68	32	49	53	67	93
Other learning materials	60	31	44	61	34	41
Communication	20	19	24	16	20	18
SRC dues and other cost	20	20	20	30	30	30
Assessment	100	100	100	100	100	100
Cost at home	86	117	28	86	62	81
Cost per student per semester	382	335	300	387	346	365
Total annual cost per student (Student)	1,146	1,005	900	1,161	1,038	1,095

Source: Instrument 14B and consultant's calculation

The Table above details the expenditure composition of trainees in Atebubu-Amantin and Nkoranza-North districts in the Brong-Ahafo region. With the exception of trainees in deprived areas in Atebubu-Amantin, costs of assessment comprise the major expenditure of trainees and ranges between 26% and 33% in total average costs per training. Unlike the districts in other regions, trainees from Brong-Ahafo and particularly those from Atebubu-Amantin spend relatively lower on transportation to CoE. This is unsurprising because while trainees from Atebubu-Amantin attend Atebubu CoE (which is just within the same district), trainees from Nkoranza-North attend Offinso CoE in Ashanti region which is about 135km away from Nkoranza.

Food cost is also lower for trainees in both districts and weighs at most 25% for those in Nkoranza-North and 18% for those in Atebubu-Amantin. Trainees in the extremely deprived areas in both districts spend the lowest amount on cost at home while those from the deprived areas in Atebubu-Amantin spend the highest and directly amount to about 35% of their budget. Similar to other districts, trainees spend almost the same on communication and SRC. On the cost of other learning materials, trainees from less deprived areas in both districts also commit around the same amount likewise trainees from deprived and extremely deprived areas across the two (2) districts. That notwithstanding, trainees in less deprived areas from Atebubu-Amantin and Nkoranza-North respectively incur an average of GH¢382 (US\$126) and GH¢387 (US\$128) for each training session thus maintaining the general national pattern. This as seen as relatively higher than the expenditure of their colleagues in deprived and extremely deprived areas with the latter in Atebubu-Amantin spending the lowest.

Table 5.9: 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	929	1,146	2,075	8,300
Deprived	929	1,005	1,934	7,736
Extremely deprived	929	900	1,829	7,316

Nkoranza-North District

Less deprived	929	1,161	2,090	8,360
Deprived	929	1,038	1,967	7,868
Extremely deprived	929	1,095	2,024	8,096

Source: Instrument 14B, TED and consultant's calculations.

From Table 5.9, at least in Atebubu-Amantin, the annual total cost of training a student from less deprived and deprived areas is GH¢2,075 and GH¢1,934 respectively. Given that GPEG bears GH¢929 per annum, it means that these trainees respectively pay GH¢868 and GH¢304 higher than what GPEG pays throughout the entire training process. The relative cost burden is however different for trainees in extremely deprived areas. Given their average annual cost of GH¢900 (US\$297) for residential training, it means that GPEG bears GH¢29 (US\$10) in excess of what trainees actually pay. By aggregating all costs of training over the 4 years, the results reveal that GPEG bears about 51% while trainees bear 49%. The relatively lower cost of living in these extremely deprived areas which translate into lower trainees' cost at home is undoubtedly the reason why trainees pay less than GPEG in total cost of training.

In Nkoranza-North district, the annual total cost of training stands at GH¢2,090, GH¢1,967 and GH¢2,024 respectively for trainees in less deprived, deprived and extremely deprived areas. Out of each of these, GPEG pays GH¢929 and the remaining is borne by trainees. This implies that over the entire training course, students from less and extremely deprived areas bear GH¢4,644 and GH¢4,380 respectively while those in deprived areas bear GH¢4,152. A further analysis shows that, when costs over the lifetime of the programme are computed, trainees from Nkoranza-North pay at least GH¢436 (US\$144) higher than what GPEG pays. In addition to analysing the relative cost incidence, the above discussions compares only the intra- and inter-district level cost burden.

5.11 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?

Table 5.10: Gender Differences in Cost Incidence

Region	Levels of deprivation	Females					Total
		Transport	Food	Other learning materials	Communication	Cost at home	
		GH¢	GH¢	GH¢	GH¢	GH¢	GH¢
Northern	Less deprived	105	68	45	11	56	285
	Deprived	160	102	53	22	67	404
	Extremely deprived	115	100	39	11	47	312
		Males					
	Less deprived	127	116	45	18	185	491
	Deprived	134	88	33	15	60	330
	Extremely deprived	148	102	42	16	87	395
		Females					Total

		Transport	Food	Other learning materials	Communication	Cost at home	
Upper East	Less deprived	189	97	47	20	150	503
	Deprived	118	92	34	12	125	381
	Extremely deprived	110	63	56	21	93	343
	Males						
	Less deprived	126	112	56	21	110	425
	Deprived	118	65	44	21	89	337
	Extremely deprived	137	64	47	17	107	372
Females							
Upper West		Transport	Food	Other learning materials	Communication	Cost at home	Total
	Less deprived	68	76	56	22	130	352
	Deprived	102	71	54	14	97	338
	Extremely deprived	98	76	53	29	107	363
	Males						
	Less deprived	78	40	34	9	73	234
	Deprived	71	53	40	12	49	225
Extremely deprived	70	59	39	18	66	252	
Females							
Brong-Ahafo		Transport	Food	Other learning materials	Communication	Cost at home	Total
	Less deprived	37	66	63	20	150	336
	Deprived	27	43	30	18	70	188
	Extremely deprived	36	91	46	17	43	233
	Males						
	Less deprived	24	61	36	21	103	245
	Deprived	26	56	56	17	71	226
Extremely deprived	32	67	40	22	69	230	
Females							
Western		Transport	Food	Other learning materials	Communication	Cost at home	Total
	Less deprived	27	80	100	31	136	374
	Deprived	35	86	70	44	147	382
	Extremely deprived	0	0	0	0	0	0
	Males						
	Less deprived	40	90	70	18	150	368
	Deprived	33	111	55	21	121	341
Extremely deprived	0	0	0	0	0	0	

Source: Instrument 14B, TED and consultant's calculations.

We have earlier shown that the amount of cost GPEG bears is constant irrespective of gender and deprivation levels. We have also seen that costs payable to the college – assessment, SRC and other costs form the same percentage of trainees' budget. These taken together imply that college level costs are fixed for all trainees and thus costs on other expenditure are the sources of variations in trainees' budget allocations and financing. These sources of cost differences are therefore examined along gender and deprivation levels. Based on this and from Table 5.10, it can be seen that in the Northern region, female trainees in less deprived areas spend relatively lower average cost per face-to-face compared to the male counterparts.

Major sources of the difference in average cost included cost at home, transport and food where male trainees spend GH¢185, GH¢127 and GH¢116 respectively as opposed to GH¢56, GH¢105 and GH¢68 of female spending. This implies that at least over the 4 years, costs borne by male trainees in less deprived areas is GH¢2,472 (US\$816) over and above what female trainees bear. However, an interview with a UTDBE female trainee reveals that female trainees are likely to spend more than males owing to the fact that some go to the CoE with their children and nannies hence spending higher on transport and feeding cost. By comparing the quantitative and qualitative finding could mean male trainees might have overestimated their costs. This finding is not different in extremely deprived areas. For instance, for each training session, male trainees spend GH¢83 (US\$27) higher than female trainees. These findings are, however, different in deprived areas where female trainees in particular spend GH¢74 higher than male trainees. This means that female trainees annually incur GH¢222 (US\$73) higher.

Consistent with this evidence, female trainees in less deprived and deprived areas in Upper East region spend more than their male counterparts. There are, however, differences in the sources of cost variations. For instance, while transport and cost at home are the major causes of cost difference in the less deprived areas; cost at home and on food denote the source of variations in the cost burden in deprived areas. Conversely, for each training, male trainees expend an average of GH¢29 (US\$10) higher than the females.

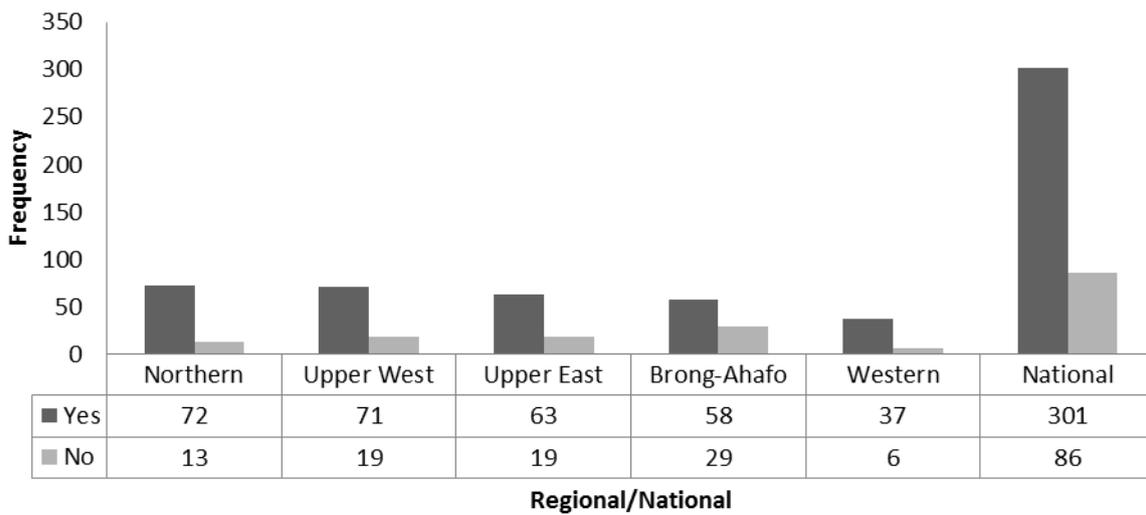
In the Upper West region, our results reveal that, irrespective of the level of deprivation, female trainees spend more than their male counterparts during every face-to-face. Specifically, female trainees in deprived, less and extremely deprived areas respectively incur an average higher costs of GH¢113, GH¢118 and GH¢111 above male trainees. It is clear from Table 5.10 that female trainees in this region spend more than males in all expenditures and expenditure on cost at home in particular is almost twice that of the males. This is true irrespective of the level of deprivation. This evidence is not different in less and extremely deprived areas in Brong-Ahafo where females incur higher costs than male. Annually, female trainees in less and extremely deprived areas respectively spend GH¢273 and GH¢9 over and above what the males incur. No trainee was sampled from the extremely deprived areas in the Western region; however, female trainees in the less deprived and deprived circuits spend more than the males. When the differences in cost burden are annualised over the entire UTDBE programme, it shows that female trainees in deprived and less deprived areas respectively incur GH¢492 (US\$162) and GH¢72 (US\$24) higher than the cost incurred by the males.

Overall, these analyses reveal that except in a few areas, female trainees expend more of the training cost on the programme due to the higher cost of transportation and cost at home across the five regions. Trainees on the UTDBE programme receive the same diploma certificate when they successfully complete the full training courses. However, there are differences in the cost of financing the programme hence variations in cost burden.

5.12 UTDBE Trainee's Indirect Costs Funding Constraints and the GPEG Sponsorship Contribution

As shown in Figure 5.3 below, 301 trainees in the sample (representing 78%) argued that they find it difficult paying for the indirect and some direct cost of training. In other words, about 78% of the trainees face challenges paying the GH¢5,424 (US\$1,790) which represents their cost commitment towards the entire training process over a four year period.

Figure 5.3: Difficulty in Paying for Cost of the Programme

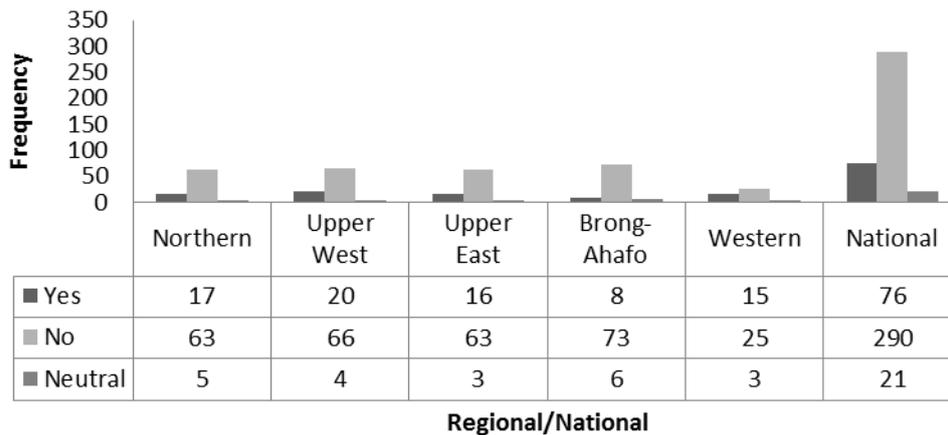


Source: Instrument 14B, UTDBE Baseline Study 2014

The number of trainees finding it difficult to bear the cost remains high across all regions with some variations. Regionally, 72 (85%) and 71 (79%) trainees sampled in the Northern and Upper West regions respectively experience difficulties in paying the GH¢6,024 (US\$1,988) and GH¢5,016 (US\$1,655) over the entire training cost. In the same vein, about 77% and 67% of trainees in Upper East and Brong-Ahafo find it hard paying. Similarly, given that trainees in the Western region bear GH¢6,060 (US\$2,000) towards the cost of the entire training process, about 86% finds it difficult paying. Conversely, as a whole only 86 (22%) out of the 387 trainees do not find it difficult paying for the remaining cost they bear. This again varies from region to region. However, 19 trainees representing 23% in Upper East and 21% in Upper West have no problem bearing their respective cost burden. Given that trainees bear the majority of the cost, it is reasonable for some to think they spend more than their colleagues on the DBE. This is explored and the results are presented below.

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

Figure 5.4: Do UTDBE Trainees Expend more than DBE?

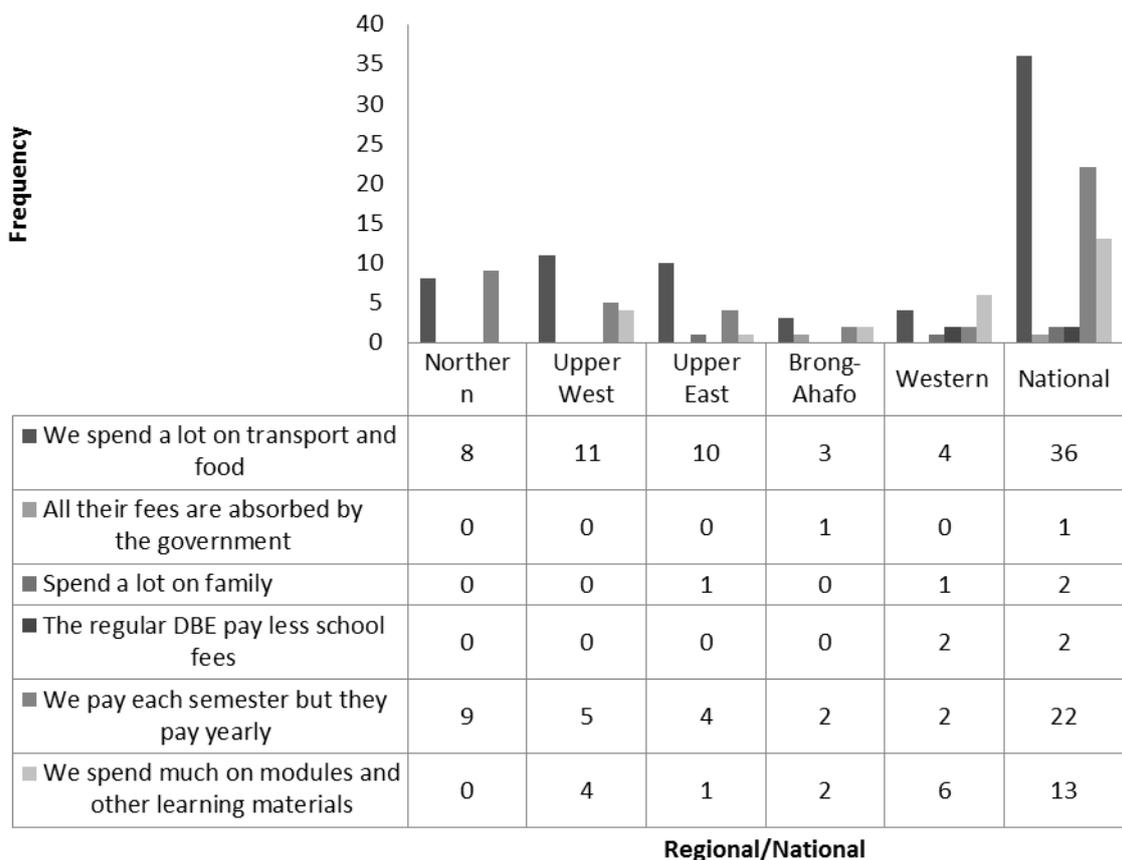


Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

Findings from the baseline data suggest that the number of trainees in Brong-Ahafo who do not think they spend more than those on the conventional teacher training is higher (73 representing 84%) than any other region. This finding collaborates with our earlier evidence that the cost to trainees is lowest in Brong-Ahafo region. Of the 387, 290 trainees (representing 75%) do not think they spend more than those on the regular training. The implication is that, despite bearing the highest cost of training, the majority of the trainees still think DBE trainees spend more (direct and indirect) than them in relation to their cost of training. However, 76 of the sampled trainees (representing 20%) feel they spend more than the DBE students. The remaining 5% of the trainees could not tell whether they spend more (or less) than trainees on the conventional CoE modality. To them, because of their rather limited knowledge on the composition and amount of expenditure DBE students incur, they are unable to tell which students are paying more (UTDBE or CoE 2 year in and one year out).

5.14 Why UTDBE Trainees Perceive they Spend Higher than DBE in Cost of Financing

Figure 5.4: Why UTDBE Trainees Spend More than DBE Trainees



Source: Instrument 14B, Baseline Study

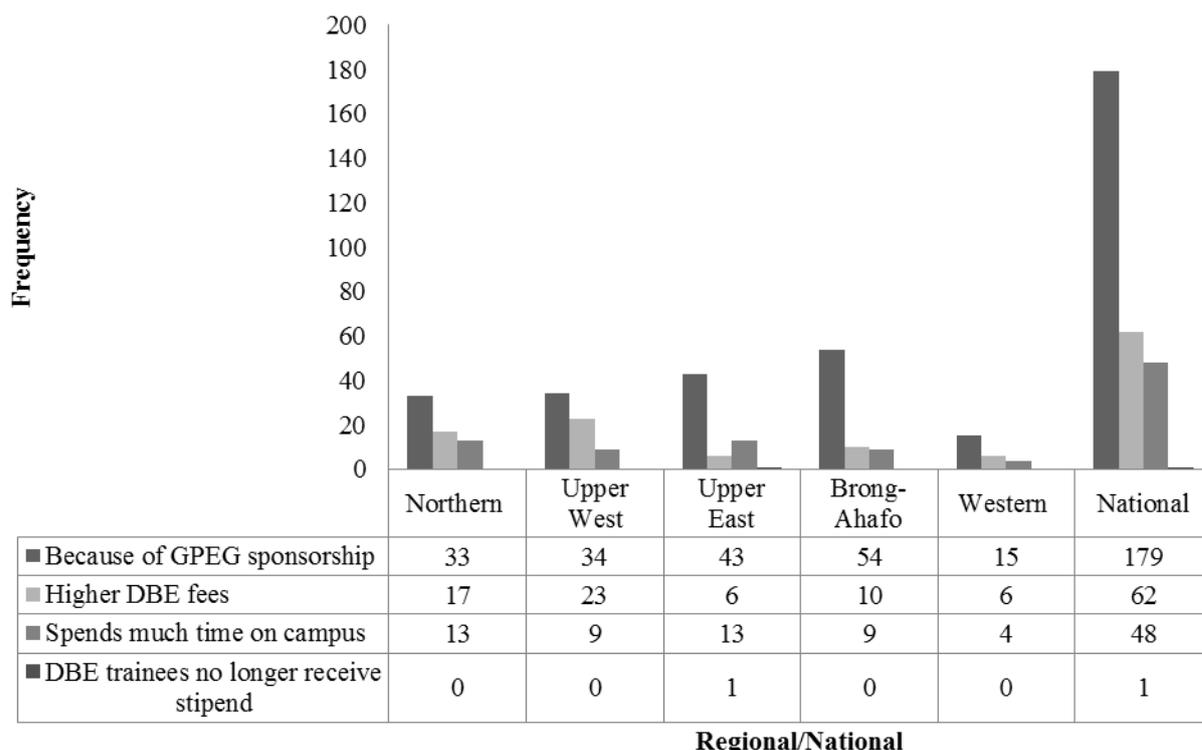
Of the 76 trainees who think they spend more than their counterparts on the conventional mode of training, the majority (36) of UTDBE trainees are of the view that they have a higher expenditure on travel and food compared to the DBE trainees. To these trainees, unlike those on the conventional mode, the fact that they would have to frequently travel in and out from the CoE as well as spend on additional food possess another significant cost. 22 (representing 29%) trainees also stated that they incur higher cost of financing than DBE students because they always have to pay for tuition fees for each face-to-face which is 3 times in a year; while DBE students pay once. Because the UTDBE programme is self-instructional, 17% of the trainees feel they spend a lot on course modules and other teaching and learning materials as opposed to those on regular training. Only 1 trainee is of the view that DBE trainees' tuition fees are fully absorbed by the government while 2 trainees think they spend more than DBE students because trainees on the regular teacher training modality pay relatively lower tuition fees.

5.15 Why UTDBE Trainees Perceive They Spend More than DBE Trainees in Relation to the Cost of Financing

Out of the 290, from Figure 5.5 below, 179 trainees (62%) think with the GPEG sponsorship, they spend less than those on the regular teacher training because those on the conventional training do not receive any support from GPEG. However, 62 (21%) trainees argue that because DBE students pay higher tuition fees, they tend to spend more than UTDBE students. 48 (17%) trainees also assert that because regular students spend relatively longer time in

school during each training process, they (DBE students) spend more on food and other necessary expenditure hence bearing a higher cost. Only 1 trainee is of the view that DBE trainees now commit much of their personal income towards financing their education because they no longer receive a monthly stipend from the government.

Figure 5.5: Why UTDBE Trainees Think They Spend Less than Those on the Conventional Training



Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

In relation to the support UTDBE trainees receive from GPEG and the additional (indirect) cost they incur during the cost of training, this section measures the relative value trainees attach to the financial support from GPEG. From Table 5.11 below, out of the 387 trainees, the majority (201 trainees representing 53%) consider the GPEG sponsorship to be moderate. Of these, 50 trainees each are from Upper East and Brong-Ahafo of which the majority are males and females respectively. In Northern, Upper West and Western regions, 42 (49%), 36 (40%) and 29 (67%) trainees respectively rate the sponsorship package moderate with the majority being males. Further results show that 101 (26%) and 47 (12%) trainees respectively consider the sponsorship to be high and very high. Of those who rate it high and very high, the majority are from the Upper West while a few are from Western Region.

5.16 Value of the GPEG Sponsorship

Table 5.11: Ranking the GPEG Sponsorship by Trainees

Rank	Northern			Upper West			Upper East			Brong-Ahafo			Western			National
	Females	Males	Total	Females	Males	Total	Females	Males	Total	Females	Males	Total	Females	Males	Total	
Very high	3	10	13	7	12	19	4	5	9	3	0	3	1	2	3	47
High	9	15	24	14	15	29	3	15	18	8	16	24	1	5	6	101
Moderate	10	32	42	16	20	36	19	31	50	27	23	50	12	17	29	207
Low	1	4	5	2	3	5	0	4	4	5	2	7	2	3	5	26
Very low	0	1	1	0	1	1	0	0	0	0	2	2	0	0	0	4
Can't rank	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	2
National	23	62	85	39	51	90	26	56	82	43	44	87	16	27	43	387

Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

Interestingly, no male trainee from Brong-Ahafo rates the sponsorship very high. However, only 26 and 4 respectively consider the sponsorship low and very low. No trainee from Upper East and Brong-Ahafo see the support to be very low. It is worth noting that, of all the rankings across all regions, it is only in Brong-Ahafo that female responses outweigh their male counterparts. This holds true only for “moderate” and “low” rankings. However, 2 male trainees – 1 each from Upper East and Brong-Ahafo argue that, because they don’t know the actual amount GPEG contributes towards their cost of training, they are unable to rank the financial support they receive from GPEG. The male trainee from Brong-Ahafo asserts:

“I only know they [referring to GPEG] pay part of my fees but I cannot tell how much they pay. So I can’t say whether is high or low or moderate”

This is not different from what the other male trainee from Upper East says:

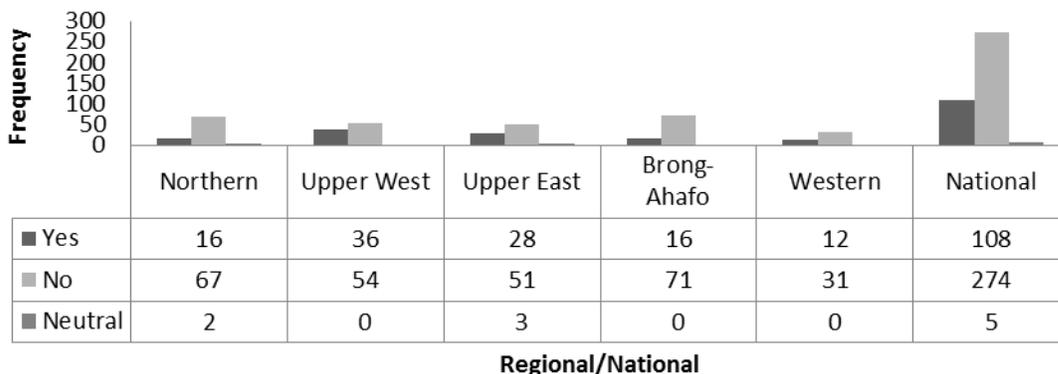
“I know GPEG sponsors us anytime we go for the training but I can’t rank it since I don’t know how much they pay”

By taking cognisance of the workings and training on the regular teaching training approach, there are variations or differences in the number of trainees who prefer to be trained on UTDBE compared to DBE. The following section critically analyses this choice.

5.17 Preferences and Choice of DBE or UTDBE Training by UTDBE trainees

Figure 5.6 below reveals that the majority (274 representing 71%) of the UTDBE trainees do not prefer training on the regular teacher training modality while 108 (28%) prefer the conventional mode. However, only 5 trainees remain neutral whether to opt for the DBE or UTDBE owing to their limited knowledge on what goes on in the conventional modality. Of those who would want to be trained via the conventional mode, the majority are from the Upper West while only a few are from the Western Region. Conversely, of the 274 trainees who prefer UTDBE to DBE, the majority (71 trainees representing 26%) are from Brong-Ahafo with the least from the Western Region.

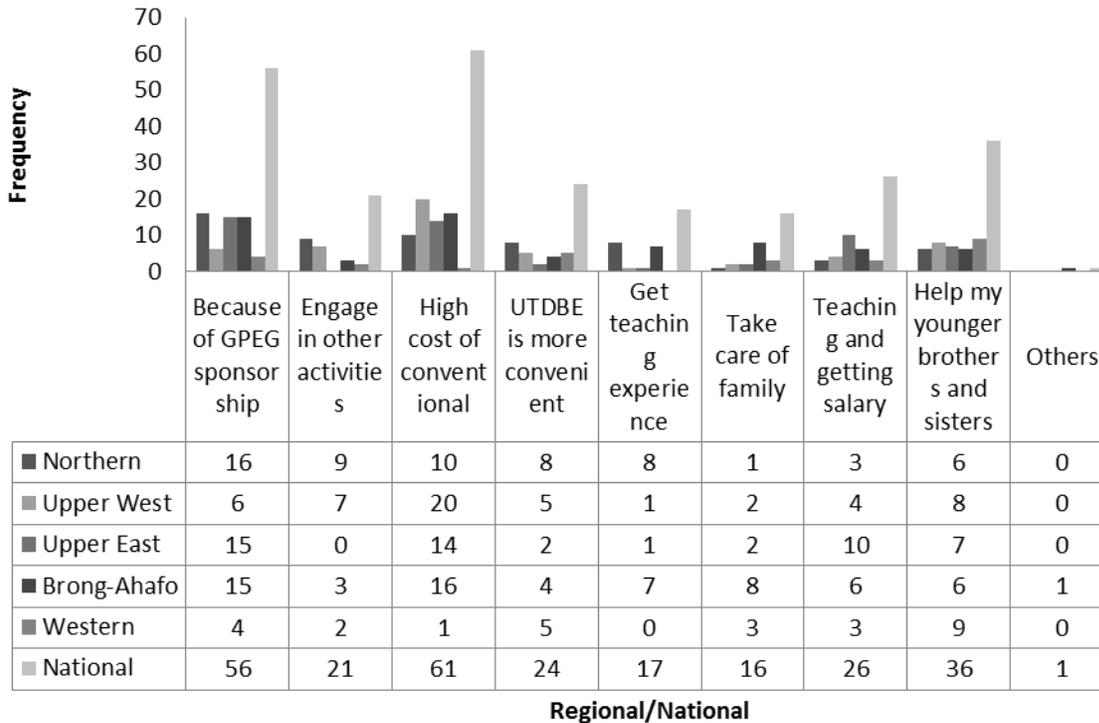
Figure 5.6: Prefers DBE to UTDBE



Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

5.18 Why Trainees do not Prefer the Regular Teachers' Training

Figure 5.7: Reasons for not Opting for Conventional



Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

Probing into why trainees prefer UTDBE programme to DBE, Figure 5.8 below reveals that of the 274 trainees, the majority would now want to be trained on the conventional training approach because of the rather high cost of financing. This view is more and less pronounced in the Upper West and Western Region respectively. The baseline study also revealed that because UTDBE trainees receive the GPEG sponsorship, generally 56 trainees prefer to be trained on the in-service to pre-service. Regionally, the majority of the trainees stating this reason were from the Northern, Upper East and Brong-Ahafo with relatively few from Western and Upper West.

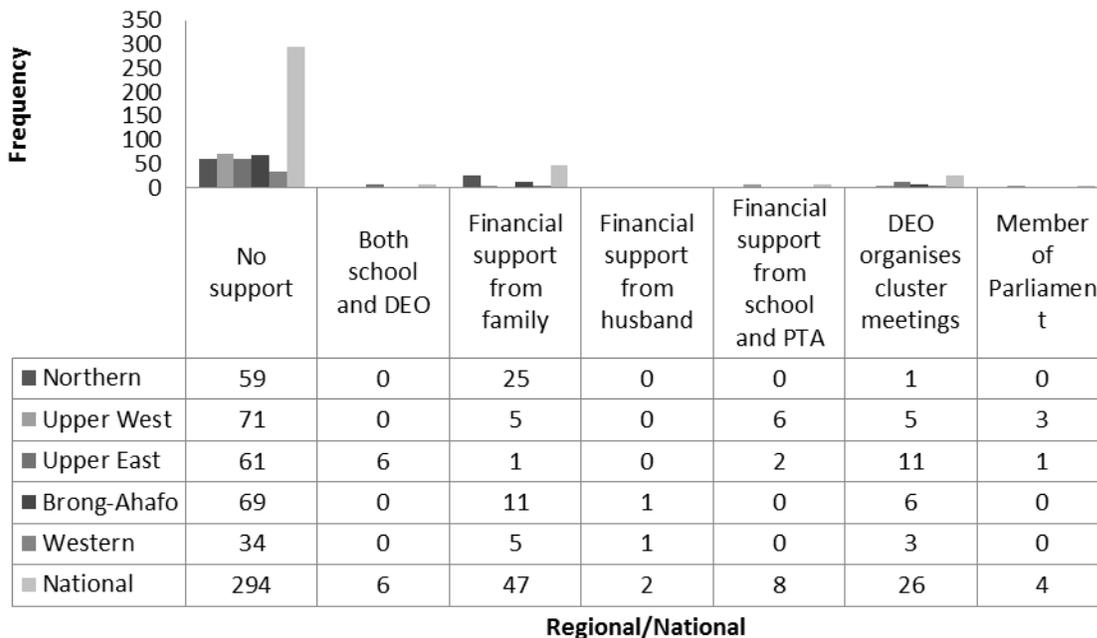
A striking finding show that 36 (representing 13%) trainees prefer the in-service training because they want to continue teaching at the school level and “*helping the younger ones in their various communities*”. To the extent that UTDBE trainees combine teaching and studying, these trainees are able to teach pupils who would have otherwise been denied a teacher if they had opted for the regular pre-service modality. The number of trainees with this motivation is higher in the Western Region although there are minor variations in the number of trainees in other regions. Further results reveal that 26 trainees want to be trained on the UTDBE mode so they could continue teaching while earning their salary. The implication is that this particular type of trainees feels they have some form of job security while they remain on the UTDBE programme.

Conversely, 17 trainees argue that because the training is in-service, the UTDBE programme allows trainees to teach while studying thus building on the trainee’s level of teaching experience. However, because the distance learning is structured such that trainees go for the face-to-face during vacation, out of the 276 trainees, 24 (representing 9%) feel it is more convenient for them to study and would not trade it for the regular training modality. Similarly, 21 (8%) trainees hold that the UTDBE programme provides them some amount of time to do other activities which, according to them, is mostly farming. Only 1 trainee maintains that the UTDBE programme is an opportunity to become a trained teacher and the diploma certificate given is the same as those awarded to their colleagues on the regular modality.

5.20 Alternative Sources of Support for UTDBE Trainees

Figure 5.9 reveals that, apart from the GPEG sponsorship, about 76% of the trainees do not receive any form of support while the remaining get some support from alternative sources. Of those who receive no support, the majority of them come from the Upper West and Brong-Ahafo regions. Out of the 84 trainees in the Northern region, 70% receive no support and thus rely on their personal income for financing their cost of training. However, 47 trainees contend that they indeed receive financial support from their families; the majority with about 53% of such trainees coming from the Northern Region. Further results show that 26 trainees, mostly from the Upper East Region, receive some support in a form cluster meetings and tutorials organised by their District Education Office (DEO). The results also show that 6 and 8 trainees respectively receive support from both their schools and DEO; and some financial assistance from the school itself as well the Parent Teacher Association (PTA).

Figure 5.9: Alternative Sources of Support

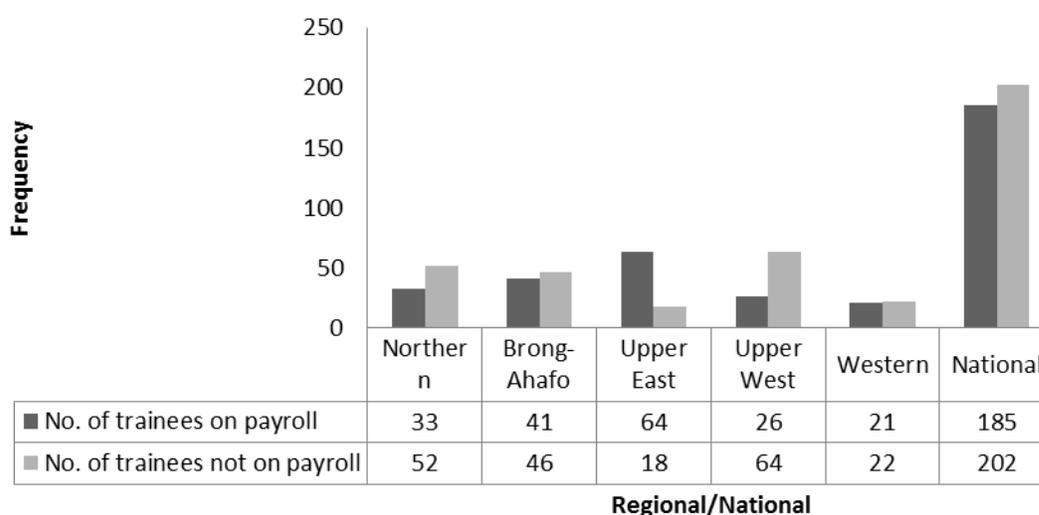


Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

5.21 UTDBE Trainees on and off GES Payroll

Figure 5.10 below shows the number of trainees on the government payroll and those trainees who are not. The data reveals that the majority of the trainees are not on the government payroll across the five regions sampled. Specifically, out of the 387 trainees sampled, 202 representing 52% do not receive any form of government salary (as pupil teachers) while the rest are on the government payroll and receive a salary (48%). The majority of the trainees not on payroll are from the Upper West and Upper East which have the fewest trainees on the payroll. Further results show that, out of the 85 trainees from the Northern region, 52 (representing 61%) do not receive a salary while the rest receive one. Apart from the Upper East region where 78% of the trainees receive a salary, the majority of the trainees from all the other regions are not on the government payroll hence do not receive salary.

Figure 5.10: Trainees on Payroll and Those not on Payroll



Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

The study also noticed some differences between the number of female and male trainees who do not receive a salary. Specifically, out of the 202 trainees who do not receive salary, about 41% are females with the majority (29 trainees representing 35%) from the Upper West (see Table 5.12). It can also be seen that 29 (45%) out of the 64 trainees who are not on a salary are from the Upper West are females and the Western Region has the least (7%) female trainees not on a salary. With the exception of the Upper East, the number of males not on a salary outweighs that of females in all regions. Of the 185 trainee who receive a salary, the majority (64%) are males where 36% are particularly from the Upper East. Notice that the number of males on a salary outweighs the females. This is true for all the regions except for Brong-Ahafo where about 59% are females. There are differences in the average salary a typical pupil teacher or trainee receives per month and this is shown in Table 5.13 below.

Table 5.12: Trainees on the Payroll and Those not on the Payroll

Region	No. of trainees on the payroll	No. of trainees not on the payroll
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	Females	Males	Total	Females	Males	Total
Northern	4	29	33	19	33	52
Brong-Ahafo	24	17	41	19	27	46
Upper East	21	43	64	10	8	18
Upper West	8	18	26	29	35	64
Western	9	12	21	6	16	22
National	66	119	185	83	119	202

Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

5.22 Average Monthly Salary of Pupil Teachers

Table 5.13 below presents the average monthly salary of a pupil teacher. It shows that a pupil teacher in the Upper East receives the highest salary per month while those in the Upper West receive the lowest. In particular, the Upper East and Upper West receive GH¢397 and GH¢215 respectively. In addition to differences in sample size, variations in the average monthly salary could be due to differences in the number of years of service where salaries of public sector workers are reviewed annually. Thus, a pupil teacher with relatively higher years of teaching is expected to receive a higher salary than those with fewer years of experience. This notwithstanding, on the average a typical pupil teacher receive GH¢357 a month. It is imperative to note that salaries are paid by the government directly to trainees thus forming part of their permanent income.

Table 5.13: Average Monthly Salary of Trainees

Region	Average salary (GH¢)
Northern	361 (US\$119) ³¹
Brong-Ahafo	381 (US\$126)
Upper East	397 (US\$131)
Upper West	215 (US\$71)
Western	356 (US\$117)
National	357 (US\$118)

Source: Instrument 14B, Cost Effectiveness Datasheet per UTDBE trainee Baseline (2014)

To the extent that these incomes are regular, trainees on the government payroll as pupil teachers have a relatively stable income flow compared to those not on the GES payroll. Incomes of the latter group are irregular. By comparing the two groups, trainees on the payroll are considered “well-off” and are relatively capable of bearing the cost of training. Given that a typical trainee annually bears an average of GH¢1,356 (US\$448) towards cost of training, a pupil teacher trainee on the government payroll can commit at most 32% of the annual salary on financing his/her UTDBE training. This percentage also holds true given the cost incidence over the entire

³¹ Figures in brackets are their respective dollar equivalent. Exchange rate used is US\$1=GH¢3.03

training process.³² Conversely, trainees not on the government payroll would have to look for alternative sources of funding. Although the majority of the trainees receive no support apart from GPEG, altruism and solidarity within the communal family were found to motivate individual families, schools and PTAs to extend some financial support to trainees in their communities who pursue the course. This support may not be enough in meeting the cost of study necessitating trainees to engage in other income generating activities. The main motivation that the individual and family have in financing a trainee is the hope that they will eventually go onto the GES payroll as a professional teacher which often brings a high degree of security to the family.

Conclusion

The inadequate supply of trained teachers has remained a challenge to many countries not least Ghana. Various policies have been implemented by many countries to supplement the traditional teacher training approach. In the case of Ghana, the introduction of the UTDBE programme in 2004 was a policy response to bridging the teacher demand and supply gap. While both traditional and distance education modalities are cost sharing between the government, often the donor and the student, the rather limited resources have necessitated policy-makers to identify which training modality is most cost effective and efficient.

Overall, the study finds that the unit cost per DBE graduate is seven times higher than the UTDBE graduate. By using a total of 387 UTDBE trainees from 9 districts in 5 regions, this chapter assessed the cost incidence and subsequent identification of the modality that is cost effective and efficient. This was done by taking into consideration the gender differences and deprivation levels. Results from the study reveal that the UTDBE programme is cost effective given its ability to train the set 8,000 untrained teachers with the minimum possible cost. As compared to the conventional teacher training, the UTDBE programme is cost efficient given its relatively lower costs of training (49%). The implication is that, the majority of the remaining training costs are borne by students and trainees sometimes not even on the government payroll as pupil teachers (52%). Except for West Mamprusi, trainees in the less deprived areas in all the districts bear the majority of the UTDBE training costs compared to their colleagues in other areas within the same district. There are also variations in the cost of financing across gender with women often paying more in terms of indirect costs for attending UTDBE training. District level analyses reveal that except for a few areas, female trainees bear the brunt of the training cost on the programme. However at the national level, on the average male trainees pay GH¢24 (US\$10) higher than their female counterparts when costs are annualized over the lifetime of the training programme. The major of the differences in cost incidence and burden can be attributed to higher cost of transportation and costs at home (example feeding while away at the training, child care etc).

³² Although salaries are usually reviewed annually, this percentage is calculated by holding salary adjustment constant at least over the entire training process.

Chapter 6: Lesson Observation with UTDBE Trainees

Research Question 2

What skills have the student teachers gained in lesson planning/preparation, teaching methodology and classroom organization and management?

6.1 Introduction

In order to answer the research question, classroom observations were conducted in 187 sampled schools visited. Overall 389 forty minute to one hour classroom observations were completed across the 9 sampled districts. Classroom observations were conducted among 235 male and 157 female UTDBE trainees. Out of the total number of 389 UTDBE trainees observed, 118 were located in less deprived schools, 164 were from deprived schools and 127 were from extremely deprived schools.³³ (see Table 6.1 below for details)

Table 6.1: 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	91	44	47	37	33	31
Northern	69	50	19	35	23	11
Upper East	83	57	26	33	18	42
Upper West	99	55	44	41	21	37
Western	47	29	18	18	23	6
Total	389	235	154	164	118	127

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

As part of the classroom observation, a range of 19 indicators were used to assess the performance of the UTDBE trainees. These were:

- I. Instructional Planning Skills: Assessment of Lesson Plan (4 Indicators)
 1. Lesson Objectives
 2. Lesson Core Points
 3. Teacher Learner Activities
 4. Use of Teaching Learning Materials

- II. Teaching Methodology Delivery (13 Indicators)
 1. Subject Knowledge and Content Accuracy
 2. Use of Language
 3. Language of Instruction
 4. Use of Generic Skills

³³ See chapter one for the categorization of deprived, less deprived and extremely deprived schools

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

III. Classroom Organisation and Management (2 Indicators)

1. Classroom Setting
2. Class Control

Assessment of the indicators was done in two ways in the classroom. First, 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), Excellent (5). Secondly, observers were asked to describe teacher and learner behaviour and activities in the following 8 areas:

1. Teacher preparation for the lesson, indicating whether objectives were linked to the scheme of work and previous lesson.
2. Language of instruction used by teacher indicating how teacher used Ghanaian Language and English and how students used these languages.
3. Strategies and methods/activities teacher used in the classroom indicating whether teacher used mainly lecture and the nature of student teacher interaction.
4. Questioning and pupil responses indicating whether teacher accepted choral responses or focused mainly on more able students to answer questions, and whether opportunities were given for individual and group activities.
5. Teacher use of praise during feedback.
6. Pupils' activities during the course of the lesson.
7. Teacher use of time during the lesson.
8. Teacher disciplinary practices.

Both quantitative and qualitative analyses were done for the classroom observation instrument. The quantitative analysis used the ratings while the qualitative analysis used the descriptions of teacher and learner behaviours and activities.

6.2 Quantitative Analysis

To identify the skills student teachers gained in lesson planning/preparation, teaching methodology and classroom organization and management overall mean ratings were obtained

(see Table 6.2). In addition, mean ratings were obtained for gender (see Table 6.3), region (see Table 6.4 and level of deprivation (see Table 6.5).

Table 6.2: Mean Ratings of Classroom Observation Indicators

Indicator	Sample size (n)	Mean rating
1. Objectives	357	2.81
2. Core Points	354	2.91
3. Teacher Learner Activities	356	2.85
4. Use of Teaching Learning Materials	363	2.55
5. Subject Knowledge and Content Accuracy	385	3.43
6. Use of Language	384	3.28
7. Language of Instruction	382	3.28
8. Use of Generic Skills	376	2.72
9. Use of Chalkboard	385	3.15
10. Questioning Skills	385	2.97
11. Gender Sensitivity	384	3.19
12. Sensitivity to Diverse Learner Needs	307	2.68
13. Feedback to Pupils	377	2.89
14. Use of TLMs	386	2.38
15. Pupils' Participation	382	2.90
16. Use of Teacher Learner Activities	377	2.84
17. Evaluation of Lesson	374	2.90
18. Classroom Setting	377	2.82
19. Class Control	374	3.15

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

Table 6.2 shows that student teachers demonstrated satisfactory skills in six areas with a mean ratings of 3.0 and above. These areas are:

1. Subject Knowledge and Content Accuracy. In general, teachers gave accurate information and there was evidence that teachers understood the topics they taught. However, some explanations were not clear to learners.
2. Use of Language. Teachers used language appropriate to the level of average pupils clearly and audibly.
3. Language of Instruction. Teachers used the language of instruction appropriate to the average pupils and ensured that explanations are geared towards the language needs of different pupils.
4. Use of Chalkboard. Writing on the chalkboard was well planned with letters, figures and illustrations which are formed neatly and correctly.
5. Gender Sensitivity. Teachers ensured that questions were distributed evenly between boys and girls.

6. Class control. Teachers communicated to pupils on what to do and ensured order in the classroom.

These findings are indicative of the content of the UTDBE course the trainees have so far completed. In particular satisfactory performance with regard to subject knowledge and content accuracy reflects the emphasis on subject content knowledge particularly in the subjects: English, Maths and Science – the subjects that the majority of trainees were observed teaching.

The ratings in Table 6.2 showed further that the rest of the 13 areas need improvement especially in the use of teaching and learning materials (TLMs) for which there is a mean rating of 2.38.

6.3 Skills Acquisition by Gender

Table 6.3: Mean Ratings of Classroom Observation Indicators by Gender

Indicator	Female	Male
1. Objectives	2.83 (141)*	2.82 (213)
2. Core Points	2.91 (140)	2.94 (211)
3. Teacher Learner Activities	2.97 (143)	2.80 (210)
4. Use of Teaching Learning Materials	2.74 (144)	2.44 (216)
5. Subject Knowledge and Content Accuracy	3.45 (152)	3.43 (230)
6. Use of Language	3.44 (154)	3.17 (227)
7. Language of Instruction	3.36 (153)	3.24 (226)
8. Use of Generic Skills	2.76 (148)	2.70 (225)
9. Use of Chalkboard	3.15 (152)	3.15 (230)
10. Questioning Skills	2.94 (152)	2.99 (230)
11. Gender Sensitivity	3.29 (149)	3.12 (232)
12. Sensitivity to Diverse Learner Needs	2.75 (122)	2.64 (182)
13. Feedback to Pupils	2.90 (146)	2.88 (228)
14. Use of TLMs	2.64 (154)	2.19 (229)
15. Pupils' Participation	3.07 (152)	2.79 (227)
16. Use of Teacher Learner Activities	2.88 (151)	2.81 (223)
17. Evaluation of Lesson	2.91 (149)	2.88 (222)
18. Classroom Setting	2.83 (150)	2.82 (224)
19. Class Control	3.07 (149)	3.21 (222)

*Note: Numbers in bracket are the sample sizes.

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

Table 6.3 shows that there is very little gender difference in the performance of teaching skills. It is only in Indicator 15, Pupil Participation that the female student teachers did better than the male student teachers. While the female student teachers had a mean rating of 3.07 (Satisfactory), the male counterparts had 2.79 (Needs Improvement). While female teachers demonstrated satisfactory skills in seven indicators, the male counterparts gained satisfactory skills in six areas.

6.4 Skill Acquisition by Regions

Table 6.4: Mean Ratings of Classroom Observation Indicators by Regions

Indicator	Brong Ahafo	Northern	Upper East	Upper West	Western
1. Objectives	2.86 (79)*	2.66 (65)	2.80 (79)	2.70 (92)	3.21 (42)
2. Core Points	2.90 (78)	3.08 (66)	2.92 (76)	2.71 (92)	3.12 (42)
3. Teacher Learner Activities	2.97 (80)	2.96 (67)	2.81 (78)	2.64 (889)	2.98 (42)
4. Use of Teaching Learning Materials	3.07 (82)	1.90 (69)	2.47 (77)	2.53 (92)	2.74 (43)
5. Subject Knowledge and Content Accuracy	3.55 (89)	3.71 (69)	3.20 (82)	3.35 (98)	3.38 (47)
6. Use of Language	3.52 (90)	3.29 (68)	3.22 (81)	3.17 (98)	3.09 (47)
7. Language of Instruction	3.53 (91)	3.10 (67)	3.35 (79)	3.20 (98)	3.09 (47)
8. Use of Generic Skills	2.94 (90)	3.04 (67)	2.71 (79)	2.40 (93)	2.45 (47)
9. Use of Chalkboard	3.20 (90)	3.20 (69)	2.93 (81)	3.22 (99)	3.17 (46)
10. Questioning Skills	2.89 (91)	3.17 (69)	3.02 (80)	2.89 (99)	2.87 (46)
11. Gender Sensitivity	3.89 (89)	3.30 (69)	3.17 (82)	2.92 (98)	3.22 (46)
12. Sensitivity to Diverse Learner Needs	3.03 (75)	2.00 (50)	2.98 (66)	2.55 (74)	2.62 (42)
13. Feedback to Pupils	3.03 (87)	3.10 (68)	2.98 (81)	2.59 (97)	2.77 (44)
14. Use of TLMs	2.66 (91)	1.93 (68)	2.18 (83)	2.46 (97)	2.64 (47)
15. Pupils' Participation	3.05 (91)	2.81 (68)	2.85 (82)	2.81 (95)	3.02 (46)
16. Use of Teacher Learner Activities	3.04 (90)	2.80 (69)	2.81 (79)	2.66 (95)	2.95 (44)
17. Evaluation of Lesson	3.20 (89)	2.91 (69)	2.85 (80)	2.62 (90)	2.89 (46)
18. Classroom Setting	2.86 (88)	2.82 (67)	2.69 (81)	2.77 (95)	3.09 (46)
19. Class Control	3.37 (87)	3.25 (68)	2.96 (80)	3.05 (94)	3.11 (45)

*Note: Numbers in bracket are the sample sizes.

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

As Table 6.4 shows, on a regional basis, student teachers in the Brong Ahafo region demonstrated satisfactory skills in 12 indicators where the mean ratings were more than 3.0 and those in the Northern region demonstrated satisfactory skills in 10 indicators with mean ratings more than 3.0. Student teachers in the Upper East demonstrated satisfactory skills in five indicators while those in the Upper West in five indicators. The student teachers in the Western Region achieved a mean satisfactory rating for 10 indicators.

On the whole, student teachers in the Brong Ahafo Region achieved a mean satisfactory rating across a greater number of indicators than trainees in all other regions. While in both the Upper East and Upper West Regions trainees achieved a mean satisfactory rating across the fewest indicators.

6.5 Skill Acquisition by Level of Deprivation

Table 6.5: Mean Ratings of Classroom Observation Indicators by Level of Deprivation

Indicator	Less Deprived	Deprived	Extremely Deprived
1. Objectives	3.00 (102)*	2.72 (137)	2.75 (118)
2. Core Points	3.06 (100)	2.82 (138)	2.90 (116)
3. Teacher Learner Activities	3.94 (101)	2.79 (138)	2.85 (117)
4. Use of Teaching Learning Materials	2.71 (101)	2.38 (144)	2.60 (118)
5. Subject Knowledge and Content Accuracy	3.56 (108)	3.44 (151)	3.30 (126)
6. Use of Language	3.45 (108)	3.19 (151)	3.22 (125)
7. Language of Instruction	3.31 (107)	3.17 (148)	3.39 (127)
8. Use of Generic Skills	2.84 (104)	2.60 (151)	2.75 (121)
9. Use of Chalkboard	3.25 (106)	3.14 (153)	3.06 (126)
10. Questioning Skills	3.07 (106)	2.89 (153)	2.98 (126)
11. Gender Sensitivity	3.31 (107)	3.18 (153)	3.09 (124)
12. Sensitivity to Diverse Learner Needs	2.62 (91)	2.62 (115)	2.81 (101)
13. Feedback to Pupils	3.04 (105)	2.80 (152)	2.87 (120)
14. Use of TLMs	2.41 (107)	2.39 (154)	2.33 (125)
15. Pupils' Participation	2.98 (105)	2.91 (154)	2.83 (123)
16. Use of Teacher Learner Activities	2.90 (107)	2.87 (151)	2.76 (119)
17. Evaluation of Lesson	3.05 (105)	2.76 (148)	2.93 (121)
18. Classroom Setting	3.00 (105)	2.79 (151)	2.70 (121)
19. Class Control	3.24 (106)	3.09 (150)	3.15 (118)

*Note: Numbers in bracket are the sample sizes.

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

Table 6.5 shows that student teachers in the less deprived districts achieved a mean rating of 3 or more in 10 indicators. While the trainees located in the deprived and extremely deprived zones demonstrated satisfactory skills in five indicators.

The overall conclusion to be drawn from a quantitative analysis of the mean ratings awarded to trainees during lesson observation is that trainees' performance across all the indicators falls into satisfactory or needs improvement categories. Performance with regard to subject content knowledge is likely related to the strong emphasis in UTDBE course content on the acquisition of subject content knowledge for the trainees themselves. Trainees' use of relevant language is likely related to the admission policy adopted by GES with regard to recruiting trainees who are resident in the community. What remains to be seen is whether trainees will show an improvement in the higher order pedagogical and classroom management skills as they progress through the UTDBE programme and are given the opportunity to learn more about classroom methodology, learner-centred teaching strategies and techniques for evaluation.

6.6 Classroom Observation Analysis of Descriptions 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 is collected to give a more detailed background to what was observed in the classroom and also as a check on the judgements made with regards 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 sub-sections, such as gender, district, and level of deprivation, are also described. However, given the relative cell size of these metrics (eg level of deprivation), these observations on performance are not inferential, merely descriptive.

Future classroom observations (interim and end line studies) will be carried out with the same UTDBE trainees that are sampled for this baseline. Descriptions of performance at this baseline will therefore be compared with future analysis in order to track improvements in performance of the UTDBE trainees.

6.7 Teacher Preparation for the Lesson

Overall there appears to be a good percentage of trainees attempting to prepare lesson notes and are doing some form of preparation prior to lesson periods. Overall 137 out of a total of 389 had a repeated lesson or no lesson plan (35%). Overall 47 UTDBE trainees (12%) presented a poorly planned lesson, 70 (18%) had a satisfactory lesson plan and 137 (35%) had a good lesson plan linked with previous lesson and knowledge of pupils.

On a regional basis, Western and the Brong Ahafo regions had the highest number of teachers with good lesson plans that are linked with previous lesson and knowledge of pupils recording 45% and 44% respectively of classrooms observed. The Upper West region had the highest number of repeated lessons; about 24% of lessons observed in the Upper West Region were repeated lessons. The Northern Region on the other hand had about 35% of teachers observed with no lesson notes prepared. Follow up interviews reveal that most of the UTDBE trainees had not received any training in lesson planning and preparation. Teachers reveal that they were yet to receive any training on lesson planning at the COE. Most of these trainees were worried and complained that they had not received much practical training at the COE during their face to face sessions. In the Upper East Region, 25% of trainees observed had no lesson notes with 31% were deemed to have prepared a good lesson linked to previous lessons and knowledge of pupils. The criteria for a “good” lesson plan was that there was evidence that the current lesson was linked to the previous lesson as the teachers reminded the pupils of what they learnt in the last lesson or drew on previous knowledge or understanding of the subject. The objectives were usually clearly stated in the lesson plan and were also linked to the syllabus. Also there was progression between lessons in terms of application process skills. (See table below for more details). Overall there were slight differences in terms of trainees from deprived, less deprived and extremely deprived schools. In the Upper West Region 71% and 59% of trainees from extremely deprived and deprived schools respectively had no or poor lesson plans compared to only 38% in less deprived schools. On the contrary, trainees from less deprived schools in the Northern Region were more likely to have no lesson plan or a poor lesson plan. In the Upper

East Region, more than half of the trainees from deprived and extremely deprived (52% and 57%) schools had no or poor lesson plans. In the Western Region about 70% had a good /satisfactory lesson plan. Overall females were more likely to have a satisfactory lesson plan compared to males except in the Brong Ahafo and Upper East Regions.

Table 6.6: Lesson Planning and Preparation

Region	Gender	Repeated Lesson		No Lesson Notes		Poor plan		Satisfactory Lesson Plan		Lesson linked to previous Learning/ Lessons		TOTAL
Brong Ahafo	Male	9	20%	6	14%	2	5%	9	20%	18	41%	44
	Female	6	13%	7	15%	6	13%	6	13%	22	47%	47
REGIONAL TOTALS		15	16%	13	14%	8	9%	15	16%	40	44%	91
Northern	Male	1	2%	17	34%	7	14%	13	26%	12	24%	50
	Female	0	0%	7	37%	2	11%	4	21%	6	32%	19
REGIONAL TOTALS		1	1%	24	35%	9	13%	17	25%	18	26%	69
Upper East	Male	7	12%	16	28%	6	11%	10	18%	18	32%	57
	Female	0	0%	8	31%	5	19%	5	19%	8	31%	26
REGIONAL TOTALS		7	8%	24	29%	11	13%	15	18%	26	31%	83
Upper West	Male	14	25%	13	24%	8	15%	4	7%	16	29%	55
	Female	10	23%	10	23%	4	9%	7	16%	13	30%	44
REGIONAL TOTALS		24	24%	23	23%	12	12%	11	11%	29	29%	99
Western	Male	0	0%	5	17%	5	17%	7	24%	12	41%	29
	Female	0	0%	1	6%	3	17%	5	28%	9	50%	18
REGIONAL TOTALS		0	0%	6	13%	8	17%	12	26%	21	45%	47
OVERALL TOTALS		47	12%	90	23%	48	12%	70	18%	134	34%	389

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

The following excerpts from descriptions made by enumerators illustrate the link between lesson planning and the quality of the lesson itself. For example the trainee in Naaniik Primary School is observed to: “frequently repeat the same thing” an indication that s/he does not have a clear structure for the lesson in mind.

The teacher had prepared his lesson notes neatly and you could see that the objectives of the lesson were clearly linked to the scheme of work and core points stated clearly. The teacher also linked current lesson to previous lesson (UTDBE Trainee in Less Deprived Community, Nakpanduri DA JHS, Northern Region)

It is clear that the teacher is not prepared for the lesson as he has no lesson notes and frequently repeats the same thing (Naaniik Primary School, Northern Region)

The teacher appeared to be well prepared for the lesson. The objectives of the lesson are linked to the scheme of work. There is a progression between lessons and in the application of skills. The teacher has adequate knowledge of the subject matter and the lesson is to some extent linked to previous lessons. (Tampala RC Primary, Upper West Region)

The lesson notes were poorly prepared therefore could not be linked to the previous lesson however the objectives had a linkage with the syllabus. The lesson made provision for the pupils to apply the skills they have learnt in the class. (Dua-Kantia Primary School, Upper East Region)

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

6.8 Language of Instruction

Appropriate language of instruction is considered an important component of quality education delivery. With regard to the findings related to the Language of Instruction used by teachers observed across the five regions, lessons at the upper primary levels and JHS were delivered mainly in English language and the lower primary lessons were mostly a mixture of English and Ghanaian language. In the Brong Ahafo and Upper East Regions, 43% and 33% of lessons were delivered in a mixture of English and Ghanaian language with only 2% and 14% delivered in “English Only”. Where English was used as the main medium of communication especially in the lower primary level, the majority of pupils had difficulty understanding what the teacher was teaching. The Northern Region had the majority (56%) of lessons delivered in English language. Only 3% of lessons observed were delivered in “mostly Ghanaian language” and 14% in “Ghanaian Language only”. In the Western Region 26% used a mixture of Ghanaian language and English with 19% delivery in English Only. The trend across the five regions except the Northern Region revealed that the use of English language as the main language of instruction was predominant in less deprived areas and most at the JHS levels.

What is clear from the evidence of classroom observations is that teachers in urban schools (classified here as less deprived) are more likely to deliver lessons in English than their rural counterparts. The pattern of language use across KG and Lower Primary classes is also similar across the 5 regions where teachers all use a Ghanaian language or (usually in the case of English reading or grammar lessons) a mixture of English and the mother tongue. There is a challenge regarding the language of instruction among teachers where text books are written in English and teachers find themselves having to translate ideas and concepts into the local language of students to understand while at the same time trying to ensure that pupils are able to express their understanding of these concepts in English. So while it would appear that schools and teachers are attempting to embrace the practice of teaching children at lower primary in their mother tongue the success of this policy is inhibited by the nature of the resources available.

Table 6.7: Language of Instruction across UTDBE Trainees

Region	Level	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	KG ³⁴ & LP	44%	11%	0%	25%	19%
	UP	42%	17%	8%	17%	17%
	JHS	0%	0%	0%	100%	0%
REGIONAL TOTALS		43%	12%	2%	24%	18%
Northern	KG & LP	27%	0%	18%	9%	45%
	UP	0%	35%	65%	0%	0%
	JHS	0%	0%	100%	0%	0%
REGIONAL TOTALS		8%	16%	59%	3%	14%
Upper East	KG & LP	40%	10%	7%	30%	13%
	UP	29%	53%	18%	0%	0%
	JHS	0%	50%	50%	0%	0%
REGIONAL TOTALS		33%	27%	14%	18%	8%

³⁴ KG means Kindergarten, LP means Lower Primary, UP means Upper Primary and JHS means JHS

Region	Level	English and L1 as LOI	Mainly English as LOI	English only as LOI	Mainly Ghanaian Language as LOI	Ghanaian Language Only as LOI
Upper West	KG & LP	24%	15%	7%	29%	24%
	UP	16%	57%	19%	5%	3%
	JHS	0%	33%	67%	0%	0%
REGIONAL TOTALS		20%	35%	15%	17%	14%
Western	KG & LP	18%	9%	9%	45%	18%
	UP	30%	20%	20%	20%	10%
	JHS	25%	50%	25%	0%	0%
REGIONAL TOTALS		24%	20%	16%	28%	12%
OVERALL TOTALS		26%	24%	19%	18%	13%

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

6.9 Teaching Methodology

Findings from the classroom observation reveal that the method of teaching across most classrooms includes lecture method, demonstrations and questioning and in a few cases, use of group work. The majority of lessons observed across the five regions can best be described as “teacher centred” rather than “child centred”. The mode of teaching in most cases is based on the strategy of introducing the topic and then leading pupils to an understanding by asking a series of questions either to the whole class or to individuals. In the case of reading lessons, teachers relied on reading aloud so that pupils could follow and then asking them to repeat either individually, or as a group. This practice could best be described by observers as “choral reading”.

Overall, 35% of lessons observed used lecture method and another 25% used question and answer method. There were about 30% using demonstrations together with question and answer method. This approach appeared to be one of the most effective approaches in terms of ensuring high levels of pupil participation used by trainees observed. Overall there was very little use of group work. Only 3% of trainees used some form of group work where pupils were expected to work collaboratively on a given task during lessons.

Table 6.8: Teaching Methodologies Used

Region	Gender	Lecture with Questions (%)	Question and Answer Method (%)	Demonstration and Question and Answer (%)	Activity Based involving pupils (%)	Group Work (%)
Brong Ahafo	Male	38%	29%	19%	12%	2%
	Female	25%	39%	18%	16%	2%
REGIONAL TOTALS		31%	34%	19%	14%	2%
Northern	Male	27%	24%	39%	8%	2%
	Female	26%	26%	32%	11%	5%
REGIONAL TOTALS		26%	25%	37%	9%	3%
Upper East	Male	38%	18%	29%	13%	4%
	Female	23%	12%	54%	4%	8%
REGIONAL TOTALS		33%	16%	37%	10%	5%
Upper West	Male	40%	26%	28%	4%	2%
	Female	31%	19%	38%	12%	0%
REGIONAL TOTALS		36%	23%	33%	7%	1%
Western	Male	35%	19%	23%	15%	8%
	Female	17%	39%	17%	22%	6%
REGIONAL TOTALS		27%	27%	20%	18%	7%

OVERALL TOTALS	31%	25%	30%	11%	3%
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(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

On a regional level, 67% of trainees used a lecture with questions and answers in the Brong Ahafo Region, in the Northern Region 51%, 35% in the Upper East Region, and 59% and 56% in Upper West and Western Regions respectively. Less than 20% of trainees in each region used some form of activity based teaching method or group work during their lessons. There were only 16%, 15% and 14% of trainees employing activity based methods across Brong Ahafo, Upper East and Western Regions respectively. Northern Region had the least percentage (12%) of trainees adopting activity based teaching and learning approaches. On the whole, there were more female trainees using activities and group work compared to male trainees. (See Table 6.8 for details)

The following observations made during classroom observation illustrate the extent to which pupils were involved in each type of lesson. For example in the first description, there is little for pupils to do – they “were occasionally called” ... “there was no occasion for pupil to interact”. However in the lesson in Vingving, it is clear that the pupils are interacting with teaching and learning materials and one another in a classroom with “cordial interactions” between pupil and teacher.

“A major part of the lesson was done using lecture method. Pupils were occasionally called to the board to solve problems; there was also minimal question and answer session. There was no occasion for pupil to interact through paired/group work” (Nyamenae DA Primary School, Western Region)

“Although lesson objectives and learning activities were not known, teacher used activities that brought children from their seats to the chalkboard to write. Pupils were also asked to provide responses to questions and did some exercises (writing). (Vapuo DA primary school, Lawra, Upper West Region.)

“The teacher used rhyme to start the lesson with the children. She later introduced the topic/concept on the chalkboard and distributed the TLMs including Milo tin, milk tin, empty chalk boxes, tooth paste boxes, set squares among others on each table for the pupils to work in groups. There was a very cordial interaction between teacher and pupils as they worked in groups”. (Vingving RC Primary School, Jirapa Upper West Region)

6.10 Use of Teaching Learning Materials

Across all five regions the evidence from classroom observation reports indicates that the majority of teachers had not prepared for their lessons and hence did not have any TLMs available. The majority of classrooms observed showed that there were very few cases where teaching and learning materials were used. Also there were very few school/classroom that had a full complement of text books for their school and the vast majority of schools/classrooms visited lacked the basic teaching aids and TLMs required for effective teaching and learning taking place. A few classrooms had teachers’ guides and a few textbooks for pupils. Overall 50% of 386 teachers did not use any form of TLMs or they used TLMs that were not relevant to

the lesson being taught. Another 31% of the 386 used some form of TLM such as pupils' text books and teachers' guide during their lessons. These TLMs did not stimulate any form of active participation among pupils during their lessons. There were a few classrooms where teachers used appropriate teaching and learning materials that stimulated interest and participation among pupils. These 20% of teachers across the five regions demonstrated the ability to improvise and use TLM's that were related to pupils' everyday life and their surroundings.

Table 6.9: Trainees Use of Teaching and Learning Materials

Region	Level of Deprivation	No TLMs used	TLMs not Relevant to Lesson	TLMs relevant to objectives of lesson	TLMs stimulates pupils Participation	TLMs relevant to previous lesson and pupils daily life
Brong Ahafo	Less Deprived	35%	13%	35%	13%	4%
	Deprived	11%	14%	54%	22%	0%
	Extremely Deprived	23%	19%	35%	19%	3%
REGIONAL TOTALS		21%	15%	43%	19%	2%
Northern	Less Deprived	68%	14%	9%	5%	5%
	Deprived	49%	20%	17%	9%	6%
	Extremely Deprived	45%	0%	45%	9%	0%
REGIONAL TOTALS		54%	15%	19%	7%	4%
Upper East	Less Deprived	33%	0%	39%	22%	6%
	Deprived	30%	22%	30%	13%	4%
	Extremely Deprived	67%	2%	17%	7%	7%
REGIONAL TOTALS		49%	7%	25%	12%	6%
Upper West	Less Deprived	33%	10%	33%	14%	10%
	Deprived	34%	17%	37%	7%	5%
	Extremely Deprived	31%	17%	23%	20%	9%
REGIONAL TOTALS		33%	15%	31%	13%	7%
Western	Less Deprived	26%	4%	30%	39%	0%
	Deprived	44%	0%	39%	17%	0%
	Extremely Deprived	33%	0%	17%	33%	17%
REGIONAL TOTALS		34%	2%	32%	30%	2%
OVERALL TOTALS		38%	12%	31%	15%	5%

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

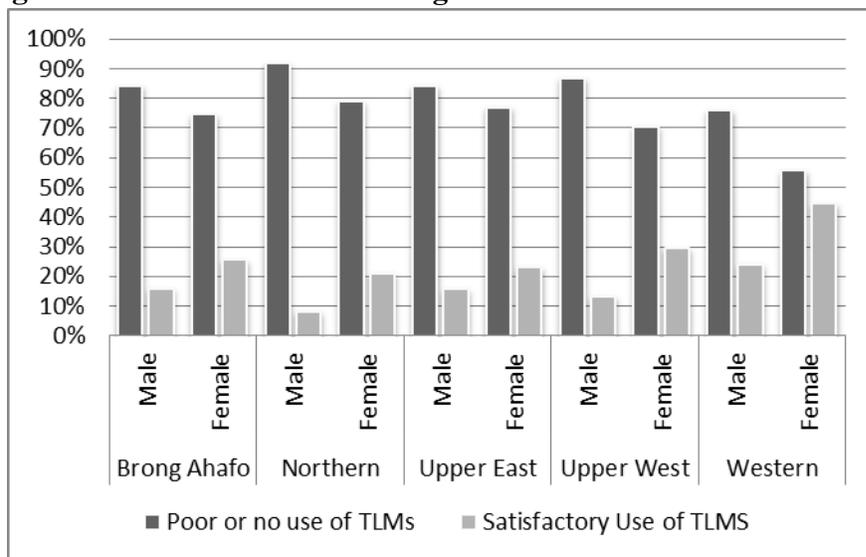
Findings from the lesson observation show that in the Northern and Upper East Regions 30% and 43% of teachers used TLMs during their lessons. Brong Ahafo had the highest proportion of teachers using TLMs during classroom observations. 64% used TLMs such as textbooks, teachers' guide and other form of TLMs in the classroom. The Western and Upper West Regions both had 51% of teachers using TLMs during classroom observations.

With regard to differences in the extent to which TLMs were used according to the level of deprivation of the area where the school is situated, in Brong Ahafo and Northern Regions, there were higher percentages of trainees from less deprived schools (35% and 45%) that did not use any form of TLMs compared to deprived and extremely deprived schools. The situation in the Upper East is different; the region had the highest number of trainees without TLMs. The data shows that 67% of teachers who did not have TLM's were from extremely deprived areas. This supports the assertion that schools in extremely deprived and hard to reach areas were less likely

to receive textbooks and other TLMs from the district capital. In the Upper West and Western Regions, a similar trend appear to take shape as a little above half of the teachers observed who did not have or use any TLM were from deprived schools. Just a little above 50% used some TLMs during their lessons.

Figure 6.1 shows that across all five regions, there are more female trainees using appropriate TLMs during their lessons compared to male trainees.

Figure 6.1: Use of TLM’s among Male and Female UTDBE Trainees



(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

In conclusion, there appears to be a fairly low level of usage of TLMs across all five regions. The majority of teachers still had challenges preparing / improvising TLMs to make their lessons interesting and more participatory. Background information gathered about the levels of resources in schools indicate that this continues to be a challenge; and this may be linked to the school’s proximity to the district capital but can also be attributed to how head teachers are prioritizing spending of the capitation grant. With regard to trainees’ knowledge and understanding of this aspect of classroom practice, in this case as with many others, it is clear that the UTDBE course content so far covered is focused on subject knowledge rather than classroom management skills; and it is therefore probable that trainees who have managed to acquire these skills have received training as part of INSET events at the school, cluster or district level.

6.11 Usage of Questioning by the UTDBE Trainee in the classroom

Use of appropriate questioning can stimulate effective teaching and learning in the classroom. Observations across the five regions show that there was a great deal of low order questioning used by trainees across the classrooms. Over 70% of trainees observed across all five regions demonstrated the practice of asking mainly closed ended and low order questions that do not promote higher order thinking skills among pupils. There were a few classrooms where open ended questions or problem solving activities were used. Overall, Brong Ahafo had the highest

percentage of 30% teachers asking more open ended and intellectually stimulating questions during classroom observations. The Upper West Region had the lowest percentage with 19% of trainees using higher order questioning. Overall, trainees in extremely deprived schools were more likely to ask low order and close ended questions compared to trainees in Less Deprived schools except in the Western and Northern Regions.

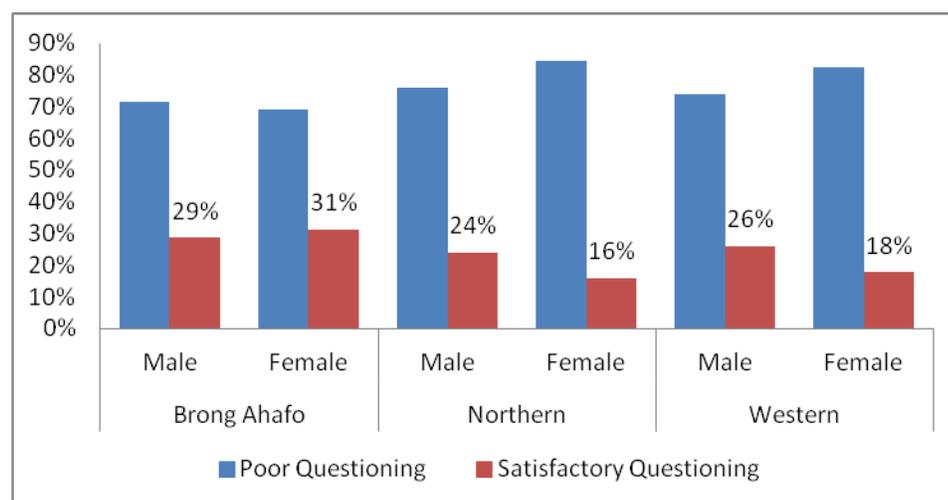
Table 6.10: Trainees’ use of Questioning and Evaluation of Pupils in the Classroom

Region	Level of Deprivation	Low order questions and Choral Responses	Low order questions and Choral Responses %age	Open Ended, Problem Solving and Activity Based.	Open Ended, Problem Solving and Activity Based %age	TOTAL
Brong Ahafo	Less Deprived	15	68%	7	32%	22
	Deprived	25	71%	10	29%	35
	Extremely Deprived	21	70%	9	30%	30
REGIONAL TOTALS		61	70%	26	30%	87
Northern	Less Deprived	19	83%	4	17%	23
	Deprived	28	80%	7	20%	35
	Extremely Deprived	7	64%	4	36%	11
REGIONAL TOTALS		54	78%	15	22%	69
Upper East	Less Deprived	12	67%	6	33%	18
	Deprived	18	78%	5	22%	23
	Extremely Deprived	30	73%	11	27%	41
REGIONAL TOTALS		60	73%	22	27%	82
Upper West	Less Deprived	15	75%	5	25%	20
	Deprived	34	83%	7	17%	41
	Extremely Deprived	30	81%	7	19%	37
REGIONAL TOTALS		79	81%	19	19%	98
Western	Less Deprived	15	68%	7	32%	22
	Deprived	16	94%	1	6%	17
	Extremely Deprived	3	60%	2	40%	5
REGIONAL TOTALS		34	77%	10	23%	44
OVERALL TOTALS		288	76%	92	24%	380

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

Sampled data across three regions show that male UTDBE trainees are more likely to ask high order questions during lessons compared to female UTDBE trainees except the Brong Ahafo Region where there was a slightly higher percentage of females. See figure below.

Figure 6.2: Use of Questioning among Male and Female UTDBE Trainees



(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

The following observations on trainees' use of questioning illustrate the method many teachers were using – that is to say that teachers are making themselves the focus of the learning – teacher asks questions, pupils respond with correct answer, whereas with the use of higher order questions there is a higher expectation for pupils to extend their thinking or problem solving skills. For example the description of the lesson in Nkofinkofi DA Primary School indicates that pupils simply engage in “simple recall”.

“Teacher’s questions were fairly distributed but were basically low order questions. Pupils were not even given the opportunity to work in pairs or in groups. However, they answered teacher’s questions with satisfaction.” (Solinga DA primary School, Upper East Region)

“Since the teacher mainly used question and answer method in the lesson, she wrote several examples of division and invited pupils to answer. It was observed that the same pupils who raised their hands were called to answer. The slow learners were not motivated by the teacher to answer. Only a cross-section of the pupils were answering the questions”. (St Anthony Primary School, Upper West Region)

“Most questions were relatively low order closed questions although once the teacher moved on to asking the children to work out how many halves would come from a number of whole objects and how many whole objects could be made from a given number of halves, the questions were more like application questions and pupils were expected to calculate and demonstrate how they would carry out the calculation” (Zinpen Primary School, Upper West)

“Pupils were not encouraged to ask questions. Lesson was mainly based on lecturing method, therefore, teacher asked only few questions but pupils were reluctant to respond. Class participation was very poor”. (Attobrakrom JHS, Western Region)

“Teacher asks a wide range of questions and pupils provided answers. The questions however were low order questions since largely required pupils to engage in simple recall. It is only one dimensional, i.e questions from teacher and responses from learners. Pupils were not given opportunity to ask questions”. (Nkofinkofi DA Primary School, Western Region)

Low order question were asked throughout lesson choral responses is the norm for the class. Learners worked individually. (Nkoranza DA Primary School, Brong Ahafo Region)

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

6.12 Classroom Management and Control

Classroom management and control was another area trainees were assessed on to measure their ability to control the class while they teach. Classroom management and control include the following indicators:

- Time on task

- Disciplinary practices
- Classroom setting
- Class control
- Teacher's motivation and feedback strategies

Overall findings from the lesson observations reveal that majority of trainees were generally able to maintain order and were able to work within the time allocated for the various lessons. There was evidence, however, of both physical and verbal abuse in the classroom.

The majority of the classrooms observed had pupils all seated in rows and facing the chalk board. There were no special arrangements that encouraged group work or use of activities in the classroom. Feedback among trainees was good. Over 70% of trainees gave positive feedback and encouraged pupils to try again when they failed to give the right responses to questions.

6.13 Classroom Setting and Control among UTDBE Trainees

Trainees were assessed on their ability to control the class while they teach. Findings across the five regions reveal that the majority of trainees had a fairly good control over the class during classroom observations. Overall 24% of UTDBE trainees had difficulty controlling the class during lesson observations. In the Upper West Region 33% of trainees had problems controlling the class, which is the highest proportion of all the regions, Brong Ahafo had the lowest proportion with 8%. (See Table 6.11 for more details). UTDBE trainees from deprived schools were more likely to have challenges with controlling their classrooms across all districts except the Northern and Upper West Regions. The case of the Northern Region is quite different as more trainees from less deprived schools were unable to control their classrooms compared to extremely deprived schools.

Table 6.11: Classroom Control among UTDBE Trainees

Region	Level of Deprivation	Teacher allows pupils to do whatever they want	Teacher constantly orders pupils	Teacher sometimes communicates with pupils to maintain order	Teacher and pupils communicate with each other and ensures good atmosphere.	Pupils cooperate with each other without teacher's control.
Brong Ahafo	Less Deprived	0%	4%	43%	43%	9%
	Deprived	3%	9%	57%	26%	6%
	Extremely Deprived	0%	7%	52%	38%	3%
REGIONAL TOTALS		1%	7%	52%	34%	6%
Northern	Less Deprived	13%	30%	35%	22%	0%
	Deprived	6%	6%	35%	32%	21%
	Extremely Deprived	9%	9%	18%	45%	18%
REGIONAL TOTALS		9%	15%	32%	31%	13%
Upper East	Less Deprived	0%	17%	44%	33%	6%
	Deprived	4%	35%	39%	17%	4%
	Extremely Deprived	0%	31%	51%	15%	3%
REGIONAL TOTALS		1%	29%	46%	20%	4%
Upper West	Less Deprived	0%	20%	35%	35%	10%
	Deprived	7%	24%	32%	32%	5%
	Extremely Deprived	0%	42%	21%	27%	9%
REGIONAL TOTALS		3%	30%	29%	31%	7%

Western	Less Deprived	5%	9%	32%	45%	9%
	Deprived	29%	12%	41%	18%	0%
	Extremely Deprived	0%	17%	17%	50%	17%
REGIONAL TOTALS		13%	11%	33%	36%	7%
OVERALL TOTALS		5%	19%	39%	30%	7%

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

6.14 Classroom Setting

Appropriate classroom setting promotes effective participation among pupils. Findings from the lesson observation reveal that classroom setting was generally satisfactory among UTDBE trainees. Overall 68% of UTDBE trainees had their classrooms arranged and pupils organized before the lesson began. However, only 2% of trainees were observed to arrange their classroom for a variety of activities (group work or other activities) which implies that the other 98% of trainees arranged their classroom according to the standard practice of seating the children in rows of dual desks. The Brong Ahafo Region recorded the highest percentage of UTDBE trainees with the appropriate classroom setting before the beginning of lessons. There were more male UTDBE trainees with satisfactory classroom setting in all regions except the Upper West Region. Please see Table 6.12 below for details.

Table 6.12: Classroom Setting among UTDBE Trainees

Region	Sex	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 classroom for a variety of activities
Brong Ahafo	Male	10%	14%	62%	14%	0%
	Female	9%	17%	48%	26%	0%
REGIONAL TOTALS		9%	16%	55%	20%	0%
Northern	Male	8%	15%	58%	19%	0%
	Female	16%	26%	37%	16%	5%
REGIONAL TOTALS		10%	18%	52%	18%	1%
Upper East	Male	18%	16%	46%	14%	5%
	Female	24%	24%	24%	24%	4%
REGIONAL TOTALS		20%	19%	40%	17%	5%
Upper West	Male	25%	17%	23%	29%	6%
	Female	21%	16%	26%	35%	2%
REGIONAL TOTALS		23%	17%	24%	32%	4%
Western	Male	10%	10%	41%	38%	0%
	Female	12%	12%	29%	47%	0%
REGIONAL TOTALS		11%	11%	37%	41%	0%
OVERALL TOTALS		15%	16%	41%	25%	2%

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

Overall findings from lesson observations reveal that feedback strategies among UTDBE trainees were mostly positive with a few trainees giving poor or negative feedback. 75% of UTDBE trainees gave positive feedback to pupils and encouraged pupils to try harder when they were unable to respond to questions. The following are excerpts of descriptions of lessons made during classroom observations which illustrate the feedback strategies employed by many of the trainees – these include asking the rest of the pupils to clap for pupils or praising the pupil verbally:

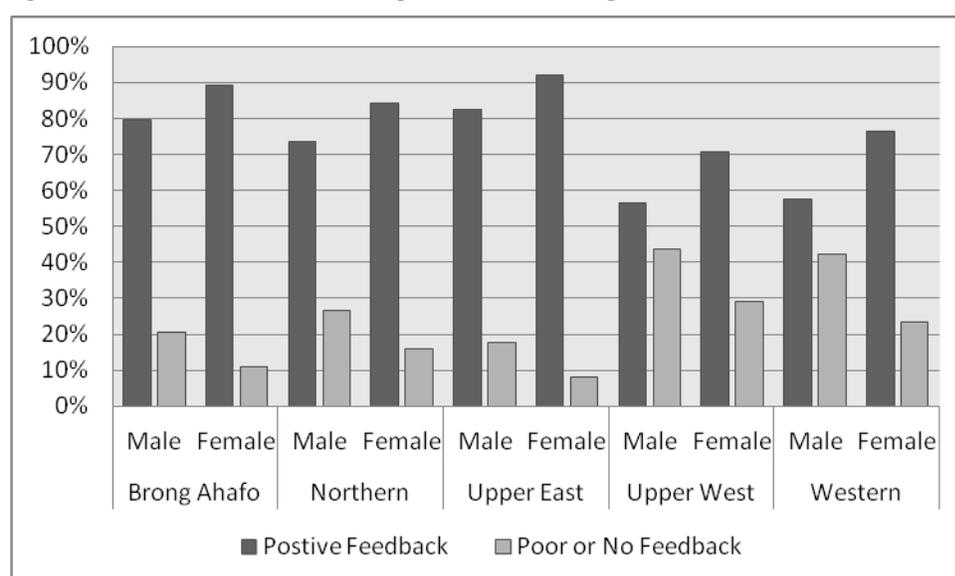
The teacher praises the children who answered questions correctly by repeating the response of the learner and asked the class to clap for him or her. The teacher used more than one approach (Amanten DA Primary, Brong Ahafo, Deprived)

The teacher mostly use hand claps and few praises to students who gave correct responses. He also encourage students who fail to answer to pay attention to the lesson and this motivate reluctant students to also participate.(Gbankoni JHS, Northern, Deprived)

When a pupil answers a question properly, he asks the class to clap. Sometimes he uses phrases like "well done". When there is a wrong answer he encourages pupils to try again.(Yama Marakaz, Northern, Deprived)

Teacher asked pupils to clap hands for deserving students and praised other for their correct responses. Teacher did not use any encouragement to assist the pupils who are reluctant to participate since the class is too large.(Yekoti KG, Upper East, Extremely Deprived)

Figure 6.3: Feedback Strategies Used among Male and Female UTDBE Trainees



(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

Figure 6.3 shows that a higher proportion of female UTDBE trainees were using more positive feedback compared to poor or negative feedback.

Table 6.13: Feedback Strategies among UTDBE Trainees

Region	Level of Deprivation	Positive Feedback Strategies	Positive Feedback Strategies %age	Poor or No Feedback Strategies	Poor or No Feedback Strategies %age	TOTAL
Brong Ahafo	Male	35	80%	9	20%	44
	Female	41	89%	5	11%	46
REGIONAL TOTALS		76	84%	14	16%	90
Northern	Male	36	73%	13	27%	49
	Female	16	84%	3	16%	19
REGIONAL TOTALS		52	76%	16	24%	68
Upper East	Male	47	82%	10	18%	57
	Female	23	92%	2	8%	25

Region	Level of Deprivation	Positive Feedback Strategies	Positive Feedback Strategies %age	Poor or No Feedback Strategies	Poor or No Feedback Strategies %age	TOTAL
REGIONAL TOTALS		70	85%	12	15%	82
Upper West	Male	31	56%	24	44%	55
	Female	29	71%	12	29%	41
REGIONAL TOTALS		60	63%	36	38%	96
Western	Male	15	58%	11	42%	26
	Female	13	76%	4	24%	17
REGIONAL TOTALS		28	65%	15	35%	43
OVERALL TOTALS		286	75%	93	25%	379

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

6.15 Time on Task

The quantity of time spent by teachers in teaching in class contributes significantly to the quality of education. Available evidence suggests that teacher's failure to teach even when in school contributes to the poor performance and falling standards of education in Ghana. This section of the report attempts to assess the extent to which trainees were fully engaged with the task of teaching during the lesson. It further explores the influence of location, gender and longevity trainees have been engaged in teaching and how that affects time on task during lesson delivery.

Overall 90% of UTDBE Trainees across the five sampled regions spent their time engaged in teaching and other learning activities. In the Northern and Western Regions 96% of UTDBE trainees were rated as satisfactory on their use of time during lesson observations. Brong Ahafo recorded 94%, and the Upper East and Upper West had 86% and 85% of Trainees respectively who achieved satisfactory ratings on use of time. In general there were very few trainees who were engaged in activities outside teaching and learning during classroom observations. One can however not rule out the possibility of research effect as a main factor to this performance. There were no marked differences in the performance of this indicator across the three levels of deprivation as illustrated in Table 6.14 below:

Table 6.14: Time on Task among UTDBE Trainees across Regional and Levels of Deprivation

Region	Level of Deprivation	Less than satisfactory use of Time	Less than satisfactory use of Time %age	Satisfactory to Good use of Time	Satisfactory to Good use of Time %age	TOTAL
Brong Ahafo	Less Deprived	2	9%	20	91%	22
	Deprived	2	6%	33	94%	35
	Extremely Deprived	1	3%	30	97%	31
REGIONAL TOTALS		5	6%	83	94%	88
Northern	Less Deprived	1	4%	22	96%	23
	Deprived	1	3%	34	97%	35
	Extremely Deprived	1	9%	10	91%	11
REGIONAL TOTALS		3	4%	66	96%	69
Upper East	Less Deprived	3	17%	15	83%	18

Region	Level of Deprivation	Less than satisfactory use of Time	Less than satisfactory use of Time %age	Satisfactory to Good use of Time	Satisfactory to Good use of Time %age	TOTAL
	Deprived	6	26%	17	74%	23
	Extremely Deprived	3	7%	39	93%	42
REGIONAL TOTALS		12	14%	71	86%	83
Upper West	Less Deprived	5	25%	15	75%	20
	Deprived	7	17%	34	83%	41
	Extremely Deprived	3	8%	34	92%	37
REGIONAL TOTALS		15	15%	83	85%	98
Western	Less Deprived	0	0%	23	100%	23
	Deprived	2	12%	15	88%	17
	Extremely Deprived	0	0%	5	100%	5
REGIONAL TOTALS		2	4%	43	96%	45
OVERALL TOTALS		37	10%	346	90%	383

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

UTDBE trainees' use of time on task is very similar among male and female trainees. Across all five sampled regions, over 90% of both male and female trainees demonstrated satisfactorily to good use of time on task as illustrated in Table 6.15.

Table 6.15: Time on Task across Male and Female UTDBE Trainees

Region	Gender	Less than satisfactory use of Time	Less than satisfactory use of Time	Satisfactory to Good use of Time	Satisfactory to Good use of Time	TOTAL
Brong Ahafo	Male	4	9%	40	91%	44
	Female	1	2%	43	98%	44
REGIONAL TOTALS		5	6%	83	94%	88
Northern	Male	2	4%	48	96%	50
	Female	1	5%	18	95%	19
REGIONAL TOTALS		3	4%	66	96%	69
Upper East	Male	10	18%	47	82%	57
	Female	2	8%	24	92%	26
REGIONAL TOTALS		12	14%	71	86%	83
Upper West	Male	3	5%	52	95%	55
	Female	12	28%	31	72%	43
REGIONAL TOTALS		15	15%	83	85%	98
Western	Male	0	0%	27	100%	27
	Female	2	11%	16	89%	18
REGIONAL TOTALS		2	4%	43	96%	45
OVERALL TOTALS		37	10%	346	90%	383

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

The time on task analysis suggests that only 10% of trainees overall appear to have done anything other than spend the whole time on task and there is no particular trend with regard to years of service. The trend on the time trainees spent on lesson delivery depicts a situation of trainees with more than 1 year and less than 7 years of teaching experience in all the five regions

effectively spending their time on task. Even though most trainees with one year or less of teaching experienced in sample schools taught for the entire lesson they failed to effectively spend their time on task except for trainees in the Upper West and the Western Regions who demonstrated effective use of time with each obtaining 100% and 80% respectively. Trainees with more than seven years of teaching experience in sample schools recorded the lowest rate in terms of effective use of time compared to their counterparts who have taught for six years or less. Overall, trainees with 2 years or 3-6 years of teaching experience effectively utilized time on task and trainees with one year of teaching or with 7 to 10 years of teaching poorly performed in terms of time on task.

Table 6.16: Time on Task by Longevity of Service

Region	Years of Experience	Lesson ran over time		Finished teaching before end of allotted period		Went out of class to fetch something or meet someone		Effective use of time		Teacher in class for whole lesson		TOTAL
Brong Ahafo	1 year	0	0%	0	0%	0	0%	4	40%	6	60%	10
	2 years	0	0%	1	3%	2	5%	25	63%	12	30%	40
	3 to 6 years	1	3%	0	0%	1	3%	24	77%	5	16%	31
	7 to 10 years	0	0%	0	0%	0	0%	1	50%	1	50%	2
	11 to 14 years	0		0		0		0		0		0
REGIONAL TOTALS		1	1%	1	1%	3	4%	54	65%	24	29%	83
Northern	1 year	0	0%	0	0%	0	0%	1	25%	3	75%	4
	2 years	0	0%	0	0%	0	0%	21	75%	7	25%	28
	3 to 6 years	1	3%	1	3%	0	0%	24	83%	3	10%	29
	7 to 10 years	0	0%	0	0%	1	13%	5	63%	2	25%	8
	11 to 14 years	0		0		0		0		0		0
REGIONAL TOTALS		1	1%	1	1%	1	1%	51	74%	15	22%	69
Upper East	1 year	0	0%	0	0%	1	33%	0	0%	2	67%	3
	2 years	1	4%	1	4%	1	4%	12	46%	11	42%	26
	3 to 6 years	4	9%	0	0%	3	6%	24	51%	16	34%	47
	7 to 10 years	1	14%	0	0%	0	0%	2	29%	4	57%	7
	11 to 14 years	0		0		0		0		0		0
REGIONAL TOTALS		6	7%	1	1%	5	6%	38	46%	33	40%	83
Upper West	1 year	0	0%	0	0%	0	0%	4	100%	0	0%	4
	2 years	0	0%	4	9%	4	9%	32	68%	7	15%	47
	3 to 6 years	0	0%	3	8%	3	8%	23	61%	9	24%	38
	7 to 10 years	0	0%	0	0%	0	0%	4	57%	3	43%	7
	11 to 14 years	0	0%	0	0%	0	0%	0	0%	1	100%	1
REGIONAL TOTALS		0	0%	7	7%	7	7%	63	65%	20	21%	97
Western	1 year	0	0%	0	0%	0	0%	4	80%	1	20%	5

Region	Years of Experience	Lesson ran over time		Finished teaching before end of allotted period		Went out of class to fetch something or meet someone		Effective use of time		Teacher in class for whole lesson		TOTAL
	2 years	0	0%	0	0%	0	0%	10	71%	4	29%	14
	3 to 6 years	0	0%	0	0%	1	5%	14	74%	4	21%	19
	7 to 10 years	0	0%	0	0%	0	0%	1	25%	3	75%	4
	11 to 14 years	0	0%	0	0%	1	33%	1	33%	1	33%	3
REGIONAL TOTALS		0	0%	0	0%	2	4%	30	67%	13	29%	45
OVERALL TOTALS		8	2%	10	3%	18	5%	236	63%	105	28%	377

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

6.16 Disciplinary Practices and Control Strategies

Evidence from previous research where classroom observations were carried out (TENI 1) indicates that use of physical punitive strategies, including caning, knocking pupils' heads, kneeling for long periods on hard floors, digging holes, etc are widespread in schools in Ghana. Recent policy change by GES has meant that revised guidance has been included in the most recent head teachers' manuals. However, the use of physical punishment, and caning in particular, has been a central part of customary practice in schools in Ghana and in order to change this, it is necessary that teachers are equipped with a range of alternative strategies for maintaining control in the classroom, disciplining poor behaviour and rewarding good academic performance and good behaviour.

Trainees observed as part of this baseline assessment have so far completed 3 semesters of their course. Over this period, they have covered 3 units specifically focused on educational professional studies – these are: Principles and Practice of Education (EPS 111), Child and Adolescent Development and Learning (EPS 121) and Principles and Methods of Teaching in Basic Schools (EPS 121). In the latter unit the issue of discipline is addressed in a lesson entitled “Maintaining Discipline in the Classroom II”. In this lesson trainees are guided through measures designed to “prevent undesirable behaviour” and “strategies for promoting and maintaining discipline”. Most pertinent to this aspect of trainees' performance assessment is the section of this lesson entitled “Use of punishment” (Section 9.3, p.206). Trainees are given examples of punishments including:

- Soft reprimand
- Loss of points to the groups which the pupil belongs
- Withdrawal of privileges, eg preventing a pupil who likes games to go out and play
- Social isolation, and
- Corporal punishment

With regard to the latter form of punishment trainees are advised that:

“It must however be noted that corporal punishment such as spanking, physical assault, detaining/imprisoning pupil, denying pupil access to food and water for a long time is unacceptable and morally unjustifiable. Teachers ought not to use any of these especially during teaching and learning sessions.” (Principles and Methods of Teaching in Basic Schools (EPS 121), p. 207)

It can therefore be assumed that trainees are aware of the gravity of using corporal punishment and that they have been given some guidance as to the kinds of alternative strategies that can be employed in the classroom.

This section is based on the assessment and description of the kinds of disciplinary strategies trainees used and the extent to which these can be judged to promote positive behaviour in the classroom and create a positive and child friendly learning environment. The following table is based on summaries of the descriptions enumerators gave during classroom observations with particular regard to the disciplinary practices used by trainees. Overall 389 lessons were observed, and of these, enumerators described the disciplinary practices in 377.

As can be seen from the overall total, the majority of classrooms (66%) were deemed to be well behaved classrooms and as such there was no evidence of disciplinary strategies other than those used to maintain pupils’ interest and participation by rewarding evidence of good work, for example, correct responses to teachers’ questions or good performance in reading or some other activity. Within the regions, the number of trainees demonstrating certain behaviours has been disaggregated by gender. In each region, except for the Western Region, it is clear that a higher percentage of male sampled UTDBE trainees are in these well behaved classrooms. This could point to gender as being a factor; however, a closer scrutiny of the background of these classes shows that the majority of the male teachers (around 65%) are in Upper Primary (P4 to P6) or JHS classes. Whereas, the majority of female teachers (81% of observed female trainees) are found in Lower Primary (P1 to P3) and KG classes (KG1 and KG2). It can be readily assumed that younger pupils require a more structured and overt approach to classroom behaviour as they need to be acclimatized to the culture and practice of classroom learning.

Table 6.17: Analysis of Percentages of Trainees’ Placement at Different Levels of the Basic School

Region	Male			Total	Female			Total
	KG & LP	UP	JHS		KG & LP	UP	JHS	
Brong Ahafo Totals	19	24	1	44	44	3	0	47
Brong Ahafo Percentage	43%	55%	2%	100%	94%	6%	0%	100%
Northern Totals	9	22	19	50	13	3	3	19
Northern Percentage	18%	44%	38%	100%	68%	16%	16%	100%
Upper East Totals	26	27	4	57	23	2	1	26
Upper East Percentage	46%	47%	7%	100%	88%	8%	4%	100%
Upper West Totals	20	31	4	55	28	16	0	44
Upper West Percentage	36%	56%	7%	100%	64%	36%	0%	100%
Western Totals	6	16	7	29	16	1	1	18
Western Percentage	21%	55%	24%	100%	89%	6%	6%	100%
OVERALL TOTALS	80	120	35	235	124	25	5	154
OVERALL PERCENTAGES	34%	51%	15%	100%	81%	16%	3%	100%

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

So, rather than gender being a determining factor, other trends among teacher behaviour should be examined. An important factor observed in classrooms described as having good behaviour with no evidence of overt strategies on the part of the teacher is the fact that observers noted the use of praise by the teacher for pupils' responses to questions or the way in which they carried out a particular activity; this points to a situation pertaining in the classrooms where pupils were actively involved in the teaching and learning process, either as part of a general class discussion or activities. The focus on learning in these classrooms means that there was less opportunity or motivation for pupils to become distracted or demonstrate negative behaviours. The "work" culture in the classroom contributes a great deal to the prevention of poor or off-task behaviour in pupils.

Where the female trainees appear to perform differently to their male counterparts is in the instance of classrooms where there is evidence of teachers using positive class control strategies. In the Northern, Upper East and Upper West Regions, there was a higher percentage of female trainees demonstrating positive control strategies. In Brong Ahafo, there was gender parity and in Western Region there was only a small percentage of male trainees who are described as using positive control strategies. Once again, it should be noted that the majority of these female trainees are given responsibility for the younger children in the primary school and therefore a major part of their teaching responsibility is to create a learning environment that guides children to an understanding and appreciation of behaviour that supports the teaching and learning process.

With regard to the more negative aspects of use of disciplinary practices, the overall percentage for the three descriptors indicative of teachers demonstrating no strategies or using intimidating or harmful practices is relatively low. Overall 8% of the trainees are described as demonstrating no class control or disciplinary strategies despite evidence of poor behaviour among pupils, 5% of trainees were described to have used verbal chastisement or to have evinced an intimidating demeanour, and in 3% of classrooms there was evidence of physical punishment where either the teacher or a pupil were hitting pupils with a cane or "knocking" (hitting) students.

Table 6.18: Analysis of Percentages of Trainees' Use of Different Disciplinary Practices by Gender

Region	Gender	Despite poor behaviour in class there is no evidence of class control		Verbal chastisement used eg shouting or insults or non-verbal intimidation - stern or angry demeanour		Physical punishment strategies used to punish poor response or indiscipline eg cane or knocking		Evidence of positive class control strategies		Well behaved class - no evidence of class control strategies other than reward correct responses		TOTAL
Brong Ahafo	Male	1	2%	2	5%	0	0%	12	27%	29	66%	44
	Female	3	7%	3	7%	3	7%	12	27%	23	52%	44
REGIONAL TOTALS		4	5%	5	6%	3	3%	24	27%	52	59%	88
Northern	Male	7	14%	1	2%	0	0%	7	14%	35	70%	50
	Female	2	11%	0	0%	3	16%	5	26%	9	47%	19
REGIONAL TOTALS		9	13%	1	1%	3	4%	12	17%	44	64%	69

Region	Gender	Despite poor behaviour in class there is no evidence of class control		Verbal chastisement used eg shouting or insults or non-verbal intimidation - stern or angry demeanour		Physical punishment strategies used to punish poor response or indiscipline eg cane or knocking		Evidence of positive class control strategies		Well behaved class - no evidence of class control strategies other than reward correct responses		TOTAL
TOTALS												
Upper East	Male	2	4%	4	7%	0	0%	14	25%	36	64%	56
	Female	3	12%	1	4%	0	0%	8	31%	14	54%	26
REGIONAL TOTALS		5	6%	5	6%	0	0%	22	27%	50	61%	82
Upper West	Male	3	6%	3	6%	3	6%	4	7%	41	76%	54
	Female	2	5%	3	8%	1	3%	8	21%	25	64%	39
REGIONAL TOTALS		5	5%	6	6%	4	4%	12	13%	66	71%	93
Western	Male	3	11%	1	4%	0	0%	1	4%	22	81%	27
	Female	3	17%	0	0%	0	0%	0	0%	15	83%	18
REGIONAL TOTALS		6	13%	1	2%	0	0%	1	2%	37	82%	45
OVERALL TOTALS		29	8%	18	5%	10	3%	71	19%	249	66%	377

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

This is more clearly illustrated in the Table 6.19 where the three elements describing teachers' lack of control or use of verbal and physical punishment are totalled and compared against the elements that describe either that teachers are using positive strategies or that the class is well behaved. From these figures it is clear that the majority of trainees (85%) were NOT using negative disciplinary practices. Overall 15% of trainees fell into the three negative categories. In most regions, however there are higher percentages of females than males recorded as falling into the poor discipline strategies element. Close scrutiny of the detailed breakdown of the three kinds of behaviour that fall into this negative category, as in the Table 6.18 shows that it is in the aspect of demonstrating no behaviour strategies where higher percentages of female trainees appear.

Table 6.19: Summary Analysis of Percentages of Trainees' Use of Different Disciplinary Practices by Gender

Region	Sex	Poor Discipline Strategies	Poor Discipline Strategies %age	Satisfactory to Good Discipline Strategies	Satisfactory to Good Discipline Strategies %age	TOTAL
Brong Ahafo	Male	3	7%	41	93%	44
	Female	9	20%	35	80%	44
REGIONAL TOTALS		12	14%	76	86%	88
Northern	Male	8	16%	42	84%	50

Region	Sex	Poor Discipline Strategies	Poor Discipline Strategies %age	Satisfactory to Good Discipline Strategies	Satisfactory to Good Discipline Strategies %age	TOTAL
	Female	5	26%	14	74%	19
REGIONAL TOTALS		13	19%	56	81%	69
Upper East	Male	6	11%	50	89%	56
	Female	4	15%	22	85%	26
REGIONAL TOTALS		10	12%	72	88%	82
Upper West	Male	9	17%	45	83%	54
	Female	6	15%	33	85%	39
REGIONAL TOTALS		15	16%	78	84%	93
Western	Male	4	15%	23	85%	27
	Female	3	17%	15	83%	18
REGIONAL TOTALS		7	16%	38	84%	45
OVERALL TOTALS		57	15%	320	85%	377

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

Again it should be reiterated that because the majority of female teachers are teaching the younger children the issues of behaviour management will be more challenging; trainees who have not yet fully understood or are unable to use good classroom control strategies will find this particularly difficult when teaching younger children. This is further buttressed by an analysis of trainees' behaviour disaggregated by years of experience. As the following table shows, there is a higher percentage of trainees with just one year of teaching experience who fall into the category of using poor discipline strategies.

Table 6.20: Summary Analysis of Percentages of Trainees' Use of Different Disciplinary Practices by Years of Experience

Region	Years of Experience	Poor Discipline Strategies	Poor Discipline Strategies %age	Satisfactory to Good Discipline Strategies	Satisfactory to Good Discipline Strategies %age	TOTAL
Brong Ahafo	1 year	2	22%	7	78%	9
	2 years	7	17%	34	83%	41
	3 to 6 years	3	10%	28	90%	31
	7 to 10 years	0	0%	2	100%	2
	11 to 14 years	0		0		0
REGIONAL TOTALS		12	14%	71	86%	83
Northern	1 year	1	25%	3	75%	4
	2 years	4	14%	24	86%	28
	3 to 6 years	8	28%	21	72%	29
	7 to 10 years	0	0%	8	100%	8
	11 to 14 years	0		0		0
REGIONAL TOTALS		13	19%	56	81%	69

Region	Years of Experience	Poor Discipline Strategies	Poor Discipline Strategies %age	Satisfactory to Good Discipline Strategies	Satisfactory to Good Discipline Strategies %age	TOTAL
Upper East	1 year	1	33%	2	67%	3
	2 years	1	4%	25	96%	26
	3 to 6 years	7	15%	39	85%	46
	7 to 10 years	1	14%	6	86%	7
	11 to 14 years	0		0		0
REGIONAL TOTALS		10	12%	72	88%	82
Upper West	1 year	1	25%	3	75%	4
	2 years	8	18%	36	82%	44
	3 to 6 years	4	11%	32	89%	36
	7 to 10 years	1	14%	6	86%	7
	11 to 14 years	1	100%	0	0%	1
REGIONAL TOTALS		15	16%	77	84%	92
Western	1 year	2	40%	3	60%	5
	2 years	1	7%	13	93%	14
	3 to 6 years	3	16%	16	84%	19
	7 to 10 years	0	0%	4	100%	4
	11 to 14 years	1	33%	2	67%	3
REGIONAL TOTALS		7	16%	38	84%	45
OVERALL TOTALS		57	15%	314	85%	371

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

A more important aspect of the lessons where there was evidence of off-task or poor behaviour is the teaching methodology teachers adopted, which in the majority of these lessons, and particularly where there were high levels of poor behaviour, was more teacher than child-centred. The following examples illustrate this notion:

Excerpts from Classroom Observation Instrument illustrating types of teacher and pupil activity where trainees' use of discipline was less than satisfactory.

Level of Deprivation	Region	District	Gender of Trainee	Class Level	Teacher's Activity	Pupils' Activity	Description of Discipline
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Level of Deprivation	Region	District	Gender of Trainee	Class Level	Teacher's Activity	Pupils' Activity	Description of Discipline
Less Deprived	Northern	West Mamprusi	Male	JHS2	The lesson was generally lectured. Teacher did most of talking. He occasionally asked pupils questions. Usually low order questions. There was no interaction between pupils throughout the lesson.	Pupils sat and listened while the teacher kept talking. He asks a few questions and pupils give response. About 70% of pupils were actively involved in the lesson. Only about 10% were given the opportunity to respond to questions.	Teacher did not use any disciplinary practice. A few pupils walk out and back to class but teacher did not say or do anything, he just continues teaching.
Extremely Deprived	Upper East	Talensi Nabdam	Female	KG2	No evidence of the use of any method. The teacher talked throughout the lesson with pupils doing nothing.	Pupils sat and listened to the teacher doing all the talking. Few of them were called to answer questions.	Most pupils were not concentrating in the lesson. No presence or use of cane. Teacher's voice was moderate and there was no punishment given to any pupil.
Extremely Deprived	Upper East	Talensi Nabdam	Male	P4	The teacher didn't have the skills of teaching that is by using different types methods like activities, role play etc. He used chalk and talk. His interaction with the children was poor.	Children some sleeping on the floor, some talking and others didn't listen to him.	No seating so children were sitting on the bare floor and lack of control of children. He was just messing up his teaching.

Level of Deprivation	Region	District	Gender of Trainee	Class Level	Teacher's Activity	Pupils' Activity	Description of Discipline
Less Deprived	Western	Wassa Amenfi	Male	P6	The lesson was largely lectured with few occasions of questions and answered. However, the teacher introduced the lesson with a demonstration.	Half of the class followed the lesson, attempting to answer some of the questions the teacher posed. Equally half showed disinterest in the lesson and did not concentrate on the lesson. Some of the pupils interjected the colleagues who were responding to questions and neglect others.	The classroom was disorganised. There were several cases of interjections and heckling. Teacher made no effort to maintain discipline in the class. Teacher did not use cane. No sanctions were applied neither were offensive words used on pupils.

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

The general conclusion to be drawn from this analysis is that the majority of trainees are capable of maintaining good order in their classrooms so that a positive learning environment is created. There was little evidence of harsh or punitive methods of discipline and on the whole, teachers' demeanour is positive, warm, friendly or merely neutral, with just a few trainees described as evincing threatening or intimidating body language or behaviour. This finding is, to some extent, buttressed from the evidence of interviews carried out with the pupils from the observed classrooms. There were 84 focal group discussions carried out among pupils from Upper Primary classes across 45 schools. Evidence from these interviews indicates that caning is used by a number of trainees and pupils were particularly unhappy about physical punishment being dealt out for incorrect answers in class. In the interviews, 17 groups described their teacher as using the cane. However, in the majority of the other interviews pupils explicitly described one of the things they like about their teacher as being that the teacher did not use the cane.

Trainees' use of less teacher-centred teaching methods so that pupils are actively involved and some trainees use of positive strategies for teaching and reinforcing positive behaviours in pupils generally has a positive impact on the quality of teaching and learning in the classroom.

6.17 Trainees' Performance with Regard to the Extent they Facilitated Pupils' Participation in the Observed Lesson

As described above, trainees observed as part of this baseline assessment have so far completed 3 semesters of their course. Over this period, they have covered 3 units specifically focused on educational professional studies. In the Principles and Methods of Teaching in Basic Schools

(EPS 121) unit both pupil-centred and teacher-centred teaching methods are discussed according to the kinds of strategies that can be adopted and the relative strengths and weaknesses of these are examined. In Lesson 10 of Unit 3 of this module trainees are taken through “Weaknesses of Teacher-Centred Methods of Teaching” (pp126-128). The authors refer to the work of Professor Jerome Bruner and cite his theory that:

“To instruct someone in a discipline is not a matter of giving him to commit results to mind. Rather, it is to teach him to participate in the process that makes possible the establishment of knowledge.”

This lesson goes on to guide trainees towards an appreciation that if pupils are not actively involved in the learning ... they cannot explore concepts on their own. The onus is therefore on the teacher to not just facilitate the active participation of pupils in whatever is ongoing in the classroom but that pupils should be enabled to become independent learners who are able to “explore on their own”.

The concept of pupil participation therefore hinges on two main factors in the classroom – that pupils are active participants rather than passive receptors of information and that the way a lesson is structured gives pupils the opportunity to learn or consolidate independent learning strategies through “discovery, project work, problem solving, and deductive” activities (Principles and Methods of Teaching in Basic Schools (EPS 121), p54).

The extent to which teachers are able to facilitate pupil participation in a lesson is an important factor when measuring teachers’ performance in the classroom. As part of this assessment, the lesson observation schedule required enumerators to first give a grade based on the following descriptors:

Grading	1	2	3	4	5
Descriptor	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 solving (Teacher initiates inquiry-based learning)	Teacher introduces activities that encourage pupils to apply new knowledge / concepts for their daily life.

Grade 4 descriptor refers to teachers using activities that equip pupils with generic skills. It is generally understood that a generic skill is a skill which can be applied across a variety of subjects, that is to say, a transferable skill; it is what Gagné refers to as "cognitive strategies".

The major kinds of generic skills include thinking skills (such as problem solving techniques); learning strategies (such as creating mnemonics that help with memorization); and metacognitive skills (such as monitoring and revising problem solving techniques or mnemonic-creating techniques). The implication is, therefore, that trainees achieving grades 4 and 5 on this spectrum are not simply teaching content but are also guiding pupils to learn or consolidate higher order thinking and learning skills. Whereas, grades 1 to 3 describe the extent to which pupils are involved in activities on going in the classroom.

An additional requirement for this aspect of trainee assessment required enumerators to describe the level of participation observed in the classroom. The results of enumerators' observations of the 389 lessons are summarized in the following tables. The table below shows the results of this assessment by level of deprivation. This gives an indication of the levels of participation across the different regions but across the five summary indicators used, there does not appear to be a particular trend with regard to trainees' performance. For example for the indicator "Whole Class Actively Involved", the average across Brong Ahafo is 12%, in the classrooms in Less Deprived and Extremely Deprived schools 4% and 3% of teachers fell into this category, whereas those in the deprived schools were 26%.

Table 6.21: Analysis of Levels of Pupil Participation by Level of Deprivation

Region	Level of Deprivation	Whole class actively involved		Most of the class were actively involved		Half of the class actively involved		All or most were passive		Significant number of pupils disengaged		TOTAL
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	
Brong Ahafo	Less Deprived	1	4%	10	43%	6	26%	3	13%	3	13%	23
	Deprived	9	26%	17	49%	8	23%	1	3%	0	0%	35
	Extremely Deprived	1	3%	17	55%	11	35%	1	3%	1	3%	31
REGIONAL TOTALS		11	12%	44	49%	25	28%	5	6%	4	4%	89
Northern	Less Deprived	2	9%	9	39%	6	26%	4	17%	2	9%	23
	Deprived	2	6%	24	69%	4	11%	4	11%	1	3%	35
	Extremely Deprived	1	9%	5	45%	3	27%	2	18%	0	0%	11
REGIONAL TOTALS		5	7%	38	55%	13	19%	10	14%	3	4%	69
Upper East	Less Deprived	5	28%	6	33%	5	28%	1	6%	1	6%	18
	Deprived	2	9%	13	57%	5	22%	2	9%	1	4%	23
	Extremely Deprived	10	24%	6	15%	14	34%	9	22%	2	5%	41
REGIONAL TOTALS		17	21%	25	30%	24	29%	12	15%	4	5%	82
Upper West	Less Deprived	4	20%	9	45%	5	25%	2	10%	0	0%	20
	Deprived	15	37%	7	17%	7	17%	7	17%	5	12%	41
	Extremely Deprived	6	16%	12	32%	6	16%	10	27%	3	8%	37
REGIONAL TOTALS		25	26%	28	29%	18	18%	19	19%	8	8%	98
Western	Less Deprived	11	48%	8	35%	1	4%	3	13%	0	0%	23
	Deprived	4	24%	2	12%	2	12%	4	24%	5	29%	17

Region	Level of Deprivation	Whole class actively involved		Most of the class were actively involved		Half of the class actively involved		All or most were passive		Significant number of pupils disengaged		TOTAL
	Extremely Deprived	3	60%	1	20%	0	0%	1	20%	0	0%	5
REGIONAL TOTALS		18	40%	11	24%	3	7%	8	18%	5	11%	45
OVERALL TOTALS		76	20%	146	38%	83	22%	54	14%	24	6%	383

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

However, the table below amalgamates the Whole Class, Most of the Class and Half the Class into the category of “Satisfactory” and those of “passive” and generally “disengaged” into “Poor”. From this analysis it shows that overall 80% of classes fall into this category – across the different levels of deprivation in each region between 70% and 97% of classes are satisfactory to good. However classrooms in the deprived part of the Western Region demonstrate a much lower percentage than this at 47%.

Table 6.22: Summary Analysis of Levels of Pupil participation by Level of Deprivation

Region	Level of Deprivation	Satisfactory to Good Levels of Participation	Satisfactory to Good Levels of Participation %age	Poor Levels of Participation	Poor Levels of Participation %age	TOTAL
Brong Ahafo	Less Deprived	17	74%	6	26%	23
	Deprived	34	97%	1	3%	35
	Extremely Deprived	29	94%	2	6%	31
REGIONAL TOTALS		80	90%	9	10%	89
Northern	Less Deprived	17	74%	6	26%	23
	Deprived	30	86%	5	14%	35
	Extremely Deprived	9	82%	2	18%	11
REGIONAL TOTALS		56	81%	13	19%	69
Upper East	Less Deprived	16	89%	2	11%	18
	Deprived	20	87%	3	13%	23
	Extremely Deprived	30	73%	11	27%	41
REGIONAL TOTALS		66	80%	16	20%	82
Upper West	Less Deprived	18	90%	2	10%	20
	Deprived	29	71%	12	29%	41
	Extremely Deprived	24	65%	13	35%	37
REGIONAL TOTALS		71	72%	27	28%	98
Western	Less Deprived	20	87%	3	13%	23
	Deprived	8	47%	9	53%	17
	Extremely Deprived	4	80%	1	20%	5

Region	Level of Deprivation	Satisfactory to Good Levels of Participation	Satisfactory to Good Levels of Participation %age	Poor Levels of Participation	Poor Levels of Participation %age	TOTAL
REGIONAL TOTALS		32	71%	13	29%	45
OVERALL TOTALS		305	80%	78	20%	383

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

The two tables that follow show the same data but disaggregated by gender. From the second of these two tables (Summary Analysis of Levels of Participation by Gender), it can be seen that in Brong Ahafo, Northern and Upper West Regions higher percentages of females fall into the satisfactory levels of participation category than males. In Upper East and Western Regions, the reverse is true as there are higher percentages of male trainees in the satisfactory category.

Table 6.23: Analysis of Levels of Pupil Participation by Gender

Region	Sex	Whole class actively involved		Most of the class were actively involved		Half of the class actively involved		All or most were passive		Significant number of pupils disengaged		TOTAL
Brong Ahafo	Male	3	7%	18	41%	16	36%	3	7%	4	9%	44
	Female	8	18%	26	58%	9	20%	2	4%	0	0%	45
REGIONAL TOTALS		11	12%	44	49%	25	28%	5	6%	4	4%	89
Northern	Male	3	6%	25	50%	11	22%	8	16%	3	6%	50
	Female	2	11%	13	68%	2	11%	2	11%	0	0%	19
REGIONAL TOTALS		5	7%	38	55%	13	19%	10	14%	3	4%	69
Upper East	Male	9	16%	22	39%	15	27%	8	14%	2	4%	56
	Female	8	31%	3	12%	9	35%	4	15%	2	8%	26
REGIONAL TOTALS		17	21%	25	30%	24	29%	12	15%	4	5%	82
Upper West	Male	15	27%	13	24%	7	13%	15	27%	5	9%	55
	Female	10	23%	15	35%	11	26%	4	9%	3	7%	43
REGIONAL TOTALS		25	26%	28	29%	18	18%	19	19%	8	8%	98
Western	Male	12	44%	6	22%	2	7%	5	19%	2	7%	27
	Female	6	33%	5	28%	1	6%	3	17%	3	17%	18
REGIONAL TOTALS		18	40%	11	24%	3	7%	8	18%	5	11%	45
OVERALL TOTALS		76	20%	146	38%	83	22%	54	14%	24	6%	383

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

Table 6.24: Summary Analysis of Levels of Pupil Participation by Gender

Region	Sex	Satisfactory to Good Levels of Participation	Satisfactory to Good Levels of Participation %age	Poor Levels of Participation	Poor Levels of Participation %age	TOTAL
Brong Ahafo	Male	37	84%	7	16%	44
	Female	43	96%	2	4%	45

Region	Sex	Satisfactory to Good Levels of Participation	Satisfactory to Good Levels of Participation %age	Poor Levels of Participation	Poor Levels of Participation %age	TOTAL
REGIONAL TOTALS		80	90%	9	10%	89
Northern	Male	39	78%	11	22%	50
	Female	17	89%	2	11%	19
REGIONAL TOTALS		56	81%	13	19%	69
Upper East	Male	46	82%	10	18%	56
	Female	20	77%	6	23%	26
REGIONAL TOTALS		66	80%	16	20%	82
Upper West	Male	35	64%	20	36%	55
	Female	36	84%	7	16%	43
REGIONAL TOTALS		71	72%	27	28%	98
Western	Male	20	74%	7	26%	27
	Female	12	67%	6	33%	18
REGIONAL TOTALS		32	71%	13	29%	45
OVERALL TOTALS		305	80%	78	20%	383

(Source: UTDBE Baseline Assessment Field Data, Instrument 13, 2014)

A breakdown of the percentages of males and females according to their years of experience is shown in the following table. According to this there is a higher percentage of males with longer experience (more than 2 years) in Brong Ahafo, while in all the other regions – Upper East (77%), Western (72%) and Northern (80%), the majority of female trainees have longer than 2 years’ teaching experience. In the Upper West Region the distribution is similar between males and females - 50% of male trainees have more than 2 years’ experience and 58% of females. With regard to male and female performance in facilitating participation in the Northern Region this could be attributed to experience rather than gender, however in Brong Ahafo and the Upper West, there is not such a clear correlation.

6.18 District Education Office Views on the Performance of UTDBE trainees

District Directors interviews report that there has been improvement, though marginal, in the classroom performance among UTDBE trainees as a result of INSETS at school, cluster and District level to equip pupil teachers with requisite teaching techniques. The Directors and their officers affirm that the UTDBE programme has deepened knowledge and experience already acquired by trainees when they were first engaged as pupil teachers. Consequently there has been improvement in their classroom performance, in lesson notes preparation and delivery as well as classroom management. The Directors and Frontline Officers affirm that before the UTDBE programme, the trainees (those engaged to teach as pupil teachers) were not able to plan and prepare acceptable lesson notes. Many of them could not differentiate between core points and Teacher–Learner activities. They did not understand the concept of lesson objectives and were

incapable of setting specific, realistic achievable and measurable objectives within the time allotted for a subject period or a lesson. They were also not aware of the importance and the strategic use of Relevant Previous Knowledge (RPK) of their pupils, on which new concepts can be taught. They found it very difficult to break down major topics into sub components for ease of teaching and learning.

The Circuit Supervisors and Frontline Deputy Directors report that as a result of the UTDBE programme a reasonable number of trainees have acquired skills of handling lesson notes planning and preparation. They, however, argue that they are not as skilful as the trained teachers. Most of them have arrears of lesson notes preparation.

Another area where slight improvement has been observed is lesson delivery. Circuit Supervisors interviewed reported that lesson introduction was a big challenge to the trainees before the UTDBE programme. They often resorted to inappropriate lesson introduction to capture the imagination of their pupils. They were also not aware of the effective deployment of generic skills for ease of teaching and learning. They could not identify relevant teaching aids or TLMs to be deployed in class to facilitate teaching and learning. They were not aware of using various methods of teaching and differential learner's needs were not being met. The Circuit Supervisors report that the training at CoE, coupled with INSETS, have to some extent addressed their deficiencies. The trainees are aware of various techniques of teaching but their application is far from the ideal. Most of them know about the concepts of child-centred approach, gender sensitivity and classroom management in lesson delivery, but few of them practice them as a result of difficulties experienced in their application. Some of them effectively use various types of questioning and RPK to introduce their lessons. They have gradually acquired facilitating skills on which they can build or improve. Such group of trainees have woven facilitation skills into their teaching. Most of the trainees find comfort in using lecture method in their teaching.

A considerable number of trainees, as revealed by the Circuit Supervisors, need improvement in their communication skills. They report that the trainees are able to communicate effectively in local language/dialect (L1) particularly those handling lower primary but their communication in English seems to be a challenge. Comparatively the trained teachers appear to be very effective in using English as a medium of instruction and the local language/dialect if they are natives of the communities where their schools are located. The Circuit Supervisors report that classroom management by trainees has witnessed a remarkable change. Before the UTDBE programme, the trainees resorted to command order mixed with corporal punishment to control their classes. Few trainees as well as trained teachers observed during the school visits by researcher still deploy these punitive methods to control their classes. However the Circuit Supervisor report that trainees often resort to pupil-activity based method and sitting arrangement to control their classes. In the case of trained teachers, Circuit Supervisors report that various child-centred techniques are deployed to ensure successful lesson delivery.

Circuit Supervisors are of the view that trainees are skilful in the use of local language/dialect to deliver their lessons particularly at the lower primary and this has positive effect on the learning abilities of pupils. They also hold the view that they need to work very hard to improve quality of their lesson notes. Much work will have to done in their acquisition and application of various

skills in teaching methods. Circuit Supervisors interviewed report that in spite of the deficiencies in the classroom performance of the trainees, their presence in the classroom is gradually impacting positively on the pupil learning abilities. Circuit Supervisors in Talensi-Nabdam and Bongo Districts report that as a result of the UTDBE programme, trainees have acquired some knowledge in pedagogy and content in subject areas for effective lesson delivery. Concepts learned are being translated into their teaching practice though not as ideal as expected. Wassa Amenfi West Circuit Supervisors also contend that at least rudimentary teaching skills learned at CoEs are being applied to their teaching. Circuit Supervisors in other Districts dwell on continuous classroom pupil engagement as a result of the presence of trainees. The Circuit Supervisors contend that trainees' engagement and training have slightly improved quality of teaching in the schools. The effective use of local language/dialect (L1) to teach pupils in lower primary has had a significant impact on learning.

Conclusions

The general conclusion to be made from the analysis of the lesson observations and views drawn from officers at the District Education Offices is that trainees are on the whole performing satisfactorily across several areas of the lesson observation. These are: subject content knowledge; language of instruction; lesson structure with regard to introductory activities and using questions to improve participation; and classroom management skills associated with use of praise. The District Officers contend that trainees are better able to prepare lesson notes than before but as many lessons are not up to date, this is difficult to assess.

As has been described, the majority of the course content the UTDBE trainees have so far covered is related to subject content knowledge with just a few modules focused on pedagogy. This baseline assessment of trainees' teaching skills demonstrates this. Further assessments of trainees' classroom practice as they progress through the UTDBE course are expected to show a development in the acquisition of higher order pedagogical skills so that strategies and methods are more child-centred and that trainees are less likely to fall back on "lecture method".

Chapter 7: Support, Retention and Staying Power of UTDBE Trainees Related to Characteristics and Context Factors

7.1 Introduction

This chapter of the Baseline Study reviews findings related to support, retention and staying power of UTDBE trainees' in relation to characteristics and context factors. The assessment of the support received by the UTDBE trainees were reviewed in relation to how they are supported by the District Education Office as a whole, with specific reference to how they are supported by the UTDBE Programme Coordinators and Circuit Supervisors. At the school level, support received by the UTDBE trainees were assessed in relation to how the Head teachers and other teachers, especially the trained teachers, support trainees in areas such as lesson notes preparation and delivery, financial support and addressing trainees concerns in relation to difficult subjects and topics in the course of their programme. While at the community level the study looked at how these UTDBE trainees are supported by the SMC/PTA as well as community members. This chapter also bring to light the factors and conditions that tend to either promote or hinder UTDBE trainees' teacher retention and staying power in relation to their characteristics and context factors. It explored how the UTDBE programme is going to impact on teacher retention and staying power in rural areas.

7.2 Support Received by UTDBE Trainees in the Course of their Training

The UTDBE trainees are supported along the course of their training to better equip them with the needed skills and experience as well as make it easy for them to successfully complete their training. In all a total of 407 UTDBE trainees were interviewed across the 9 districts in 5 regions of the country. Interviews with the trainees revealed that they receive both institutional and individual support. The support received by these trainees ranges from the district level by the district education office, the school level by the head teachers and their colleagues, professional teachers and at the community level by the SMC/PTA. At the district level, the support to these UTDBE trainees in the course of their training comes in the form of either the district GES officials such as the Circuit Supervisors and UTDBE Coordinators supervising trainee teachers at their various schools to observe how they teach and if there is the need make recommendations to trainees to improve upon their lesson preparation and delivery. Other forms of support UTDBE trainees receive from the DEO across the level of deprivation and also regions were the organisation of the weekly cluster meetings at the district level and the organisation of Cluster Based INSETs for all teachers. At the school level, UTDBE trainees said they received support from both their head teachers and other colleague teachers. Interviews with the head teacher revealed that trainees receive support on lesson notes preparation and delivery, teaching methodology, classroom management and correcting them when the need arises; and that the UTDBE trainees also benefit from the organisation of School Based INSETs by the Head teachers. Interviews with the trainees revealed that, in some cases, some trainees are supported financially by their Head teachers when they are about to go for the face to face at the colleges. The Head teachers sometimes organize School Based INSETs to update and also refresh trainees knowledge on lesson notes preparation and delivery, teaching methodology and classroom

management. The trainees further reported that their colleague teachers who are trained teachers support them when the need arises through guiding them to prepare their lesson notes, as well as on how to teach difficult subjects and topics.

7.3 Support Received by UTDBE Trainees from DEOs, Head Teachers and Colleague Teachers

Data collected from District Education Office in all the 9 sample districts for this study revealed that the District Education Officers and Head teachers provide professional support to the trainees to sustain their interest in choosing teaching as a career and to go through the programme successfully. Interviews with Deputy Directors reveal that Circuit Supervisors visit the schools where trainees are teaching. They are observed in the classroom and have appraisal meetings with the trainees to highlight the strengths and weaknesses of the trainees. The Circuit Supervisors further provide suggestions to address the challenges of the trainee during the appraisal meeting. In some cases, as found in Bongo and Lawra Districts, demonstration lessons are given to trainees on a regular basis. It is worth stating that, as a result of the appraisals conducted, DEOs are reported to have organized School Based Inset (SBI and Cluster Based Inset (CBI) especially when common problem(s) is or are identified among trainees. Trainees' lesson notes are also vetted to identify areas of concern for address. In Nkoranza North for instance, it was reported that Circuit Supervisors organize tutorials for trainees after residential face to face sessions in the CoEs to facilitate the learning of trainees.

Interviews with frontline staff or Deputy Directors revealed that at the school level, the Head teachers have been tasked to support the trainees by guiding them in the preparation of lesson notes, teaching methodology and lesson delivery. In the Talensi-Nabdum district for instance, the Director reports that Head teachers have been trained purposely to mentor their teachers, particularly trainees. Head teachers are expected to vet lesson notes of teachers and to provide suggestions. This is also extended to the trainees. Head teachers identify their shortcomings for address. Demonstration lessons are sometimes provided and SBI is also conducted to address challenges being experienced in teaching certain subjects, planning and preparation of lesson notes. In Lawra, trainees are given separate specialized INSET on lesson notes planning preparation and delivery as well as classroom management. In all the districts, UTDBE Coordinators have been appointed to supervise and monitor the trainees' performance and implementation of the UTDBE programme. Coordinators visit the CoEs to monitor course and trainees attendance as well as help in addressing any challenges identified with the trainees from that particular district. This is an indication that the trainees are supported by the district coordinators throughout the phase of the programme. Furthermore, the DEOs are mandated to see to the efficient and effective organization of cluster meetings where educational experts are invited to give tutorials at an agreed venue in the district to supplement what has been taught at the CoEs.

Northern Region

The findings from the Northern region support assertions that the DEOs, and UTDBE coordinators provide support for trainees. Among the trainees in the less deprived areas in the **Northern Region**, for instance, of the 19 trainees who stated they had received some form of

support, 35% indicated having received DEO support, 8% received SBIs, 38% received support from the Head teacher and 15% received support from colleague teachers, while 7 trainees said they were not receiving any form of support.

Out of a total of 36 UTDBE trainees interviewed in deprived communities 50% were supported by DEO, 8% received CBIs, 3% received SBI, 42% received Head teacher support, and 19% received support from their colleague teachers. In addition, 20 trainees out of the 27 trainees interviewed from extremely deprived communities revealed that they receive various forms of support while the remaining 7 trainees said they have not had any support. Among the 20 trainees who do receive support, 41% said they received support from their Head teachers, and 15% said they received support from their colleague teachers which was in the form of guidance in lesson notes preparation, lesson delivery and tutorials on subjects and topics they found difficult teaching. Furthermore, 7 trainees, (26%) who indicated they were receiving support, said their support was from the DEOs through Circuit Supervisors' visits to their schools to observe how they were teaching and correct them when they were not teaching well and the organisation of the weekly cluster meetings for UTDBE trainees. Two of the trainees which represent 7 % and also 1 trainee 4% said the support they received came in the form of CBIs and SBIs respectively.

Upper East Region

In the **Upper East Region**, out of the 15 UTDBE trainees interviewed in less deprived communities, 33% indicated they received support from the DEO in the form of Circuit Supervisor supervision of their teaching at school, another 33% indicated they received support from their Head teachers while the remaining 33% acknowledged receiving SBIs. Twenty-seven percent (27%) and 13% trainees indicated they have received support from their colleague teachers and also through CBIs and 3 trainees reported they have had no support. In deprived communities, out of the total of 25 trainees interviewed, 3 trainees gave no indication of receiving any kind of support, the other 22 trainees attested to the fact that they have received support from the DEO, their Head teachers, colleague teachers and also through CBIs and SBIs. Of that number, 36% said they received support from the DEOs, 28% said they were supported by colleague teachers and 52% said they have received support from their Head teachers. With regard to the trainees referred to above who are supported through the organisation of CBIs and SBIs, 4 trainees said they were supported through SBIs and 2 trainees said they were supported through CBIs and the remaining 3 trainees said they have not received any support from the 4 designated sources. Again 37 trainees out of a total of 44 trainees interviewed in the extremely deprived communities in the Upper East region said they have received support from both DEO, Head teachers, colleague teachers and also had support in the form of CBIs and SBIs. Out of this number, as many as 24 trainees representing 55% said their Head teachers supported them most of the time. Another 15 trainees (34%) said the DEOs supported them in diverse ways as UTDBE trainees. On the part of support received from colleague teachers, 11 trainees (25%) indicated the support they received as UTDBE trainees came from colleague teachers. With regard to trainees being supported through the organisation of CBIs and SBIs, 6 trainees (14%) and 2 trainees (5%) said the support they received came in the form of SBIs and CBIs respectively. The remaining 7 trainees interviewed said they have not received any form of support from the 4 designated sources.

Upper West Region

Of the 18 trainees interviewed in the less deprived part of the **Upper West Region**, 8 revealed that the DEO, Head teachers and colleague teachers were supporting them and they also received CBIs and SBIs. The majority of the trainees (10 – 56%) who were in these less deprived communities claimed they have never received any support. Among the 8 trainees who said they were receiving support, 6 trainees representing 33% said they were supported by their Head teachers, 2 trainees (11%) indicated they were supported by colleague teachers and 1 trainee (6%) had DEO support. The other 3 trainees said their support came in the form of CBIs and SBIs, with 2 trainees (11%) receiving SBIs and 1 trainee received CBIs. In deprived communities of the Upper West region, 19 trainees out of a total of 32 said they were receiving support from DEO, Head teachers, colleague teachers and sometimes SBIs and CBIs which was helping them develop as teachers to bring about quality teaching and learning.

The remaining 13 trainees interviewed in the Upper West Region said they were not aware of any form of support from DEOs, Head teachers or colleague teachers. Out of the total of 19 trainees who said they received support, 11 trainees representing 34% said the support they received was from the Head teachers, 8 trainees (25%) said they were being supported by colleague teachers who were professionally trained teachers in lesson notes preparation and delivery and 5 trainees (16%) indicated they have received support from the DEOs, with only 2 trainees (6%) getting SBIs. In the extremely deprived communities, out of a total of 45 interviewed, 28 trainees indicated support from CBIs and SBIs as well as general supervision and guidance from the DEOs, Head teachers and their colleague teachers. The rest of the trainees totalling 17 reported receiving no support. A total of 13 trainees (29%) out of the 28 trainees who indicated they have received support of some form said they were being supported by the Head teachers, 8 representing 18% received support from colleague teachers and 6 trainees (13%) said the support received so far was coming from the DEOs. Furthermore, as many as 10 trainees (22%) said they have received support in the form of SBIs, while only 4 trainees (9%) indicated they received CBIs.

Brong Ahafo Region

Interviews with the UTDBE trainees in less deprived communities of the **Brong Ahafo Region** revealed that 18 trainees out of a total of 22 trainees indicated they have received support from DEO, Head teachers and colleague teachers, as well as participated in CBIs and SBIs while pursuing their course, while the remaining 4 trainees indicated they have not received any support. On the other hand, out of a total of 41 trainees interviewed in deprived communities, 32 trainees stated they have received support with 17% receiving CBIs, 15% said they received SBIs and 39% said they receive guidance on how to prepare lesson notes and delivery from both colleagues and the Head teachers, while 24% receive support from their colleagues who are trained teachers. 49% said they have received support from the DEO, but the remaining 9 trainees have not received any support. In extremely deprived communities, 23 trainees out of the 29 trainees said they have received support in the course of their training while 15 trainees representing 52% of the total interviewed in extremely deprived communities said they have received support from the DEO. Also 13 trainees (45%) and 13 trainees (45%) all said they received support from Head teachers and colleague teachers respectively, while only 2 trainees

7% and 1 trainee 3% reported to have received support in the form of CBIs and SBIs respectively. The remaining 6 trainees indicated that they have not received any support at all.

Western Region

In the **Western Region**, UTDBE trainees interviewed revealed varied responses which point to the fact that the UTDBE trainees received support while pursuing their course. A total of 23 trainees were interviewed in the less deprived communities. Out of this, 15 trainees could affirm that they have received support while undertaking their training in the district. Out of this number, 8 trainees each representing 35% said they have received support from the DEO and colleague teachers respectively. Also 5 trainees representing 22% as well as 2 trainees (9%) and another 2 trainees (9%) all said they received support from Head teachers and training in the form of CBIs and SBIs respectively. The remaining 8 trainees interviewed said they have not received any form of support so far in the course of their training. An appreciable number of trainees interviewed in deprived communities indicated they have received support as UTDBE trainees in the Wassa Amenfi West district of the Western region. Out of a total of 18 trainees interviewed, 12 trainees with 6 trainees representing 33% said they have received support from the DEO. Five trainees (28%) said it was their Head teachers who supported them in lesson preparation and sometimes financially. Also 3 trainees (17%) and 4 trainees (22%) all said they have received support in the form of CBIs and SBIs respectively. The other 6 trainees said they have not received any support in the course of their training in the district. Six trainees were interviewed in the extremely deprived communities, 4 of whom indicated receiving DEO support while the remaining 2 hadn't. Out of the 4 trainees who said they have received support, 3 trainees constituting about 50% said they were being supported by the DEO in the organisation of the weekly cluster meetings and visitation to the college by the District Director of Education and the UTDBE Coordinator. Also 2 trainees were being supported by their Head teachers in lesson notes preparation and delivery and also advice. One trainee (17%) said they have benefited a number of times through CBIs and SBIs respectively. The following are few excerpts by the UTDBE Trainees to validate the assertion being made.

Deprivation Level	Interview with UTDBE Trainees Responses
Less Deprived	<p><i>Circuit Supervisor organizes cluster meetings for us. At times some of my colleagues do give me hand-outs in relationship to the programme I am offering". Interview with UTDBE Trainee, Gonukrom DA JHS. Less deprived community. Wassa Amenfi West district, Western region.</i></p> <p><i>"I receive support from the head teacher in terms of food items. My colleagues in the school sometimes assist me financially when I am going back to school". Interview with UTDBE Trainee, Pwalugu DA Primary School. Less deprived community. Talensi-Nabdam district, Upper East region.</i></p> <p><i>"In the class I am supported by another teacher. During face to face, District Education Officers advise us. No financial support from head teacher or District Education Officers" Interview with UTDBE Trainee, Atebubu EA Primary School. Less deprived community. Atebubu North</i></p>

	<p><i>district, Brong Ahafo region.</i></p> <p><i>“Colleagues help me a lot in my studies. Head teacher organise in-service training. DEO organised SBIS for us”. Interview with UTDBE Trainee, Siiri DA Primary School. Less deprived community. Jirapa district, Upper West region.</i></p>
Deprived	<p><i>“At the district level, the officers normally advise us to be serious with our studies, my Head teacher also motivate me sometimes with some money”. Interview with UTDBE Trainee, Nakpanduri Presby JHS. Deprived community. Bunkpurugu Yunyoo district, Northern region.</i></p> <p><i>“Colleagues - Sometimes invite my colleague teachers to assist me in difficult topics. GES office - In-service training. Head Teacher- help in lesson notes preparation” Interview with UTDBE Trainee, Boama DA Primary School. Deprived community. Nkoranza North district, Brong Ahafo region.</i></p> <p><i>“The head teacher has helped me a lot. He showed me how to write lesson notes and advises me how to handle children and explain clearly. The circuit supervisor has observed two lessons and he showed me how to teach children how to deal with remainders when doing division”. Interview with UTDBE Trainee, Gbare DA Primary School. Deprived community. Bongo district, Upper West region.</i></p>
Extremely Deprived	<p><i>“My Head teacher was helping on how to prepare lesson notes and guide me on teaching methodologies. He sometimes supports me with money”. Interview with UTDBE Trainee, Zendaagan DA Primary School. Extremely deprived community. Lawra district, Upper West region.</i></p> <p><i>“Wherever I have a problem with my lesson notes preparation lesson delivery and other things I consult colleagues for support. I also consult the Head teacher for support if I have any problem with my lesson notes. We at time consult some officers in the DEO to explain some of the topic in the modules for us to have a better understanding”. Interview with UTDBE Trainee, Naylorigo DA Primary School. Extremely deprived community. Bongo district, Upper East region.</i></p> <p><i>“Both district and school base in-service training have been organised for about 6 times in 3 years”. Interview with UTDBE Trainee, Jadema DA Primary School. Extremely deprived community. West Mamprusi district, Northern region.</i></p> <p><i>“The District Education Officers organise tutorials or cluster meetings and workshops for us. They also supervise and monitor us in our various schools and also when we are at the COE”. Interview with UTDBE Trainee, Atebubu St. Patrick RC Primary School. Extremely deprived</i></p>

community. Atebubu Amanten district, Brong Ahafo region..

Source: Field Data, Instrument 14: Interview with UTDBE Trainee, Q39.

Table 7.1 shows the general overview of trainees' responses to the question about support they are given. Of the 407 trainees interviewed 110 (27%) indicated that they have received no support. With regards to the remaining 297, 134 (33%) described receiving support from District Education Office (this translates as the cluster meetings organised to prepare trainees for vacation face to face sessions and visits by Circuit Supervisors). About a quarter of (24%) stated that they get support from colleagues and 40% indicated that their head teachers also gave them guidance with issues such as lesson notes preparation and handling difficult topics. Smaller numbers indicated that they received training in the form of School or Cluster Based In-service training.

Table 7.1: Trainees Who Receive Differing Levels of Support across the Districts: Data Analysis of Instrument 14: Interview with UTDBE Trainees, Q39.

Region	Level of Deprivation	DEO		CBI		SBI		HT		Colleagues		Number of Trainees who receive some form of support	Number of Trainee who receive no support	Total Number of Trainees
Northern	Less Deprived	9	35%	0	0%	2	8%	10	38%	4	15%	19	7	26
Northern	Deprived	18	50%	3	8%	1	3%	15	42%	7	19%	28	8	36
Northern	Extremely Deprived	7	26%	2	7%	1	4%	11	41%	4	15%	20	7	27
Upper East	Less Deprived	5	33%	2	13%	5	33%	5	33%	4	27%	12	3	15
Upper East	Deprived	9	36%	2	8%	4	16%	13	52%	7	28%	22	3	25
Upper East	Extremely Deprived	15	34%	2	5%	6	14%	24	55%	11	25%	37	7	44
Upper West	Less Deprived	1	6%	1	6%	2	11%	6	33%	2	11%	8	10	18
Upper West	Deprived	5	16%	0	0%	2	6%	11	34%	8	25%	19	13	32
Upper West	Extremely Deprived	6	13%	4	9%	10	22%	13	29%	8	18%	28	17	45
Brong Ahafo	Less Deprived	7	32%	1	5%	1	5%	11	50%	13	59%	18	4	22
Brong Ahafo	Deprived	20	49%	7	17%	6	15%	16	39%	10	24%	32	9	41
Brong Ahafo	Extremely Deprived	15	52%	2	7%	1	3%	13	45%	13	45%	23	6	29

Region	Level of Deprivation	DEO		CBI		SBI		HT		Colleagues		Number of Trainees who receive some form of support	Number of Trainee who receive no support	Total Number of Trainees
Western	Less Deprived	8	35%	2	9%	2	9%	5	22%	8	35%	15	8	23
Western	Deprived	6	33%	3	17%	4	22%	5	28%	0	0%	12	6	18
Western	Extremely Deprived	3	50%	1	17%	1	17%	2	33%	0	0%	4	2	6
Total		134	33%	32	8%	48	12%	160	39%	99	24%	297	110	407

Source: Field Data, Instrument 14: Interview with UTDBE Trainee, Q39.

7.4 SMC/PTA Support to UTDBE Trainees and Other Teachers

FDGs with the SMC/PTA in some communities revealed that they initiate support to teachers especially the UTDBE trainees and community service volunteers who are helping to enhance the quality of teaching and learning in the deprived and extremely deprived communities. Such support by communities included: free decent accommodation, farmlands for teachers to farm as well as providing free labour to till the lands for the teachers. In some cases some 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 most common intervention adopted by the communities visited is the paying of regular visits especially the SMC/PTA executives to interact with teachers in the schools and to have a first-hand situation of the school. Although SMC/PTAs across the levels of deprivation said they supported trainees, community support to trainees was most pronounced in the extremely deprived and deprived communities where SMC/PTAs were finding it difficult to attract teachers who were not natives of the community. Below are a few excerpts by the SMC/PTA Focal Group Interview to validate the assertion being made above.

Deprivation Level	FGD with SMC/PTAs Responses
Less Deprived	<p><i>“The PTA, often come to the school to visit and when we have meeting we also, interact with them to let them know that, if they are (PTA) always if the teachers need support”. FGD with SMC/PTA, Atebubu EA Primary School. Less deprived community. Atebubu Amanten district, Brong Ahafo region.</i></p> <p><i>“We used to contribute small monies for them every term”. FGD with SMC/PTA, Nasiria EA Primary School. Less deprived community. West Mamprusi district, Northern region.</i></p>
Deprived	<p><i>“Help with accommodation. Provide food to some teachers and appeal to GES for postings”. FGD with SMC/PTA, Timiabu DA Primary School.</i></p>

	<p><i>Deprived community. Atebubu Amanten district, Brong Ahafo region.</i></p> <p><i>“The community contributes food stuff to motivate teachers, we provide them free accommodation”. FGD with SMC/PTA, Zua DA Primary School. Deprived community. West Mamprusi district, Northern region.</i></p> <p><i>“The same PTA members contributed some money which we use in supporting the teachers who are not on salary with GH 40.00 a month for their subsistence”. FGD with SMC/PTA, Goziri DA Primary School. Deprived community. Lawra district, Upper West region.</i></p> <p><i>“Both the SMC and PTA contribute money on a monthly basis which they give to teachers together with foodstuffs to encourage them to work hard and increase their interest in teaching”. FGD with SMC/PTA, Bonsie DA JHS. Deprived community. Wassa Amenfi West district, Western region.</i></p>
Extremely Deprived	<p><i>“We try to co-operate with them -we sit in the school and know the challenge, they face to improve the learning of the children. Volunteer teachers without salary. We have agreed to contribute something because they are doing without payment. Every parent should contribute 50 pesewas a week or GH 2 a month. But many parents say they cannot afford to give this money. We are doing it for the JHS”. FGD with SMC/PTA, Zinpen DA Primary School. Extremely Deprived community. Jirapa district, Upper West region.</i></p> <p><i>“Institutionalization of awards scheme. Assist in accommodation and visitation. FGD with SMC/PTA, Fiema Anglican Primary School. Extremely Deprived community. Atebubu Amanten district, Brong Ahafo region.</i></p>

Source: Field Data, Instrument 17: FGD with SMC/PTA, Q16.

7.5 Factors Affecting the UTDBE Performance at the School Level: Head Teacher Leadership and Mentorship

The five field teams observed and recorded the general school culture and behaviour especially in relation to indicators of head teachers’ management (i.e. presence in the school, punctuality and visits to classrooms to monitor teacher presence) during their first few hours at the school. This section describes the key findings across the 197 schools visited.

Head Teacher Punctuality

Head teacher punctuality was assessed using the school observation instrument. The teachers were not informed of the research teams' arrival in order to prevent prompting. Teachers' punctuality was assessed using a standardized school observation instrument which catered for the number of teachers present at the time of arrival. It was assumed that teachers would begin reporting to school from 7 am ahead of start of lessons at 8am and so the research team arrived within that time.

Table 7.2 shows the number of schools where head teachers were either present or absent at the time of the research teams' arrival. 'Yes' indicates that head teachers were present and 'No' indicates that head teachers either reported late or absented themselves from school that day.

Table 7.2: shows the summary of data collected about head teacher presence at the time of research teams' arrival, just over half (56%) of heads were actually present in the school.

Table 7.2: Number of Schools with Head Teachers Present on Arrival of Research Team by Region and Deprivation Levels

Region	Deprivation Level	Yes	Percentage	No	Percentage	Total
Brong Ahafo	Less Deprived	3	50%	3	50%	6
	Deprived	15	94%	1	6%	16
	Extremely Deprived	10	83%	2	17%	12
Sub Total		28	82%	6	18%	34
Northern	Less Deprived	7	64%	4	36%	11
	Deprived	8	57%	6	43%	14
	Extremely Deprived	7	78%	2	22%	9
Sub Total		22	65%	12	35%	34
Upper East	Less Deprived	4	50%	4	50%	8
	Deprived	5	42%	7	58%	12
	Extremely Deprived	14	67%	7	33%	21
Sub Total		23	56%	18	44%	41
Upper West	Less Deprived	3	43%	4	57%	7
	Deprived	3	21%	11	79%	14
	Extremely Deprived	2	13%	13	87%	15
Sub Total		8	22%	28	78%	36
Western	Less Deprived	6	60%	4	40%	10
	Deprived	6	60%	4	40%	10
	Extremely Deprived	2	50%	2	50%	4
Sub Total		14	58%	10	42%	24
Overall Total		95	56%	74	44%	169

(Source: Instrument 12, School Observation)

This table implies that 50% of head teachers in less deprived schools, 94% in deprived rural area schools and 83% in extremely deprived schools were present in the Brong Ahafo region while 50% of head teachers in less deprived schools, 6% in deprived and 17% in extremely deprived schools were not in school at the time of the research team's visit to the school in the same region.

The head teacher punctuality in the Brong Ahafo region is higher in deprived rural areas and extremely deprived schools respectively than the less deprived schools.

In the Northern region, 64% of the head teachers who were present at schools in less deprived communities, 57% in deprived rural communities and 78% in extremely deprived areas. Conversely, 36% of head teachers in less deprived schools, 43% in deprived schools and 22% in extremely deprived schools were not in school at the time of the research team's arrival visit.

Head teacher punctuality in the Northern region tends to be higher in the extremely deprived schools and less deprived schools respectively rather than deprived schools. The rate of absenteeism in this region was progressively higher than in the Brong Ahafo region.

In the Upper East region, head teachers were present in 50% of schools in less deprived areas, 42% in deprived areas and 67% in extremely deprived areas. In the same region, 50% of head teachers in less deprived schools, 58% in deprived schools and 33% in extremely deprived schools were not in school at the time of the research team's arrival visit. For the Upper East Region, head teachers in extremely deprived schools are more punctual than those in the less deprived and deprived schools. Once again, the trend exhibited in the Upper East region presents a further deterioration in leadership at the school level compared to both Northern and Brong Ahafo Regions.

In the Upper West Region, head teachers were present in 43% of less deprived school, 21% in deprived schools and 13% in extremely deprived schools. The Upper West has a peculiar situation of head teachers across the deprivation levels not being punctual to schools, with the extremely deprived and the deprived schools affected the most. In the Western region, head teachers were present in 60% of less deprived school, 60% in deprived schools and 50% in extremely deprived schools. It appears lack of discipline to adhere to staying in school to ensure time-on-task and greater contact hours are a real issue in the Upper West region.

The Western Region is relatively similar to that of the Upper West Region as head teacher punctuality across the levels of deprivation looks low. Generally, head teachers punctuality in deprived and extremely deprived schools is higher than that of less deprived schools across the five regions.

Teacher Absenteeism

In a significant number of schools sampled, a substantial of number of teachers (both professional and non-professional) absented themselves from school on the day research teams visited. In some instances, the teachers absented themselves without prior permission from the head teachers. However, the majority of the teachers absented themselves with prior permission from the head teacher mostly due to illness or to attend a workshop at the district education level. A major reason also for high absenteeism was attributed to the lack of fuel at the time as most of the teachers stay in the district capital and commute to school on daily basis. Here is an excerpt from a respondent:

"At the time of arrival there was no teacher in the school, the first teacher came around 7:40 am. The reasons for this late coming included fuel shortage as most of the teachers commute to school" (Instrument 12: School Observation, 2014).

It is worth noting that the absenteeism rate of trained teachers far outweighs that of the untrained teachers. In most of the sample schools, UTBDE trainees and other untrained teachers are more punctual and regular than the trained or GES paid teachers. The main reasons given for teacher absenteeism based on interviews suggest that fuel shortage, illness, GES meeting, and social gathering such as outdooring, funerals.

Head Teacher Measures to Ensure Teachers Return to Class

Further observation of head teachers revealed that in the 173 schools for which a school observation was made 17 Head Teachers were absent and their actions were not described in a further 45 schools (the lack of description generally correlates with those schools where the head was not present at the start of the day). Forty one head teachers were observed not to make any attempt to visit classrooms or ensure that teachers teach or return to class after break, 70 head teachers ensured that teachers were in class teaching at all periods of the day by moving around the school and directing teaching staff to cover teacherless classes.

Table 7.3: Number of Head Teachers Who take Measures to Ensure Teachers are in Class

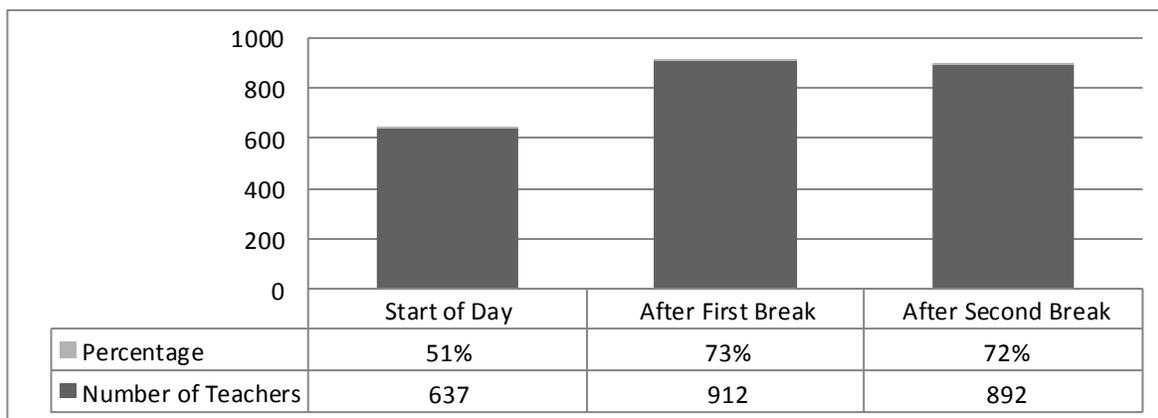
Head Teacher Monitoring	Number	Percentage
Absent HT	17	10%
Does not monitor	41	24%
HT monitors	70	40%
Not described	45	26%
Total	173	

(Source: Instrument 12, School Observation)

Number of Teachers Present throughout the Day

Figure 7.1 shows the number of teachers who were in class at various times within the day across the five regions. It was found that 51% of teachers were teaching at the start of the day, 73% returned to classrooms to teach after the first break and 72% returned to teach after the second break.

Figure 7.1: Number of Teachers Present Throughout the Day



(Source: School Observation Instrument 12)

Influence of Head Teacher Commitment on Teachers

Table 7.4 illustrates the influence of head teacher punctuality on the other teachers across the five regions. ‘Yes’ indicates the number of head teachers and teachers present and ‘No’ indicates the number of head teachers and teachers who are not punctual. The aim of the section is to assess the trend of head teacher punctuality and other staff punctuality, and the vice versa. It was revealed that in the 56.98% of schools where head teacher punctuality is high, 75.69% of teachers were also punctual. On the other hand, in the 43.02% of schools where the head teacher punctuality is low, the punctuality rate for teachers is 24.31%. The findings suggest that in the sampled schools head teachers’ punctuality can influence teachers’ punctuality.

Table 7.4: Influence of Head Teacher's Punctuality on Teachers' Punctuality

Teacher Type	Punctuality of Teacher			
	Yes	Percentage %	No	Percentage %
Head Teachers Punctual	98	56.98	74	43.02
Other Teachers Punctual	794	75.69	255	24.31

(Source: Instrument 12, School Observation)

7.6 Reasons for UTDBE Trainee Teachers Retention in Deprived Rural Communities

In order for teachers, especially the UTDBE trained teachers, to stay in the rural areas and deprived districts there should be certain prevailing conditions or enabling environment as well as policies in place by the GES, which contribute to teacher retention in rural areas. Interviews at the districts education offices, schools and community levels all pointed to a number of factors which tend to promote teacher retention in deprived rural communities.

Interviews with District Directors and Frontline Officers indicate that the retention of UTDBE trainees in their respective districts and schools is the function of their level of require motivation and implementation of appropriate policies. In assessing the motivation of teachers as a factor which tend to promote teacher retention in deprived rural communities, all the Districts Directors of Education and UTDBE Coordinators attest to the high level of motivation of the trainees to help their respective communities and to change their pupil-teacher status in view of their marginalization within the teaching profession.. In all the 9 sample districts, the officers report on the willingness of trainees to work in communities where most of them are natives. Trainees are also motivated to stay in the deprived rural communities as a result of the fact that they have been given the opportunity to train to become professional teachers under the UTDBE programme.

Another reason that accounted for the retention of teachers especially the UTDBE trainees was the institution of various policies at the District level to ensure trainee retention in the district during the UTDBE training at the CoEs. The District Directors of Education as well as other officials of the DEO revealed that, as a result of the UTDBE programme guidelines, the trainees before selection should agree to stay in the districts for the course duration of four (4) years. In all the districts, the Directors confine the trainees to their schools at the time of selection. The

trainee is expected to stay there until peculiar circumstances as determined by the Director, dictate otherwise. As indicated by Directorate, the trainees are selected depending on the deprivation status of the school and the community where trained teachers refuse posting. Trainees stay in their old schools until changes are effected by their Directors. Interviews with UTDBE Coordinators reveal that transfers are not entertained during the four (4) year course duration. It is an exception and not a norm for a transfer to be effected in most of the district. In the Wassa Amenfi West and Lawra district however, trainees transfer during the UTDBE training as a norm. This trend in the two districts may not ease monitoring and supervision of trainees as data stability on training may keep changing.

The District Directors and UTDBE Coordinators claimed that the length of stay of trainees in the school and district after graduation varies from one district to another. The variation is between 3 years to 5 years. All the sampled districts have 3 years with an exception of Atebubu which has 5 years retention rate after graduation. In Talensi-Nabdum, Bongo, Lawra, Bunkpurugu-Yunyoo, Wassa Amenfi West, Trainees after graduation are expected to stay in their schools which have supported their training. The situation is not clear with West Mamprusi, Nkoranza North and Atebubu. In districts where there are no transfers a 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 district confines the trainee to a school where he/she was selected. After the course, GES condition of service state that the trainee has to report to his/her school and serve there for 3 years before transfer can be considered. This trend promotes trained teacher retention in the deprived rural schools to gradually address scarcity of high demand for trained teachers. In **districts** where transfers become a norm the length of stay of the trainee after graduation in a district at the time of selection for the programme is at least 8 years. The beneficial impact of the UTDBE programme in the deprived areas to address Trained Teacher demand cannot be over emphasized.

In another instance, the Head teachers outline a number of general factors that they felt contributed to teachers especially the UTDBE trainees staying in deprived and hard to reach communities. But key among these factors are:

- the provision and availability of basic social amenities such as electricity;
- potable drinking water, communication network; and
- good road network and accommodation for teachers.

Other factors that contributed in this regard were community support to teachers in cash and kind which came in the form of food stuffs, access to farm land for crop cultivation by teachers, provision of incentive packages to teachers by the District Education Office. Good Head teacher leadership as well as cordial relationship between communities and teachers was all seen as contributing factors that motivated teachers to stay in the rural areas. These key factors were reported in almost all the sampled districts as well as the regions. Below are few excerpts by the Head teachers to validate the assertion being made above.

Deprivation Level	Interview with Head Teachers Responses
Less Deprived	<i>“Accommodation. Free supply of foodstuffs. Some of the teachers who have financial challenges are helped by the community. Plots of land for</i>

	<i>farming”. Interview with Head teacher, Amoaman DA Primary School. Less Deprived. Wassa Amenfi West District, Western region.</i>
Deprived	<p><i>“Provision of accommodation. Provision of electricity, good community school relationship”. Interview with Head teacher, Pinihin RC KG Primary School. Deprived community. Nkoranza North district, Brong Ahafo region.</i></p> <p><i>“Because they come from the community they are more willing to help their own people. Because they have the chance to live with their own families. Interview with Head teacher, Gbankoni JHS. Deprived community. Bunkpurugu Yunyoo district, Northern region.</i></p>
Extremely Deprived	<i>“Provision of teachers’ accommodation. Incentives for teachers working in deprive rural communities. Provision of social amenities eg. Electricity and water”. Interview with Head teacher, Agomo KG and Primary School. Extremely Deprived. Bongo district, Upper East region.</i>

Source: Field Data, Instrument 10: Interview with Head Teachers, Q24.

Impact of the UTDBE Programme on Teachers Retention and Staying in Rural Areas

In another dimension, teacher retention and staying in the rural and hard to reach areas is one of the key objectives of the GPEG UTDBE programme undertaken by pupil teachers in all the 57 deprived districts in Ghana; accordingly this tends was one of the avenues for assessing the impact of the UTDBE programme. Interviews with Head teachers from almost all the sample schools attest to the fact that the UTDBE programme which involves training whilst teaching results in teachers staying at post in the rural and hard to reach areas. Out of a total of 172 Head teachers’ responses, 165 Head teachers said yes the UTDBE programme was a contributing factor to ensuring that teachers were staying in the rural areas to teach in schools. In order to validate why the UTDBE programme was contributing to teacher retention in the rural areas, various reasons were given. Key among the reasons given by the majority of the Head teachers was the fact that the majority of the UTDBE trainees recruited for the programme are indigenes of the communities in which the schools they teach are located. Another reason was the fact that UTDBE trainee teachers were afraid they will be taken off or dismissed from the programme if they didn’t stay in the rural communities they have been posted to teach. The longevity of the programme (that is 4 years to complete the programme) and in some cases the bonding of UTDBE trainees for 3 years after the completion of their programme by the District Education Office were the other contributing factors that promoted teacher retention in these rural communities. Last but not least is the timing of the programme where trainees go to the colleges only during vacations and therefore will always be at post during the school time. These were the 5 key opinions expressed by Head teachers in relation to why they see the UTDBE programme as a contributing factor to teacher retention in the rural and hard to reach communities and districts as a whole. Below are a few excerpts by the Head teachers to validate the assertion being made.

Deprivation Level	Interview with Head Teachers Responses
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Less Deprived	<p><i>“To be considered, teachers have to be already teaching in a rural school. So it means they will be here till programme is completed”. Interview with Head teacher, Kokofu RC Primary School. Less deprived Community. Atebubu Amanten District, Brong Ahafo region.</i></p> <p><i>“Yes, because most people come back to the district because of this programme and after completion they are force to serve the district for some time”. Interview with Head teacher, Bunkpurugu DA Primary School. Less deprived Community. Bunkpurugu-Yunyoo District, Northern region.</i></p> <p><i>“It helps in teacher retention in a sense that, teachers are always at their post while under taking that programme. So at the end of their course they will remain at their various communities”. Interview with Head teacher, Anofobisi DA JHS 'B'. Less deprived Community. Bongo District, Upper East region.</i></p> <p><i>“All the UTDBE trainees are bonded for a number of years thereby retaining them in the deprived communities. Interview with Head teacher, Asankra Breman RC Primary School. Less deprived Community. Wassa Amenfi West District, Western region.</i></p>
Deprived	<p><i>“Because trainees have the fear that they will be dropped from the programme if they leave the school. The programme thus is keeping them at their respective stations or schools”. Interview with Head teacher, Birifoh DA Primary School. Deprived Community. Lawra District, Upper West region.</i></p> <p><i>“Because they attend their classes during holidays, hence they are always in school”. Interview with Head teacher, Wungu Marakaz EA Primary School. Deprived community. West Mamprusi District, Northern region.</i></p> <p><i>“Most of the UTDBE teachers or trainees come from this communities hence hardly leave the district/communities after the recruitment and training”. Interview with Head teacher, Akonkonti DA Primary School. Deprived Community. Nkoranza North District, Brong Ahafo region.</i></p>
Extremely Deprived	<p><i>“Then UTDBE programme helps to retain teachers in deprived communities because. They are under training, they cannot leave the community and when they finish, they have to teach at least for three years before they can leave”. Interview with Head teacher, Ayensuakrom DA Primary School. Extremely Deprived community. Wassa Amenfi West District, Western region.</i></p> <p><i>“The UTDBE programme creates room for the trainees to attend the course during the holidays. This gives them enough time to perform their duties and the fact that staying in the deprived community is one of</i></p>

	<p><i>conditions for the sponsorship, they are encouraged to stay”. Interview with Head teacher, Kongo DA Primary School. Extremely Deprived community. Talensi Nabdam District, Upper East region.</i></p> <p><i>“The programme has contributed a lot in the retention of teachers in deprived communities due to the fact that untrained teachers wanting to attain basic skills in teaching and a diploma certificate have no other choice than to accept posting to deprive communities in other to be enrolled into this UTDBE programme”. Interview with Head teacher, Fiema Saviour Primary School. Extremely Deprived Community. Nkoranza North District, Brong Ahafo.</i></p>
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Source: Field Data, Instrument 10: Interview with Head Teachers Q22.

7.7 SMC/PTA’s Views on their own Experience with UTDBE Trainees and Other Teacher Types in their Communities

Communities represented by the School Management Committees and Parent Teacher Associations (SMC/PTA) are seen to be the major players in the promotion of quality educational delivery in schools especially in the rural and deprived areas of the country. These groups of people in our communities play critical roles to ensuring the wellbeing of both teachers and pupils in a school at a point in time. A total of 54 FGDs with SMC/PTAs were conducted out of a total of 197 schools visited. The analysis of the Focal Group Discussion (FGD) will explore the experiences of communities with UTDBE trainees and other types of teachers in their communities. To achieve this objective, there is the need to assess the difficulties encounter by communities in order to get “Trained Teachers” to stay or even to be posted to their communities. Furthermore the analysis will look at the impact of the UTDBE trainees and the programme as a whole on quality delivery of education in schools. The analysis will also assess the sort of support communities/SMC/PTAs give to UTDBE trainees. Finally key challenges faced by UTDBE trainees while teaching in the rural areas and recommendations in order to overcome these challenges is discussed This analysis was done by taking into consideration the three levels of deprivation, districts and regional differences.

Difficulties Encounter by Communities in order to get “Trained Teachers” to stay or even to be Posted to their Communities.

Retaining trained teachers in rural areas, particularly in remote or hard to reach communities has been a challenge to Ghana Education Service for at least the last 10 years. So, while there have been great strides in providing access to the children in these areas, the quality of the education they receive is undermined by this difficulty. The issue is not just associated with availability of trained teachers but the unwillingness to either be posted to remote stations or, when posted there, to remain there. Key reasons for this unwillingness rest on the presence of physical and social amenities. Many of these rural communities lack easy access to potable water, electricity, sanitary facilities, medical care, mobile phone network, modern housing, or a good road network that would expedite access to these and other amenities such as banking. Community schools therefore have to rely on untrained teachers and in many cases these are volunteers who live in

the community. SMC/PTA groups interviewed as part of the baseline evaluation confirmed that this situation persists in their schools. The following are excerpts of their views on this issue:

Deprivation Level	FGD with SMC/PTAs Responses
Less Deprived	<i>“Very difficult, because the place is rural, without social amenities, they usually rely on community volunteer who can choose to go to school anytime they want”. FGD with SMC/PTA, Wulugu Ranch Primary School. Less deprived community. West Mamprusi district, Northern region.</i>
Deprived	<i>“It is very difficult to get trained teachers into the community. Anytime we request for trained teachers we are told there are no trained teachers available”. FGD with SMC/PTA, Amuni Catholic Primary School. Deprived community. Wassa Amenfi West district, Western region.</i>
Extremely Deprived	<i>“To get trained teachers, hmm! It difficult because the district office gets certain number of quota to distribute to school and if you are not lucky, your school does not get a trained teacher. FGD with SMC/PTA, Nayorigo DA Primary School. Extremely deprived community. Bongo district, Upper East region.</i> <i>“Very difficult because of, lack of accommodation, no electricity and no toilet facility”. FGD with SMC/PTA, Premukya DA Primary School. Extremely deprived community. Atebubu Amanten district, Brong Ahafo region.</i>

Source: Field Data, Instrument 17: FGD with SMC/PTAs, Q2.

Interventions in Place to Motivate Trained and Untrained Teachers Stay in Deprived Communities

In order to ensure that teachers (trained or untrained) agree to be posted as well as stay in a deprived area, there is the need for stakeholders in the education sector to put in place certain measures and interventions to motivate teachers to stay in rural deprived communities. In their bid to motivate teachers to stay in the rural communities, SMC/PTAs revealed that certain measures have been put in place to ensure the retention of these teachers. The key interventions put in place by the community members to ensure teachers stay in deprived communities include the provision of farm land and food stuffs for teachers, provision of free decent accommodation to teachers as well as levying of parents to contribute money monthly for the upkeep of teachers especially those who are not on a government salary. Some of the communities visited reported that they sometimes organise awards schemes to reward committed and dedicated teachers who are serving in the rural areas. Below are few excerpts by the FGD’s with SMC’s and PTA’s to validate the assertion being made above.

Deprivation Level	FGD with SMC/PTAs Responses
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Less Deprived	<p><i>“Assist in accommodation. Assist some teachers in land acquisition for farming purposes. Support teachers with food stuffs seasonally. Support some teachers were being provided with water and visitation to the teachers”. FGD with SMC/PTA, Dwenewoho Azaria Islamic Primary School. Less deprived community. Nkoranza North district, Brong Ahafo region.</i></p>
Deprived	<p><i>Yes, parents are levied 1.00Gh Cedi per child (monthly) to support volunteer teachers, community members provide accommodation for non-native teachers, PTA/SMC do backyard garden for teachers’ wives”. FGD with SMC/PTA, Binde DA Primary School. Deprived community. West Mamprusi district, Northern region.</i></p> <p><i>“We sometimes give awards to deserving teachers in the form of clothing, soap, guinea fowls or eggs and fowls. Parents help in school activities such as tree-planting. Parent mediates misunderstanding between teachers and pupils”. FGD with SMC/PTA, Salibga Primary School. Deprived community. Bongo district, Upper East region.</i></p>
Extremely Deprived	<p><i>“The office is making an effort with incentives-they allow teachers to go for study leave-when you stay in the village school for 2 years you are given study leave with pay. PTA try to get volunteers and to support volunteers and pupil teachers with small contributions- soap money. NGOs -GPEG are refunding the fees”. FGD with SMC/PTA, Nyanyaari DA Primary School. Extremely deprived community. Lawra district, Upper West region.</i></p>

Source: Field Data, Instrument 17: FGD with SMC/PTAs, Q3.

7.8 Impact of UTDBE Programme on Quality Delivery of Education in Schools.

In assessing the impact of the UTDBE programme on quality delivery of education in schools, interviews with most of the SMC/PTAs FGDs revealed that the UTDBE programme promoted quality teaching and learning as trainees were now equipped with the needed skills and experience to teach children. It was further reported by some SMC/PTAs that as a result of the UTDBE programme, the trainees were now punctual and school attendance has increased as they were now committed to the teaching profession. Some also said that before the UTDBE programme, the trainees were impatient towards the children, teaching was very poor, and they didn't know how to prepare lessons notes. But now they are friendly towards the children, teaching slow learners and giving home work to pupils almost every school day. Most of the SMC/PTAs interviewed attested to the fact that the UTDBE trainees were now contributing to the delivery of quality education because they are applying what is being taught to them at the colleges during their teaching in the classroom. To them, the UTDBE trainees are more committed to their work than the trained teachers posted to the school. Below are few excerpts by the SMC/PTA Focal Group Interview to validate the assertions being made above.

Deprivation Level	FGD with SMC/PTAs Responses
Less Deprived	<p><i>“There has been improvement in their teaching and children are happy to learn because they understand their teachers now”. FGD with SMC/PTA, Atampiisi DA Primary School. Less deprived community. Talensi Nabdam district, Upper East region.</i></p> <p><i>“Before the UTDBE programme, they were impatience towards the children, teaching was so poor, didn't know to prepare lessons notes. Now they are friendly towards the children, teaching slow learners and giving home work out”. FGD with SMC/PTA, Tongo DA Primary School. Less deprived community. Talensi Nabdam district, Upper East region.</i></p> <p><i>“They are regular and punctual at school and teach with commitment. They also relate very well with the pupils”. ”. FGD with SMC/PTA, Nkofinkofi DA Primary School. Less deprived community. Wassa Amenfi West district, Western region.</i></p>
Deprived	<p><i>“They are helping a lot, without them; some of our classes would have been empty without teachers. I think they are of a good help to our schools especially in the villages”. FGD with SMC/PTA Puffien DA Primary School. Deprived community. Lawra district, Upper West region.</i></p> <p><i>“The UTDBE trainees are contributing to the delivery of quality education because they are applying what the learnt during their training in the classroom. To them, the UTDBE trainees are more committed to their work than the trained teachers posted to the school”. FGD with SMC/PTA, Bonsie Islamic Basic School. Deprived community. Wassa Amenfi West district, Western region.</i></p>
Extremely Deprived	<p><i>“Improvement in academic performance. Improvement in attendance by the teacher, organisation of extra classes. The commitment of UTDBE trainees in the school is higher than the trained teachers”. FGD with SMC/PTA, Fiema Anglican Primary. Extremely deprived community. Atebubu Amanten district, Brong Ahafo region.</i></p>

Source: Field Data, Instrument 17: FGD with SMC/PTAs, Q13.

7.9 Key Challenges face by UTDBE Trainees in the School Communities Particularly the Deprived and Extremely Deprived

In a related development, SMC/PTAs interviewed although expressed satisfaction with how the programme was being implemented and how it has enhanced teaching and learning in the schools, they were quick to add a number of challenges they felt were still hindering the smooth operation of the UTDBE programme. If these challenges were to be addressed then the UTDBE

programme will go a long way to reducing the trained teacher shortages in our basic schools especially for hard to reach communities. A major challenge faced by most UTDBE trainees is financial constraints especially with those who are still not on the government payroll but are teaching in deprived or extremely deprived communities in the country.

Another key challenge was the non-availability of basic social amenities in most of the communities where UTDBE trainees were teaching. The SMC/PTA complained about the lack of potable drinking water, electricity, motorable roads, phone network and the lack of decent accommodation for teachers. A few of the SMC/PTAs stated the non-cooperative nature of some community members to the extent that some of them are harassing teachers. Below are a few excerpts by the FGD's with SMC/PTAs to validate the assertion being made above.

Deprivation Level	FGD with SMC/PTAs Responses
Less Deprived	<p><i>“Some parents run insult at them after punishing their children. Insecurity in the school. Limited classrooms and increase in enrolment. Inadequate furniture (desks). Non availability of toilet facility and urinal and water problem which is being addressed”. FGD with SMC/PTA, Dwenewoho Azaria Islamic Primary School. Less deprived community. Nkoranza North district, Brong Ahafo region.</i></p> <p><i>“Increasing the level of financial support they received, they incur a lot of cost, PTA/SMC will also have to beef up or resume their financial contribution to trainees and be supportive, this will go a long way to retain them in the school”. FGD with SMC/PTA, Nasiria EA Primary School. Less deprived community. West Mamprusi district, Northern region.</i></p> <p><i>“We supported the school with computers, contributed money to buy iron gates for computer room and the head teachers’ office. Wired round the school and paid light bills”. FGD with SMC/PTA, Tongo DA Primary School. Less deprived community. Talensi-Nabdram district, Upper East region.</i></p> <p><i>“SMC/PTA do give support to teachers with raw foodstuffs. Sometimes a token of money is given to UTDBE trainees just to support them”. FGD with SMC/PTA, Sirii DA Primary School. Less deprived community. Jirapa district, Upper West region.</i></p>
Deprived	<p><i>“Their major challenge is finance to pay for the UTDBE, the teachers quarters is still incomplete and that hinders their stay”. FGD with SMC/PTA, Zua DA Primary School. Deprived community. West Mamprusi district, Northern region.</i></p> <p><i>“The volunteers are having financial problem because they are not on salary, including Sandra the UTDBE trainee. Sandra has the following 1.</i></p>

	<p><i>Difficult getting lorry fare 2. Other expenses (soap, food, etc)”. FGD with SMC/PTA, Binde DA Primary School. Deprived community. Bunkpurugu Yunyoo district, Northern region.</i></p> <p><i>“Means of transport (e.g. bicycle) for them to commute to the school to teach. No salary and this affects their teaching since they have to spend the time in lesson preparation to do other work for money since the support given them from us they say is not enough”. FGD with SMC/PTA, Goziri DA Primary School. Deprived community. Lawra district, Upper West region.</i></p> <p><i>“From their interaction with the teachers the main complaints/challenges centre around the poor infrastructural facilities of the school and their own financial difficulties. Since the DBE graduates receive their salaries regularly they do not complain much about money. However, the UTDBE trainees are always worried about money”. FGD with SMC/PTA, Bonsie Islamic Basic School. Deprived community. Wassa Amenfi West district, Western region.</i></p>
Extremely Deprived	<p><i>Delay in payment of salary, inadequate salary, accommodation, means of transport and these are general problems facing teachers”. FGD with SMC/PTA, Nyomoase DA Primary School. Extremely deprived community. Atebubu Amanten district, Brong Ahafo region.</i></p> <p><i>“See that building over there, the kitchen at the KG class, are our own contributions and hard work. We are still following the DCE to help us plaster them”. FGD with SMC/PTA, Tigboro-Jeffiri Primary School. Extremely deprived community. Jirapa district, Upper West region.</i></p> <p><i>“Since the community pays as much as GH700.00 a month on the seven community supported teachers, it is very difficult to find additional money to support the UTDBE trainees”. FGD with SMC/PTA, Ayensukrom DA Primary School. Extremely deprived community. Wassa Amenfi West district, Western region.</i></p> <p><i>“support in organised INSET for untrained teachers to handle some topic confidently”. FGD with SMC/PTA, Kong-Daborin Primary School. Extremely deprived community. Jirapa district, Upper East region.</i></p>

Source: Field Data, Instrument 17: FGD with SMC/PTAs, Q18.

7.10 Recommendation Made Towards the Retention of Teachers in Deprived Communities

The FGD with the SMC/PTAs across the sample schools and communities also sort the views of the respondents on the measures the District Assembly, GES and the community members need to adopt in order to ensure the retention of teachers in these deprived communities. A number of recommendations were made by the SMC/PTA members interviewed. But key among the many recommendations made include the need to increase the GPEG sponsorship to cover almost all the cost of the course to ease the burden on trainees as most of them are not yet on the government payroll.

Ideally, District Assemblies would also ensure they provide all the needed social amenities such as teachers' bungalows to cater for the accommodation needs of the trainees, electricity, potable water, motorable roads and other amenities to make teachers stay in the deprived communities.

Another important recommendation made by some of the SMC/PTAs interviewed was the selection of indigenes from these deprived communities for the UTDBE training and not people from urban places who are not willing to stay in the deprived communities after their training. Government should also put in place allowances and incentives for teachers teaching in deprived communities to motivate them stay in those communities. A number of the SMC/PTAs interviewed also recommended that communities should make the motivation of teachers as one of their main priorities. Furthermore, the SMC/PTAs and communities as a whole should ensure that they support teachers by providing farm lands as well as food stuffs for teachers. They said they could do this by paying regular visits to schools to interact with the teachers, encourage teachers to give up their best. Below are few excerpts by the SMC/PTA focal Group interviews to validate the assertion being made above.

Deprivation Level	FGD with SMC/PTAs Responses
Less Deprived	<p><i>“Increasing the level of financial support they received, they incur a lot of cost, PTA/SMC will also have to beef up or resume their financial contribution to trainees and be supportive, this will go a long way to retain them in the school”. FGD with SMC/PTA, Nasiria EA Primary School. Less deprived community. West Mamprusi district, Northern region.</i></p> <p><i>“People from the community should always be considered first, followed by people who are willing to remain in the community after completion to teach in their selected processes”. FGD with SMC/PTA, Atampiisi DA Primary School. Less deprived community. Talensi Nabdram district, Upper East region.</i></p>
Deprived	<p><i>“The community is willing to provide farm land and labour to farmers. The DEO should construct teachers' accommodation. The community should be connected to the national grid to motivate teachers to stay”. FGD with SMC/PTA, Zua DA Primary School. Deprived community. West Mamprusi district, Northern Region.</i></p>

	<p><i>“To increase the support given to the teachers not on salary. Making friendship with the teachers. Presentation of gift such as food stuff, guinea fowl among others to the teachers”. FGD with SMC/PTA, Goziri DA Primary School. Deprived community. Lawra district, Upper West region.</i></p> <p><i>“Improvement in the infrastructure facilities of the school to make the school environment attractive to both teachers and pupils. Cooperation from parents would enhance the work of teacher will receive his/her salary regularly to have the peace of mind to perform”. FGD with SMC/PTA, Bonsie Islamic Basic School. Deprived community. Wassa Amenfi West district, Western region.</i></p>
Extremely Deprived	<p><i>“GPEG sponsorship is inadequate and so more should be available for smooth learning. Trainees should be given an orientation after the programme has ended to enable them understand how to start the practical aspect of teaching from what they have learnt in school. There should be creation of awareness on the importance of going for this programme, it is not just to get a Diploma, but to improve upon your teaching and help children learn better. There should be refresher training sessions during weekend to refresh the minds of trainees”. FGD with SMC/PTA, Atebubu SDA Primary School. Extremely deprived community. Atebubu Amanten district, Brong Ahafo region.</i></p> <p><i>“That adequate accommodation is provided including toilet facilities, electricity and water. The school itself has a meter but it has not yet been connected to the grid”. FGD with SMC/PTA, Zinpen DA Primary School. Extremely deprived community. Jirapa district, Upper West Region.</i></p>

Source: Field Data, Instrument 17: FGD with SMC/PTAs, Q19.

Conclusions

The issue of trainee support is inextricably linked to trainees’ retention and “staying power”, as well as the ultimate quality of the trained teacher at the end of the process. Evidence from baseline field work canvassed in this chapter indicates that institutionalized support exists for trainees – for example, cluster meetings, CBI, SBI, monitoring by Circuit Supervisors – but further support is needed and this, as well as support provided at the school and district level, is inconsistent across the 9 districts under scrutiny.

While it is clear that support structures are in place, it does not appear that measures are taken to ensure that the remoteness or level of deprivation of the school community is taken into account so that such support is equitable across all trainees. It is also clear that the extent to which support is given is dependent on willingness on the part of individuals rather than as a result of a rigorously applied policy. So, it is the case for many trainees that they do not receive support in the form of mentorship from headteachers over and above INSETs delivered at the school or cluster level. Financial support also varies widely among trainees, with some receiving a pupil

teachers' stipend, others receiving an allowance from PTA/SMC groups, while the rest are dependent on family, friends or themselves for money.

Little can be done at this stage to alleviate difficulties with regard to lack of social and physical amenities available in communities which is why it is particularly important that trainees in the most deprived areas are actually from that community. However, there is some evidence to suggest that trainees in the most remote schools have the greatest challenge in gaining access to support provided at the district level. This implies that those trainees who are most "valuable", inasmuch as they are the most difficult to replace with trained teachers, are also the most "at risk" with regard to their "staying power" on the programme.

Chapter 8: DBE and UTDBE Teachers (Not Observed During Lessons) at the School Level

8.1 Introduction

This chapter reports on findings from data collected from teachers in the surveyed schools who were not observed during the classroom lessons but did fill out a questionnaire in the 197 schools visited where 407 UTDBE trainees were interviewed. As a way of supplementing, validating and cross-referencing some of the data collected for the UTDBE trainees, an additional instrument was developed to collect information on ‘other teachers’ in the schools where the trainees were observed. It was primarily to help provide us with data on recently graduated DBE teachers. Secondly, it aimed to provide some indicators relating to factors that will help us determine whether training while teaching results in teachers staying in the deprived districts or not.

‘Other teachers’ refers to the teachers in schools where researchers conducted lesson observations and interviews. These ‘other teachers’ excluded the head teacher and UTDBE trainees observed and interviewed. The ‘other teachers’ includes both professional and pupil teachers of various levels of education, some trainees currently in the Untrained Teacher in Basic Education (UTDBE) Programme (some sponsored by GPEG and other sponsors) and those who had already completed a DBE by means of distance education. It also covers National Service Volunteers (NSVs), community volunteers and other pupil teachers. The same sampling criteria for selecting districts, circuits and schools were applied to the other teachers. Simple random and purposive sampling was, however, used in selecting individual teachers at the school level for interviews. Where other teachers were fewer than 7, all were asked to fill a questionnaire. In the Brong Ahafo region in particular where the average number of other teachers was 15, purposive sampling was used to select teachers with DBE, especially recently graduated teachers.

The chapter highlights characteristics of ‘other teachers’ at the school level, both trained and untrained and their attitudes to the teaching service which, to a large extent, could determine their retention in deprived districts. Efforts made by various stakeholders, both at the school and district levels, to improve quality of teaching through teacher performance are also documented in the chapter. Teachers’ perception on the differences between DBE and UTDBE trainees is compared in the chapter. It is anticipated that findings in the chapter would bring out differences between teachers trained on a full time and distance basis to inform policy direction.

Unlike other research instruments for this study, the survey of “other teachers” – that is to say teachers who are not currently part of the GPEG sponsored UTDBE programme – is in the form of a questionnaire which teachers were asked to fill independently but with guidance from enumerators where necessary.

8.2 Background Characteristics of Teachers

A total of six hundred and forty-five teachers participated in the questionnaire/ instrument of the full study. This comprised 380 (58.9%) males and 265 (41.1%) females. This gender balance represents that of national statistics with regard to percentages of female and male teachers in public schools. Almost a third (28.1%) of the teachers are from the Brong Ahafo region followed by the Upper East region 178 (27.6%) with Western region yielding the least number of 37 (5.8%) teachers (Table 8.1). This finding is consistent with the observation of the field researchers that there was overstaffing in the Brong Ahafo region.

Table 8.1: Distribution of Teachers by Region by Sex

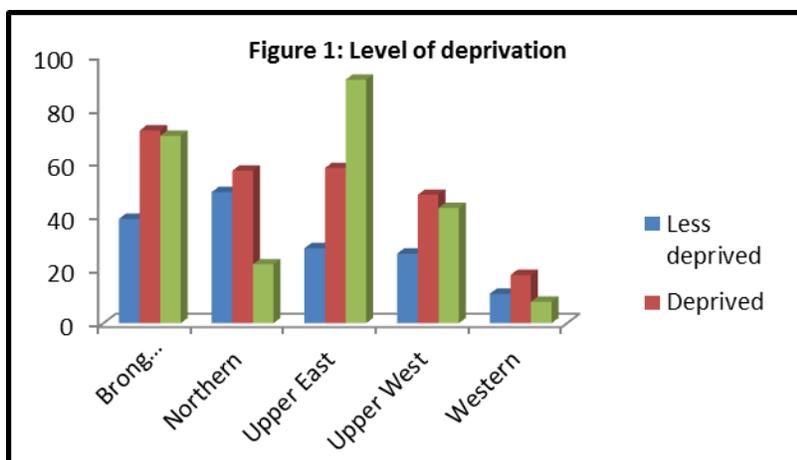
Regions	Male	Female	Total	%
Brong Ahafo	95	86	181	28.1
Northern	93	39	132	20.5
Upper East	112	66	178	27.6
Upper West	54	63	117	18.1
Western	26	11	37	5.7
Total	380	265	645	100.0
%	58.9	41.1		

Source: UTDBE Impact Assessment Baseline Study, 2014

8.3 Level of Deprivation in School Communities

Just as we used levels of deprivation to sample the UTDBE trainees observed, we applied similar indicators to the other teachers in order to ascertain whether they were teaching in less deprived, extremely deprived or deprived areas of the districts sampled. Two hundred and fifty three (39.5%) were from deprived school communities, 234 (36.6%) and 153 (23.9%) were from extremely deprived and less deprived school communities respectively. Upper East has the highest number of teachers working in extremely deprived school communities while the Northern Region has the highest proportion of teachers sampled from less deprived communities. (Figure 8.1). ‘Other teachers’ also includes 53 trainees currently on GPEG sponsored UTDBE programme, who were not part of the sample of UTDBE teachers selected for classroom observation.

Figure 8.1: Proportions of Teachers by Level of Deprivation in School Communities by Region



Source: UTDBE Impact Assessment Baseline Study, 2014.

8.4 Categories of Teachers

Unlike the UTDBE trainees observed who had similar backgrounds, the other teachers belonged to different categories. These categories can be explored at different levels including professional and non-professional based on training and educational qualifications, and experienced and not experienced among others. These categories ultimately impact on retention and quality educational delivery within the deprived districts studied. The majority, 374 (58.3%), of ‘other teachers’ were trained professional teachers while the remaining 269 (41.7%) had no professional training in education. The non-professional teachers comprised 178 (27.8%) pupil teachers, 81 (12.6%) community volunteers, 8 (1.2%) national service personnel and student teachers (Table 8.2). The pupil teachers presumably had WASSCE certificates, which is the minimum qualification for employment to teach in basic schools in Ghana.

Community Volunteers are most often Senior High School graduates who come from the community and are serving at the local school. Approximately 60 community volunteers were found across the school sample; these CV’s graduated from a Senior High School and are currently attending a College of Education as part of a distance DBE programme not sponsored by GPEG. The remaining volunteer teachers are also SHS graduates on the basis of other responses they gave in the questionnaire.

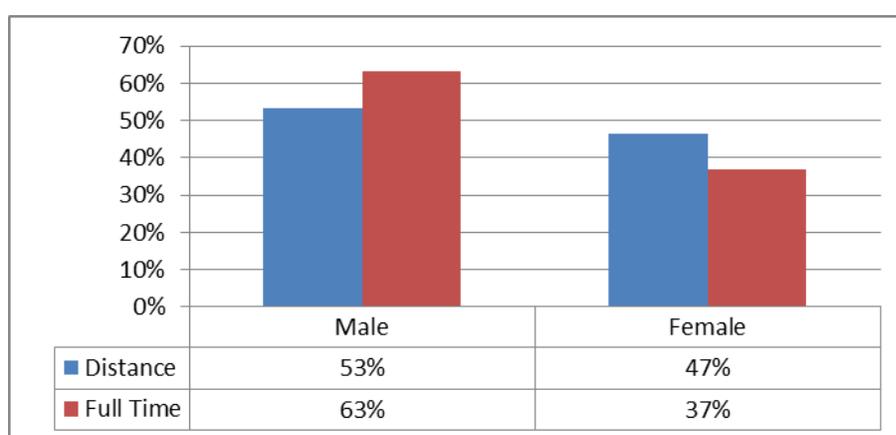
Table 8.2: Type of Teacher by Region

Region	Total number per category of teachers				Total	%
	Trained	Pupil Teacher	Community Volunteer	NSS		
Brong Ahafo	97	83	1	0	181	28.2
Northern	70	17	42	3	132	20.6
Upper East	105	58	13	0	176	27.5

Region	Total number per category of teachers				Total	%
	Trained	Pupil Teacher	Community Volunteer	NSS		
Upper West	87	8	19	2	116	18.1
Western	15	12	6	3	36	5.6
TOTAL	374	178	81	8	641	100.0
%	58.3	27.8	12.6	1.2		

Source: UTDBE Impact Assessment Baseline Study, 2014

Figure 8.2: Proportion of Male and Female DBE Graduates by Mode of Training



Source: UTDBE Impact Assessment Baseline Study, 2014

Teaching experience of teachers

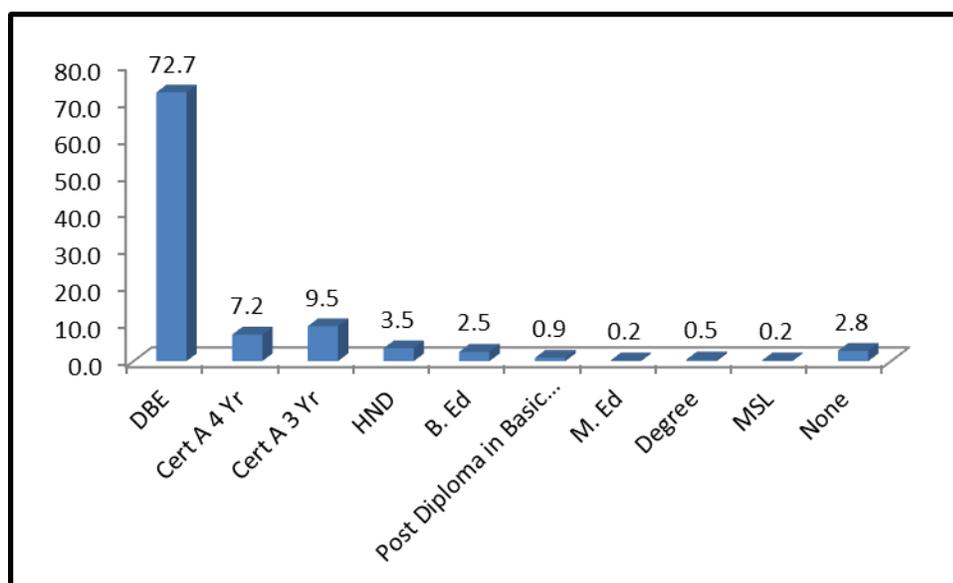
Teachers' teaching experience in the current schools ranged from 1 (24.8%) to 30 (1.4%) years with 76.4% of them having taught for between one to four years in their respective schools. A few teachers started teaching in 1980 but almost half (49.5%) had started teaching in the last five years, that is between 2009 and 2014. In terms of experience, many of the 49.5% teachers who have been teaching since between 2009 and 2014 could be compared with the focus group of UTDBE trainees in terms of experiences and other characteristics.

Professional qualification

Professional qualifications of teachers ranged from Teachers' Certificate 'A' 3 Years, 41 (9.5%), to Master of Education degree (0.2%). Twelve (2.8%) teachers indicated that they have no professional qualification (Figure 8.3). Three hundred and fifteen (72.9%) of teachers, comprising 186 (59%) males and 129 (41.0%) females held a Diploma in Basic Education (DBE) obtained through either full time or distance education (14 of these listed DBE as their qualification but they are yet to graduate) (Table 8.3). Post Diploma in Basic Education holders obtained DBE before proceeding on to higher qualifications. The Upper East had the highest number of DBE teachers closely followed by the Brong Ahafo region (Figure 8.3). The recently

graduated teachers among this group of teachers will serve as a source for comparison in subsequent activities.

Figure 8.3: Type of Teachers' Qualification across Sampled Schools (%)



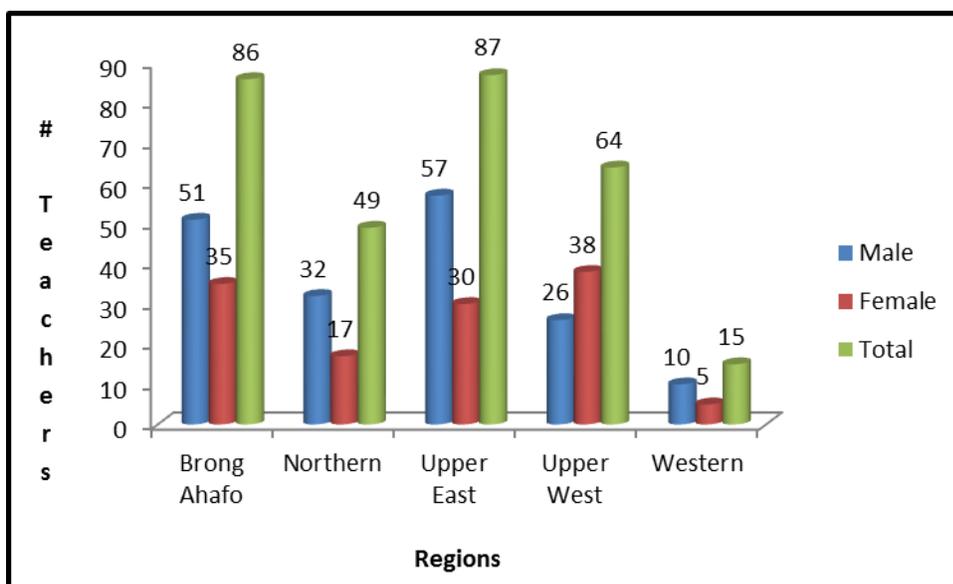
Source: UTDBE Impact Assessment Baseline Study, 2014

Table 8.3: Teachers' Qualifications by Region by Sex

		DBE	Cert 'A' 4 Yr.	Cert 'A' 3 Yr.	HND	B. Ed	Post DBE	M. Ed	Degree	None	Total
Brong Ahafo	Male	53	1	6	4	2	0	0	0	0	62
	Female	35	8	1	0	1	0	0	0	0	45
Northern	Male	35	4	10	5	2	2	0	2	4	57
	Female	18	2	2	0	1	0	0	0	1	24
Upper East	Male	62	5	3	1	1	0	0	0	2	73
	Female	31	0	2	0	3	1	0	0	3	40
Upper West	Male	26	6	8	3	0	0	1	0	2	43
	Female	40	5	8	1	0	0	0	0	0	53
Western	Male	10	0	0	1	1	0	0	0	0	11
	Female	5	0	1	0	0	1	0	0	0	7
Total		315	31	41	15	11	4	1	2	12	432
%		72.9	7.2	9.5	3.5	2.5	0.9	0.2	0.5	2.8	100

Source: UTDBE Impact Assessment Baseline Study, 2014

Figure 8.4: Other Teachers who had DBE by Region by Sex



Source: UTDBE Impact Assessment Baseline Study, 2014

Three hundred and one teachers obtained DBE, 146 (48.3%) and 155 (51.7%) through distance and fulltime education respectively (Table 8.4). A total of 78 (53.8%) males and 68 (46.2%) females undertook the DBE programme by distance studies while 98 (63.2%) and 57 (36.8%) went through the full time programme. These graduated between 2001 and 2014.

Table 8.4: Mode of DBE Studies by Region by Sex

Region	Mode of study	Male	Female	Total	Mode of study	Male	Female	Total
Brong Ahafo	Distance	25	19	44	Full time	26	16	42
Northern	Distance	21	8	29	Full time	11	9	20
Upper East	Distance	13	15	28	Full time	44	15	59
Upper West	Distance	12	21	33	Full time	14	17	31
Western	Distance	7	5	12	Full time	3	0	3
	TOTAL	78	68	146	Total	98	57	155
	%	53.8	46.2		%	63.2	36.8	

Source: UTDBE Impact Assessment Baseline Study, 2014

In the communities (197 communities) that the research team visited we are likely to find at least 51.7% who have had full time conventional DBE training and 48.3% have followed some sort of

distance education mode. During the endline exercise these 155 DBE teachers will likely be compared to the UTDBE trainees in June of 2015 along with other DBE teachers who are found in the neighbouring communities. There is likely to be more DBE in some of the locations visited due to the fact that questionnaires were not distributed to all the “other teachers” in the schools visited particularly in the Western region (please find a more detailed analysis of the background characteristics of DBE who have graduated in Annex 6).

8.5 Comparison of DBE Graduates According to their Training Mode – Distance Teacher Training or Full Time/Conventional

This section reports on the analysis of the total of 600 non observed teachers of which 301 had a DBE qualification (Distance mode or the conventional mode); other teachers did not have a DBE.

The current situation pertaining in Ghanaian schools, particularly those in deprived or remote areas of the country, is a shortage of trained teachers. Previous distance learning courses and the sponsorship of the current UTDBE training programme under the GPEG seeks to ameliorate this situation by giving the opportunity to untrained teachers resident in these deprived and remote communities to achieve trained teacher status commensurate with the Diploma in Basic Education. In order to assess the extent to which untrained teachers who train while teaching in deprived schools remain in these or similar schools or remain in the profession, teachers in the schools sampled as part of the UTDBE Baseline Research were asked to respond to questions with regard to their level of training, mode of training, length of service and future aspirations, among others.

Of the 646 questionnaires returned, 301 of the teachers stated that they had achieved trained status and had completed a DBE. Of these, 146 teachers had undertaken some form of distance course and 155 were graduates from a full time course at a College of Education.(Table 8.2) Those who completed the course by distance trained while they were teaching at a school. Their route on to the course varied, with some who paid for themselves, while others were sponsored by NGOs or even community groups.

The following section describes the comparison between these two groups to assess the differences in residence – whether they live in the school community or not, length of service, location of service – the length of time they served in rural deprived schools as opposed to schools located in the district capital, and their future plans with regard to remaining in the profession. By using this evidence it is possible to assess the different behaviours of teachers who achieve DBE according to the two different modes and begin to answer the research question as to whether training while teaching result in teachers staying in the deprived districts.

Community Residence

The following two tables show the number and percentage of teachers who are resident in the school community. The first table shows that in Brong Ahafo and the Upper East regions there are much higher percentages of distance trained DBE teachers who are resident in the

community than full time trained DBE in schools located in extremely deprived areas of the district. However, there does not appear to be a trend with regard to community residence in other areas of the districts and modality of training.

Table 8.5: Number and Percentage of DBE Graduates by Distance or Full Time Resident in the Community by Level of Deprivation

Region	Level of Deprivation	Distance trained Resident in Community	Distance trained Not Resident in Community	Total	Percentage Distance trained Resident in Community	Percentage Distance trained Not Resident in Community	Full time trained Resident in Community	Full time trained Not Resident in Community	Total	Percentage Full time trained Resident in Community	Percentage Full time trained Not Resident in Community
Bronx	Less Deprived	4	3	7	57%	43%	8	2	10	80%	20%
Bronx	Deprived	19	6	25	76%	24%	12	6	18	67%	33%
Bronx	Extremely Deprived	11	1	12	92%	8%	12	2	14	86%	14%
Northern	Less Deprived	8	8	16	50%	50%	3	5	8	38%	63%
Northern	Deprived	8	1	9	89%	11%	6	5	11	55%	45%
Northern	Extremely Deprived	0	3	3	0%	100%	No Sample				
Upper East	Less Deprived	0	3	3	0%	100%	0	6	6	0%	100%
Upper East	Deprived	2	10	12	17%	83%	4	17	21	19%	81%
Upper East	Extremely Deprived	7	6	13	54%	46%	6	25	31	19%	81%
Upper	Less Depriv	7	4	11	64%	36%	4	3	7	57%	43%

Region	Level of Deprivation	Distance trained Resident in Community	Distance trained Not Resident in Community	Total	Percentage Distance trained Resident in Community	Percentage Distance trained Not Resident in Community	Full time trained Resident in Community	Full time trained Not Resident in Community	Total	Percentage Full time trained Resident in Community	Percentage Full time trained Not Resident in Community
Western	Less Deprived	2	2	4	50%	50%	1	0	1	100%	0%
Western	Deprived	4	4	8	50%	50%	2	0	2	100%	0%
Upper West	Deprived	5	8	13	38%	62%	2	8	10	20%	80%
Upper West	Extremely Deprived	3	6	9	33%	67%	5	9	14	36%	64%
Western	Extremely Deprived	No Sample					No Sample				

Source: UTDBE Impact Evaluation Field Data – Questionnaire for Other Teachers, 2014

The following table illustrates a clearer picture of community residence. In the Brong Ahafo and Northern regions there are higher percentages of teachers resident in the community overall, whereas in Upper East and Upper West the majority of these teachers do not live in the communities. In the Western Region half of the distance trained teachers live in the community and all the full time trained teachers are residents. However, it should be added that there is a relatively small number of DBE graduates sampled in the Western Region – just 15 – and there are almost twice as many full time DBE graduates as distance trained graduates in the Upper East sample. Notwithstanding, in Brong Ahafo, Northern, Upper East and Upper West there are higher percentages of distance trained DBE teachers who live in the communities than full time trained teachers.

Table 8.6: Number and Percentage of DBE Graduates by Distance or Full Time Resident in the Community

Region	Distance Trained DBE Teachers					Full Time Trained DBE Teachers				
	Resident in Community	Not Resident in Community	Total	Percentage Resident in Community	Percentage Not Resident in Community	Resident in Community	Not Resident in Community	Total	Percentage Resident in Community	Percentage Not Resident in Community

				nity	nity				nity	nity
Brong Ahafo	34	10	44	77%	23%	32	10	42	76%	24%
Northern	17	12	29	59%	41%	10	10	20	50%	50%
Upper East	9	19	28	32%	68%	11	48	59	19%	81%
Upper West	15	18	33	45%	55%	11	20	31	35%	65%
Western	6	6	12	50%	50%	3	0	3	100%	0%

Source: UTDBE Impact Evaluation Field Data – Questionnaire for Other Teachers, 2014

Residential status of all teachers

Of all the teachers who responded to the questionnaire, a total of 357 (55.4%) teachers lived in the school community while 287 (44.6%) resided outside the school community in urban and peri-urban communities which have better social amenities. The Western region recorded the highest proportion of teachers, 30(81.1%), who reside in the school community, followed by Brong Ahafo 132 (73.3%), Northern 88 (66.7%) and Upper West, 51 (43.6%). Only a third of teachers in the Upper East region live in the school community.

Length of Service

The following table and graph illustrate the length of service of DBE graduates from the two modalities. In each case the number of teachers who stated that they had served within the given ranges of years is indicated. The trend across all the regions is clear inasmuch as there are much higher numbers of Distance DBE graduates who have served for more than 5 years; whereas most full time DBE graduates have served between 1 to 3 years.

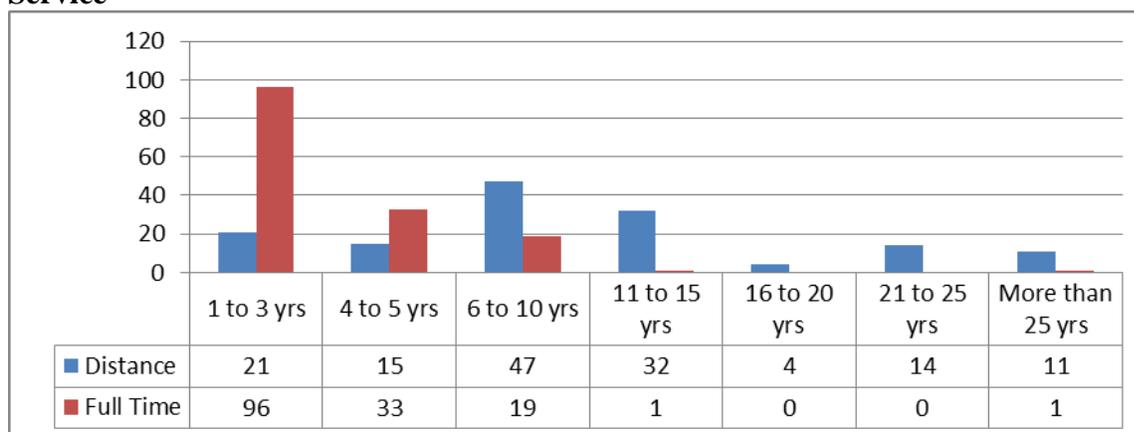
Table 8.7: Number of DBE Graduates by Distance or Full Time and Length of Teaching Service

Total Number of Years Teaching										
Region	Distance of Full Time	1 to 3 yrs	4 to 5 yrs	6 to 10 yrs	11 to 15 yrs	16 to 20 yrs	21 to 25 yrs	More than 25 yrs	Total number of respondents	Number of non-responses
Brong Ahafo	Distance	10	6	13	6	1	2	5	44	1
Brong Ahafo	Full Time	29	7	3	0	0	0	0	42	3
Northern	Distance	4	2	9	8	1	4	1	29	0
Northern	Full Time	13	2	3	1	0	0	1	20	0
Upper East	Distance	7	3	9	7	0	1	1	28	0
Upper East	Full Time	35	16	6	0	0	0	0	59	2
Upper	Distance	0	2	12	9	2	7	1	33	0

Total Number of Years Teaching										
Region	Distance of Full Time	1 to 3 yrs	4 to 5 yrs	6 to 10 yrs	11 to 15 yrs	16 to 20 yrs	21 to 25 yrs	More than 25 yrs	Total number of respondents	Number of non-responses
West										
Upper West	Full Time	16	8	7	0	0	0	0	31	0
Western	Distance	0	2	4	2	0	0	3	12	1
Western	Full Time	3	0	0	0	0	0	0	3	0
TOTALS	Distance	21	15	47	32	4	14	11	146	2
	Full Time	96	33	19	1	0	0	1	155	5

Source: UTDBE Impact Evaluation Field Data – Questionnaire for Other Teachers, 2014

Figure 8.5: Number of DBE Graduates by Distance or Full Time and Length of Teaching Service



Source: UTDBE Impact Evaluation Field Data – Questionnaire for Other Teachers, 2014

In the following table and graph comparison is made between the number of years of service in village schools – these were commonly understood by respondents to be schools NOT located in the district capital, but rather in a rural village setting. A similar number of full time trained and distance trained teachers indicated that they had never taught in a village school (24 distance trained and 28 full time trained). But it is clear that there are higher numbers of distance trained teachers who serve in the village schools for longer periods of time.

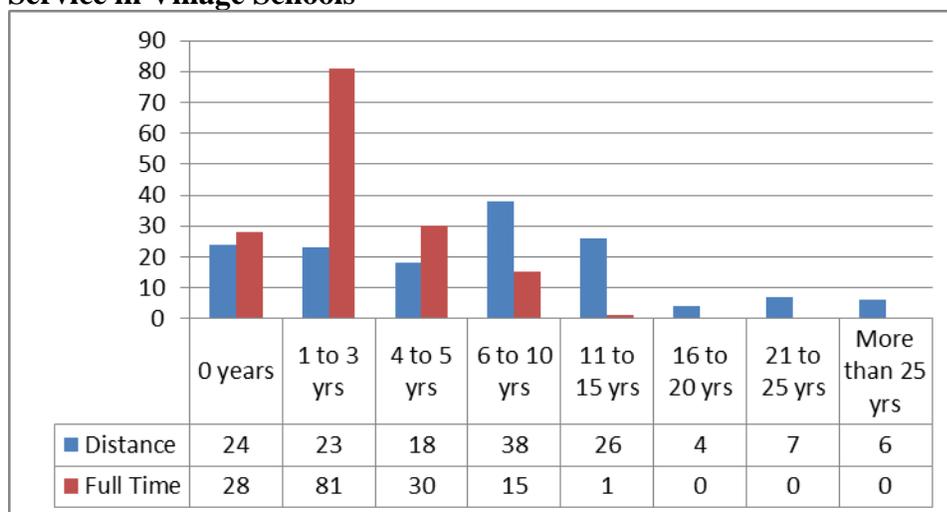
Table 8.8: Number of DBE Graduates by Distance or Full Time and Length of Teaching Service in Village Schools

Number of years of Service in Village Schools										
Region	Distance of Full Time	0 years	1 to 3 yrs	4 to 5 yrs	6 to 10 yrs	11 to 15 yrs	16 to 20 yrs	21 to 25 yrs	More than 25 yrs	Total number of respondents
Brong Ahafo	Distance	13	12	4	8	2	0	2	3	44

Number of years of Service in Village Schools										
Region	Distance of Full Time	0 years	1 to 3 yrs	4 to 5 yrs	6 to 10 yrs	11 to 15 yrs	16 to 20 yrs	21 to 25 yrs	More than 25 yrs	Total number of respondents
Brong Ahafo	Full Time	13	21	5	3	0	0	0	0	42
Northern	Distance	4	4	3	8	7	1	2	0	29
Northern	Full Time	5	10	2	2	1	0	0	0	20
Upper East	Distance	2	6	4	7	7	1	0	1	28
Upper East	Full Time	6	33	15	5	0	0	0	0	59
Upper West	Distance	4	1	5	11	7	2	3	0	33
Upper West	Full Time	4	14	8	5	0	0	0	0	31
Western	Distance	1	0	2	4	3	0	0	2	12
Western	Full Time	0	3	0	0	0	0	0	0	3
TOTALS	Distance	24	23	18	38	26	4	7	6	146
	Full Time	28	81	30	15	1	0	0	0	155

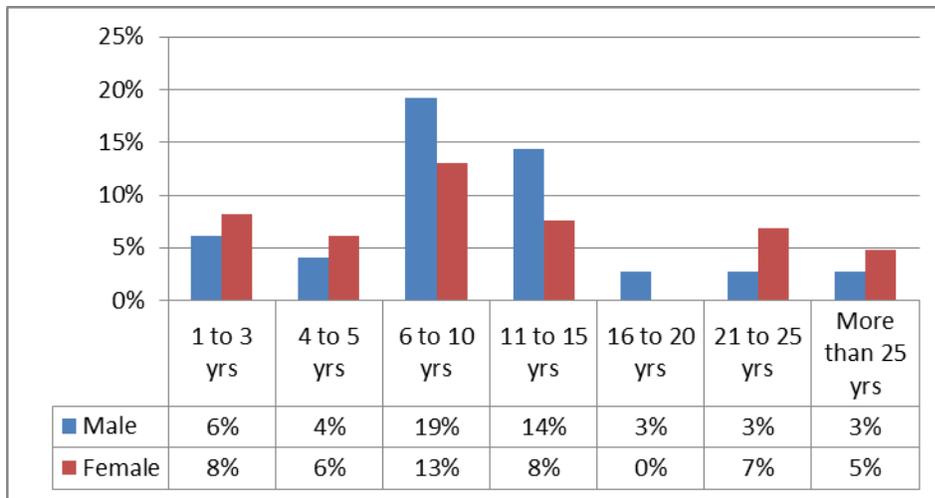
Source: UTDBE Impact Evaluation Field Data – Questionnaire for Other Teachers, 2014

Figure 8.6: Number of DBE Graduates by Distance or Full Time and Length of Teaching Service in Village Schools



Source: UTDBE Impact Evaluation Field Data – Questionnaire for Other Teachers, 2014

Figure 8.7: Percentage of Distance DBE Graduates by Length of Service and Gender



Source: UTDBE Impact Assessment Baseline Study, 2014

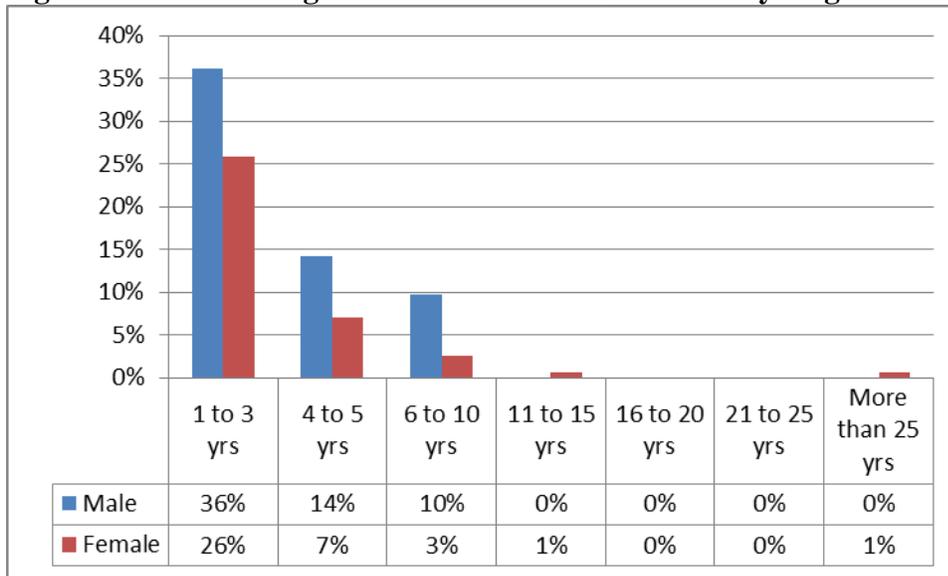
Table 8.9 below shows similar data but with regard to the **full time DBE graduates**. Once again the percentages are expressed as a proportion of the **total number of full DBE graduates**. There is overall a lower proportion of females in this sample but what is clear is that the proportions of females who are retained for longer periods decreases dramatically between 1 to 3 years and 4 to 5 years with just 4 female full time DBE graduates having served for 6 to 10 years and only 1 in each of the 11 to 15 years and more than 25 years categories.

Table 8.9: Total Number of Years Teaching Full Time DBE Graduates

Sex	1 to 3 yrs	4 to 5 yrs	6 to 10 yrs	11 to 15 yrs	16 to 20 yrs	21 to 25 yrs	More than 25 yrs	Total number of respondents
Male	56	22	15	0	0	0	0	98
Female	40	11	4	1	0	0	1	57
Male	36%	14%	10%	0%	0%	0%	0%	155
Female	26%	7%	3%	1%	0%	0%	1%	

Source: UTDBE Impact Assessment Baseline Study, 2014

Figure 8.8: Percentage of Full Time DBE Graduates by length of Service and Gender



Source: UTDBE Impact Assessment Baseline Study, 2014

The following tables illustrate length of service in rural (deprived or extremely deprived) schools and the picture is fairly similar to the trend described for total years of service as just 17% of the sampled DBE graduates have spent zero years in a rural school. The key finding from this data is that these teachers who have, at some time in the last 14 years, graduated from a DBE course which they pursued by distance and therefore were trained while teaching are registering longer service in schools and longer service in rural schools. Furthermore, contrary to trends across the country with regards to female trained teachers staying in rural schools, there are relatively high numbers of females across all the categories of service periods. There are higher percentages and numbers of female graduates than male graduates in the 1 to 3 years and 4 to 5 years, a much higher percentage of males in the 6 to 10 year category, but similar numbers of males and females who have served for more than 20 years.

Table 8.10: Number of years of Service in Rural (deprived or extremely deprived) Schools – Distance DBE

Sex	0 years	1 to 3 yrs	4 to 5 yrs	6 to 10 yrs	11 to 15 yrs	16 to 20 yrs	21 to 25 yrs	More than 25 yrs	Total number of respondents
Male	10	10	6	26	16	4	3	3	78
Female	14	13	12	12	10	0	4	3	68
Male	7%	7%	4%	18%	11%	3%	2%	2%	146
Female	10%	9%	8%	8%	7%	0%	3%	2%	

Source: UTDBE Impact Assessment Baseline Study, 2014

Of the full time DBE graduates, there is a slightly higher percentage who have never taught in a rural school and no graduates either male or female who have served in rural schools for a period of more than 15 years and only one female who has served for more than 10 years.

Table 8.11: Number of years of Service in Rural (deprived or extremely deprived) Schools Full Time DBE

Sex	0 years	1 to 3 yrs	4 to 5 yrs	6 to 10 yrs	11 to 15 yrs	16 to 20 yrs	21 to 25 yrs	More than 25 yrs	Total number of respondents
Male	15	50	21	12	0	0	0	0	98
Female	13	31	9	3	1	0	0	0	57
Male	10%	32%	14%	8%	0%	0%	0%	0%	155
Female	8%	20%	6%	2%	1%	0%	0%	0%	

Source: UTDBE Impact Assessment Baseline Study, 2014

Aspirations

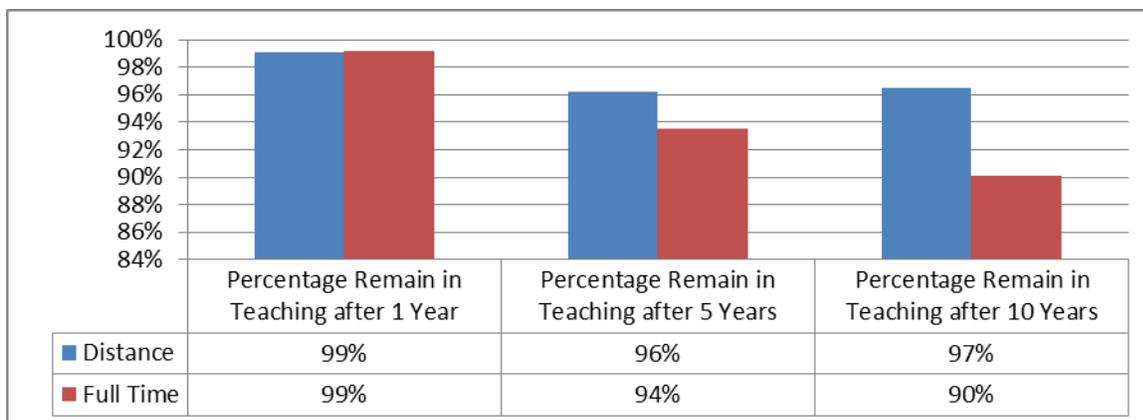
The following table and graph illustrate aspirations of DBE graduates with regard to their plans to stay in the teaching profession. It should be noted that there is a much reduced response rate for this question with only 225 responses to the question about whether they would remain in teaching after 1 year and 187 and 177 responding to questions about whether they will remain in teaching for 5 and 10 years respectively. However, what is clear is that there are marginally higher percentages of distance trained DBE graduates who foresee remaining in the teaching profession after 5 and 10 years.

Table 8.12: Number and Percentage of DBE Graduates by Distance or Full Time and Length of Time they Plan to Remain in the Teaching Profession

Distance of Full Time	Percentage Remain in Teaching after 1 Year	Remain in Teaching after 1 Year	Number of Respondents	Percentage Remain in Teaching after 5 Years	Remain in Teaching after 5 Years	Number of Respondents	Percentage Remain in Teaching after 10 Years	Remain in Teaching after 10 Years	Number of Respondents
Distance	99%	108	109	96%	76	79	97%	83	86
Full Time	99%	125	126	94%	101	108	90%	82	91

Source: UTDBE Impact Evaluation Field Data – Questionnaire for Other Teachers, 2014

Figure 8.9: Percentage of DBE Graduates by Distance or Full Time and Length of Time they Plan to Remain in the Teaching Profession

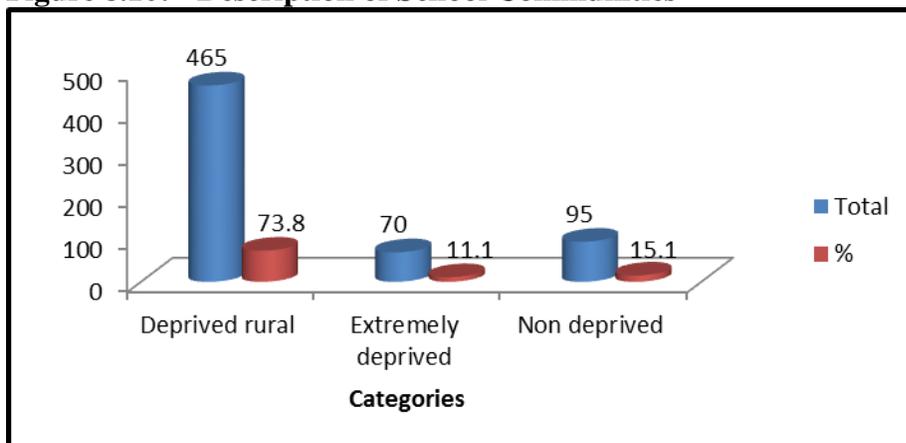


This final section is based on the full cohort of teachers that were analysed and considered “other” teachers at the school.

Teachers’ perception of school/community

The poor conditions in the school communities reflected in the “other teachers” description of the school community. A total of 465(73.8%) perceived the school community to be deprived rural, 70 (11.1%) thought of it as extremely deprived while only 95 (15.1%) perceived their school communities as non-deprived (Figure 8.10).

Figure 8.10: Description of School Communities



Source: UTDBE Impact Assessment Baseline Study, 2014

When this is compared to the proportions of respondents by level of deprivation as classified by the sampling criteria, it is clear that teachers’ perceptions of levels of deprivation are more extreme. The following description as to why they held these perceptions indicates that many of their assertions are based on the facilities available for teaching and learning including school infrastructure. Poor school facilities are a key contributor to teachers’ reluctance to remain in service at the school.

Deprived and extremely deprived communities

Issues related to the school environment

The justifications for their assertions were that schools' environment were not good for effective teaching and learning because they lacked educational facilities. Lack of classrooms, furniture for learners and teachers, sanitary and water facilities, as well as teaching and learning materials (TLM), and the lack of library facilities in the schools were also of great concern to them. Insufficiency of classrooms for KG and primary schools was also stated as a factor of deprivation by most of the teachers as both teachers and pupils were forced to hold classes under trees and be exposed to vagaries of the weather or using what could best be described as 'death trap' buildings at the KG level. Some of the teachers reported they had to travel to the district capital or the regional capital in order to procure TLMs, or to type, print or photocopy materials for teaching and learning.

Issues related to the community

Poor socio-economic conditions of the communities were also mentioned by most teachers as factors associated with high levels of deprivation. They asserted that communities also lacked social amenities like good road networks, potable water, banking and healthcare facilities. Some of these deprived communities are so remote that access to the District Education Office is very difficult. There are no telephone networks in the school/community for easy communication with family and friends or to seek help in times of emergency. The main economic activity in these areas is farming and most parents did not know the importance of education. This is the main cause of poor parental care for children, especially regarding education reported by teachers.

Non-deprived communities

Teachers in non-deprived school communities claimed they had facilities which make learning easier and faster because their schools were situated in urban and peri-urban areas of the district where social amenities were comparatively available and therefore attracted quality teachers and students. These areas had generally good roads, potable drinking water, electricity and better healthcare facilities. School infrastructure was relatively good and even though some of the schools had no accommodation for teachers, teachers were able to get decent accommodation in town without travelling far as compared to other school/communities. Overall, the attendance of students and the school facilities were far better as compared to schools that were described by respondents as more deprived.

8.6 Attitudes to Teaching Profession

The issue of retention of teachers in the teaching field, especially in the remote rural and deprived communities is largely influenced by teachers' interest in the profession which is shaped by several factors both internal and external to the education sector. In response to whether they enjoy teaching, 620 (98.1%) affirmed that they do enjoy teaching. Only 12 (1.9%) answered to the contrary. Further probing to support this assertion revealed diverse reasons why teachers chose to become teachers, prominent among them was the passion or interest that people have for the teaching profession (Table 8.13).

Table 8.13: Motivation for Becoming a Teacher

Motivating factors	Frequency	%
Passion, interest for the profession	230	36.8
Love for children and ability/flair to interact with and educate them to quality education to become responsible adults in future	150	24
To impact, share knowledge to improve education in Ghana	129	20.6
Desire to serve/ help people, district and mother Ghana .	37	5.9
Teaching is perceived to be a noble profession and well-respected in the community	25	4.0
For personal development, that is, to earn a living and save for further education, preferably for tertiary education. Teaching also provides job security,	32	5.1
External influences and motivation by father, uncle, former headmaster, teacher, volunteers, Peace Corps	9	1.4
Trained as a teacher to be a role model to children	7	1.1
Have poor family background who could not afford to support education at other tertiary institutions that they might have qualified for.	4	0.6
Had grades at the WASSCE that did not qualify him/her for other tertiary institutions	2	0.3
Total	625	100.0

Source: UTDBE Impact Assessment Baseline Study, 2014.

8.7 Teachers' Future Aspirations

Teachers' response to how long they would like to serve in their current schools ranged between 0 and indefinitely with 6 (1.1%) stating 20 to 30 years. Twenty five (4.3%) out of 582 teachers indicated they would not like to continue teaching in their respective schools, 56 (9.6%) would like to teach indefinitely. Four hundred (58.1%) would like to teach between 1 and 5 years

Training Support and Mentorship

Supply of trained teachers in the education sector, especially at the basic level is inadequate in some rural communities. As a result many pupil teachers are employed in education, especially in deprived rural communities where trained teachers are reluctant to go. It is therefore imperative that teachers are given support and mentorship to expose them to new trends of education practices to make them confident and more effective in teaching.

Regarding support received in this direction, 416 (74.8%) of teachers indicated that they had between 1-6 in-service trainings, with 103 (18.5%) who had received 2 in-service trainings. These are school-based (SBI) INSET organized by the school as well as cluster-based (CBI) INSET organized by the various district education offices in the last 2-3 years. The trainings

focused on curriculum issues, and how to teach specific subjects such as Maths, Science, and language. According to a teacher, *'In-service training was organized by GES in Creative Arts workshop, how to teach languages, maths and science effectively'*. Another also wrote *"District Training Officers have been organising in-service training programmes for teachers in the district on improving our teaching methods and techniques. The headteacher has also been doing his best by organizing in-service training for us to ensure quality lesson delivery and improving pupils' performance"*.

Some headteachers, as stated, also support provision of TLMs and vetting of lesson notes.

In addition, some teachers, especially newly posted teachers, had also received mentorship from either the headteachers or they were assigned to experienced teachers for support. Some headteachers also assisted newly posted teachers with decent accommodation to motivate them to quickly settle and remain in the school community.

General Performance of Teachers in Schools

Teachers did not indicate the extent to which the in-service trainings had prepared them for teaching or had helped them improve on their teaching. However, responses to the differences in performance between DBE and UTDBE trainees highlighted the positive impact of the support received by both professional teachers and UTDBE trainees. A teacher said *"Kokofu teachers help our self in terms of teaching, we have in-service training to help our self in teaching but those who are under training sometime face problem in some topics, but because of the in-service training the performance is now good"*.

Another also stated that *"most of the UTDBE teachers before had problems with the methodology but through SBI and CBI both in the school and district levels, they are being in parity."*

A third teacher said *"The only difference between how well prepared the UTDBE and DBE trained teachers is only the lesson note preparation, they are trying their best now because the education office have just started training some class on how to prepare lesson plans, TLMs and how to teach"*.

Differences between preparedness of UTDBE and DBE teachers

More than half of teachers, 265(53.4%), asserted that there are differences in the preparedness of UTDBE and DBE teachers and described several reasons for these differences. Below are some of the views expressed during interviews with other teachers at the sample schools.

DBE trained teachers were full time students on campus for the whole entire period of study and had the full time training on all the various aspects, procedures and the process to use in the classroom. They are well exposed to both the content and method more than their UTDBE colleagues. As regular students on campus, they are guided by rules and regulations and monitored by tutors about behaviours and character which they need to portray as teachers. Much time is spent for students to know what really is being taught and are therefore conversant with lesson delivery in terms of subject matter, class management and methodology. They learn

a lot of teaching methods, lesson note preparation, TLM's improvisation and preparedness in the classroom. Their lesson plans are well organised and their presentation are logically set up. DBE teachers therefore achieve their instructional objectives which enhance better teaching and learning than the untrained teachers

UTDBE students usually have their lectures during vacation and a number of weeks within the term. They are not closely monitored. They spend less time at the colleges and are unable to complete the course. As a result, they may not be able to acquire all the needed skills for teaching. Preparation of lesson notes on some specific subjects becomes a problem for some of them because they are not well taught in the preparation of lesson notes and how to use it in lesson delivery. The UTDBE teachers do not also have adequate knowledge on subject content as compared to the DBE teachers. Besides that they do not use the appropriate methodology in their teaching due to lack of training. Classroom control and the method used in teaching a particular class is also weak..... Students find it difficult to understand UTDBE teachers.

Some of the UTDBE teachers were not qualified before they were admitted. English is a problem to some of them as most of them cannot express themselves well in English when it comes to oral speaking in public.

The UTDBE trained teacher faces a lot of problems on the field like taking care of the family etc. And when it comes to teaching, some of them fear to teach for officers to observe since they are not born teachers. Some have low self-esteem and do not have confidence to teach.

However, those pursuing the UTDBE are very committed to teach and more hard working than the DBE teachers.

On the other hand, 231 (46.6%) of teachers claimed there are no differences between the preparedness on the DBE and UTDBE teachers because the two groups received the same training, so there should be no differences in the classroom management and teaching as well. Both UTDBE and DBE trained teachers should be able to teach well, if only there is good supervision of them. A well prepared UTDBE teacher is capable of delivering his lesson as well as a DBE teacher. One teacher said “*I have witnessed a UTDBE trained teacher teach so well and same as a DBE. Nevertheless both also have very bad teachers, so is basically based on the individual*”.

Receipt of First Salary

A total of 456 (75%) teachers indicated that they had received their first salary while a quarter 152 (25%) had their first salary still pending (Table 8.14).

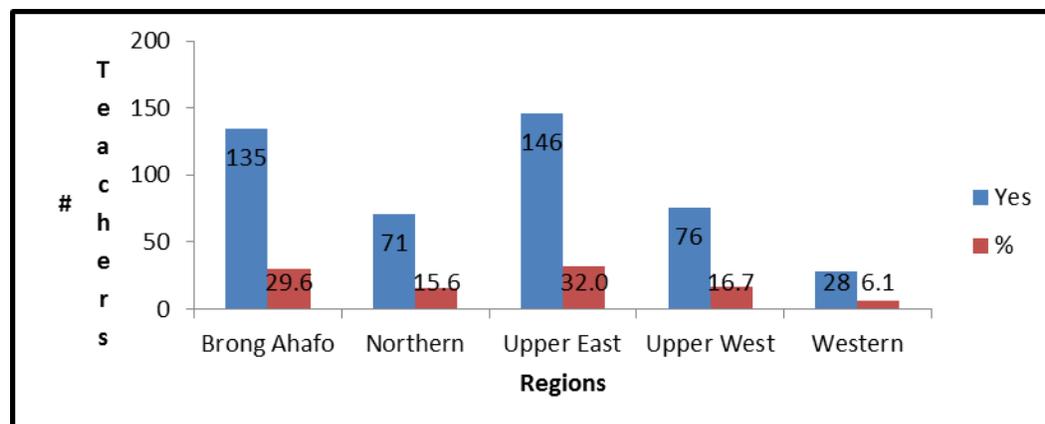
Table 8.14: Receipt of First Salary by Region

Region	Yes	No	Total	% of Total
Brong Ahafo	135	42	177	76.3
Northern	71	46	117	60.7
Upper East	146	24	170	85.9

Upper West	76	32	108	70.4
Western	28	8	36	77.8
Total	456	152	608	
%	75	25		

Source: UTDBE Impact Assessment Baseline Study, 2014

Figure 8.11: Receipt of First Salary by Region



Source: UTDBE Impact Assessment Baseline Study, 2014.

The non-payment of salary has negatively impacted on the performance of teachers as they have to endure personal hardship or are unable to adequately cater for their families. Many of them indicated they had to absent themselves from school to undertake other jobs, some menial, to earn some money for their upkeep. One of them said “*sometimes I feel like stopping this work because how to get money to buy food is a problem. There are lots of discouragements. Sometimes I don't feel like teaching. Sometimes I have to go on sick permission from the head master and go and labour for money so that I will be able to feed myself*”. This situation, they lamented de-motivates them to put in their best at school because “*it really affect you emotionally because, when you render your service and you are not paid for is a pain. Also you need money to take care of yourself as a human being*” as was bluntly put by another teacher.

What is clear from the above responses is that delays in receipt of salary is a key factor with regard to teachers’ declining levels of commitment, time-on-task and general performance.

Suggestions and recommendations to improve current DBE and UDTBE programmes

The following recommendations for improving the DBE and UTDBE programmes were made by teachers who responded to the questionnaire:

Some teachers voiced concerns over the financial obligations borne by training teachers and felt that “Government should assist UTDBE trainees with some money to pay their fees and books”. Furthermore the “termination of the allowances for the DBE students has affected the learning”.

With regard to support provided to trainees, “Government should assist the UTDBE programme by giving them better food and organising extra-classes for them to improve upon their academic work”.

The majority of recommendations were made with regard to the course structure itself: “The current DBE and UTDBE programmes should be re-structured [in] a way that the UTDBE would attend lectures on weekends instead of the vacation.” With regard to the timing of the courses, some teachers wrote that “the UTDBE students have short period when they go to campus to learn.” And: “the time they spend in the school before exams is not enough.” However others felt that: “UTDBE the time they spend being four years before graduating is too much.” With regard to course content, teachers recommended that: “During their training programmes, they must learn basic things they are going to teach the pupils [rather] than learning things they do not even need when delivering to their pupils.” And: “the courses offered should be based on practical not theoretically oriented.”

Other recommendations included that:

“There should be a provision that would enable the teacher trainees to be monitored very well. This would make them take their studies serious in order to become better teachers in future.” And: “there should be confirmation on the results of the UTDBE before admitting them or during their course, because some of them use forged results.”

Conclusion

The main findings that come out of the analysis of the questionnaires for other teachers are that there appear to be clear differences in behaviour between DBE graduates who have completed the full time course and those who followed the UTDBE route. There are higher proportions of UTDBE trainees in the GPEG-sponsored cohort who have served for longer periods overall and longer periods in the “Village Schools”.

Generally speaking attitudes and aspirations do not vary much between the different groups of teachers who completed the questionnaire. About half of the teachers reside in the community but only 26 of those who responded state they want to leave the school when they were asked how long they would be willing to stay. Furthermore, the main reasons for wanting to leave were: wives who wanted to join their husbands, teachers who wanted to return to their own communities and finally those who were ready for a “change of environment”. This is in spite of the fact that over 80% of the teachers see their school and community as being deprived or very deprived particularly with regard to school facilities.

Chapter 9: Conclusions, Programme and Policy Recommendations

The quality of learning outcomes for pupils in basic schools is closely related to the availability of trained teachers. Ghana's Education Strategic Plan sets a minimum target of 95% trained teachers in basic schools by 2020³⁵. Attaining this target does not guarantee quality learning outcomes in the system, since other factors are related, such as the effectiveness of the teacher pedagogy, the depth of subject knowledge, the level of support they receive from head teachers and other mentors along with several other quality of education inputs. However, it is important that the training of teachers addresses their needs, builds on their experience and supports their development as professionals. This baseline study has highlighted a number of areas of which the UTDBE programme can strengthen such as the trainees knowledge of their subject content and methodology, their motivation, aspirations and **commitment** to serving as teachers in often deprived communities. The baseline study also identifies some of the weaknesses of the programme which need to be addressed such as the inadequate attention given to basic pedagogy in the first two years of the UTDBE programme, and the financial constraints faced by some trainees who are not currently on GES payroll as "pupil teachers" but on the programme.

The Education Strategic Plan's target for 95% trained teachers is particularly challenging for basic schools located in deprived districts and communities where the posting of trained teachers is met with several challenges. The provision of an effective trained teacher in every classroom especially in the underserved communities requires that scarce resources for teacher training are carefully targeted towards those untrained teachers who have demonstrated their interest and commitment to serve in deprived and remote schools. Ghana devotes over 6% of its GDP to improving the quality of education and ensuring equitable access to education across the country. The GPEG-sponsored UTDBE programme aimed to contribute towards improving equitable access; the UTDBE baseline study finds that the programme is creating a new cohort of teachers who are well motivated, improving their competencies, and likely to stay in teaching in the same deprived schools in Ghana's most deprived districts. The study also reveals the need for some changes to the programme which would improve the cost-effectiveness and outcomes within the existing budget.

9.1 UTDBE Evaluation Research Questions

Overall, this impact assessment aims to assess the change and improvement in outcomes arising from the GPEG-sponsored UTDBE programme. The baseline study seeks to provide evidence for measuring the current state of the UTDBE programme and its trainees. The next two phases of the Impact Assessment will measure the change in teaching quality, content knowledge, and retention in the remote rural areas where the GPEG sponsored UTDBE trainees serve. The end line study will then compare the characteristics of these UTDBE trainees with other DBE graduates, as well as the cost efficiency and effectiveness of the UTDBE programme.

³⁵Ministry of Education, ESP.

The GPEG 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 this has impacted on learning outcomes. The impact evaluation will also investigate trainees' satisfaction and career ambitions. To achieve the objectives of the UTDBE evaluation programme, the following research questions have been formulated.

1. What improvement has occurred in the student teachers' quality of teaching as a result of 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 on the traditional pre-service in the quality of 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 trainee's satisfaction with the course work of the UTDBE programme?
9. How can the current UTDBE programme be improved?

The timing of the UTDBE baseline is such that at the point of research, trainees had already completed 3 semesters of the 4 year programme. Findings in this report take cognizance of this and reference is made to possible progress with regard to trainees' performance since the onset of the programme in 2012.

9.2 Key Conclusions

The programme is having a positive impact on ensuring trained teachers are available in the most deprived areas of Ghana; the programme is showing signs that it will assist the MOE/GES reach its goal of 95% trained teachers by 2020, and thereby improving the quality of basic education.

The UTDBE programme is providing a method of developing a cohort of trained teachers, including a significant number of female teachers, to Ghana's most deprived districts/areas of the country – these are areas where, the Ghana Education Service has often not been able to attract and retain trained teachers. The UTDBE programme is helping to ensure teacher retention in these areas by extending the number of years of service in a deprived area to between five and eight years. Most of the UTDBE trainees have served in the rural areas for at least one year (as a pupil teacher), with UTDBE ensuring their retention in the same school for four additional years and possibly an extra three years in the same rural school after the programme; this meant that the UTDBE trained teacher is in a community school for potentially eight years.

In most Districts, Directors have used the UTDBE program to address Trained Teacher resource gaps in their schools. They have paid attention to deprived and hard-to-reach communities where they have problems in posting Trained Teachers. Interviews with Directors and research findings suggest that most of the Directors prefer candidates who are native to the communities where the schools are located in order to avoid posting refusal after the course. The probability of candidates from urban centres being selected and refusing posting to serve in deprived areas is very high based on their experience with teachers trained through the conventional DBE.

According to the Baseline Study, UTDBE graduates are more likely to stay and work in deprived communities than their DBE counterparts. Consequently Teacher retention in deprived communities is higher among the UTDBE graduates. The drop-out rate of the UTDBE trainees is also very low-- estimated to be approx.17% demonstrating the high level of their commitment.

Initial findings from the baseline study suggest that the UTDBE is cost-effective program; the programme was found to cost seven times less than the conventional DBE modality. However, a high burden of cost is placed on UTDBE trainees (over 50%) and this is a very difficult challenge for most trainees given that they are often from the most deprived areas of the country. For instance, the transport costs to attend the Colleges of Education constitute a significant financial burden on the trainees.

Interviews and lesson observations suggest that the UTDBE program has not paid adequate attention to the pedagogical and methodological needs of the trainees. Much more attention is focused on the subject-content knowledge which is high order, preparing them for JHS teaching and not always relevant to their classroom experience.

The course duration has also been found to be too short with 10 weeks of residential face to face lessons compared to 32 weeks for DBE. The UTDBE trainees were also found to have very limited Head teacher or trained teacher mentorship at school and cluster levels; since the cluster meetings expected to supplement residential face to face are not being effectively organized.

The quality of the UTDBE training and the performance of the trainees, is on the whole satisfactory, based on intensive classroom observation of 409 trainees and interviews with education officials including College of Education Tutors and District Education Directors.

9.3 Background Characteristics Relating to Motivation & Satisfaction

The study findings suggest that retention of trainees in their respective districts and schools is related to their aspirations, motivation and satisfaction levels with the programme along with certain GES policies at national level. The high level of motivation and aspiration of trainees to help their respective communities and to change the pupil-teacher status is influenced by their willingness to serve their communities coupled with their prospect of job security within GES which strengthens their resolve to succeed.

This study has clearly shown that the background characteristics of UTDBE trainees, their motivation, aspirations, level of satisfaction and their location influence teacher trainee retention and quality classroom performance. Findings from the study indicate that across all the 9 districts sampled, there is evidence to support the willingness of trainees to work in communities where

most of them are native. Trainees are also motivated to stay in the deprived rural communities as a result of the opportunity offered by the UTDBE programme to become professional teachers. Many trainees asserted that their career choice for teaching is influenced by the socio-economic conditions of their communities or districts which inspire them to improve the conditions for better education for their community children. Responses across the five regions studied suggest that the trainees' choice of becoming professional teachers is partly due to the fact they are native of the communities where they want to work. Most of the trainees claim that their choice to become a teacher was motivated by the "situation" in their community which often has a "poor standard of education". Most of the trainees aspire for further education to become professional teachers and then have access to higher education and the career opportunities commensurate with this.

The UTDBE also promotes continuity and support for pupils in schools because most of the trainees are native of their districts and also speak the relevant local language proficiently in order to assist children at the early grade levels; most importantly, the trainees also reside in the communities where they teach minimizing the level of teacher absenteeism which has been found in many of these districts (Associates for Change, 2014). With regards to the benefits of the UTDBE training, the baseline study shows that the UTDBE trainees expect to be retained in their districts of operation after the programme.

9.4 Comparison of UTDBE and DBE Modes of Implementation

Recruitment

The UTDBE trainee recruitment process by the District Education Offices under the GPEG-sponsored cohort lacked transparency and consistency in some districts. For instance, while nearly all the UTDBE trainees enrolled in August 2012 met the basic entry requirements of being a GES-appointed pupil teacher and having attained at least a secondary education, greater numbers of trainees in the second cohort who were added in December 2012 appeared to fall short of these criteria with several trainees not having sufficient secondary school passes, leading to some being forcibly removed from the programme. However a large proportion of the trainees recruited either in August or December 2012 were either not GES appointed pupil teachers or were appointed but not on the GES payroll, making it very difficult for them to pay the high costs of participation in the UTDBE programme. In some districts other forms of abuses such as interference in the admission processes were found during the baseline.

The baseline study was concerned with the pattern of admission of trainees to the programme in addressing the trained teacher supply gap. The UTDBE programme was not fully targeted or fully rationalized since districts with high rates of untrained teachers tended to have low rates of enrolment under the GPEG-sponsored UTDBE programme. Admission to Colleges of Education by students seeking to pursue a DBE on the conventional route is however rigorously administered. The academic background of the DBE students is therefore more homogeneous.

Course Structure

Principals and tutors of Colleges of Education were generally supportive of the programme and optimistic about its output. However, those interviewed across the 5 Colleges of Education visited voiced various concerns. Among these were the challenges trainees face in balancing their training with their ongoing teaching commitments and family responsibilities. Both Tutors and Trainees agreed that the course duration was too short. Residential face-to-face sessions take only 10 weeks each year, as compared to the DBE programme, whose course duration was 32 weeks in each of two academic years (theoretically, though up to ten weeks are used for exams, preparation and other non-face-to-face training).

As a consequence, cluster meetings are seen as an essential addition to the face-to-face College sessions to support trainees in their independent study of the UTDBE course modules, and to supplement what has been taught and examined at the College of Education. However, findings from field research indicate that the quantity and quality of cluster based meetings across the 9 districts is inconsistent with some districts not organising the training on a regular basis. This raises the question as to whether the training methods being used---periodic cluster meetings of the whole group in addition to the main residential face-to-face sessions during school vacations, is adequate to equip the UTDBE trainees with the requisite teaching skills.

The baseline interviews with Tutors and Principals of the Colleges of Education suggest that the UTDBE Course content is too extensive for the length of the programme. Consequently Tutors complain that they are under stress to complete the syllabus while the trainees find the pace of progressing too fast to cope with the content due partly to their often weak academic background. The DBE students have more residential time as well as access to libraries and the internet to do research. The UTDBE trainees are at a disadvantage. The interaction with their College Tutors is short and they have virtually no access to libraries and internet.

Content Knowledge

While there are clear differences between the two modes of UTDBE and conventional DBE delivery, the content of the UTDBE programme is based almost entirely on the conventional DBE syllabus. From such a comparison it is clear that DBE students are on average performing better than the UTDBE trainees, with a higher average score across the core subject areas and a greater proportion achieving higher grades (A to C). In terms of the UTDBE trainees' improvement in subject knowledge, an analysis of exam results across 2 exams in each of 2 subjects (English and Science), indicates that majority of trainees have made progress

Interviews at the CoEs indicate various reasons for this disparity. Apart from the differences in face to face timing students experience from the two modalities, there is the question of the differences in entry behaviour and UTDBE background including the number of years since UTDBE trainees have graduated from High School. Tutors were, however also concerned that the structure and timing of the UTDBE programme and the emphasis on subject knowledge creates a situation whereby students are simply "cramming" for exams rather than gaining the

necessary skills, methods and understanding to equip them for the classroom particularly at primary level.

9.5 Cost Effectiveness and Efficiency

Analysis of cost data gathered during the baseline study indicates that the UTDBE programme is cost efficient when comparing the costs for the regular DBE programme at the institutional level. However, data collected with regard to other costs incurred by the programme indicate that:

- ❖ in situations where trainees are not placed on GES payroll, they become incapacitated financially. This often affects their commitment and performance level in relation to regular school attendance and punctuality to schools were they are serving.
- ❖ Placement of trainees at the colleges far removed from teaching posts of UTDBE trainees, (without regard to proximity), places an additional cost burden on the majority of trainees to incur a disproportionate indirect personal cost, experience reduced trainee–tutor interaction and increases stress levels during face-to-face sessions. For instance, trainees from Wassu Amenfi West attending College at nearby Enchi College outperformed the other UTDBE trainees in Integrated Science. These were trainees who lived in close proximity to the College of Education in the region and could interact with the tutors outside the face to face period.

When the average cost borne by UTDBE trainees is calculated and added to the cost to government it appears that trainees bear 59% of the total cost of participation in the programme.

9.6 Lesson Observation and the Quality of teaching

Lessons observations conducted as part of the baseline study suggest that the teaching skills of trainees were not sufficient for effective teaching in the classroom. The trainees had gained satisfactory skills (mean ratings of 3.0 and above) in one third of the requisite skills assessed but needed improvement in two-thirds of the requisite skills. The areas where trainees had gained satisfactory skills were subject knowledge and content accuracy, language of instruction and use of language, use of chalkboard, gender sensitivity and class control. The areas where the trainees had not gained satisfactory competencies were in the areas of teaching methodology, providing feedback to children, preparing lesson notes and disciplinary practices in the classroom.

There was very little gender differences in the acquisition of teaching skills except for pupil participation where overall female trainees achieved a satisfactory rating compared to male trainees who needed improvement. Regionally, the trainees from Brong Ahafo had gained satisfactory skills in two-thirds of the lesson observation indicators while trainees in Upper East and Upper West barely gained satisfactory scores across a quarter of the indicator skills assessed during the lesson observation.

The baseline findings suggest that most of the trainees cannot prepare acceptable lesson notes. The *preparation for the lessons* by trainees was less than satisfactory with over a third having no lesson plan when observed. Many of the UTDBE trainees could not adequately prepare a lesson

with regard to identifying clear objectives and linking these to pupils' previous learning. About one third of trainees are able to plan, prepare and effectively deliver their lessons, with lesson objectives clearly linked to the syllabus as well as the previous lesson and knowledge of pupils. These trainees are also able to plan for progression between lessons in terms of application process skills. Data from the Districts suggest that before their participation in training programmes, the trainees could not plan and prepare lesson notes. In terms of teaching, the level of trainees' skills with regard to facilitating learner centred lessons were generally lacking with most trainees reverting to teacher centred strategies such as lecturing or class discussion or "question and answer" sessions.

9.7 Content Knowledge

Principals at College of Education level felt there should be an increased emphasis on teaching methodology and pedagogy particularly child centred. Therefore content knowledge should be combined with the teaching methodology and pedagogy to increase the teaching skills of the UTDBE trainees. This has significant implications of the UTDBE programme in assisting teachers' becoming more child centred in their classroom.

9.8 UTDBE Retention in Remote Rural Areas

Regarding the *retention in the remote rural areas*, the baseline finding show that over three-quarters of the trainees were teaching in deprived rural and extremely deprived communities of the districts. Although many of the trainees demonstrated a willingness and commitment to teach in underserved communities, they were not always fully utilised. Trainees were expected to teach up to 35 hours per week (without breaks) but the trainee utilisation varied between districts. In some districts, real workloads were often lower, reduced by an oversupply of teachers in some schools and in some cases by unauthorised absences (e.g Brong Ahafo region). Primary school trainees were generally expected to teach all subjects to one class, but there was some informal teacher specialisation especially in the Brong Ahafo region. Moreover, trainees in less deprived schools gained satisfactory skills in over half of the lesson observation indicators compared to a quarter gained by trainees in deprived rural and extremely deprived schools. This could be partly attributed to inaccessibility leading to absenteeism at district tutorial and cluster meetings. Absenteeism was not well recorded at tutorial and cluster meetings but trainees in deprived rural and extremely deprived schools reported a higher incidence and indicated that few practical/logistical measures were in place to reduce absenteeism.

The baseline results suggest that the UTDBE programme has in-built strategies that ensure trainee stability and retention in deprived area schools and districts. The field work findings indicated factors such as non-availability of social amenities, decent accommodation, water and electricity supply, lack of banking and postal services as well as poor roads to the deprived communities have contributed to the poor supply and retention of trained teachers. The baseline study reveals that teacher retention of UTDBE trainees is based on the various policies at the District level. As a result of the UTDBE programme guidelines suggest that trainees should agree to stay in the district for the entire course duration of four (4) years which assists district retain the teachers while they are on UTDBE.

In order to assess the extent to which “training while teaching” impacts on teachers’ retention in rural and remote communities, DBE graduates (from both modalities) in the sampled schools were asked to provide information about their teaching service to date. From this information a comparison was made between the retention behaviours of Full Time DBE graduates and Distance DBE graduates in order to determine the contributory factors to the relative longevity of service in a deprived community and school. These behaviours included whether they live in the school community or not, length of service, location of service – the length of time they served in community/ schools as opposed to schools located in the district capital, and their future plans with regard to remaining in the profession. Comparatively, more males than females work in deprived and extreme deprived school communities. Based on the results, there appears to be clear differences in behaviour between DBE graduates who have completed the full time course and those who followed the distance education route. The baseline study found that there are higher proportions of “Distance DBE” teachers who have served for longer periods overall and longer periods in the rural, deprived or remote schools often between 3-10 years after completing their distance DBE.

The baseline study also suggests that the non-payment of salaries to some pupil teachers on the UTDBE programme has negatively impacted on their performance since they are unable to adequately cater for their families. Many of the UTDBE trainees interviewed indicated that they could not attend school on a regular basis due to the fact that they engaged in other income generating activities to cater for the family and attempt to pay for their participation on the UTDBE programme.

9.9 Policy and Programme Recommendations

The MOE/GES policy of reducing the trained teachers supply gap in the rural deprived areas has been well received by the District Education Directors and the Frontline Officers. This initiative is perceived to have a positive impact on the delivery of quality education in the deprived hard-to-reach areas where it is difficult to post trained teachers. The programme is an attempt to address the problem of equity with respect to access to quality education. However, in order to effectively meet these challenges various recommendations have been made with regard to policy formulation and implementation over the long and short term.

Selection Process

The mode of selection to participate in the programme is very important in order to ensure better targeting and ensure the neediest districts are allocated adequate quota’s by the UTDBE programme. Authenticity of potential UTDBE trainee result slips and certificates indicating the level of qualification should be confirmed by WAEC through TED before final selection is made. Copies of the final selection should also be made available to the DEOC, Regional Director and GNAT.

Trainee Location

In most districts, the Directors have used the UTDBE programme to address the trained teacher resource gap in schools. They have paid attention to deprived and hard-to-reach communities where they have problems in posting trained teachers. It is suggested that the deprivation status of school communities should be carefully considered in the selection of untrained teachers for the programme and that candidates who are native to the community should be given priority.

The strength of the UTDBE program is the professional development opportunity the programme offers to pupil teachers serving their communities. The high level of commitment to teaching and their ability to use local languages (L1) to teach particularly in lower primary should be exploited. New modules focussed on assisting UTDBE trainees learn to teach literacy and numeracy skills to lower primary levels should be developed. Modules related to the importance of using the first language and the NALAP bilingual approach to literacy should be grounded in the programme; alternative disciplinary practices and child friendly teaching approaches should also be introduced in the modules. A full review of the UTDBE course content to better adapt the programme to the “untrained teachers” is needed in order to maximize the benefits of the programme.

Trainee Retention, Mentorship and Support

The high motivation of trainees to becoming professional teachers and their level of commitment in schools should be further supported by head teachers during the performance of their duties in their schools. Trainees are learning on the job and therefore need guidance and direction by Headteachers. Head teachers should be trained and officially assigned to the trainees who are teaching in their schools to guide and mentor them as well as report on their performance. The Headteachers should act as mentors to the trainees, supporting their studies and teaching as well as sharing their experiences with them.

The cluster meetings of trainees to supplement residential face to face sessions also serve as a support to the trainees. It is also recommended that the cluster meeting system should be improved. The responsibility should be essentially shared between District Offices and the respective Colleges of Education. CoE staff are better qualified to put in place a programme to supplement effectively support trainees during face-to-face session. This opportunity will enable tutors to concentrate on areas they could not cover. College Tutors should also be assigned with the responsibility of supervising and monitoring trainees twice in a school term before another residential face to face session takes place.

DEO support to the trainees’ efforts is also essential to their professional well-being. According to the Principals of the Colleges of Education, the trainees need to be equipped with both subject (content) knowledge, and pedagogical skills. The main thrust for the CoEs is however content, not pedagogy. The programme should give the trainees content to deliver. It is also widely acknowledged by the Principals that the trainees find it difficult to study on their own. It is recommended that DEOs should support the trainees’ professional needs in the following areas: teaching skills and methodologies, lesson notes planning and preparation, developing and effective use of TLMs and lesson presentation and delivery. These can be addressed through the

following: improving preparatory approaches, introducing more tutorial approach and field practicums.

Course Structure

Course content and organisation should be reviewed so that it is tailored more towards the needs of the practising teacher. The UTDBE programme should be re-structured to concentrate on teaching good pedagogical practice, place more emphasis on the mentoring and cluster group work, give head teachers a more formal role in supporting and developing the trainees, and ensuring that they have access to high quality distance learning materials (both subject content and pedagogical practice).

The college tutors also need to have training on how to work effectively with this cohort of trainees, given that this is a programme that needs more participatory and adult learning techniques in order to meet their needs of the trainees. The orientation of tutors should take into account the proportion of trainees placed at the KG and Lower Primary levels of Basic Schools and more emphasis should be placed on equipping teachers with the skills to teach early grade reading and maths. Tutors should be asked to use more participatory adult learning methods in their classrooms in order to model good teaching practice.

Cost Efficiency

The following recommendations are made with regard in particular to reducing the cost burden to the trainees themselves:

1. Re-zoning the Colleges of Education to align with the trainees district residential location in order to strengthen the face-to-face sessions and significantly reduce the cost to trainees in transport.. This can be done effectively if the districts, Colleges of Education, TED and GPEG are brought together in order to consult on these issues.
2. Ensuring that all trainees are on government payroll as paid pupil teachers from the point they join the UTDBE programme. The UTDBE payroll status should be regulated in order to ensure that trainees do not drop out, passing their exams and meeting classroom performance targets. This would go a long way to ensuring that trainees are able to bear the costs imposed by their training (which currently amounts to over 50% of the salaries of paid pupil teachers).

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Annexures

Annex 1: 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 drop out 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 while they teach. 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 one whole lesson	389
14	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.	407

14B	Cost-Effectiveness Data for UTDBE trainees	This data gathered cost data from UTDBE trainees undergoing the course.	361
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
16	Learner Assessment Data Template	This gathered the continuous assessment data for pupils observed. The main purpose was to see whether there have been any improvements in pupils performance as a result of teachers engagement in the UTDBE programme. We gathered data in Mathematics, English Language and either Natural or Integrated Science. .	170
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.	54
18	Focus Group Discussion Guide for Pupils (Boys & Girls)	FGD's were held separately among boys and girls from classes observed. It was to see how pupils think about the different types of teachers present in their schools and what disciplinary options were being used at the school level.	84

Annex 2 Teacher Supply across School Types

Table 2a Teacher Supply at Kg Level by Type, Gender and District

DISTRICT	YEAR	ENROLLMENT	TOTAL TRS	TRAINED TEACHERS						PTTR	TR. DEMAND (PTRNORM 25)
				M	%	F	%	T	%		
Talensi – Nabdam	2010/11	8004	64	5	7.8	33	51.6	38	59	211	320
	2011/12	8238	175	4	2.3	43	24.6	47	26.9	175	330
	2012/13	8295	156	4	2.6	48	30.7	52	33.3	160	332
Bongo	2010/11	6376	124	12	9.7	25	20.1	37	29.8	172	255
	2011/12	6205	119	9	7.6	25	21	34	28.6	183	248
	2012/13	6364	134	22	16.4	26	19.4	48	35.8	133	255
Jirapa	2010/11	5562	104	1	0.9	31	29.8	32	30.7	174	222
	2011/12	5637	86	4	4.7	39	45.3	33	50	131	225
	2012/13	5640	79	10	12.7	35	44.3	34	57	125	226
Lawra	2010/11	6322	144	0	0	16	100	16	11.1	395	253
	2011/12	6308	143	0	0	27	100	27	18.9	234	252
	2012/13	6418	145	1	0.7	11	7.6	12	8.3	535	257
B'Yunyoo	2010/11	7841	82	17	20.7	9	11	26	31.7	302	314
	2011/12	7737	99	21	21.2	18	18.2	39	39.4	198	310
	2012/13	7755	87	16	18.4	23	26.4	39	44.8	199	310
West Mamprusi	2010/11	9116	98	10	10.2	30	30.6	40	40.8	228	365
	2011/12	11,067	120	13	10.8	38	31.7	51	42.5	217	443
	2012/13	11,771	115	12	10.4	40	34.8	52	45.2	226	471
Nkoranza	2010/11	2188	89	2	2.2	21	23.6	33	25.8	95	88

	2011/1 2	3969	163	6	3.6	2 7	16. 6	3 3	20. 2	120	159
	2012/1 3	4178	209	4	1.9	4 6	22	5 0	23. 9	84	167
Atebubu	2010/1 1	8114	184	6	3.3	1 7	9.2	2 3	12. 5	353	325
	2011/1 2	8416	225	5	2.2	4 7	20. 9	5 2	23. 1	162	337
	2012/1 3	8424	308	7	2.3	7 4	24. 0	8 1	26. 3	104	337
Wassa Amenfi	2010/1 1	16368	300	2	0.7	1 2	4.0	1 4	4.7	1169	655
	2011/1 2	16714	265	1	0.4	9	3.4	1 0	3.8	1671	669
	2012/1 3	16783	275	5	1.8	5 4	19. 6	5 9	21. 4	285	671

Table 2B: TEACHER SUPPLY AT PRIMARY LEVEL BY TYPE, GENDER AND DISTRICT

DISTRICT	YEA R	ENROLLME NT	TOTA L TRS	TRAINED TEACHERS						PTT R	TR. DEMAND (PTRNOR M 25)
				M	%	F	%	T	%		
Talensi – Nabdram	2010/ 11	18813	370	147	39.7	82	22.2	229	61.9	82	538
	2011/ 12	19524	581	188	32.4	97	16.7	285	49.1	69	558
	2012/ 13	18963	577	185	32.1	95	16.4	280	48.5	68	542
Bongo	2010/ 11	20686	488	205	42.0	55	11.3	260	53.3	80	591
	2011/ 12	21036	505	218	43.2	55	10.9	273	54.1	77	601
	2012/ 13	19059	524	201	38.4	50	9.5	251	47.9	76	545
Jirapa	2010/ 11	16664	380	120	31.6	89	23.4	209	55	80	476
	2011/ 12	16870	319	115	36.1	76	23.8	191	59.9	88	482
	2012/ 13	16330	305	107	35.1	74	24.2	181	59.3	90	467
Lawra	2010/ 11	17816	405	107	26.4	132	32.6	239	59	75	509
	2011/ 12	18075	390	116	29.7	40	10.3	156	40.0	116	516
	2012/ 13	16780	375	99	26.4	139	37.1	238	63.5	71	479
B'Yunyoo	2010/ 11	24250	548	230	42.0	17	3.1	247	44.6	98	693

	2011/ 12	23402	588	247	42.0	15	2.6	262	45.6	89	669
	2012/ 13	23389	581	253	43.5	17	2.9	270	46.4	87	668
West Mamprusi	2010/ 11	23520	465	174	37.4	81	17.4	255	54.8	92	672
	2011/ 12	26638	555	177	31.9	82	14.8	259	46.7	103	761
	2012/ 13	26864	530	168	31.7	84	15.9	252	47.5	107	768
Nkoranza	2010/ 11	4785	136	79	58.1	22	16.2	101	74.3	47	137
	2011/ 12	8432	331	144	43.5	33	10.0	177	53.5	48	241
	2012/ 13	8923	362	139	38.4	29	8.0	168	46.4	53	255
Atebubu	2010/ 11	15978	450	133	29.6	44	9.7	177	39.3	90	457
	2011/ 12	15906	505	170	33.7	67	13.2	237	46.9	67	455
	2012/ 13	15941	687	194	28.2	82	11.9	276	40.2	58	455
Wassa Amenfi	2010/ 11	35479	786	142	18.1	65	8.2	207	26.3	171	1014
	2011/ 12	34282	719	122	17.0	53	7.3	175	24.3	196	979
	2012/ 13	34307	735	241	32.8	94	12.8	335	45.6	102	980

Table 2C: TEACHER SUPPLY AT JHS LEVEL BY TYPE, GENDER & DISTRICT

DISTRICT	YEAR	ENROLLMENT	TOTAL TRS	TRAINED TEACHERS						PTRR	TR. DEMAND (PTRNORM 25)
				M	%	F	%	T	%		
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
Bongo	2010/11	6670	233	138	59.2	30	12.9	168	72.1	40	267
	2011/12	7287	252	158	62.7	41	16.2	199	78.9	37	291
	2012/13	7539	305	189	61.9	43	14.1	232	76.1	33	302
Jirapa	2010/11	3363	168	81	48.2	22	13.1	103	61.3	33	135
	2011/12	4495	189	96	50.3	3	15.12	126	66.36	36	180

	2				8	0	9	6	7		
	2012/1 3	4666	191	10 7	56. 0	3 8	19. 9	14 5	75. 9	32	187
Lawra	2010/1 1	6709	314	15 8	50. 3	3 7	11. 8	19 5	62. 1	34	268
	2011/1 2	7387	289	15 1	52. 2	3 4	11. 8	18 5	64	40	296
	2012/1 3	7445	290	17 0	58. 6	4 2	14. 5	21 2	73. 1	35	298
B'Yunyoo	2010/1 1	3373	225	12 7	56. 4	6	2.7	13 3	59. 1	25	135
	2011/1 2	6834	238	13 1	55. 0	1 0	4.2	14 1	59. 2	48	273
	2012/1 3	7298	254	12 5	49. 2	9	3.5	13 4	52. 7	54	292
West Mamprusi	2010/1 1	7131	223	14 9	66. 8	2 1	9.4	17 0	76. 2	42	285
	2011/1 2	8331	286	20 7	72. 4	2 2	7.7	22 9	80. 1	36	333
	2012/1 3	9021	337	23 0	68. 2	3 2	9.5	26 2	77. 7	34	361
Nkoranza	2010/1 1	1927	137	93	67. 9	1 0	7.3	10 3	5.2	18	77
	2011/1 2	2377	184	12 4	67. 4	1 3	7.1	13 7	74. 5	17	95
	2012/1 3	2572	212	13 9	65. 6	2 0	9.4	15 9	75	16	103
Atebubu	2010/1 1	3944	251	13 0	51. 8	3 2	12. 7	16 2	64. 5	24	158
	2011/1 2	4401	252	11 6	46. 0	4 1	16. 3	15 7	62. 3	21	176
	2012/1 3	4441	303	20 8	68. 6	4 0	13. 2	24 8	81. 8	18	178
Wassa Amenfi	2010/1 1	9211	233	14 8	63. 5	3 2	13. 7	18 0	77. 2	52	368
	2011/1 2	9383	349	15 3	43. 8	3 0	8.6	18 3	52. 4	51	375
	2012/1 3	9454	398	23 6	59. 3	5 0	12. 6	28 6	71. 9	33	378

Annex 3 Numbers of UTDBE Trainees by District (Details from Chapter 2)

District	Region	Total	Female	Male	% Female	% Male	College of Education
Bosome Freho District	Ashanti	325	157	168	48%	52%	Agogo
Ejura/Sekyedumase District	Ashanti	125	60	65	48%	52%	Monica
Offinso North District	Ashanti	39	18	21	46%	54%	Ofinso
Ahafo Ano South District	Ashanti	35	21	14	60%	40%	Mamptech
Atebubu-Amantin District	BrongAhafo	391	211	180	54%	46%	Atebubu
Asunafo South District	BrongAhafo	310	173	137	56%	44%	Agogo
Nkoranza North District	BrongAhafo	289	156	133	54%	46%	Ofinso
Kintampo South District	BrongAhafo	250	120	130	48%	52%	Agogo
Pru District	BrongAhafo	216	90	126	42%	58%	AbetifiCoE
Tain District	BrongAhafo	210	90	120	43%	57%	Monica
Sene District	BrongAhafo	170	54	116	32%	68%	AbetifiCoE
Kintampo North Municipal	BrongAhafo	61	30	31	49%	51%	AbetifiCoE
Kwahu North District	Eastern	25	9	16	36%	64%	AbetifiCoE
East Gonja District	Northern	349	142	207	41%	59%	Mamptech
Saboba District	Northern	208	47	161	23%	77%	Monica
Kpandai District	Northern	189	47	142	25%	75%	PWCE, Aburi
Central Gonja District	Northern	162	68	94	42%	58%	Mamptech
Sawla-Tuna-Kalba District	Northern	147	34	113	23%	77%	Atebubu
West Mamprusi District	Northern	141	51	90	36%	64%	Atebubu
Bunkpurugu-Yunyoo District	Northern	104	25	79	24%	76%	PWCE, Aburi
Yendi Municipal District	Northern	88	23	65	26%	74%	Atebubu
Tolon-Kumbungu District	Northern	79	30	49	38%	62%	Atebubu
Zabzugu-Tatale District	Northern	71	12	59	17%	83%	Atebubu
Karaga District	Northern	66	10	56	15%	85%	Mamptech
West Gonja District	Northern	62	24	38	39%	61%	Atebubu

District	Region	Total	Female	Male	% Female	% Male	College of Education
Gushegu District	Northern	53	9	44	17%	83%	PWCE, Aburi
Nanumba South District	Northern	50	15	35	30%	70%	PWCE, Aburi
Nanumba North District	Northern	48	8	40	17%	83%	Monica
East Mamprusi District	Northern	43	8	35	19%	81%	PWCE, Aburi
Bole District	Northern	41	16	25	39%	61%	PWCE, Aburi
Savelugu-Nanton District	Northern	39	7	32	18%	82%	PWCE, Aburi
Chereponi District	Northern	38	4	34	11%	89%	Mamptech
Bawku Municipal District	Upper East	120	38	82	32%	68%	JasikanCoE
Builsa District	Upper East	97	48	49	49%	51%	Ofinso
Bongo District	Upper East	89	32	57	36%	64%	JasikanCoE
Talensi-Nabdam District	Upper East	85	28	57	33%	67%	JasikanCoE
Bawku West District	Upper East	75	27	48	36%	64%	JasikanCoE
Garu-Tempene District	Upper East	64	16	48	25%	75%	Ofinso
Kassena Nankana West District	Upper East	38	22	16	58%	42%	JasikanCoE
Kassena Nankana District	Upper East	28	17	11	61%	39%	JasikanCoE
Wa East District	Upper West	253	76	177	30%	70%	Mamptech
Wa West District	Upper West	248	124	124	50%	50%	JasikanCoE
Lawra District	Upper West	152	62	90	41%	59%	Ofinso
Jirapa District	Upper West	143	54	89	38%	62%	Ofinso
Nadowli District	Upper West	68	35	33	51%	49%	Ofinso
LambussieKarni District	Upper West	17	4	13	24%	76%	JasikanCoE
Sissala West District	Upper West	7	1	6	14%	86%	Ofinso
Sissala East District	Upper West	5	1	4	20%	80%	Ofinso
Kadjebi District	Volta	300	130	170	43%	57%	Peki
Nkwanta North District	Volta	81	35	46	43%	57%	Peki
Nkwanta South District	Volta	72	25	47	35%	65%	Peki
Krachi West District	Volta	42	20	22	48%	52%	Peki
Krachi East District	Volta	37	5	32	14%	86%	Peki
Wassa Amenfi West District	Western	195	65	130	33%	67%	Enchi
Sefwi Akontombra	Western	156	47	109	30%	70%	Wiawso

District	Region	Total	Female	Male	% Female	% Male	College of Education
District							
Bia District	Western	155	63	92	41%	59%	Wiawso
Juabeso District	Western	92	34	58	37%	63%	Wiawso

Source: Teacher Education Division of GES, 2013.

Annex 4: Selected Course Content for the UTDBE programme

English

Year 1 Semester 1 (FDC 111)

FDC 111: ENGLISH LANGUAGE STUDIES

Unit 1: INTRODUCTION TO COMMUNICATION AND STUDY SKILLS (I)

Lesson 1: What is communication?

Lesson 2: Factors of communication (I)

Lesson 3: Factors of communication (II)

Lesson 4: Effective communication and types of communication

Unit 2: INTRODUCTION TO COMMUNICATION AND STUDY SKILLS (II)

Lesson 1: Purpose of making

Lesson 2: Processes of note taking

Lesson 3: Types of notes- undiagrammatic or spread notes

Lesson 4: Types of notes- diagrammatic or patterned notes

Lesson 5: Types of notes- (using symbols and short forms in note taking)

Lesson 6: Types of notes- (short forms and abbreviations)

Lesson 7: Sources of notes: notes from oral sources

Lesson 8: Note -making from written sources.

Lesson 9: Sources of notes – (notes from electronic source)

Lesson 10: How to maintain your notes

Unit 3: DEFINITION OF LANGUAGE, ORGANS OF SPEECH AND SPEECH WORK

Lesson 1: definition of language

Lesson 2: Organs of speech and speech production (I)

Lesson 3: Organs of speech and speech production (II)

Lesson 4: Speech work- vowels 1, 2, 3 and 4

Lesson 5: Speech work – vowels 5, 6, 7 and 8

Lesson 6: Speech work- 9, 10, 11 and 12

Unit 4: MAJOR WORD CLASSES

Lesson 1: Major word classes (I)

Lesson 2: Major word classes (II)

Lesson 3: Tense forms of regular verbs

Lesson 4: Major word class- verbs: irregular verbs

Lesson 5: Transitive and intransitive verbs

Unit 5: SPEECH WORK AND GRAMMAR (MAJOR AND CLASSES)

Lesson 1: The English consonants

Lesson 2: The English consonants- descriptive a consonant

Lesson 3: The English consonants- plosives

Lesson 4: Major word class- adjectives

Lesson 5: Major word classes- Adverbs (I)

Lesson 6: Major word classes- Adverbs (II)

Lesson 7: Minor word classes- (I) prepositions, pronouns

Lesson 8: Minor word classes- (II) – conjunctions and articles

Unit 6: READING COMPREHENSION

Lesson 1: Developing comprehension skills

Lesson 2: Types of comprehension questions (I)

Lesson 3: Types of comprehension questions (II)

Lesson 4: Reading comprehension – descriptive text (I)

Lesson 5: Reading comprehension – descriptive text (II)

Lesson 6: Reading comprehension – the expository text (I)

Lesson 7: Reading comprehension – the expository text (II)

Unit 7: WRITING (COMPOSITION)

Lesson 1: Descriptive writing (I)

Lesson 2: Descriptive writing (II)

Lesson 3: Introduction to paragraph writing

Lesson 4: Expository writing

Lesson 5: Elements and structure of a narrative

Lesson 6: Writing narratives

Annex 5: 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 all five regions which were sampled.

Table 9: Trainee's expenditure in total cost of training (Upper West)

Expenditure: Student ³⁶	Jirapa District			Lawra District		
	Less deprived	Deprived	Extremely deprived	Less deprived	Deprived	Extremely deprived
	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢
Transport	60	69	74	83	107	75
Additional Food cost	54	69	75	81	61	47
Other learning materials	44	42	45	57	54	36
Communication	18	11	22	19	15	15
SRC dues and other cost	30	30	30	30	30	30
Assessment	100	100	100	100	100	100
Cost at home	116	80	38	111	79	109
Cost per student per face-to-face	422	401	384	481	446	412
Total annual cost per student (Student bears)³⁷	1,266	1,203	1,152	1,443	1,338	1,236

Source: Instrument 14B and consultant's calculations

Table 9 above presents the composition of necessary expenditure trainees incur during face-to-face training across districts studied in the Upper West. These are essential and unavoidable costs trainee typically incurs during residential training. For instance, given that trainees distance away from CoEs, expending on transport becomes inevitable.³⁸ An analysis of Table 3 reveals that trainees from less deprived areas or circuits in each district spends more than their counterparts in deprived and extremely deprived areas. In particular, while a UTDBE trainee from a less deprived area in Jirapa incurs an average cost of GH¢422 per face-to-face, trainees in deprived and extremely deprived areas respectively spend GH¢401 and GH¢384 for each face-to-face. Thus, trainees from less deprived, deprived and extremely deprived areas in Jirapa annually incur an average of GH¢1,266, GH¢1,203 and GH¢1,052 respectively. Probing into sources of differences in cost, it is clear from Table 3 that while cost incurred at home form a greater percentage of the budget of a less deprived trainee, cost of assessment however form a greater proportion of the cost components of trainees from deprived and extremely deprived areas.

³⁶ Throughout this chapter, these are the average costs incurred by a typical UTDBE trainee.

³⁷ These costs are found by multiplying average cost per face-to-face by three (3).

³⁸ It is imperative to understand that, cost at home is only incurred by those with dependents or caretakers hence these denote the average cost a trainee with dependent incurs.

The relatively higher cost at home incurred by trainees in less deprived areas (towns/district capitals) is expected since cost of living in these areas may be relatively higher than that of the deprived and extremely deprived areas. Trainee's from this district in the Upper West attend Offinso CoE in the Ashanti region which is 372km (often taking over 10 hours of travel by bus). However, trainees from extremely deprived areas spend higher amount on transport as compared to those from deprived and less deprived circuits. This finding is expected given that trainees from extremely deprived areas travel over a longer distance to CoE hence higher transport cost. This finding is confirmed given the fact that trainees from deprived areas also spend relatively higher costs on transport compared to those from less deprived areas. Cost on communication and on other learning materials do not show significant variations across the three (3) levels of deprivation.

Surprisingly, trainees from extremely deprived areas in Lawra incur a lower transport cost compared to those from deprived and less deprived areas. This could be due to an understatement of transport cost by trainees from the extremely deprived areas or/and an overstatement by trainees from deprived and less deprived areas. While costs at home is the greatest expenditure trainees from less and extremely deprived areas incur, transport cost is however the highest expenditure component of trainees from deprived areas and accounts for about 24% of their budget. There are also noticeable variations in the average cost on additional food where trainees from less and extremely deprived areas spend an average of GH¢81 and GH¢47 respectively. Cost on other learning materials and communication show some level of homogeneity across all areas. However, owing to the higher cost at home and transportation, trainees from less deprived areas spend an average of GH¢481 (US\$159) per face-to-face training while trainees from extremely deprived areas incur the lowest cost of GH¢412 (US\$136) for each residential training session. These respectively give an annual average cost of GH¢1,443 (US\$476) and GH¢1,236 (US\$408) while each trainee from the deprived areas in Lawra spends GH¢1,338 (US\$442) per annum.

Table 10: 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	929	1,266	2,195	8,780
Deprived	929	1,203	2,132	8,528
Extremely deprived	929	1,152	2,081	8,324
Lawra District				
Less deprived	929	1,443	2,372	9,488

Deprived	929	1,338	2,267	9,068
Extremely deprived	929	1,236	2,165	8,660

Source: Instrument 14B, TED and consultant's calculations.

Table 10 above outlines the relative burden of cost in the cost sharing UTDBE system. The results reveal that trainees from each of the deprived areas in both districts bear more of the costs. In particular, the annual cost per student from less deprived areas in Jirapa and Lawra is GH¢2,195 and GH¢2,372 respectively of which GPEG bears GH¢929 each. When the costs over the lifetime of the course are calculated, GPEG bears GH¢3,716 (US\$1,224) while trainees from less deprived, deprived and extremely deprived areas in Jirapa bear GH¢5,064, GH¢4,812 and GH¢4,608 respectively. An intra-district level comparison shows that over the entire programme, trainees from less deprived areas in Jirapa spend more than their counterparts in the deprived and extremely deprived areas. However, on the average, each trainee pays at least GH¢892 (US\$294) higher than GPEG. This holds true when cost incidence is annualized over the entire 4-year period. Qualitative investigation (interviews with Trainees) suggests that UTDBE trainees from extremely deprived areas may be spending more on costs than the UTDBE trainees from less deprived areas.

This finding on the burden of cost is not different for Lawra district except for the absolute value of the total costs. Specifically, of the GH¢9,488 (US\$3,131), GH¢9,068 (US\$2,993) and GH¢8,660 (US\$2,858) as the respective total cost of financing a trainee from a less deprived, deprived and extremely deprived area, the cost to GPEG is GH¢3,716 (US\$1,226). The implication is that at least over the entire course period, trainees from Lawra spends GH¢1,228 (US\$405) more than GPEG. Further results reveal that it is more costly training a student from less deprived areas in Lawra compared to those in deprived and extremely deprived areas. A juxtaposition of both districts show that while the entire UTDBE programme is more expensive for trainees in less deprived areas, it is relatively inexpensive to those in extremely deprived areas in Upper West region.

Upper East Region

Table 13: Trainee's expenditure in total cost of training: Talensi-Nabdham and Bongo (Upper East)

Expenditure: Student	Talensi-Nabdham District			Bongo District		
	Less deprived	Deprived	Extremely deprived	Less deprived	Deprived	Extremely deprived
Transport	164	110	137	121	123	109
Additional food cost	91	54	64	132	82	67
Other learning materials	59	38	53	45	43	40
Communication	23	18	19	16	19	17
SRC dues and other cost	11	11	11	11	11	11

Assessment	100	100	100	100	100	100
Cost at home	122	107	110	125	93	87
Cost per student per semester	570	438	494	550	471	431
Total annual cost per student (Student)	1,710	1,314	1,482	1,650	1,413	1,293

Source: Instrument 14B and consultant's calculation

Table 13 which outline the composition of expenditure in total average cost of trainees in Talensi-Nabdam and Bongo districts in the Upper East region shows that unlike the trainees from less deprived areas in Bongo, transport cost forms a greater proportion of the budget of trainees and holds true irrespective of the level of deprivation. Because 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 at least 25% of their entire budget on transportation to the CoE for each training session.

Apart from transport cost, all trainees in less deprived areas in Talensi-Nabdam and Bongo (Upper East) spend much of their budget on the upkeep of their dependents and/or family while they go for training. However in Bongo, cost of assessment is the next highest expenditure of trainees in deprived and extremely deprived areas and respectively weighs about 21 and 23% of their entire budget per face-to-face. Cost on communication, SRC and other learning materials stay almost the same for all trainees. By aggregating all expenditures, it is clear that on the average, trainees from less deprived areas in both districts spend more than their counterparts with the absolute average value of transport and cost at home as the major sources of budget variations. However, trainees in deprived and extremely deprived areas in Talensi-Nabdam and Bongo respectively spend the minimum average cost of GH¢438 (US\$145) and GH¢431 (S\$142) for every residential face-to-face.

Table 14: 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	929	1,710	2,639	10,556
Deprived	929	1,314	2,243	8,972
Extremely deprived	929	1,482	2,411	9,644
Bongo District				
Less deprived	929	1,650	2,579	10,316

Deprived	929	1,413	2,342	9,368
Extremely deprived	929	1,293	2,222	8,888

Source: Instrument 14B, TED and consultant's calculations.

By annualising and summing all cost involved in training, Table 14 above reveals that, for trainees in less deprived, deprived and extremely deprived areas in Talensi-Nabdam (Upper East), it respectively costs GH¢2,639, GH¢2,243 and GH¢2,411 per annum of which GPEG pays GH¢929 per student. This means that, over the entire UTDBE course, trainees from less deprived areas fund GH¢6,840 (US\$2,257) while their colleagues in deprived and extremely deprived areas spend GH¢5,256 (US\$1,735) and GH¢5,928 (US\$1,956) respectively.

Turning to Bongo district (Upper East), it can be seen from Table 8 that, it cost GH¢10,316, GH¢9,368 and GH¢8,888 respectively to fully train a UTDBE trainee from less deprived, deprived and extremely deprived areas of the district. Of these costs, trainees respectively bear GH¢6,600, GH¢5,652 and GH¢5,172. By comparing the relative burden of cost of training in these two (2) districts, one can see that, trainees from Talensi-Nabdam and Bongo respectively pay at least GH¢1,540 (US\$508) and GH¢1,456 (US\$481) higher than GPEG.

Western Region

Table 15: Trainee's expenditure in total cost of training – Wassa-Amenfi (Western Region)

Expenditure: Student	Wassa-Amenfi District		
	Less deprived	Deprived	Extremely deprived
Transport	33	34	42
Additional food cost	85	102	56
Other learning materials	85	60	58
Communication	24	29	20
SRC dues and other cost	54	54	54
Assessment	100	100	100
Cost at home	143	130	97
Cost per student per semester	524	509	427
Total annual cost per student (Student)	1,572	1,527	1,281

Source: Instrument 14B, TED and consultant's calculations.

Table 15 outlines the average expenditure of trainees in Wassa-Amenfi district in the Western region. It shows that among the expenditure list, cost at home significantly form a greater proportion of trainees budget. This holds true only for those in less deprived and deprived areas as trainees in extremely deprived areas spend much on assessment. Also notice that trainees in extremely deprived areas spend relatively higher on transport than their colleagues. Interestingly, on the average, trainees in less deprived areas expend the same amount on food and other

learning materials. Conversely, while all trainees commit similar percentage of their budget allocations to communication and SRC dues, trainees in deprived areas spend more on food.

By averaging cost incurred per face-to-face, the results show that trainees in less deprived areas incur the highest cost (GH¢524) while those in extremely deprived areas spend the lowest (GH¢427). Because cost of living in less deprived areas may relatively be higher than extremely deprived areas, trainees in the latter circuits would therefore incur higher cost at home. This is a notable source of cost variation in these two (2) areas

Table 16: 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	929	1,572	2,501	10,004
Deprived	929	1,527	2,456	9,824
Extremely deprived	929	1,281	2,210	8,840

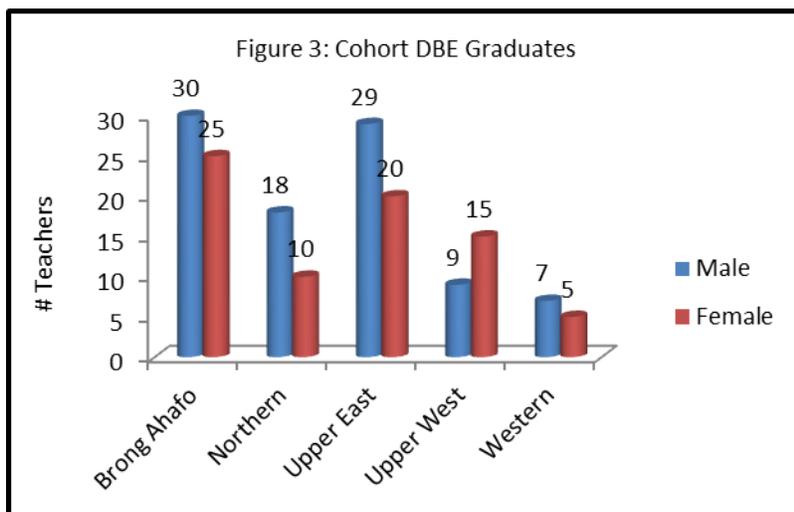
Source: Instrument 14B, TED and consultant's calculations.

The average total cost over the 4 years and the relative cost incidence is shown in Table 16 above. It can be seen that given the annual cost covered by GPEG, trainees in less deprived, deprived and extremely deprived areas bear GH¢6,288, GH¢6,108 and GH¢5,124 respectively. By juxtaposing the cost burden of trainees, it is clear that trainees in less deprived areas bear much of the cost of training. This notwithstanding, irrespective of the level of deprivation, trainees in Western region pay at least 16% higher than what GPEG pays.

Annex 6: Analysis of the Most Recently Graduated UTDBE teachers found in the sample sites

For the purpose of comparison with the current UTDBE trainees, further reference to DBE in the chapter will focus on the 168 teachers who had obtained DBE (Distance and by the conventional mode of training) between 2011 and 2014 and will be referred to as “Cohort DBE” (CBDE) teachers. Sixty one (36.3%) of cohort DBE teachers graduated in 2011, 40(23.8%) in 2012, 46(27.7%) in 2013 and with the least, 21(12.5%) recently graduating in 2014.

The cohort DBE teachers comprised 93(55.4%) males and 75(44.6%) females. On regional basis, Brong Ahafo has the highest number of both male (30) and female (25) cohort DBE teachers while the Western region has the least (Figure 3). Two thirds of cohort DBE teachers, 101(60.5%) undertook the DBE programme on full time basis while 66(39.5%) by distance education.



Source: UTDBE Impact Assessment Baseline Study, 2014

According to the sample, a total of 129(53.3%) DBE teachers were located in schools in deprived communities, a third in extremely deprived and only a quarter worked in less deprived school communities (Table 5).

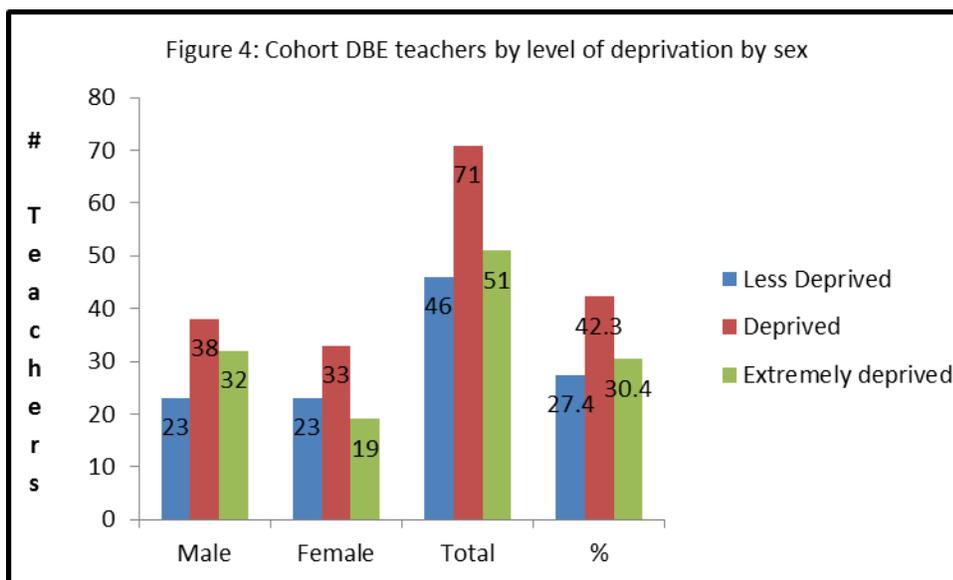
Table 5: Distribution of DBE by level of deprivation

	Less Deprived	Deprived	Extremely deprived	Total
Brong Ahafo	17	43	26	86
Northern	24	20	3	47
Upper East	9	33	44	86
Upper West	18	23	23	64
Western	5	10	0	15

Total	73	129	96	298
%	24.5	43.3	32.2	100.0

Source: UTDBE Impact Assessment Baseline Study, 2014

Similarly, majority of the cohort DBE teachers, 71 (42.3%) worked in deprived school communities while a third worked in extremely deprived schools with the remaining 46 (27.4%) in less deprived communities. Comparatively, more males than females work in deprived and extreme deprived school communities (Figure 4). This probably could be a deliberate effort by the district education office not to post females to rural communities where living conditions are often poor. The location of teachers could influence their retention and willingness to reside and work there.

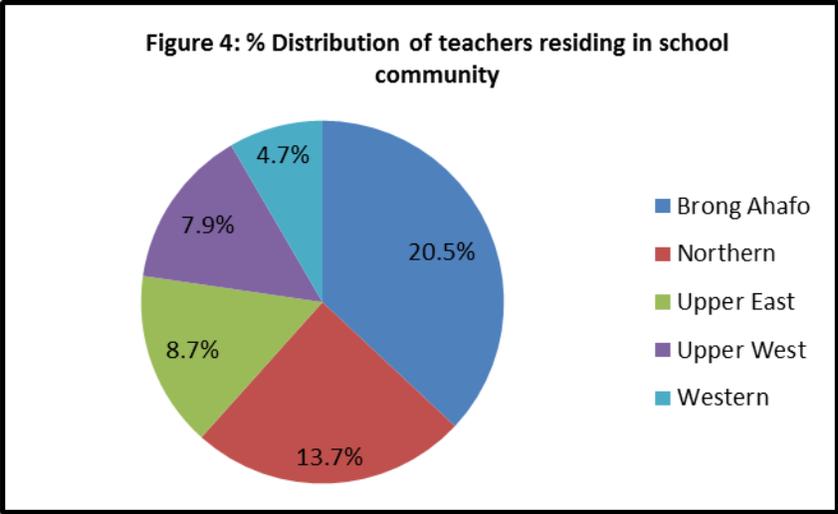


Source: UTDBE Impact Assessment Baseline Study, 2014

Teaching experience

Almost a third (27.2%) had taught for only one year at the current schools. In fact, 89.9% of all the DBE teachers have been teaching for between 1-5 years in their current schools. On the other hand, 124 (81.4%) of cohort DBE teachers have been teaching for 1-3 years in their present schools, that is, a third (32.7%) for one year, 23.5% for two years and 24.8% for three years.

One hundred and forty eight (49.2%) of DBE teachers indicated that they reside in the school community, while 153 (50.5%) live outside. Brong Ahafo recorded the largest number of teachers (44.6%) living in the school community while Western region had only 6.1% (Figure 4).



Source: UTDBE Impact Assessment Baseline Study, 2014

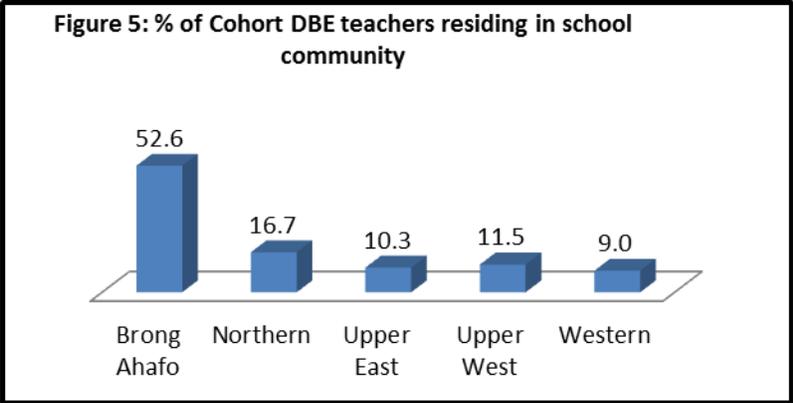
Out of a total of 168 cohort DBE teachers, less than half, 78(46.4%), resided in the school community (Table 6) with majority, 90 (53.6%) residing outside the school community. Brong Ahafo region registered the highest proportion of 52.6%) teachers residing in the school community (Figure 5).

Table 6: Cohort DBE Residence in school community

	Yes	No	Total	% residing
Brong Ahafo	41	14	55	24.4
Northern	13	15	28	7.7
Upper East	8	41	49	4.8
Upper West	9	15	24	5.4
Western	7	5	12	4.2
TOTAL	78	90	168	46.4
%	46.4	53.6		

Source: UTDBE Impact Assessment Baseline Study, 2014

Teachers who reside outside the school community are compelled to commute, some for several hours daily, to school and despite their perceived commitment to duty, they often would arrive at school late because of poor road network and scarcity of public transport. Most of them therefore commute by motorbike and are often delayed or absent during the rainy season. This has implications for teacher performance, invariably affecting learning outcomes.



Source: UTDBE Impact Assessment Baseline Study, 2014

Annex 7: 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 8 enumerators including the supervisor is expected to spend 5 days in each district
- Each team of 8 will cover about 4 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)
- 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
- Then all sub-team members will hold an FGD with pupils if the UTDBE teacher is teaching at the upper primary level or JHS

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

Date (Day month and numbe r see below for exampl e)	District/Comm nity number	Actual name of communit y (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	Supervis or
			Rest of 6 team member s visit 3 schools and conduct school level interviews	Sub teams each visit 1 school and conduct school level interviews (total of 3 schools)	Sub teams each visit 1 school and conduct school level interviews (total of 3 schools)	Sub teams each visit 1 school and conduct school level interviews (total of 3 schools)	Sub teams each visit 1 school and conduct school level interviews (total of 3 schools)	Visit the sub- teams
Day 2			8 team member s split into groups of two and visit 4 schools	8 team member s split into groups of two and visit 4 schools	8 team member s split into groups of two and visit 4 schools	8 team member s split into groups of two and visit 4 schools	8 team member s split into groups of two and visit 4 schools	Visit the sub- teams

Annex 8: List of National Level Stakeholders Interviewed

Name	Institution	Position
Mr Stephen Adu	Ministry of Education	Head of Basic Education
Mr Samuel Ansah	Teacher Education Division (GES)	Director
Mr. Agyepong	Ministry of Education	National GPEG Coordinator
Madam Beatrice Zalia Ali	Ministry of Education	Head of Logistics and Supplies
Mr. Christian Koramoah	Ministry of Education	Finance Controller
Prof Frederick Ocansey	University of Cape Coast	Dean, Faculty of Education
Prof George K.T. Oduro	University of Cape Coast	Provost, College of Distance Education (CoDE)
G.K Dorfe	Teacher Education Division (GES)	Distance Learning Officer
J.W. Molenaar	Teacher Education Division (GES)	
Mr. Philip Akoto	Teacher Education Division (GES)	Finance and ICT Manager