REPUBLIC OF UGANDA

COMPREHENSIVE EVALUATION OF THE UNIVERSAL PRIMARY EDUCATION (UPE) POLICY

Thematic Report 3:
Primary Teacher training for producing Competent teachers to deliver UPE

November, 2018

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FOREWORD

This independent comprehensive evaluation of the Universal Primary Education (UPE) policy is one of the many evaluations of Government policies and programmes to be produced by the National Planning Authority (NPA)in fulfilment to the National Planning Act (2002) and the National Development Plan (NDPII). Two decades since the UPE policy was introduced, it is important to look back and take stock of the remarkable gains attained, identify the challengesfaced, and lessons learnt during the implementation of the UPE policy.

The objectives of the UPE Policy were:

1) To provide facilities and resources to enable every child to enter school;
2) To ensure the completion of the primary cycle of education;
3) To make education equitable in order to eliminate disparities and inequalities;
4) To ensure that education is affordable by the majority of Ugandans; and
5) To reduce poverty by equipping every individual with basic skills.

This comprehensive evaluation set out to assess the extent to which the above objectives have been achieved. In an effort to provide guided policy direction, the evaluation was undertaken along six (6) thematic areas that include:

(i) Policy, Legal, Regulatory and Institutional frameworks;
(ii) Efficacy of the Primary School Curriculum in Supporting the Realization of UPE;
(iii) Primary Teacher Training for Producing Competent Teachers to deliver UPE;
(iv) Efficacy of School inspection in Supporting the delivery of UPE;
(v) Financing and Costing of UPE; and
(vi) Education Modelling and Forecasting.

TheseReports provide over-arching findings and recommendations necessary for improving the quality of primary education in Uganda. In particular, the reports are useful in: informing the finalization of the review of the Education White Paper; improving teacher training mechanisms and policies; improving adequacy of the curriculum; strengthening policies and guidelines regarding community participation; inspection; providing status for the 2030 Agenda on Sustainable Development Goal 4 on Education for All; and informing policy planning and the Uganda Vision 2040.

The comprehensive evaluation used both quantitative (secondary and primary) and qualitative evidence using data from; the UNHS, EMIS, UNEB, NAPE, MTEF, World Bank, UNESCO, and NPA Survey among others. The quantitative analysis was based on rigorous econometric and non-econometric models that include the: Standard Mincerian Regression; Stochastic Frontier production function; Benefit Incidence analysis, cohort analysis, ordinary least squares analysis, logit analyses, UNESCO's Education Policy and strategy simulation (EPSSim). With respect to

the qualitative analysis, we undertook a rigorous desk review of the relevant literature with bench marked good country policy practices, various formative and summative evaluations on the UPE policy before, interviews and field work.

This comprehensive evaluation was based on the standard OECD-DAC evaluation principles which includes; relevance, effectiveness, efficiency, impact and sustainability. The rating criteria is categorized into 3 decision rules namely; Substantially Achieved, Partially Achieved, and Not Achieved. Overall the UPE Policy has been **partiallyachieved** based on the OECD criteria rating.

The UPE policy substantially meets the relevance principle. The policy is aligned to national priorities and policies such as the Poverty Eradication Action Plan (PEAP), Millennium Development Goal (MDG) 2 of achieving Universal Primary education, Education Act 2008, Sustainable Development Goal (SDG) 4, NDPs and Uganda Vision 2040. Empirical evidence indicates that: 88 percent of the school going age children are in school; and equity in terms of gender parity and Special Needs Education have greatly improved.

On the other hand, **the UPE policy partially meets the effectiveness principle.** Overall, 60 percent of the UPE objectives have been substantially achieved under objective 1, 3 and 5, but with partial achievement registered on 2 and 4. This rating is as a result of performance on the following indicators; access of 88 percent, PLE completion of 65 percent,remarkable improvement in literacy and numeracy, cohort completion rate of 38 percent, dropout rate of 38.5, repetition rate of 1.5 percent.

This policy partially meets the efficiency principle in producing the maximum possible outcome given the available inputs. This is explained by the government-aided schools being away from the maximum possible outcome by only 0.38 percent when compared to their private schools counterparts at 11.8 percent. This implies that, for Government to improve learning outcomes, it should increase financing to the primary school sector. However, the evaluation notes that there are still leakages in the system among which include; poor completion, absentiseem, less time on task by teachers and low pass rates.

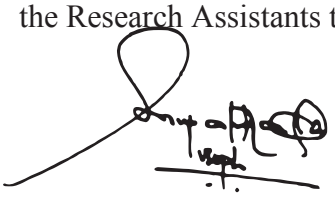
The UPE policy partially meets the policy impact principle. Notably, the policy has significantly impacted on the years of schooling especially on the average years of education for the household head that have increased to 10 years from 4.2 years in 1997. Empirical evidence shows that completing 7 years of primary increases household incomes by about 10.2 percent as compared to their counterparts who don't complete the cycle. Similarly, the analysis showed that an additional year of schooling improves Primary Health Care (PHC) outcomes of these households, as well as equipping individuals with basic skills and knowledge to exploit the environment for self-development and national development.

The UPE policy partially meets the sustainability principle. The comprehensive evaluation notes that while donor financing has gone down over the years, government financing and household education expenditure have increased. Over the same period, the per capita expenditure has consistently reduced occasioned by increase in enrolment out-pacing growth in the education budget, indicating a financial sustainability constraint. Beyond that, a review of the institutions that support UPE indicates that albeit their challenges, they are technically capable of spear heading a successful UPE Programme. Moreover, Government continues to greatly support primary education amidst other education sub-sectors like BTVET and USE which compete for the available fixed resource envelope. Notwithstanding, there are other factors which hinder the sustainability of the policy, that include; high population growth rate, high dropout, negligence by parents and poverty among others.

Overall, empirical evidence indicates that the UPE policy remains relevant, pro-poor and has largely fulfilled its primary objective of increasing equitable access. However, challenges that include leakages within the system affect learning outcomes. Similarly, to attain the desired quality Universal Primary Education, the per pupil expenditure should increase to UGX 63,546 for Urban schools and UGX 59,503 for rural schools from the current UGX 10,000 that government is contributing. In fact, the demand constraints have reduced over the UPE span, with Uganda pursuing an inclusive economic growth and rapid reduction in poverty which has significantly increased the financial resources at the disposal of households. This also illustrates the increasing priority that Ugandans have accorded to these areas and the impact of the UPE policy in raising awareness and addressing cultural constraints even among the poorest households.

Indeed, Government was right on its decision to implement the policy and is therefore advised to continue pursuing this programme with improved financing and institution strengthening as indicated in the respective thematic reports.

In conclusion, I extend my gratitude to the; First Lady/Minister of Education and Sports for the overwhelming support, Parliament of Uganda and the Ministry of Finance Planning and Economic Development for appropriating funds for the first comprehensive evaluation. Also, we acknowledge thesupport from; the Inter-Agency Committee, Ministry of Education and Sports, Local Governments, Schools visited, the NPA Fraternity especially the M&E Department and the Research Assistants that collected the data that informed part of the analysis.



Joseph Muvawala (PhD)
EXECUTIVE DIRECTOR

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LIST OF ACRONYMS

AGE	Agriculture Education
AIDS	Acquired immune deficiency syndrome
ASSAPR	Education and Sports sector Annual Performance report
BTVET	Business Technical Vocational Education & Training
CA	Continuous Assessment
CapefA	Capacity Building for Education for All
CCTS	Centre Coordinating Tutors
CPD	Continuous professional development
C-PT	Certificate of Proficiency in Teaching
C-TEP	Certificate in Teacher Education Proficiency
DEPE	Diploma in Education Primary External
DES	Directorate of Education Standards
DIS	District/Municipality Inspectors of schools
DoS	Dean of Studies
DPO	Deputy Principal Outreach
DPP	Deputy Principal Pre-service
ECD	Early Childhood Development
EGR	Early Grade Reading
EIC	Equity in the Classroom
EMIS	Education Management Information System
EPRC	Education Policy Review Commission
ESA	Education Standards Agency
ESCC	Education Sector Consultative Committee
ESIP	Education Strategic Investment Plan
ESSP	Education Sector Strategic Plan
ESSR	Education and Sports Sector Review
FY	Financial Year
GoU	Government of Uganda
GRP	Gender Responsive Pedagogy
GWP	Government White Paper
HIV	Human Immune-deficiency Virus
HTCs	Health Tutor College
ICT	Information Communications Technology
IMU	Instructional Materials Unit
INSET	In-service Teacher Training
IPS	Integrated Production Skills
ITCs	Instructor Training Colleges
ITE	Instructor and Tutor Education
KSE	Kiswahili Education
KYU	Kyambogo University
LG	Local Governments
LLE	Local Language Education
M&E	Monitoring and Evaluation
MDAs	Ministries, Departments and Agencies

MoFPED	Ministry of Finance, Planning and Economic Development
MoES	Ministry of Education and Sports
MTEF	Medium Term Expenditure Framework
NAPE	National Assessment of Progress in Education
NCDC	National Curriculum Development Centre
NDP	National Development Plan
NPA	National Planning Authority
NRM	National Resistance Movement
NSGE	National Strategy for Girls Education
NTCs	National Teacher Colleges
O Level	Ordinary Level
PCR	Pupil Classroom Ratio
PE	Physical Education
PEAP	Poverty Eradication Action Plan
PES	Professional Education Studies
PHE	Professional Health Education
PLE	Primary Leaving Education
PTCs	Primary Teachers' College
PTE	Primary Teacher Education
PTR	Teacher Pupil Ratio
RE	Religious Education
SCR	Student classroom ratio
SESEMAT	Secondary Science and Mathematics Teachers
SGDs	Sustainable Development Goals
SNE	Special Needs Education
SP	School practice
SPC	School Practice Coordinators
SPM	Sector Policy Management
SST	Social Studies
STE	Secondary Teacher Education
SWAp	Sector-Wide Approach
TDMS	Teacher Development Management System
TE	Teacher Education
TIET	Teacher Instructor Education and Training Department
TISSA	Teachers Initiative in Sub-Saharan Africa
TMM	Top Management
UCE	Uganda Certificate of Education
UGX.	Uganda Shillings
UNATU	Uganda National Teachers' Union
UNEB	Uganda National Examinations Board
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UPE	Universal Primary Education
USAID	United States Agency for International Development
UTS	Unified Teaching Service
UTSEP	Uganda Teacher and School Effectiveness Project

EXECUTIVE SUMMARY

The National Development Plan II (2015/16-2019/2020) regards Education as key to Human Capital Development for the country. As well,the Plan regards Human Capital as a fundamental to harnessing the identified growth opportunities to achieve the national Vision 2040of*"A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years"*. Therefore, the quality of human capital is heavily dependent on the quality of the education system of a nation. Equally, the quality of an education system of a nation heavily depends on the quality of its teachers. Also, the realisation that quality teachers arise out of quality teacher training systems, confers significant importance on the way teachers are trained and developed. This is well elaborated by the Education Policy Review Commission (EPRC) of Uganda (1989) that:

"…… no education system can be better than the quality of its teachers, nor can a country be better than the quality of its education"

Based on the recommendations of the EPRC, the Government White Paper (GWP, 1992) was enacted to guide education in Uganda. With reference to teacher training and development, the GWPE set out to address;

i. the percentage of untrained teachers that had increased significantly among the teaching staff,
ii. failure by the Teacher Training institutions to attract enough high quality students to join the teaching profession,and
iii. gaps within the teacher training curriculum.

Over the past years,given the critical role teachers play in the teaching and learning process, the Government of Uganda (GoU) has undertaken numerous policy reforms aimed at improving the quality of Teacher Education. Some of these include:introduction of the Teacher Development and Management System (TDMS), phasing out of Grade II teachers, introduction of on-site training programmes, the teachers scheme of service, the revision of the entry requirements into primary teaching and the review of qualifications for tutoring at Primary Training Colleges (PTCs).

In as much as there has been a significant increase in the qualified teachers in the primary school sub-sector (now at over 95%) arising out of the above reforms, the overarching concerns are about:

i. the quality of the teachers being produced,
ii. the efficiency with which the teachers are distributed in schools, and
iii. teacher absenteeism.

To this end, this evaluation was undertaken to assess the Primary Teacher Education System in Uganda in light of its capacity to produce adequate competent and ethical primary school teachers who can implement the Universal Primary Education as intended.

Key findings

1. **The current Uganda's primary teacher training system is projected to supply primary school teachers in excess of the projected annual demand for primary**

school teachers. Cumulatively, the primary education subsector will require 320,679 teachers to achieve the target PTR of 40:1 by 2030. This necessitates recruitment of an average of 18,478 teachers annually over the next 12 years (between 2019 till 2030). Taking into account the number of teachers that graduate annually from all PTCs and the existing stock of teachers not yet absorbed into service (unemployed), the projections indicate that on average, 34,705 primary school teachers shall be in supply annually in search of teaching jobs. Considering that the anticipated total annual demand is 18,478 (on average), there shall be an annual surplus of 16,227 teachers (on average).

2. **The current teacher training has been effective in enabling majority of the primary school teachers to acquire teaching qualifications, and acquire knowledge on "what" to teach. However, it has been ineffective in building teachers capacity in "how" to teach.**There is sufficient evidence to conclude that much as majority of the primary school teachers hold a teaching qualification, know "what" to teach, many of them don't know "how" to teach. This is a threat to UPE objective 1, since the provision and maintenance of quality education as the basis for promoting human resource development can never be guaranteed by teachers who don't know how to teach. The specific evaluation findings to this effect are highlighted below:

    i. Almost all primary school teachers (93.2%) are qualified to teach in a primary school. Only 6.8% were found to be teaching without a teaching qualification. Most of the untrained teachers are found in private schools (15.9%) compared to only 2.5% found in government primary schools. Hard-to-reach districts also posted greater proportions of unqualified teachers compared to the rest of districts.

    ii. Majority (83%) of the primary school teachers have full knowledge and mastery of the curriculum content but they were found to be pedagogically weak and unable to transmit such knowledge to the pupils. For instance, 57% of the teachers do not plan for teaching, 40.4% of those that attempt to plan do not have the skills to produce quality lesson plans that are fit for the purpose, 37% of the teachers assess learners without reference to the curriculum and over 50% could not teach vocational skills.

    iii. Professionalism amongst teachers during the execution of their duties is declining. For instance, whereas majority of primary teachers (58.5%) are always present for class, a significant proportion is absent and teaching usually does not start on time. **For instance, it was found that only 36% of the teachers start teaching in the first week after school holidays**. In addition, it was observed that majority of teachers start their daily lessons late in disregard of the class timetable.**On average, 120 hours are lost in a month for every teacher that skips the first week of school. This, in financial terms translates into a UGx 26 Billion loss to government annually due to teachers not teaching in the first week of each of the terms.** Such a loss can sustain at least 5351 new teachers on the payroll which would go a long way in enabling the country attain its ideal PTR indicator. Besides, time wastage is responsible for poor curriculum coverage as reported in

the curriculum thematic paper, and this is a leading cause of poor learning outcomes within the primary education subsector.

3. **From the evaluation, seven constraints emerged as those that undermine the effectiveness of the Uganda's primary teachers training and management as highlighted below:**

   i. **Low capacity of PTCs to deliver competent teachers:** Teacher Training Colleges (PTCs) are severely constrained in terms of financial, human and physical resources. Currently government provides a capitation grant of UGX 1,993 per day for each pre-service teacher trainee and UGX 94 per day to provide in-service or continuous professional development (CPD) for each teacher within the catchment area of the core PTC, for 45 days in a year. This evaluation estimates a minimum required capitation grant of UGX 3,523 per day for each pre-service teacher trainee and UGX 806 per training day to provide outreach or continuous professional development (CPD).

   With reference to staffing, PTCs are operating at an average staffing level of 58%, although some operate at 29% staffing level. Also, PTCs reported significant shortages of physical infrastructure including classrooms (32%), toilets (30%), tutor accommodation (58%), ICT labs (35%), and integrated production skills workshops (87%). The outlook for physical infrastructure in PTCs seems pessimistic on the backdrop that only 30% of the required resources to establish infrastructure in PTCs has been earmarked within the Education Sector Plan over the next two years.

   ii. **Existence of misalignment between the Primary Teachers Training (PTE) Curriculum and the Primary School Curriculum.** Foremost the lower primary school curriculum is thematically arranged while the entire PTE curriculum is subject-based. Second, misalignment was noticed within the curricula contents. For instance, while there is significant alignment within the Mathematics Curricula, this is not the case with regards to Social Studies (SST), English Language, and Integrated Science. These discordances between the two curricula were found to be seriously affecting particularly the newly qualified teachers whenever they come face to face with the thematic curriculum for the first time.

   iii. **Poor PTE curriculum implementation:** Whereas the revised PTE curriculum contains a mix of academic and practical subjects, this evaluation found that more emphasis is put on the academic domain at the expense of the practical subjects such as production skills, Agriculture, co-curricular activities.

   Also, contrary to the provisions of the PTE, the findings show that the PTE curriculum content is mainly being taught theoretically and using poor teaching methods that are mainly limited to lecture method, talk and chalk and others that only promote rote learning among the teacher trainees.

With regards to School Practice, half (50%) of the PTCs do not follow the School Practice guidelines in the PTE curriculum, especially in terms of time required to be dedicated to supervised school practice. Some PTCs were found to provide only 2 weeks rather than the official 6 weeks while others contemplated dedicating more than 6 weeks.

In terms of assessment, contrary to the PTE curriculum provision for Continuous Assessment, tutors believe that having termly examinations, regional pre-promotional examinations, regional mock examinations, practical examinations and promotional examinations is what constitutes continuous assessment.

iv. **Low entry requirements into the teaching profession:** Although the MoES recently revised (upwards) the academic requirements for admission into the PTE, and in as much as all those admitted to PTCs meet the minimum requirements for entry into PTCs, primary teacher education continues to struggle to attract the best candidates.Performance in the critical subjects including English and Math is still poor with only 0.6% and 2.3% of the trainees scoring distinctions at "O" level, respectively.

Compared to other better education systems, the entry requirements into primary school teaching for Uganda are still low. For instance, this evaluation found that in most of the countries that have good education systems, primary school teachers are required to have a minimum of a bachelor's degree or master's degree. Besides the low academic entry requirements, the non-academic entry requirements into primary school teaching are even lower. No personality and attitudinal tests are required and undertaken to establish alignment of the candidates' interests, personality and orientation with the teaching profession. **As a consequence, the findings indicate that 49% of trainees in the PTCs do not love the profession but only joined it due to other reasons.**

v. **Inadequate training period to cover the loaded curriculum:** Majority (71%) of the tutors indicated that the content in the current PTE curriculum can never be accomplished within the 2 years period for pre-service training while 29% believe that it can. This evaluation estimated that 2,777 hours would be required to accomplish the pre-service teacher training programme. This implies that the current six-term period for Primary Teacher Education is inadequate to effectively implement the PTE curriculum. These are approximately 8 terms of training. It would therefore require an additional year to accomplish the PTE curriculum.

vi. **Poor Conditions of Service of the Tutors:** Besides the meagre pay, it was observed that tutors lack adequate instruction materials and laboratories and other critical infrastructure particularly for practical subjects. For instance, only 17% and 30% of the PTCs have IPS workshops and ICT labs respectively. On the other hand, only 42% of the tutors have some accommodation at the PTC. Tutors also complained of much more workload arising out of non-recruitment to fill the 42% of the currently vacant positions within PTCs. Other concerns relate to the

botched implementation of the scheme of service which had raised their hopes with regards to addressing their career growth and remuneration concerns.

vii. **Weak professional development support for tutors/teacher:** Contrary to the provisions of the scheme of service for Teacher Education Institutions (2011) that clearly stipulate that a teacher in active service is expected to grow continuously both vertically and horizontally mainly through upgrading to improve on their qualifications; refresher courses to broaden and improve on performance in specific areas; available evidence presupposes that more emphasise within the teacher support systems has been placed on elimination of unqualified teaching staff than making teachers both qualified and able to effectively teach.

The level of penetration and or reach of teacher support systems is still very shallow with very few teachers benefiting from it. For instance, a significant proportion of primary school teachers (30%) have never attended a CPD, in-service seminars and zonal workshops organised by CCTs in their career time. On the other hand, 22% of tutors have only attended between 1-3 CPD activities throughout their career.

From the findings, the weak professional development support for teachers is perpetuated by majorly under-funding of the support system (particularly the CCs and CCTs) inefficient allocation of the available meagre resources (ie CCTs) and lack of a sole institution to take leadership for the provision and management of teacher professional development.

4. **Government has undertaken various reforms, all aimed at improving the quality of primary teacher education**. However, their impacts have been limited due to principally poor resourcing and limited involvement of the key stakeholders (mainly teachers) in the design and implementation. For instance, whereas overall, reforms such as the TDMS significantly reduced the number of licensed teachers to about 2% (in government schools) and the pupil teacher ratio to about 43:1, its activities of particularly supporting teachers on-site are on a declining trend due to the declining levels of material and technical support to the system.

5. **There is a weak and inefficient system of teacher deployment that reinforces the huge variations in Pupil-Teacher Ratios (PTR) in schools across and within districts**. For instance, whereas the national PTR is 43:1, some schools have PTR as high as 300:1 while others have as low as 10:1. The two extreme scenarios all reflect wastage of the teaching resource. The former implies a significant shortage of teachers particularly in highly enrolled schools while the latter implies either a surplus of teachers or underutilised staff particularly in lowly enrolled schools.Stark disparities in teacher distribution exist in schools according to their location. Rural-based schools registered the highest PTR of 55:1 compared to urban schools (urban PTR 49:1). This scenario implies that teachers are concentrated around urban areas mainly to due to better amenities compared to rural areas.

Hard-to-reach districts on average continue to register higher PTRs compared to the national PTR and those of other districts. Government schools within hard-to-reach districts post higher PTRs compared to their private counterparts. For instance, 72% of the government schools in hard-to-reach districts have their PTRs above national average. Overall, the PTRs in hard-to-reach districts range from as low as 18:1 to as high as 105:1. The persistently higher PTRs within government primary schools in hard-to-reach districts partly imply that the incentives such as allowances targeting teachers in hard-to-reach districts are not yielding the intended results.

Conversely, it is positive to note that there is a strong link between teachers' accommodation and number of teachers in a school, meaning that there is relatively better targeting and rationalisation of teachers' accommodation as an incentive to attract and retain more teachers in schools with more accommodation demand. This is reflected in a higher coefficient of determination (0.74) between the number of teachers and the available teachers' houses in schools. Relatedly, the policy to provide more teachers accommodation in hard-to-reach districts to make them attractive for teachers is to some extent being implemented. This is reflected in the fact that the proportion of teachers provided with accommodation in schools in hard-to-reach districts (12%) is higher than those outside these locations (10%).

6. **There is a fairly elaborate legal and institutional framework to guide the PTE.**Some of the frameworks aim at promoting quality in the teaching force both at primary and PTCs. Others such legal policies on gender in education have led to more females (57% of total enrolment) being recruited into PTCs. Nonetheless, a number of gaps have been cited within these frameworks:

    i. There is no legal instrument to give effect to the operationalization of the scheme of service that had been adopted to among others increase school level supervision, and promote and motivate teachers in Uganda,
    ii. Absence of a written and disseminated textbook policy,
    iii. Absence of a National Teachers' Policy,
    iv. Contradictions surrounding the development of the primary school curriculum and the primary teacher education curriculum independently by different institutions, and
    v. Absence of an institutional arrangement to take leadership for the provision a holistic teachers professional support and development.

RecommendationsPer Key finding

In light of the above findings, we therefore recommended as follows:

1. Excess supply of primary teachers beyond those demanded

In order to contain the surge in the supply of primary teachers, which is in excess of the current and future demand, we recommend as follows:

a) Halt any establishment and or licensing of any new PTC. Besides, there is need to rationalise the existence of all the 45 public PTCs, especially in circumstances where a lesser number would as well satisfy the current and future demand for primary school teachers.
b) Maintain the current ceilings on student enrolment in PTCs for the next 12 years.
c) Stop universities from providing Grade III teachers' training given that it is not their area of speciality. Rather, universities should concentrate on providing further teacher training post-Grade III.

2. Low Professional Capacity of Primary Teachers

It is clear that the current pre-service training will not provide all the skills required for one to be a competent teacher. This necessitates a focused robust teacher/tutor professional support system to continuously support teachers mainly on how to teach among others. We recommend the following specific interventions:

a) Urgently develop teachers' professional development standards to guide the design, implementation, and funding of teacher professional development in the country.

b) Urgently develop a national teachers' professional development strategy. In order not to reinvent the wheel, this can be embedded within the current scheme of service or the imminent teachers' policyby defining a detailed national teachers' professional development strategy for achieving competent teachers.

c) The TDMS as a strategic intervention towards teacher professional development should be restructured and adequately resourced. Foremost, rather than relying on CCTs as the sole providers of professional development support, and given that they are as well overstretched, there is need to identify and develop senior teachers as mentors and coaches to support the lean CCT structure in providing professional support on-site. In the interim, focus should be placed on adequately resourcing the TDMS and easing the workloads of CCTs. To this end, we recommend for urgent recruitment of CCTs to fill the existing 38 vacancies and additional CCTs to reduce the CCT-to-school ratio from the current 1:35 to the recommended 1:18. Further, there is need to increase the in-service/outreach capitation grant from UGx 94 to UGx 806 per day for each teacher within the catchment area of the core PTC for 45 days a year.

d) Elevate one of the existing institutions to become a National Institute of Teacher Education and Professional Development to provide leadership for particularly the professionalization of the teachers and education administrators.

e) The MoES should fast-track the development and implementation of the National Teachers' Policy as a framework through which to professionalize and homogenize the teaching profession and enhance the development and management of teachers.

3. Low PTC Capacity to deliver competent teachers

The findings highlighted the inadequate teaching learning environments within PTCs that cannot support the training of competent primary school teachers. To address this, we recommend as follows:

a) Given that public PTCs in Uganda depend on central government for any resources, and, given thatthe current policy is to fully cover tuition of teacher trainees, government should capacitate the PTCs with the required resources to function effectively and deliver competent teachers as defined in the teachers' profile. Foremost, there is need to recruit 686 tutors to raise the staffing levels of all public PTCs to the ceilings set by the MoES. In the interim, recruitment should be done of tutors in subjects where there are acuteshortages including Maths (43% vacant), English Language (51% vacant), and Science (50% vacant). Other subjects with critical shortages include Kiswahili (56% vacant), Local language (73% vacant), SNE (73% vacant), and ECE (53% vacant). Further, a more feasible strategy to fill the unmet infrastructure needs should be charted and priority should be given to such PTCs that have reported acute shortages of classrooms, toilets, ICT labs, and Integrated Production Skills Workshops.

b) With regards to financing, this evaluation estimates a minimum capitation grant of UGX 3,523 (from UGx 1,993) per day for each pre-service teacher traineeand UGX 806 (from UGx 94) per training day to provide outreach or continuous professional development (CPD) for each teacher within the catchment area of the core PTC for 45 days a year to enable the PTCs to meet their basic recurrent expenditures.

c) It should be a requirement for all PTCs to have improvement plans or strategic plans clearly identifying areas that need improvement and the interventions for improvement. The MoES in collaboration with the National Planning Authority should ensure support to this intervention.

4. Misalignment of the Primary Teachers Training (PTE) Curriculum and the Primary School Curriculum

To address this, we recommend for the Primary Teacher Curriculum and the Primary School Curriculum to be designed and managed under one roof and preferably by the NCDC just as the laws provide. However, this shall require fundamental capacity augmentation at the NCDCto be able to design and manage the PTE curriculum. In the interim, efforts should be directed towards aligning the two curricula such that primary teacher trainees are fully exposed to the primary school curriculum, in terms of content, pedagogy and structure while still in training. This can be achieved through a framework that enables the intensive collaborations between Kyambogo University and the NCDC during the curricula review exercises.

5. Low entry requirements into the teaching profession

In as much as the revised entry academic requirements for the prospective teacher trainees slightly improved their quality, we recommend that entry requirements into PTCs should further be raised to "A" level. This is in response to the finding thatthe

primary teaching profession continues to attract relatively poor quality candidates who struggle to cope with not only the teacher training demands but also classroom practice when they graduate. Moreover, drawing on best international practice, this evaluation found that in all countries that have good education systems, a primary school teacher must hold a minimum of a bachelor's degree. This is on the realization that primary teachers must be as skilled just as those that teach at higher levels. This is because, it requires great skills and competences and initiative to teach at primary and ensure that all pupils are able to develop their cognitive, emotional and physical skills as bases for the subsequent education levels.

6. Poor Conditions of Service of the Tutors

The scheme of service needs to be rejuvenated and funded in order to enhance the tutors' and teachers' status, morale and professionalism; as the key ingredients of a quality teacher education and development system. In the interim, a costed action plan and financing strategy for the implementation of the *scheme of service* needs to be developed by the Education Service Commission. Above all, there is need for the MoES to introduce a legal instrument to give full effect to the operations and institutionalization of the scheme of service, as this would guarantee its perpetual implementation.

7. Inadequate training period to cover the loaded curriculum

The MoES in collaboration with the National Planning Authority and other key stakeholders should further study and evaluate the proposal and the possibility to revise the length of pre-service primary teacher training from 2years to 3years in response to the findings that: the ideal time required to accomplish the PTE curriculum is 2,777 hours which approximates to 3 years. However, in case the entry requirement to PTCs is elevated to a minimum of "A" level, there will be no need of revising the length of the training period given that such candidates would have higher aptitude to cope with the training demands within the 2 years.

8. Weak and inefficient system of teacher deployment

There is need for a number of policy and instrument reviews to guarantee effective and efficient deployment of primary school teachers as recommended below:

a) Urgently establish a clear policy framework for deployment and legitimate transfer of teachers to address the huge disparities in PTRs within the primary schools. For avoidance of doubt, the PTR should be the principal determinant of teacher deployment such that schools with extreme PTRs should be given priority in deployment. Demands to move teachers away from hard-to-reach areas should be resisted.

b) **The hard-to-reach policy needs to be revisited to increase on its impact on teacher deployment in the hard-to-reach schools.** Foremost, defining hard-to-reach using geographical demarcations is out-dated and leads to poorly targeting the intended beneficiaries. Rather, spatial data should be urgently used to map schools to parameters used in measuring hard-to-reach, as an accurate method to establishing the

beneficiaries. Also, given that schools found in hard-to-reach areas continue to exhibit higher PTRs (shortage of teachers), implies that the existing incentives allocated to attract teachers to such areas have not been effective. To this end, such incentives should be revised upwards.

Conclusion

Whereas the Primary Teachers' Education system has a fairly relevant and focused training curriculum, and a fairly elaborate legal and institutional framework, it is significantly constrained to produce competent primary school teachers to deliver UPE as intended. Most of the teachers coming out of the training system know "what" to teach but don't know "how" to teach it. This has been as a result of among other the acute incapacitation of the PTCs, inefficiencies in deployment of teachers, and poor curriculum implementation. The TDMS and other support systems arising out of the various earlier reforms managed to ameliorate some of the skill/knowledge gaps within the primary teachers but only to an extent, due to the highlighted constraints. Therefore, there is need for a systemic approach to address the critical constraints to enable the teacher training system to deliver competent teachers who can implement the UPE as intended.

SECTION ONE

INTRODUCTION

1. Background

The National Development Plan II (2015-2021) highlights education as key in ensuring human capital development which is one of the ways to achieve Uganda vision 2040. Thiswill depend on the quality of human capital, which in turn depends on the quality of the instruction processes. The role played by the teacher is key in the setting of learners' goals and managing and guiding the learning process for the achievement of the set goals (Szucs, 2009). UNESCO (2006) asserts that teachers are the key agents in ensuring effective teaching and in determining the quality of education that children receive. The Education Policy Review Commission (EPRC) (1989) also asserts thatno education system can be better than the quality of its teachers, nor can a country be better than the quality of its education. The quality of teachers therefore has a big bearing on the quality of education and outputs of the education system.

UPE was launched in 1997 on recommendations of the Education Policy Review Commission (EPRC, 1989) as implored by the Government White Paper on Education (1992). Its objectives are to:

1. Establish, provide and maintain quality education as the basis for promoting human resource development
2. provide the facilities and resources to enable every child to enter and remain in school until the primary cycle of education is complete
3. make basic education accessible to the learner and relevant to his or her needs as well as meeting national goals
4. Make education equitable in order to eliminate disparities and inequalities
5. Ensure that education is affordable by the majority of Ugandans
6. Meet the objectives of poverty eradication by equipping every individual with basic skills and knowledge.

UPE conferred more responsibility to teacher education. For instance, there was exponential increase in enrolment from approximately 2.6m to approximately 8.7m pupils between 1996 and 2017. While government has tried to deploy more qualified primary school teachers in schools, the pupil teacher ratios remain high with some extreme cases being 300:1. This implies that the increase in the teaching force was and continues to be unmatched with school enrolment and this is a persistent threat to the achievement of UPE objectives. There are as well serious concerns with regards to the quality of teachers being produced, the efficiency with which the teachers are deployed and teacher absenteeism. It is therefore imperative that an evaluation of Teacher Education in Uganda is conducted in light of its ability to produce competent teachers to deliver the Universal Primary Education (UPE). This is the basis for this evaluation.

1.1. History of Education in Uganda

Before the introduction of formal education, indigenous education existed in communities in Uganda, majorly focusing on teaching the youth accepted economic, social, and political

behaviour of their community. According to Muyanda – Mutebi (1996), indigenous education was characterised by the following:

(i) There were no formal institutions, like schools, for this education.
(ii) There was no formal curriculum. The curriculum was the sum total of the societal experiences with regard to culture, customs, beliefs and values.
(iii) Instruction was basically given freely by elders and peers.
(iv) Instructional methods were through demonstrations, modelling, stories, folklore, songs, etc.
(v) Evaluation was through observation of an individual's performance in real situations in life, for example through battles, production, marriages, civic duties and leadership.

Such education aimed at:

(i) Moulding children to fit into their respective societies.
(ii) Promoting harmony in society.
(iii) Enabling the youths to solve individual and societal problems.
(iv) Equipping the youths with production skills.
(v) Promoting cultural heritage.
(vi) Developing character training and respect for elders among the youths.
(vii) Enabling the youths to acquire and apply life skills.

The arrival of missionaries to Uganda led to the introduction of formal education. The history of Formal Education in Uganda therefore dates far back to 1875 when the then Kabaka of Buganda Kabaka Mutesa 1 invited teachers to Uganda to teach his subjects knowledge and skills (Ssekamwa, 2000; Scanlon, 1964). This invitation culminated into Stanley's write up of November 15, 1875 to the London Daily Telegraph, which emphasised the need for a 'practical Christian tutor' in Uganda. The first batch of missionaries to visit Uganda were from a range of professions including; lieutenant of the Royal Navy, trained engineer, architect, curate, skilled artisan, builder, and doctor.

By 1877, the teachers from the Church Missionary Society had arrived in Uganda under the leadership of Alexander MacKay, (Ssekamwa, 2000; Scanlon, 1964). These were mainly protestant. In 1879, the Roman Catholic White Fathers followed. The missionaries taught Christianity, reading, writing, numeracy, agriculture and some technical skills. Reading was emphasised because its mastery was viewed as an avenue of advancing reading of the bible (Scanlon, 1964). The Moslems who were the first to arrive in Uganda on the other hand focused more on teaching Islam and reading the Koran.

By 1906 several boarding schools had been established (Muyanda-Mutebi, 1996) and many more high schools were opened there after. The kind of education offered in these schools was closely aligned to the European type of education with emphasis on English grammar and reading. Other subjects taught were Geography and mathematics. There was an increase in learner enrolment at that time and this required an increase in the number of teachers hence the need for training more teachers. Since then, teacher education has remained at the centre of the education debates which have caused its evolution hitherto.

1.2. A History of Teacher Education in Uganda

1.2.1. Pre-Independence Period

Before the introduction of formal education, indigenous education existed in communities in Uganda, majorly focusing on teaching the youth accepted economic, social, and political behaviour of their community. According to Muyanda – Mutebi (1996), indigenous education was characterised by the following:

(vi) There were no formal institutions, like schools, for this education.
(vii) There was no formal curriculum. The curriculum was the sum total of the societal experiences with regard to culture, customs, beliefs and values.
(viii) Instruction was basically given freely by elders and peers.
(ix) Instructional methods were through demonstrations, modelling, stories, folklore, songs, etc.
(x) Evaluation was through observation of an individual's performance in real situations in life, for example through battles, production, marriages, civic duties and leadership.

Such education aimed at:

(viii) Moulding children to fit into their respective societies,
(ix) Promoting harmony in society,
(x) Enabling the youths to solve individual and societal problems,
(xi) Equipping the youths with production skills,
(xii) Promoting cultural heritage,
(xiii) Developing character training and respect for elders among the youths, and
(xiv) Enabling the youths to acquire and apply life skills.

The coming of the missionaries changed the content that was taught with most of them introducing foreign content as opposed to indigenous knowledge that was taught before. This necessitated the training of teachers to deliver the new curriculum. This training was undertaken in some of the first teacher training colleges including Mukono, Nsambya, Bikira, Gulu, Namirembe, and Rubaga. Nyanjeeradde Teacher Training School (current Makerere Primary School) was also established in 1930 by the Uganda Protectorate government to train Kiswahili Teachers but was later closed by Government. A teacher training school for Muslim schools was established at Kasawo in Mukono District,but later transferred to Kibuli during the 1950s (ssekamwa, 2000). In 1948, a Teacher Training college was established at Nyakasura, and in 1954, it was transferred to Kyambogo hill. This became the National Teacher's college Kyambogo and later on the Institute of Teacher Education Kyambogo (ITEK) by a statute of parliament in 1989. Whereas Makerere College had been earlier on established in 1922 for majorly technical training, it also offered some teacher training courses.

Between 1924 and 1962 Education in Uganda in general and teacher education in particular underwent significant changes recommended by the various education commissions and committees that were constituted at different times and under different terms of reference and leadership.

Some of the pre-independence education commissions that had significant impact on teacher education included the Phelps-stokes commission (1924), The Thomas Education committee (1940), and De Bunsen committee (1952). In sum, the commissions and committees were mainly concerned with the entrenchment of the colonial government interests into the faith dominated education system, provision and management of teacher training, entry requirements into teacher training and the length of teacher training. Some of the recommendations made by the De Bunsen Committee that shaped teacher training include:

1. A reduction in the training centres from 41 to 22 adequately equipped teacher training centres, discontinuation of training of vernacular teachers and increasing the annual teacher output from approximately 500 to 1,000.
2. Establishment of students' enrolment ceiling (between 100-200) within colleges.
3. Teacher training course length of 4 years consisting of 2 years of general education and 2 years of professional training.
4. Entry into teacher training colleges after 8 years of basic education.

1.2.2. Post-Independence period

After independence in 1962, Uganda needed to undertake education reforms. For this, it established the Castle Education Commission (1963). The commission was tasked with the responsibility of examining content and the structure of education in Uganda and provide recommendations (Anguma, Jurua & Asiimwe, 2012). The commission recommended the expansion of teacher training among others. By 1964, enrolment numbers in the existing PTCs including Kibuli (Muslim), Arua, Boroboro, Iganga, Kabwangasi, Ndejje, Lotome, Namutamba, Mbarara, Ngora, Nyakasura (Protestant), Bukedea, Gulu, Kinyamasika, Busubizi, Butiti, Ibanda, Kangole, Nkokonjeru, Nkozi, Nyondo, Nyadonga, Ngetta, Ngora and Nyondo (Roman Catholic) and Nsuube (Government), had increased. On the other hand, Kyambogo and Nsuube were specialising in training Primary Domestic Science teachers.

With regards to the curriculum, the teacher training curriculum included subjects such as; Arithmetic, Health education, Religion (Bible knowledge), Arts and crafts, Nature study and gardening, English, Singing, Geography, Needlework, Vernacular language, history and Physical education. The college curriculum was closely aligned to the primary school curriculum. To signify the criticalness of practice in teaching, supervised teaching practice lasted 12 weeks. With regards to financing, the arrangement was that of cost-sharing where on average students paid between $42 - $50 (Scanlon, 1964), while government support was $77 per student per year. Prior to the enactment of the 1970 education Act, teacher training was largely in the hands of faith-based organisations that had founded majority of the teacher training colleges (PTCs). This complicated the management of teacher training and the teachers since each category of teachers was reporting to its respective religious or administrative authority e.g. each teacher paid allegiance to the denominational or administrative authority they subscribed to (Ssekamwa; 2000). The government therefore enacted the 1970 Education Act leading to the takeover of all schools by government to avoid the divisions. The Act further stopped anyone to teach unless they were registered. In the same year, the Unified Teaching Service (UTS) was established with the aim of bringing all teachers under one authority the Teaching Service Commission. All the above were aimed at improving the quality of education.

Some of the Castle Commission's recommendations that were of consequence to teacher training included the establishment of Teacher Training Colleges for Grade III teachers with minimum admission on attainment of O-Level Secondary education and a phase out of Teacher Training Colleges for Grade II teachers. The existing Grade II Primary school teachers were required to upgrade to Grade III status (Ssekamwa, 2000).

The current education reforms and teacher education reforms derive from the Education Policy Review Commission under the chairmanship of Prof. Senteza Kajubi of 1987 whose recommendations culminated into the Government White Paper on Education (GWPE) of 1992. Among the critical recommendations of the GWPE that significantly impacted teacher training is the UPE policy recommendation. This came with a promise of free basic education to all Ugandan children of school going age, provision of basic requirements including qualified teachers for the primary education subsector. More professional support to enhance teachers' competences to deliver the UPE was promised as well. Inspite of the progress made in reforming teacher training, there are many concerns regarding the quality of the teachers being produced, and the efficiency with which the teachers are deployed in schools.

Accordingly, this evaluation is undertaken to assess the Primary Teacher Education System in Uganda in light of its capacity to produce competent and ethical primary school teachers who can implement the Universal Primary Education as intended.

1.3. Scope of the Study and Methodology

The overall objective of this evaluation is to assess the Primary Teacher Education System in Uganda in light of its capacity to produce competent primary school teachers who can implement the Universal Primary Education.The specific objectives were to;

(i) To assess the extent to which policy and institutional frameworks are focused to helping teachers/trainees acquire the appropriate competences and working environment to implement the UPE policy and the primary curriculum;
(ii) Review and analyse critical reforms in the country's primary school teacher training;
(iii) Assess the effectiveness and efficiency of the current teacher training and development approaches in achieving UPE objectives;
(iv) Assess the adequacy and relevance of the teacher training curriculum viz a viz the competences required to implement the UPE policy and the primary school curriculum;
(v) Evaluate the current primary teacher training financing mechanism and assess the financing gaps that exist; and
(vi) Draw lessons from best practices and suggest recommendations on how primary teacher's training could be improved and adapted to the prevailing needs and challenges of primary education sub-sector.

This evaluation is part of the comprehensive review of the UPE policy which include:

i). Evaluation of the Policy, legal and regulatory and institutional framework of UPE

ii). Costing and financing frameworks of the UPE
iii). Modelling and Forecasting education learning outcomes
iv). Curriculum design
v). School inspection practices.

1.3.1. Research Design

The evaluation employed a mixed methods research design of both quantitative and qualitative techniques. The qualitative techniques involved interviewsand the quantitative techniques involved a survey. A triangulated approach involving document analysis was also employed, complemented by field visits.45 Primary Teachers Colleges (PTCs) from 47 districts from all regions across the country where government PTCs and Private PTCs were visitedand 4 National Teachers colleges (NTCs) specifically involved in primary teacher education across Uganda were involved in the evaluation. Phenomenology and cross-sectional survey strategies were adopted.

1.3.2. Data Sources and Tools

Data was gleaned from both primary and secondary sources. Primary data was obtained from a survey using a questionnaire and a guided interview while secondary data was got from documents. The interviews were conducted with purposively selected officials from Primary Teachers' Colleges, National Teachers Colleges (NTCs) that offer a Diploma in Primary Education (DEPE), National Curriculum Development Centre (NCDC), Ministry of Education and Sports (MoES), Directorate of Education Standards (DES), Kyambogo University (KYU) and Local Governments (LGs). The information from the interviews informed the questionnaire that was used in the survey.

1.3.3. Field Visits

The Teacher Training Thematic Area Team visited scientifically six demarcated regions of Uganda namely: Central, West Nile and Northern, Karamoja & East, East Busoga, Western and South Western**.** Prior to the visitations and field experiences, permission was sought from the relevant Ministries and Sectors/departments, Primary teachers' Colleges (PTCs), National Teachers' Colleges (NTCs), district and municipality local government authorities. The sampling of key informants during the field visits was both purposive and proportionate for all the six (6) regions in terms of post/title held in the institution and proxy. Gender was considered during the selection of key informants. The field visits and consultations were scheduled in liaison with the heads of institutions, programmes and departments.

1.3.4. Survey

The survey was conducted using a questionnaire subjected to officials from NTCs and PTCs. From the NTCs, the evaluation focused on only those involved in facilitating the Diploma Education Primary (DEP) whoincluded; Principals, Deputy Principal Officers, School Practice Coordinators (SPC), Dean of Studies (DoS) and Tutors.

From PTCs, the evaluation targeted purposively selected respondents who included; Principals, Deputy Principal Pre-service (DPP), Deputy Principal Outreach (DPO) School Practice Coordinator (SPC), Director of Studies (DoS), Tutors, Professional Education Studies (PES) lecturers and Coordinators Centre Tutors (CCTs). The tutors and teacher trainees were randomly selected. Other respondents included; The District/Municipality Inspectors of schools (DIS). NPA staff supervised data enumerators and assured the quality of the process in the various districts in addition to the consultant during validation of the tools, data collection and data analysis.

1.3.5. Documentary Study

The documents consulted included; other studies on Teacher issues, the Ministry of Education and Sports (MoES), EMIS reports (2012/16), The Education Sector Strategic Plan (2017/20), The MoES policies, The Government White Paper on Education (1992), Ministry of Education and Sports Sector Annual Performance Reports (2011/17).Other relevant documents reviewed included; The 2030 Sustainable Development Goals (SDGs), Uganda Vision 2040, Poverty Eradication Action Plan (PEAP), National Development Plan II, Sector-Wide Approach (SWAp), Education Strategic Investment Plan (ESIP), TISSA Report (2014), Data generated from document analysis was subjected to a content review to get guidance towards the key objective of the evaluation. It also involved a review of the key issues impacting primary teacher education.

1.3.6. The Target Population

45 Primary Teachers Colleges (see appendix A) and 4 National Teachers colleges (NTCs) were considered by the evaluation. The NTCs were chosen for the evaluation given that they provide in-service training for Grade III teachers who are upgrading to Grade five or Diploma (GV). These include; NTC Kabale, NTC Kaliro, NTC Mubende and Kabalega College Masindi. Specifically, 49 teacher training institutions and 61 support and administrative institutions were sampled and visited across the country. All the Institutions were purposively selected.

The target population for the survey included principals of PTCs (49) and NTCs (4), NTC Deputy Principal Officers (DPOs - 4), PTC DPOs (17), School Practice Coordinators (SPCs) of PTCs (44) and NTCs (5), Deans of Studies (DOS) (5) from 5 NTCs of Arua, Gulu, Kabale, Masindi & Mubende, and DOS' of PTCs (48) from 48 districts, Deputy Principals Pre- Service (PTC- 49) , District Inspectors of School (DIS) (62) from 62 districts, Professional Education Studies (PES) Lecturers(11), Teacher trainees (181), and Tutors (197). In total, the sample size of 846 participants and 27 facilitators was engaged in the teacher training thematic area data collection.

1.4. Data Analysis

For quantitative data descriptive statistics were used in terms of frequencies and percentages based on views of the respondents. For qualitative data, themes of the study were identified and data analysed accordingly.

1.5. Structure of the Report

Section one of the report presents the introduction and background to education in Uganda, with special focus on Teacher Education. It also presents the scope and methodology employed in the evaluation. Section two presents the reforms in Teacher Training and development in Uganda. In section three an evaluation of the regulatory and institutional frameworks guiding teacher education is presented, followed by an evaluation of the effectiveness and efficiency of teacher training and development in achieving UPE objectives in section four. Conclusions and recommendations are drawn in section five.

SECTION TWO

REFORMS IN TEACHER TRAINING AND DEVELOPMENT IN UGANDA

2. Introduction

A number of reforms have taken place in the education sector with the aim of improving the quality of education, before and after independence. The recent sector reforms have been majorly guided by the GWPE (1992). Some of these reforms have been translated into action plans for implementation. This section presents a review of the critical reforms in the country's primary school teacher education and training.

2.1. Reforms

Immediately after independence, the Castle Education Commission (1963), was appointed to review the education system which was still operating along the recommendations of the De Bunsen Education Committee of 1952. The recommendations focused on domesticating the education system to produce enough qualified Ugandans to fill all job positions particularly in the public service that prior to independence, were being occupied by foreigners. With reference to teacher training, some of the reforms saw the establishment of Teacher Training Colleges for Grade III teachers with O-Level secondary education as the entry requirement. Consequently, Teacher Training Colleges for Grade II teachers, which required prospective teacher trainees to possess a primary education qualification, had to be phased out. (FountainPublishers, 1997).

The period from 1970 to the early 1980s was characterised by economic decay and political turmoil and hence did not witness much reforms in teacher education. However, many reforms were introduced with the coming of the new government in 1986 that culminated into among others; universalization of primary education (UPE) and the introduction of the Teacher Development and Management System (TDMS).

2.1.1. The TDMS

TDMS was created majorly to address and fast-track teachers' professional development through pre-service and in-service training programmes. According to earlier evaluations of TDMS (see Hartwell et al.,2003), found that the programme provided the only avenue for reaching teachers, schools and communities on-site with a decentralised network of in-service teacher education, professional guidance and school-level support. Particularly, the programme led to the establishment of: 554 Coordinating Centres (CCs) each with a Coordinating Centre Tutor (CCT); and 54 Primary Teacher Colleges' (PTCs) Administrative units to support the CCs and CCTs. Also, through the TDMS, around 13,000 untrained teachers were in the process of being upgraded to qualification status; about 8,500 Head Teachers underwent a certificate course in School Management; and over 22,229 community members who volunteered, were trained on community resource mobilisation for education in terms of provision of building materials, raising funds, labour and involvement in the management of schools (MoES, 1999).

2.1.2. Establishment of the Instruction Materials Unit

The Instructional Materials Unit (IMU) was established in 1993 as part of the larger Primary Education and Teacher Development Project (MoES, 1999). Consequently, a draft National Book Policy was formulated and the Instructional materials market became liberalised in 1994. This was to ensure that materials produced reach the schools so as to aid the teaching learning process. However, the liberalisation of instructional materials' market led to a proliferation of many books on market some of which do not measure up to the standard.

2.1.3. Introduction of the National Assessment of Progress in Education

In order to continuously monitor and evaluate the primary teachers' subject mastery, and teaching and learning effectiveness, the National Assessment of Progress in Education (NAPE) was introduced in 1995 by UNEB. Since 1996, NAPE has being providing information on the above parameters, albeit focusing on only literacy and numeracy, yet the curriculum prescribes vocational skills, music and other subjects too.

2.1.4. Establishment of the Education Standards Agency and later on Directorate of Education Standards

Further reforms have been undertaken in the area of quality assurance for Primary Teacher Education. This arose from the establishment of the Education Standards Agency (ESA) in (2001), which later became the Directorate of Education Standards (DES) in 2008 on the Enactment of the Education Act (2008). DES has the responsibility of setting and monitoring quantitative and qualitative Education Standards in the Institutions of the Education Sector in Uganda. There exists a Teacher Education Unit at DES which ensures that all teacher education institutions are performing according to the set standards.

2.1.5. Introduction of Teacher Education Proficiency Training

Of recent, training programmes to strengthen teachers' competencies have been introduced and these include the Certificate of Proficiency in Teaching (C-PT), and the Certificate in Teacher Education Proficiency (C-TEP). These are in-service training programmes respectively designed to equip teachers and tutors with enhanced pedagogical skills, (MoES, 2014). The C-PT course is a needs-based course designed to bridge existing gaps in Primary Teacher Education practices. On the other hand, the C-TEP course is aimed at strengthening the capacity of PTC tutors to deliver college training programmes using appropriate methods (MoES., 2014).

2.1.6. Revision Of Entry Requirements into Teacher Training

In an effort to enhance quality of teacher education, the MoES revised the requirements for admission into the primary teacher training college. Hitherto, besides the requirement to have attained an O-level certificate, it is also a requirement to have obtained a credit in Mathematics and English and a pass in any two science subjects at O-level. Also, the qualification requirements for one to teach in a PTC were increased by the TIET department. Currently, the minimum qualification for a tutor is a Bachelor's Degree in a relevant field (Scheme of Service, 2013).

2.1.7. Cascading of the SESEMAT Programme to Primary Schools

In order to improve the teaching of science at PTCs, the Secondary Science and Mathematics Teachers (SESEMAT) programme, which was initially created to support secondary school science teachers, was later extended to support science and maths tutors/lecturers in PTCs and NTCs, (MoES, 2014). This programme promotes learner-centred teaching methods thereby enabling the teacher trainees to as well adopt the use of such methods as they teach mathematics and science in primary and secondary schools.

2.1.8. Adoption of Sector Wide Approach to Planning

With regards to planning for teacher education, government adopted the Sector Wide Approach (SWAp) in 1999. This resulted into new structures intended to foster holistic and forward policy development, planning, and management as well as enhanced participation by stakeholders. Among the new structures is the Teacher Education working group that handles all teacher education issues.

2.1.9. Introduction of the Scheme of Service

Tutor/teacher motivation has been the focus of the reforms in the teacher education subsector. The scheme of service was established and adopted in phases since 2008 to address this issue, but its implementation was halted due to financial constraints. Many tutors have retired without being promoted despite upgrading and teaching for a considerable number of years. This has resulted in low morale of tutors which could impact negatively on their service delivery.

2.1.10. Hard-to-reach policy reform

In a bid to improve access to public services without any barriers such as geographical location, the Government in 2001 designed a 'hard-to-reach'/incentive scheme for the sectors of Education and Health in order to attract and retain Public officers to meet the established staff norms. The policy targets primary school teachers serving or accepting to serve in areas which exhibit the conditions for it to be classified as hard to reach such as limited access to functional amenities, hostile communities and terrain, limited housing, insecurity, among others. The policy entails a 30% markup to the civil servant's salary and other incentives including accommodation as compensation for the hardship.

2.1.11. Introduction of the Class-teacher system

Finally, the review of the primary school curriculum in 2007 led to the introduction of the policy of one teacher per class which requires a primary school teacher to teach all subjects to a class under his/her jurisdiction. While this reform tries to address efficiency in providing primary education, it assumes that the teachers have knowledge and interest in all subjects on the curriculum, which is not the case. The reform is ineffective in a situation where a teacher's competences are wanting, and makes the learners to suffer the consequences. Ideally, teachers would perform better if they were allowed to specialise and teach what they are interested in.

2.2. Evaluation findings on the effectiveness of the reforms in teacher education.

i). Overall, the reforms (particularly the TDMS) significantly reduced the number of licensed teachers in government schools to about 2% (by 2017) and the pupil teacher ratio to about 43:1 (by 2017)

ii). The effectiveness of the TDMS (particularly the CCT system) in supporting the on-site teaching and learning activities is on a declining trend due to the declining levels of material and technical support to the system. Among the list of constraints that CCTs gave for not effectively performing their roles, inadequate funding (21.2%), inadequate materials/space (12.1%), large catchment area (12.1%), dilapidated resource centres (12.1%), hostile communities (6.1%) and lack of interest by teachers (6.1%); standout as the most important.

iii). The National Assessment of Progress in Education (NAPE) is less effective in continuously monitoring and evaluating the primary teachers' subject mastery since it is narrow in focus. The findings show that it is restricted to only literacy and numeracy yet the curriculum is broader than these.

iv). Much as the reform to increase the primary teacher trainee intake academic requirements has led to increased quality of teacher trainees enrolled, PTCs have expressed concern of the reducing numbers of eligible candidates for admission. The findings show that the average enrolment of PTCs is 352students but with 3 PTCs having low enrolments below 200 students while 25 PTCs have below the mean enrolment.

v). Whereas the scheme of service had been introduced as a human resource tool stipulating the training and retraining requirements and the career path of teachers and tutors, its operationalization was halted due to financial constraints. The findings show that this has lowered the morale of teachers and tutors.

vi). Whereas the proportion of teachers provided with accommodation in schools in hard-to-reach districts (12%) is higher than those outside these locations (10%), which is a positive move in terms of targeting and rationalisation of teachers' accommodation as an incentive, the persistently higher Pupil Teacher Ratios (in some schools 150:1) within government primary schools in hard-to-reach districts partly imply that the incentives such as allowances targeting teachers in hard-to-reach districts are not yielding the intended results.

vii). In as much as the reforms that led to the class-teacher system tried to address the cost-effectiveness of primary education, it has imposed an overwhelming load on some teachers that handle very large classes (in terms of enrolment). Also, the evaluation found out that teachers are not necessarily talented and or interest in teaching all the subjects on the primary school curriculum in the same class. This reform is reported to be having negative ramifications for the learning of the children.

SECTION THREE

THE REGULATORY AND INSTITUTIONAL FRAMEWORKS GUIDING TEACHER EDUCATION

3. Introduction

The current Teacher education system is guided by a number of international and national policy frameworks and implemented by various institutions. The international frameworks include but not be limited to; The Universal Declaration of Human Rights (1948), The 2030 Sustainable Development Goals (2015), specifically goal number 4. At national levelteacher education is guided by; The Constitution of the Republic of Uganda (1995), Vision 2040, National Development Plan (NDP) II, Education Sector Strategic Plan (2017-2020), The University and other Tertiary Institutions Act (2001) as amended (2003), Equal opportunities commission Act (2007), The Education Act (2008), the Government White Paper on Education (1992), Teachers' professional code of conduct (2012), the UNEB Act (1983), NCDC Act (2000), among others.A National Teacher Policy is yet to be developed and implemented to regulate and address teacher education and development issues holistically. In the next sub-sectionsan evaluation of the regulatory and institutional frameworks, which directlyinform Teacher Education in Uganda is undertaken.

3.1. Legal/Policy Framework

3.1.1. The Government White Paper on Education (GWPE) (1992)

The Government White Paper on Education (1992) is the policy document that has guided education to date. It has been the basis for the currently reformed primary school curriculum. The evaluation was concerned with some the challenges to implementing the provisions of the GWPE that are of consequence to the primary teacher education. Below are the evaluation findings.

Evaluation Findings

i). Evaluation findings reveal that whereas the GWPE provided for the teaching in local language and Kiswahili in primary schools, this is yet to be fulfilled due to inadequate staff to teach them. For instance, only 27percent and49percent of the positions for the local language and Kiswahili tutors at PTCs are filled, respectively.

ii). **Inadequate time for training for teachers to learn and teach local language and Kiswahili.** Besides inadequate teachers being one of the causes of slow progress in effecting the teaching of local language and Kiswahili as provided for by the GWPE, the time allocated to the teacher trainees to learn the Kiswahili and local language is too short to ensure their mastery and as such the teacher trainees are graduated with limited competences in the subjects.

iii). **The GWPE provisions on teaching in local area language within the lower primary education sub-sector have largely not been tenable partly due to lack of alignment between the languages of instruction and assessment.** It was found that

the local language-teacher-trainees were being taught and assessed in English instead of the particular local languages that they are being trained to teach. Similar scenarios were found in primary schools where children are instructed in local languages but assessment is in English.

3.1.2. The Education Act (2008)

According to this Act, it is the responsibility of the state to:provide for teachers' welfare, set policies, provide the teacher training curriculum, register teachers after completion of training, deploy and promote teaching staff (section 5), among others. This evaluation was interested in identifying the gaps that need fillingwithin and/by this Act and are of consequence to teacher education.

Evaluation Finding(s)

i). There is no legal instrument to give effect to the operationalization of the scheme of service that was adopted to enhance the tutors' and teachers' status, morale and professionalism in Uganda.

ii). There is no objective and efficient criterion for deployment of teachers in primary schools. This is reflected in the huge variations in the pupil teacher ratios in schools by ownership and location.

3.1.3. National Curriculum Development Centre (NCDC) Act (2000)

The NCDC Act (2000) mandates NCDC to develop curricula for Primary and Tertiary institutions, among others. The other functions of NCDC include: designing and developing teaching aids and instructional materials; devising tests and evaluation of examination questions and methods of examining students; organising and conducting in-service courses and orientations on instruction, objectives and methods of curriculum development. This evaluation was interested in identifying the gaps that need filling within and/by the NCDC Act and are of consequence to teacher education.

Evaluation Findings

i). **The NCDC Act is not being implemented as intended.** While the Act and GWPE (1992) provide that curriculum development for PTCs and primary schools should be handled by NCDC, this has not been the case. In practice, the two curricula are being designed and developed independently by two independent government institutions, Kyambogo University (PTE) and NCDC (primary school).

ii). **There is significant non-alignment of the Primary Teacher Education curriculum and the Primary School Curriculum.**Save for the mathematicscurriculum, there is noticeable misalignment in most of the subject areas between the PTE curriculum and the primary school curriculum. The content organization of the two curricula varies significantly. For instance, whereas part of the primary curriculum is thematically arranged, this is not reflected in the PTE

curriculum. Secondly, whereas the primary curriculum exploits the spiral arrangement of content where knowledge is logically sequenced and deepens as the learners ascend the academic ladder, the PTE curriculum has a more or less discrete curriculum arrangement with distinct content for year one and year two (*see appendices 1-4 for more details*). These discrepancies are in part perpetuated by the two curricula being designed and developed independently by Kyambogo University (PTE) and NCDC (primary school).

3.1.4. The Teachers' Professional Code of Conduct Notice, (2012)

The Education Service Teacher's professional code of conduct notice (2012) defines the code of conduct forteachers while executing their duties and responsibilities. The code outlines the ethical and professional conduct of tutorsand teacher in terms of: personal teacher conduct, relationship with colleagues and parents, the employer and the community. This evaluation was interested in assessing the implementation, consequences and the gaps that need filling within and/by the code.

Evaluation findings:

i. **Whereas the code is aimed at promoting professionalism and integrity among the teachers and instructors, it is domiciled in the Education Service Commission (ESC) which is remotely linked to the operations of PTCs and primary schools.**To this end, the code has only served to enable the ESC to receive periodic reports of sanctioned cases particularly from district local governments. It has therefore been of little effect to the intended objective of nurturing and ensuring professionalism and integrity within the teaching profession across the country. It is worthwhile to consider reviewing the code in light of the decentralisation of primary education since districts are the implementers of most of education policies.

3.1.5.The Equal Opportunities Commission Act (2007)

The Equal Opportunities Commission Act (2007) implements government's constitutional mandate of eliminating discrimination and inequalities within the various government sectors based on sex, age, race, colour, ethnicity etc. This evaluation was interested in assessing the achievements, challenges and gaps associated with the Act, that are of consequence to teacher training.

Evaluation finding(s)

i). Teachereducation has provided various opportunities to vulnerable/disadvantaged individuals to join PTCs.Currently, there are more girls (57%) enrolled in PTCs than boys (43%). Nonetheless, the findings hint at particular challenges that limit full participation of the vulnerable/disadvantaged individuals. For instance, the evaluation established that only **12 out of 45 (27%) government PTCs have a Special Needs tutor.**

3.1.6.Primary Teachers' Training Policy

The Primary Teachers' Training Policy was enactedin a bid to improve teacher education.The key features of the policy are: admissions to PTCsare based on merit; government pays tuition fees for all students admitted to PTCs, but in case a student fails promotional examinations, he/she loses government sponsorship; all PTCs are expected to follow nationally approved curriculum; teacher training in PTCs is limited to a period of two years for pre-service and 3 years for in-service programmes; and the minimum admission requirements for prospective students into PTCs. The policy defines the requirements as being: an 'O' Level certificate with a credit in English Language, a credit in Mathematics, passes in at least two science subjects from any two of the three categories of Biological science (Biology), Physical science (physics and chemistry) and applied sciences (Agriculture), (See handbook on TIET policy, 2010). This evaluation was interested in assessing the achievements, challenges and gaps associated with the policy, that are of consequence to teacher training.

Evaluation findings:

i). Much as government is committed to paying fees for all PTC students, the amount paid per teacher trainee is very minimal and this has hardly increased over the years. A PTC student is paid Sh. 1,993 per day to cover all costs of operation.

ii). In some instances, government releases are late which makes it difficult for PTCs to effectively operate thereby compromising the quality of teacher training.

iii). While all PTCs teach the same curriculum designed by Kyambogo University, there are variations with regards to time allocated to different subjects and activities. Variations were particularly noticed in the non-examinable subjects and school practice whereby some PTCs allocated more or less time compared to their counterparts

3.1.7. Physical Education and Sports Policy (2005)

The policy aims at improving and sustaining physical education through formal and non-formal programs; identifying talents in games and sports among children and youths both at school and out of school for further training and specialization.

Evaluation Finding

Physical Education and Sports receives less attention albeit being part of the teacher education curriculum. This evaluation found that in some PTCs, between 1-2 hours per week are dedicated to physical education. Among the reasons given for this is that the subject is not examined by UNEB at primary level, and the general lack of equipment and manpower specially trained in sports science to efficiently teach it in PTCs.

3.1.8. Gender in Education Policy (2009)

This policy guides all education stakeholders in planning, resource allocation, and implementation to ensure gender parity. It emphasises equal participation of both female and

male in the education system, provision of knowledge and skills equally to males and females and ensuring gender responsive planning, budgeting, programming and monitoring and evaluation. As far as integration of gender in teacher education is concerned, the sub-sector carried out a gender audit and a rapid assessment in Primary Teachers colleges to establish the extent to which Gender is integrated in the teaching and learning processes. Based on the findings, a module was developed and tutors have been trained on its use. The current evaluation is a follow up on the achievements, challenges/issues around the operationalization of the policy.

Evaluation Findings

i). Teacher Education has mainstreamedthe elements of gender education into the PTC curriculum. This has ensured that all tutors are trained on gender education to ensure that the same is done in primary schools.

ii). The evaluation found that more girls (57%) are enrolling in PTCs than boys (43%). This could be partly as a result of the policy.

3.1.9. Universal Primary Education (UPE) Policy (1997)

The policy advocates for among others, free primary education. It abolished tuition fees and Parents and Teachers Association charges for primary education. The UPE policy continues to have significant ramifications on primary teacher education. For instance, there has been a remarkable increase in the pupil enrolment from approximately 2.6m to approximately 8.7 million pupils, between 1996 and 2017. This increment required to be matched with an increase in the number of teachers to match the exponential increment in pupil enrolment.This evaluation assessed some of the consequences and gaps of the policy on teacher education and development.

Evaluation Findings

i). **The introduction of UPE enabled more primary teachers to be trained and recruited.** Most importantly, through the TDMS, many unqualified but already serving teachers were trained and attained qualification status. To date, the primary education sector boasts of over 95% qualified staff. Nonetheless, this evaluation found that more qualified teachers need to be recruited to further lower the pupil teacher ratio particularly in the rural schools.

ii). **It was found that teacher training has not been effective in equipping primary school teachers/trainees with the critical skills to address the challenges presented by UPE**. Teachers still struggle to: manage large classes, undertake continuous assessment, fit into the class-teacher system and produce instruction materials from locally available materials. From the evaluation, although 83% of the trained primary school teachers have full mastery of subject content that they teach, they were found to be pedagogically weak and unable to transmit such knowledge to the students. For instance, 57% of the teachers could not plan for teaching, 40.4% of the lesson plans were unfit for the purpose, 37% assessed learners without reference

to the curriculum and majority could not teach vocational skills. In some instances, teachers use assessment to exclude pupils from continuing with their education when they do not perform academically as expected by the teachers. These are symptoms of poor teacher training and threaten the effective implementation of UPE.

1.2.Institutional Framework

Teacher education in Uganda is a responsibility of the Teacher Instructor Education and Training (TIET) Department of the Ministry of Education and Sports (MoES). Teacher training institutions include; Early Childhood Development (ECD) Teacher Training Institutions,(training nursery teachers); Primary Teacher Colleges (Training primary school teachers); National Teachers' Colleges (Training both primary school teachers (DEPE) and Secondary School Grade V teachers); Instructor Training Colleges (Training College instructors); Health Tutors' Colleges (Training Health instructors); and Universitiesfor mainly training Secondary School teachers.

Primary School Teachers join the profession with a minimum of "O" Level School Certificate. These are trained in Primary Teachers Colleges (PTCs), for a period of two years. On graduation they obtain a Grade III Teachers' certificate. There is also a category of teachers who opt for an occupation-based training model that combines training and work. In-service training serves teachers who are working towards their first teacher qualification ie grade III or those who are upgrading from Grade III to Grade V or Diploma in Primary Education (DEPE).Operationally, outreach programmes could as well be taken to constitute part of in-service training.

Kyambogo University plays a central role in handling PTCs, NTCs and some technical Instructor Training College admissions,curriculum development, assessment and certification processes.On the other hand, Universities, both public and private, also produce teachers at Diploma and Degree levels. Thesedevelop their own programmes as accredited by the National Council for Higher Education.

There are 57 PTCs in Uganda, of these, 45 are government aided while 12 are privately owned. Of the 45 government aided colleges, 23 are core PTCs and run both pre-and in-service programmes while the 22 are non-core PTCs offering only pre-service programmes. It is however critical to note here that some universities are actively providing training for Grade III teachers. This shouldn't be the case given that this is not their area of specialisation. Rather, they are mainly suitable for further training of teachers Post-Grade III.

A PTC is headed by a Principal and assisted by a Deputy Principal (Deputy Principal Outreach (DPO) and Deputy Principal Pre-service (DPP)). Each PTC has teaching and non-teaching staff appointed by the Education Service Commission. For one to teach in a PTC, he/she must have acquired a degree as minimum qualification. There are however a few remaining tutors with a diploma qualification, and these are mainly those who were already in employment before the policy came into effect.

The evaluation of the institutional framework under this section is restricted to TIET department of the MoES given that it is directly responsible for the teacher education sub-sector. The primary teachers' colleges (PTCs) which are also part of the institutional framework are

evaluated under section four which deals with the effectiveness and efficiency of teacher training and development. On the other hand, the rest of the institutions within the framework for teacher training and development have been implicitly evaluated in the previous section under the respective lawsthat establish such institutions. This is done to limit repetitions within the write-up.

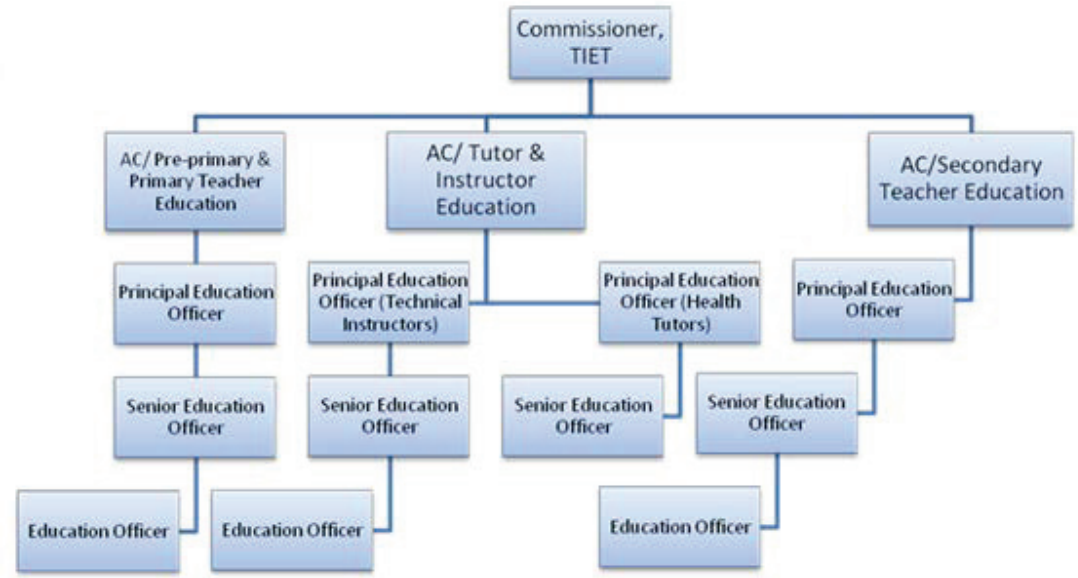
1.2.1. Teacher Instructor Education and Training Department (TIET)

TIET is one of the departments of the Ministry of Education and Sports responsible for, among other things; training of tutors who teach in primary teacher's colleges and lecturers for specialised training institutions including National Teachers' colleges. It is also responsible for policy, control and maintenance standards and control of teacher education curriculum program activities and examinations (ESSAPR, 2011).

The mission of the Department is "*To provide support, guide, coordinate, regulate and promote quality teacher, tutor and instructor education for production of adequate, competent and ethical teachers, tutors and instructors".*

The Department has three divisions; Pre-primary and Primary Teacher Education responsible for the training of ECD and primary teachers, Secondary Teacher Education (STE) division, dealing with lower secondary teacher training; and Instructor and Tutor (ITE) division, responsible for the training of teaching personnel for BTVET institutions. The head of the department is a Commissioner who is responsible for all teacher development programs, including in-service and pre-service training. Each division is headed by an Assistant Commissioner (see Fig. 3.1). This evaluation focused on the primary teacher education department.

Figure 3. 1: Structure of Teacher Instructor Education and Training Department



Source: MoES (2017)

Evaluation Findings

i). **Much as Teacher Education has recruited more tutors, this evaluation found that there is no government PTC in Uganda that is fully staffed up to the staff establishment level**. Overall, all the PTCs are expected to have teaching staff totallingto 1,621 out of which only 935 (58%) have been recruited leaving a shortage of 686 (42%).It was also found that no PTC has the required number of tutors for each subject in accordance with the established subject staff requirements and some subjects are completely without tutors.

ii). **Under the Development of PTCs project, the sector constructed various facilities in ten (10) PTCs. Nonetheless, the evaluation found that there is still an unmet need of infrastructure for PTCs to optimally operate**. For instance, 32% of the required classrooms have not been constructed in PTCs, 58% of tutors have no work-place accommodation, and 64% of the required ICT labs are yet to be provided. This implies that the primary teachers are being trained in unconducive environments.

iii). **More effort has been directed to making the primary teachers' education (PTE) curriculum relevant for producing a competent teacher to effectively deliver the UPE policy**. This was reflected in the high ratings of the PTE curriculum by the tutors and teacher trainees who indicated the PTE curriculum is focused on various knowledge, and skill including critical literacy skills,numeracy skills, classroom/school leadership and management, professionalism, communication, and reflective practice. However, there are concerns that the curriculum is not being implemented as expected due to various constraints including time, tutors, and instruction materials.

iv). **The evaluation found some evidence of tutor and teacher support systems including the TDMS (CCTs) and other in-service professional development programmes delivered under the Uganda Teacher and School Effectiveness Project (UTSEP).** For instance, records show that over 3500 primary two teachers have been trained in Early Grade Reading methodologies, and over 900 primary schools have benefited from school based internal based evaluation. Nonetheless, reports indicate that the TDMS programme is severely constrained by poor resourcing that cannot enable the CCTs to effectively deliver their support on-site in schools.

v). The increasein the primary teacher trainee intake academic requirements has led to increased quality of teacher trainees being recruited. However, PTCs are struggling to attract quality candidates and enrolments have significantly reduced, with some PTCs having their enrolment below 200 trainees. PTCs argue that quality candidates rarely want to join teaching on the backdrop that it does not pay well.

SECTION FOUR

EFFECTIVENESS AND EFFICIENCY OF TEACHER TRAINING, TEACHER SUPPORT AND DEPLOYMENT

4.0. Introduction

There is general consensus that quality teachers are the most important determinants of quality education. But competently trained teachers are an output of an effective and efficient teacher education system which entails quality inputs and processes all operating within a supportive and reinforcing context. Developing countries including Uganda are undergoing significant educational changes and expansion that require a dynamic and competent teacher to implement such changes and guarantee their sustainability.

When Uganda adopted Universal Primary Education (UPE), government promised to provide quality primary education by among others providing the critical facilities and resources. This as well implied the provision of a critical force of adequately trained and equipped teachers required to implement the UPE policy to achieve its objectives. In particular, teacher training is expected to significantly contribute towards the attainment of the UPE objective 1 (provide and maintain quality education as the basis for promoting human resource development; and 3 (make basic education accessible to the learner and relevant to his or her needs as well as meeting national goals). Besides, teacher education is supposed to address specific teacher issues identified in the Government White Paper on Education (GWPE). The evaluation question pertaining to teacher training is whether the current teacher training pathways have the capacity to satisfy the current teacher training needs to deliver Universal Primary Education.

Initial primary school teachers' training is undertaken by Primary Teachers Colleges (PTCs). **However, surprising as it may be, some universities have been licensed to provide initial Grade III teacher training.** There are currently 45 public PTCs, 23 of them being core while 22 non-core. On the other hand, there are 12 privately owned PTC around the country. At the minimum, primary school teachers are expected to hold a Grade III teachers' certificate attained either through pre-service training or in-service teachers training. There are two pathways to achieving a GIII qualification ie pre-service pathway for those entering teacher training fresh from secondary schools and in-service pathway for those untrained and or under-trained requiring to attain qualification status and or upgrade their qualification/competences

4.1. Primary Teachers Training Needs

4.1.1. Quantity of teachers needed viz supplied

An Education policy and Strategy Simulation Model (EPSSim) was used to project demand and supply of primary school teachers. **The projections are built around key education development targets and assumptions (Table 1).** The targets are in line with the achieving the SDGs and Vision 2040 by 2030 at lower secondary and Primary Teacher's colleges. However, some of assumptions and targets are specifically informed by the country's ability to attain.

In 2016, MoES raised the entry requirements for Primary Teacher's Training Colleges. Specifically, students applying to enrol in PTCs must have passed with a minimum of a credit in English and Mathematics and two principal passes from the physical and life sciences. Using data from UNEB, and the established enrolment ceiling in PTCs, we assumed that over the projection period, PTCs will only take on 19 percent of the UCE graduates that meet the entry requirements. Additionally, we assumed that over the projection period, the pass rates in PTCs rise from the 65 percent in 2014 to 85 percent in 2030. The detailed assumptions taken in the projections are highlighted in table4.1 below:

Table 4. 1: Summary of assumptions taken in projecting teacher demand and supply

Assumed parameters	Target and/ or assumed Value (2030)
Pupil Teacher ratio	40
Primary school teachers' attrition rate	3%
Primary teachers unemployment rate	15%
Enrolment into public PTCs (Ceiling to be maintained)	16,239
Total number of PTCs (No licensing of new PTCs)	57
Proportion of S4 leavers who have passed and likely to join PTCs	19%
Promotion rate in PTCs (YR1 to YR2)	94%
YR1 Repetition rate in PTCs	4%
Pass rates at PTCs	85%

YR1 denotes year 1 or first year students in PTCs while YR2 denotes second year students in PTCs

Evaluation finding

The current teacher training system is projected to supply primary school teachers in excess of the projected annual demand for primary school teachers. Inlight of the above assumptions, cumulatively, the primary education subsector will require 320,679 teachers to achieve the target PTR of 40:1 by 2030. This necessitates recruitment of an average of 18,478 teachers annually over the next 12 years (between 2019 till 2030). On the supply side, taking into account the number of teachers that graduate annually from all PTCs and the existing stock of teachers not yet absorbed into service (unemployed), the projections indicate that on average 34,705 primary school teachers shall be in supply annually in search of teaching jobs. Considering that the anticipated total annual demand is 18,478 (on average), there shall be an annual surplus of 16,227 teachers (on average) (see table 4.2 for details). This implies that there is no need to license any new PTC, whether public or private. Secondly, the finding implies that it is not necessary to increase enrolment in the PTCs beyond the current enrolment ceilings.

Table 4. 2*Projected Demand and Supply of Primary School Teachers between 2018-2030*

	2014	***2018***	***2019***	***2020***	***2021***	***2022***	***2023***	***2024***	***2025***	***2027***	***2028***	***2029***	***2030***
Teacher Demand													
Enrolment (Pupils)	*8,326,155*	*8,571,584*	*8,783,811*	*9,035,876*	*9,319,212*	*9,618,460*	*9,926,567*	*10,241,660*	*10,563,431*	*11,337,423*	*11,788,298*	*12,284,690*	*12,827,141*
Total Teachers needed to achieve target PTR	*178,044*	*188,849*	*195,353*	*202,922*	*211,382*	*220,401*	*229,831*	*239,638*	*249,826*	*273,991*	*288,053*	*303,587*	*320,679*
Pupil Teacher Ratio	*47*	*45*	*45*	*45*	*44*	*44*	*43*	*43*	*42*	*41*	*41*	*40*	*40*
Needed Teachers assuming zero attrition		*5,218*	*6,503*	*7,569*	*8,460*	*9,019*	*9,430*	*9,807*	*10,188*	*12,705*	*14,062*	*15,535*	*17,091*
Attrition (3%)		*5,665*	*5,861*	*6,088*	*6,341*	*6,612*	*6,895*	*7,189*	*7,495*	*8,220*	*8,642*	*9,108*	*9,620*
Annual Teacher Demand		***10,884***	***12,364***	***13,657***	***14,801***	***15,631***	***16,325***	***16,996***	***17,682***	***20,924***	***22,703***	***24,642***	***26,711***
Teacher Supply													
Annual Graduation from PTCs	*7,898*	*8,094*	*8,275*	*8,456*	*8,639*	*8,822*	*9,007*	*9,194*	*9,382*	*9,761*	*9,952*	*10,145*	*10,340*
Stock of teachers not yet absorbed into service	*11,995*	*16,682*	*17,923*	*19,192*	*20,488*	*21,811*	*23,162*	*24,541*	*25,948*	*28,848*	*30,341*	*31,863*	*33,414*
Annual Teacher Supply	***19,893***	***24,776***	***26,198***	***27,648***	***29,126***	***30,633***	***32,170***	***33,735***	***35,330***	***38,609***	***40,293***	***42,008***	***43,753***
Surplus Teachers		***13,893***	***13,834***	***13,991***	***14,325***	***15,002***	***15,845***	***16,739***	***17,647***	***17,685***	***17,590***	***17,366***	***17,042***

Source: EPSSim Model projections.

*Note: * the data on stock on Primary Teachers not yet absorbed into service (unemployed) for the baseline (2014) was obtained from the Macroeconomic Human Resource Planning Model (NPA, 2018).*

4.1.2. Quality of Teachers Needed Viz supplied

According to policy, primary schools teachers should at the minimum hold GIII teachers certificate and registered to teach in the country. Besides, the Primary Teacher profile requires a competent teacher to be equipped with *"what"* and *"how"* to teach. These are classified as Knowledge Competences and Values/Ethics. Examples of knowledge competences expected of a Ugandan primary school teacher include; Content Knowledge, Pedagogical Knowledge, Professional Knowledge, Contemporary Knowledge, Life skills, Leadership/Management skills, Skills of Research and Reflection, Social skills, Skills for Collaboration and Teamwork Skills for Effective Community Relations. On the other hand, the Teachers' Professional Code of Conduct describes the Ethical Code that entails values and attitudes that teachers must espouse all the time while on and off duty. The evaluation question pertaining to the quality of primary school teachersis whether the current teacher training yields the kind of teacher (already in service or in training) that matches the current profile highlighted above.

Evaluation findings

i). **Majority of the primary school teachers hold a teaching qualification, know"what" to teach but don't know"how" to teach.** This is a threat to UPE objective 1 since the provision and maintenance of quality education as the basis for promoting human resource development can never be guaranteed by teachers who don't know how to teach. The specific evaluation findings to this effect are highlighted below:

ii). **Almost all primary school teachers (93.2%) are qualified to teach in a primary school. Only 6.8% were found to be teaching without a teaching qualification. Most of the untrained teachers are found in private schools (15.9%) compared to only 2.5% found in government primary schools.** A greater share of the unqualified teachers are located in hard to reach districts including Abim, Agago, Buliisa, Kiryandongo, Lwengo, Nakasongola, Napak, Nwoya, Amuria, Amuru, Bundibugyo, Buvuma and Buyende. In terms of qualification levels, whereas majority (62%) of the teachers hold GIII certificate, those who have upgraded their qualifications to GV and Graduate levels have increased to 23.5% and 6.5% respectively.

iii). **Majority of the trained teachers possess full knowledge and mastery of the primary curriculum content**. Findings reveal that 83% of the trained primary school teachers have full knowledge and mastery of the content that they teach.

iv). **Majority of the primary school teachers do not plan for lessons taught.** From the findings, only 43% of primary school teachers prepare lesson plans for the timetabled lessons while 57% do not prepare lesson plans for all the timetabled lessons.

v). **For the teachers who plan for the lessons, 40.4% had poor quality lesson plans.** This finding implies that whereas the lesson planning levels are low within the primary schools, those that attempt to plan do not have the skills to produce quality lesson plans. For instance, few lesson plans assessed had clearly stated: (i) achievable learning objectives stated in behavioural terms (ii) learning competences (iii) methods (iv) language development competences (v) lesson procedure (vi) instructional materials to be used in the lesson (vii) time allocations to the lesson phases and (viii) life skills and values to be developed at the end of the lesson. Some of the reasons given by teachers for poor lesson planning practices include: inadequate time; teaching same content and therefore no need to plan again; too much work load/teaching activities; inadequate instructional materials to

use for planning lessons; laxity of teachers; non-examinable subjects which according to teachers do need planning; inadequate supervision of teaching by school administration; high pupil teacher ratios; poor teacher training and lack of refresher courses; and late delivery of materials for lesson planning by the authorities.

vi). **Many primary school teachers cannot appropriately assess learning.**Contrary to the recommended formative assessment, majority of primary school teachers use tests and exams (summative assessment) to assess pupils. The evaluation found that 86% of the teachers used only tests and examinations to assess the learners all the time. It was further revealed that for the teachers who gave classwork and homework as assessment, 43% did not score the work. Above all, the results indicate that 37% of the assessment done by primary school teachers is not guided by the curriculum.

vii). **Less than 50% of the primary school teachers are able teach vocational skills**

viii). The results (see table 4.3) indicate that while handwork, arts and crafts, gardening and cooking are part of the primary school curriculum, few teachers indicated to have the competences to teach and or guide learners on such subjects. This trend was found in both government and private primary schools located in both rural and urban centres.

Table 4. 3: *Primary teachers' responses on the kind of vocational skills for which they guide their learners*

Basic vocational skills	Class taught (%)		Location (%)		Type of school (%)	
	P.4	P.6	Urban	Rural	Gov't	Private
Handwork, Arts and Crafts	49.1	45.6	49.3	45.6	47.2	48.2
Gardening	36.6	41.9	37.7	40.8	40.3	36.4
Cooking	14.3	12.5	13.1	13.6	12.5	15.5

Source: National Planning Authority survey, 2017

ix) **Professionalism amongst teachers during the execution of their duties is declining**. For instance, whereas majority of primary teachers (58.5%) are always present for class, teaching does not usually start on time. It was found that only 36% of the teachers start teaching in the first week after school holidays. In addition, inspectors observed that majority of teachers start their daily lessons late in disregard of the class timetable.

Consequently, it is estimated that 120 hours are lost in a month. This, in financial terms translates into a UGX.26 Billion loss to government annually due to teachers not teaching in the first week of each of the terms. Sucha loss can sustain at least 5351 teachers on the payroll which would go a long way in enabling the countryattain its ideal PTR indicator. Besides, time wastage is responsible for poor curriculum coverage as reported in the curriculum thematic paper, which is a leading cause of poor learning outcomes within the primary education subsector.

1. **From the evaluation, the critical constraints that undermine the effectiveness of Uganda's primary teachers training include:**

   (i) low capacity of PTCs to deliver competent teachers,
   (ii) misalignment between the Primary Teachers Training Curriculum and the Primary School Curriculum,
   (iii) Poor Curriculum Implementation,
   (iv) Poor Conditions of Service of the Tutors,
   (v) Low entry requirements into teaching profession,
   (vi) inadequate training period to cover the loaded curriculum and

(vii) Weakprofessional development support for tutors/teacher.

Each of the constraints is illustrated below:

4.2.Low capacity of PTCs

4.2.1. Inadequate financing

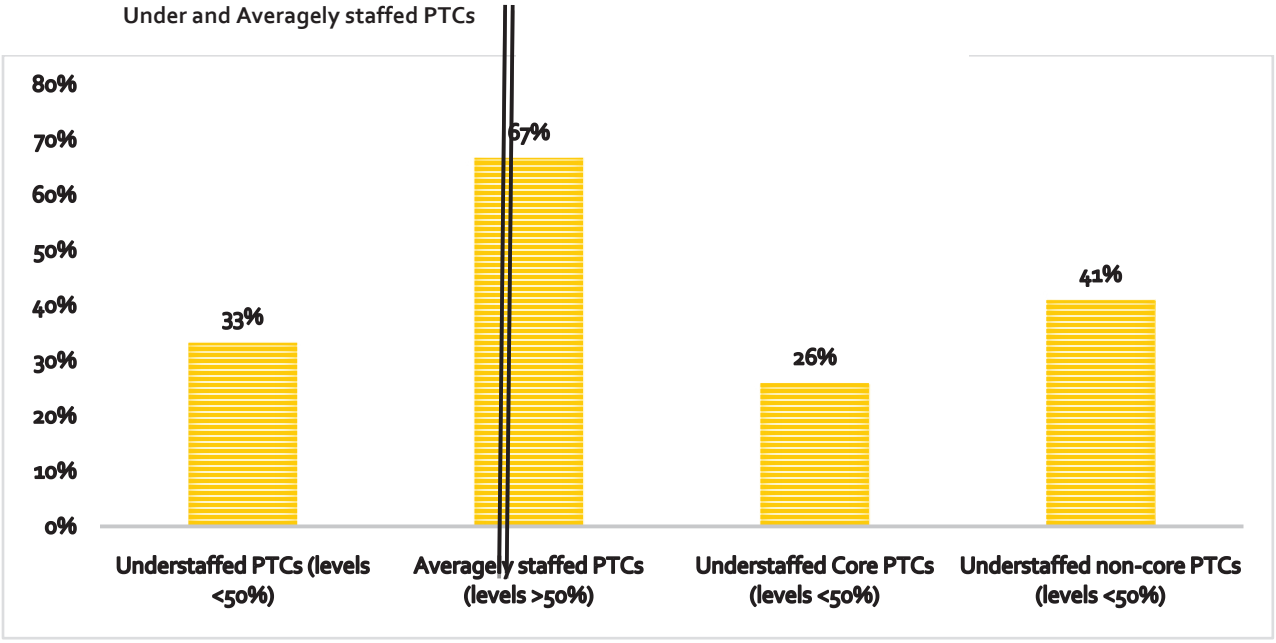
(i) **Financing to Primary teacher education is limited and non-responsive to the growing in-put shortages of PTCs.** The budget for Primary Teacher Training has remained almost constant since 2013/14. For example, in 2013/14, the pre-service teacher training total budget outturn was at Ug. Sh. 20.66bn and this has slightly reduced four years later to Ug. Sh. 19.97bn. On the other hand, the total budget for in-service teacher training slightly increased from 3bn in FY2013/14 to 5bn in FY2017/18.

(ii) **The current per capita funding provided to PTCs is below the unit cost and cannot enable PTCs meet their operation costs.**Currently government provides a capitation grant of UGX 1,993 per day for each pre-service teacher trainee and UGX 94 per day to provide in-service or continuous professional development (CPD) for each teacher within the catchment area of the core PTC, for 45 days in a year. This evaluation estimates a minimum capitation grant of UGX 3,523 per day for each pre-service teacher trainee and UGX 806 per training day to provide outreach or continuous professional development (CPD) for each teacher within the catchment area of the core PTC for 45 days a year.

4.2.2. Low staffing levels

(i) **There is no government Primary Teacher Training College (PTC) in Uganda that is fully staffed up to the staff establishment level**. Overall, all the public PTCs are expected to have teaching staff totalling to 1,621 out of which only 935 (58%) have been recruited leaving a shortage of 686 (42%). Out of the 45 public PTCs, 15 (33%) have their staffing levels less than half (50%) of their staff establishment. Non-Core PTCs are the most affected by staff shortages. For instance, 9 out of the 15 critically understaffed PTCs are non-core. These include Kisoro PTC, Kaliro, Kamurasi and Rukungiri PTCs,with staffing levels at only 29%, 33.3%, 33.3% and 38% respectively. Much as the rest (67%) of the PTCs have their staffing levels above 50% of their staff establishment, majority have their staffing levels within the range of 52%-70%. Only 7 PTCs enjoy slightly higher staffing levels and these include Nkokonjeru PTC (71%), Nyondo PTC (72%), Soroti PTC (75%), Busikho PTC (76%), Kabwangasi PTC (81%), Shimoni PTC (83%) and Jinja PTC (86%). This state of staffing indicates that the tutors are inadequate which translates into a high student tutor ratio and in a way affects the teaching learning process. When the tutors are few it implies that the work load on the few that are available is high which limits the time and attention tutors give to the trainees in supporting them and this would have adverse effects on the quality of the teacher trainee. This in turn affects implementation of UPE since the teachers graduated may not have the required competences.

Figure 4.1: Staff shortages in PTCs



Source: NPA Survey, 2017.

(ii) **No PTC has the required number of tutors for each subject in accordance with the established subject staff requirements and some subjects are completely without tutors.** Endemic tutor shortage is noticed in the gateway subjects including Maths (43% vacant), English Language (51% vacant), and Science (50% vacant). Other subjects with critical shortages include Kiswahili (56% vacant), Local language (73% vacant), SNE (73% vacant), and ECE (53% vacant). Some reports (ie TISSA report 2014) have hinted that tutor shortfall in Uganda is mainly explained by the insufficient funds to recruit more tutors, the heavily bureaucratic recruitment mechanisms and staff ceilings.

(iii) **The Student Tutor Ratio (STR) of 12:1 as envisaged in the Education Sector Plan (2017-2020) will not be achieved by 2019/20**. This evaluation projects that to hit this target, the MoES would be required to recruit about 553 tutors over the next two years (see appendix 7). Unfortunately, according to the Education Sector Plan, the MoES plans to recruit only 40 tutors between FY2018/19 and 2019/20 and this could bear a significant negative impact on the quality of teacher trainees.

(iv) **On a positive note, this evaluation found greater consistence between the current qualification levels of tutors and the policy requirements for tutors at PTCs to atleast possess a degree.** 80% of the tutors hold degree qualification while 6% hold masters degrees. Only 14% hold diplomas and these do not meet the current qualification requirement to teach at PTCs.

4.2.3. Physical Infrastructure in PTCs

Table 4. 4: *Status of physical infrastructure within the PTCs*

Resources	Resources Required	Resources available	Unfilled gap	% unfilled gap
Lecture rooms	440	299	141	32%
Toilet/latrines facilities				
Total Toilets	1114	780	334	30%
Toilets for Male	478	327	151	32%
Toilets for Females	636	453	183	29%
Toilets for Staff	242	161	81	33%
Tutors' accommodation at college	879	365	514	58%
ICT LAB	57	37	20	35%
Integrated production skills workshops/workplaces	120	15	105	87%

Source: NPA Survey 2017
Note: The numbers reported in table 1. include public and private PTCs in the Country

(i) **The evaluation found that 32% of the required classrooms have not been constructed in PTCs and some PTCs have as few classrooms as 2 while others have as many as 14 classrooms.** Fewer classrooms have sustained a higher Student Classroom Ratio in PTCs at 57:1 which is higher than the MoES target of 40:1. This implies that classrooms at PTCs are overcrowded and this is a poor-quality indicator of teacher training

(ii) **With regards to Toilet facilities, 780 toilet stances have been constructed compared to the 1,114 toilet stances required, leaving a 30% (334 toilet stances) unmet gap**. This compromises the sanitary standards of the PTCs and predisposes teacher trainees to illnesses of poor hygiene.

(iii) **Only 42% of tutors are accommodated at PTCs due to acute shortages in tutor accommodation.** Yet, lack of work-place accommodation has been cited as the main cause of teacher and tutor absenteeism given that some have to walk longer distances to get to their places of work. Equally, lack of accommodation makes it difficult for teacher trainees to access and consult their tutors as majority of the latter are not readily available whenever needed. It is however critical to note that tutors receive a consolidated salary to among others cater for living costs including accommodation and so it may not be overly the responsibility of PTCs to house all of them.

(iv) **There is a shortage of ICT facilities/labs which leaves the ICT skills of the teacher trainees as well as the Tutors wanting.** For instance, 35% of the required ICT labs have not been provided to PTCs and this contradicts the country's strategic direction of mainstreaming ICT in teaching and learning in order to hone the ICT skills of not only the learners but also the teachers to be able implement relevant, innovative and competence-based teaching approaches such as blended teaching and learning.

(v) **Only 10 PTCs out of 57 have an integrated production skills workshop in place**. Specifically, there are 15 workshops within the PTCs in Uganda leaving a shortage of 105 workshops. Yet, It is in these workshops that the trainees can learn vocational and entrepreneurial skills not only for their won livelihood but also for designing and developing teaching aids that can be used in the teaching learning process. This shortage interferes with the development of such skills which explains the current emphasis on theory in the teaching and learning at all the different levels.

4.3. Misalignment between the Primary Teachers Training (PTE) Curriculum and the Primary School Curriculum

4.3.1. **The PTE curriculum is subject-based and this content organization varies significantly with the thematic approach used in the Lower primary schools' curriculum**. This evaluation noticed this as a serious challenge particularly to the newly trained teachers whenever they come face to face with the thematic curriculum for the first time. Whereas there is some support to enable teacher trainees/fresh graduates to implement the thematic curriculum, the most strategic option would be to instruct them using a curriculum with a similar arrangement of content as that in the primary schools. Relatedly, the primary school curriculum follows spiral logic in the sequencing of content where one knowledge feeds into the other and knowledge deepens as the learners ascend the academic ladder. However, this is not the case for the PTE curriculum which has a more or less discrete curriculum arrangement with distinct content for year one and year two.

4.3.2. **There exists misalignment between the PTE and the primary school curricula within the content and scope of the individual subjects.** While there is significant alignment within the Mathematics Curricula, this is not the case with regards to Social Studies (SST), English Language, and Integrated Science. For instance, with regards to Integrated Science, the PTE curriculum has units on Force and Motion, Raw Materials and Chemical Products, Matter and Structure which do not have clear and direct linkages with the primary schools' integrated science curriculum. Conversely, the primary schools' curriculum has content in the theme Science in human activities and occupations which appear in Agriculture education in the PTE curriculum but not in the Integrated Science Education (see appendix 3). With reference to the SST curriculum for P7, "Africa" is not reflected in the PTE curriculum. Conversely, the PTE SST curriculum also has content in Unit Three-Globe, map work and photographic interpretation which is not reflected in the Primary schools' curriculum (see appendix 1). Finally, with regards to English Language, the Primary School curriculum content is all condensed in the second unit of the PTE curriculum. Thisimplies that limited time is accorded to it and this may reduce the understanding of the teacher trainee of the content and concepts in the primary English Language curriculum (see appendix 2 for details).

Table 4. 5: ***Summarized comparison of subjects offered by the two curricula***

PTE subject	Primary school equivalent
Professional Education Studies	
Special Needs Education	
English Language Education	English Language
Social Studies Education	Social Studies
Integrated Science Education	Integrated Science
Mathematics Education	Mathematics
Religious Education	Religious Education
Kiswahili Education	Kiswahili Language
Local Language	Local Language
Music Education	CAPE 1: Music Dance and Drama
Physical Education	CAPE 2: Physical Education
Early Childhood Education	
IPS	
Art and Technology	CAPE 3: Art and Technology
Home economics	
Agriculture Education	

Source: Uganda PTE and Primary School Curricula

4.4. Poor Curriculum Implementation

4.4.1. **In as much as the PTE curriculum content was favourably rated for being fairly balanced on the three knowledge domains, and for focusing on critical skills, competences, values and knowledge required of a competent primary school teacher; there are significant gapswithin the implementation of the curriculum that have constrained trainees from acquiring such skills, knowledge and values as highlighted below:**

4.4.1.1. **Whereas the revised PTE curriculum contains a mix of academic and practical subjects, this evaluation found that more emphasis is put on the academic domain at the expense of the practical subjects such as production skills, Agriculture,co-curricular activities.** For instance, some PTCs allocate only 1% of the weekly instruction time to co-curricular activities, contrary to the curriculum provision of 5%. Similarly, in majority of PTCs no time was allocated to ICT as a subject.Some of the reasons advanced for the limited emphasis on practical subjects include limited time provisions against content overload, lack of teaching staff for such areas, lack of funds to procure the required materials for use in practical classes, and lack of specialised laboratories.

4.4.1.2. **While the revised PTE curriculum provides for a variety of both tutor centred and student centred instruction methods of delivering the curriculum, findings show that the PTE curriculum content is mainly being taught theoretically and using poor teaching methods that are mainly limited to lecture method, talk and chalk and others that only promote rote learning.**This is contrary to the current paradigm shift towards competence-based teaching and assessment, where teaching is expected to lead into the development of a competence or a skill in the learner. The effects of poor teaching methods at PTCs apparently manifest throughout the primary school systemwhere more than 50% of the primary school teachers cannot teach vocational skills; CAPE and PE receive scanty attention; and very few teachers (less than 15%) use pupil centred methods such as group work method, experimental method, demonstrations and roleplays, personalized learning, and differentiated instruction, among others. Some of the reasons advanced for poor curriculum delivery methods at PTCs include limited time available for curriculum implementation which does not allow for engagement other methods of teaching and learning; some subjects not being formally assessed; poorly skilled tutors and limited exposure to CPDs for tutors[1]

4.4.1.3. **With regards to School Practice, half (50%) of the PTCs do not follow the School Practice guidelines as provided for in the PTE curriculum, especially in terms of time required to be dedicated to supervised school practice.** The evaluation found that some PTCs spend little time (ie 2 weeks) while others spend more than the policy recommended time (more than 6 weeks). This could signal a weak inspection and quality assurance mechanism that gives room for PTCs to do things as they wish, with limited regard to the written policy.For those that spent more than 6 weeks, they observed that given central role played by school practice in the making of a competent teacher, the length of School Practice as currently provided for is not sufficient for teacher trainees to be equipped with pedagogical and professional practice skills. Consequently,they

[1]Some tutors reported that throughout their career life, they have only engaged in participated in one CPD training

would prefer it to be revised upwards beyond the current 6 weeks. This finding is in line with the earlier finding requiring the increase in time length for primary teacher training due to curriculum overload.

4.4.1.4. **With regards to assessment, whereas majority of teacher trainees (55.2%) and tutors (79%) approve of the current assessment regime that entails both summative (75%) and continuous assessment (25%), the latter is not being implemented as intended.**It was noticed that rather than continuous assessment (CA) being embedded within the teaching itself so as to inform the teaching and learning processes, it is treated as a mutually exclusive process (stand-alone).The general observation is that tutors believe that having termly examinations, regional pre-promotional examinations, regional mock examinations, practical examinations and promotional examinations is what constitutes continuous assessment. Moreover, some of the tutors and teacher trainees carry negative perceptions about CA as they regard it as just a mechanism for grading and placement, rather than one improvement of the teaching and learning processes.**Within the assessment criteria, in as much as School Practice is said to contribute to the final grade of the trainee, it is not clear and explicit in terms of percentage of the final grade that is attributable to School Practice.**

4.5. Low entry requirements into teaching profession

The quality of the desired teacher to deliver UPE is partly dependent on academic ability of the trainee. The Government White Paper (1992) acknowledges the need for the Ugandan education system to draw its teachers from among the best graduates and train them rigorously and effectively, focusing on the best classroom practices. This is on the back drop that primary schoolsneed to be taught by the brightest teachers since they form the foundation for further learning.

In this regard, below were the findings:

4.5.1. **Although the MoES recently revised (upwards) the academic requirements[2] for admission into the PTE, and in as much as all those admitted to PTCs met the minimum requirements for entry into PTCs, primary teacher education strugglesto attract the best candidates**. For instance, only 12.5% of the teacher trainees currently in the PTCs scored distinctions while majority (60%) scored division 2 and 27% scored division 3 at "O" level. Performance in the critical subjects including English and Math is still poor with only 0.6% and 2.3% of the trainees scoring distinctions, respectively. Even then, the numbers joining PTCs have significantly reduced since the revision of the intake requirements tempting some stakeholders to demand a policy reversal to the pervious requirements. The cross-cutting reason advanced for the inability to attract the best candidates into primary teacher training is associated to the poor terms of service for primary school teachers characterised by low pay, no medication cover, no guaranteed accommodation among others.

4.5.2. **Compared to other better education systems, the entry requirements into primary school teaching for Uganda are still low**. For instance, this evaluation found that in most of the countries that have good education systems, primary school teachers are required to

[2] Currently, besides the "O" level certificate, it is also a requirement to have obtained a credit in Mathematics and English and a pass in two science subjects from any two of the three subject categories including Biological sciences (Biology), Physical sciences (physics and chemistry) and applied sciences (Agriculture).

have a minimum of a bachelor's degree or master's degree. This is on the realization that primary teachers must be as skilled just as those that teach at higher levels given that it takes great skills and competences and initiative to ensure that all pupils are able to develop their cognitive, emotional and physical skills as bases for further education. Moreover, this argument is bolstered by the fact that the quality of the subsequent education levels depend entirely on the quality of primary education.

4.5.3. **Besides the low academic entry requirements, the non-academic entry requirements into primary school teaching are even lower.** Apart from one expressing interest in joining a PTC through an application, no personality and attitudinal tests are undertaken to establish alignment of the candidates' interests, personality and orientation with the teaching profession. As a consequence, the findings indicate that 49% of trainees in the PTCs do not love the profession but only joined it due to other peoples influence, because they needed a job, as a last resort, because it was in line with their obtained academic grades, and other incentives including full sponsorship.

4.6. Inadequate training period to cover the loaded curriculum

As already indicated, teacher trainees undertake two years for a pre-service and 3 years for an in-service programme at a PTC. The pre-service programme is broken down into three terms per year making it 6 terms of the programme. An academic year consists of 35 weeks of 40 periods each, spread over the three terms but translating into a trainee workload of 1,400 periods per year. As earlier on hinted, it was a general perception that PTCs could not accomplish all the teaching and non-teaching activities as intended in the PTC curriculum. The pertinent question posed was "how much time would be required to undertake the activities in the curriculum". Below is what was found.

4.6.1. Majority (71%) of the tutors indicated that the content in the current PTE curriculum could not be accomplished within the 2 years period for pre-service training while 29% believe that it is adequate.

4.6.2. Averagely, tutors indicated that 2,777 hours would be required to accomplish the pre-service teacher training programme. This time can be disaggregated as follows:

Table 4. 6: *Time Required per subject per year to accomplish the PTE curriculum*

Subject/discipline	Year 1 (hours)	Year 2 (hours)	Total Time	% (of total time)
PES foundations of teacher education	66	42	108	5.0
SNE	35	20	55	2.5
General methods	60	40	100	4.6
English language	130	90	220	10.1
SST	99	60	159	7.3
Integrated science	132	80	212	9.7
mathematics	130	90	220	10.1
RE	76	28	104	4.8
Music	60	42	102	4.7
Physical education and sports education	66	48	114	5.2
IPS	99	48	147	6.8
ECD	140	64	204	9.4
Kiswahili	84	57	141	6.5
Local Lang	132	53	185	8.5
Agriculture	66	40	106	4.9

Total	1375	802	2177	100

Source: National Planning Authority survey, 2017

Table 4. 7: *Time required undertaking non-teaching academic activities*

Examination	Time in weeks/days	Actual time on Task in hours
Promotion Examinations	7 days (I week and 2 days)	39 hours
Practical Examinations (IPS & ECE)	5 days (1 week)	40 hours
Child Study Final Year term I	15 days (3 weeks)	24 hours
Final Examinations	5 days (1 week)	27 hours
Supervised School Practices I (P214)	30 days (6 weeks)	240 hours
Supervised School Practices II (P215)	30 days (6 weeks)	240 hours
Total	**92 days (18 weeks and 2 days)**	**610 Hours**

Source: National Planning Authority survey, 2017

When the teaching time and time for other non-teaching academic is added, it gives a total of 2,777 hours for the whole pre-service programme. Given that each teaching day on average has six hours of teaching, the curriculum would require at least 463 days in total for complete implementation. Given that there are five teaching days in a week, the programme would need at least 93 weeks. Further, given that a term consists of twelve weeks on average, it would take 7.8 terms (approximately eight terms) to effectively complete the pre-service curriculum. This implies that the current six-term period for Primary Teacher Education is inadequate to effectively implement the PTE curriculum. It would require additional two terms to be accomplished. **This information corroborates the views of 46.3% of the respondents who proposed three years for training pre-service primary school teachers (both lower primary and upper primary school teachers)**

4.7. Poor Conditions of Service of the Tutors

Majority of the tutors in PTCs complained of the very constrained environment under which they work which continuously affects their effectiveness in training a competent primary school teacher. Besides the meagre pay, it was observed that tutors lack adequate instruction materials and laboratories and other critical infrastructure particularly for practical subjects. For instance, only 17% and 30% of the PTCs have IPS workshops and ICT labs respectively. On the other hand, only 42% of the tutors have some accommodation at the PTC. Tutors also complained of much more workload arising out of non-recruitment to fill the 42% of the currently vacant positions within PTCs.Other concerns relate to the botched implementation of the scheme of service which had raised their hopes with regards to addressing their career growth and remuneration concerns.

4.8. Weak Professional Development Support for Tutors/Teacher

The scheme of service for Teacher Education Institutions in Uganda (2011) clearly stipulates that a teacher in active service is expected to grow continuously both vertically and horizontally mainly through upgrading to improve on their qualifications; refresher courses to broaden and improve on performance in specific areas; planned induction courses; workshops and seminars; and research among others. Similarly, the Teachers' Professional Code of Conduct highlights the need for teacher professional growth and mastery of subject content and pedagogy. Various agencies including the MoES through the TIET department, Education Service Commission, Kyambogo University, Teacher Training Institutions, Directorate of Education Standards, the District Education Office, Donor and Faith-Based Agencies, Community Based Agencies; are part of the institutional framework for teacher support in Uganda.

As earlier on stated, there is evidence to suggest that whereas majority of the primary school teachers are qualified to teach, and in as much as majority of teachers know *what* to teach, they are

pedagogically very weak-they don't know *how* to teach. This necessitates for an elaborate and robustframework to provide professional support, development and reinforcement for teachers to become and remain professionally capable of delivering the primary school curriculum as intended.From 1995, government, through the Teachers Development and Management System (TDMS) has been trying to address skills gaps amongst teachersafter their initial training and improve the standards of teaching. The Core PTCs, Coordinating Centre (CC) and hence Coordinating Centre Tutors (CCTs) are the lifelines of the TDMS through which school-based professional support and outreach services areprovided. Despite these efforts, reports continue to highlight deteriorating standards in primary schools, partly as a result of deteriorating teaching standards.

The pertinent evaluation question in this regard is:"How adequate and relevant are the teacher support frameworks to helping teachers acquire the appropriate competences required to implement the UPE?" Below are the evaluation findings:

4.8.1. The TDMS has been impactful on UPE provision through the supply of qualified teachers into the education system. This evaluation noticed a significant reductionin the number of unqualified teachers particularly in government primary schools to 2.5% thereby fulfilling one of the promises government made in the Government White Paper on Education (GWPE). Also, progress is noticed in the proportion of teachers acquiring higher qualifications in service. For instance, currently the proportions of primary school teachers that have upgraded their qualifications to Grade V (GV) and Graduate Teacher (GT) have increased to 23.5% and 6.5% respectively. Nonetheless, the TDMS has performed poorly with regards mopping the private primary schools of a significant proportion of unqualified teachers. As earlier hinted, 1 in every 6 teachers in private primary schools (16%) is unqualified. Relatedly, from this evaluation, 75% of all the unqualified primary teachers within the system teach in private schools.

4.8.2. In as much as it is acknowledged that the TDMS and the CCTs are playing a key role in improving UPE through improving the quality of teaching, they have not led tothe desired change with regards to addressing the skills gaps and standard of teaching among the primary school teachers in Uganda. This is premised on the critical evidence indicating that whereas majority of primary school teachers are qualified to teach and know what to teach, they are pedagogically weak and less able to effectively teach. This view is also carried in the Education Sector Strategic Planwhich highlights poor teacher preparation and readiness as an internal weakness that threatens quality of education service delivery. This presupposes that more emphasise within the teacher support systems has been placed on elimination of unqualified teaching staff than making teachers both qualified and able to effectively teach.**It is imperative to note that those teachers and tutors that have benefited from the existing TDMS/CCT professional development initiatives appreciate their impact in terms of support for lesson planning and scheming, pedagogy, and assessment among others.** Unfortunately,the level of penetration and or reach of teacher support systems is still very shallow with very few teachers benefiting from it. For instance, a significant proportion of primary school teachers (30%) have never attended a CPD, in-service seminars and zonal workshops organised by CCTs in their career time. On the other hand, 22% of tutors have only attended between 1-3 CPD activities throughout their career. This presupposes that TDMS and other professional development initiatives have a thinpresence on ground to cause any impact.

4.8.3. From the findings, stakeholders maintain that the weak professional development support for teachers is perpetuated by majorly **under-funding of the support system**

(particularly the CCs and CCTs) inefficient allocation of the available meagre resources (ie CCTs) and lack of a sole institution to take leadership for the provision and management of teacher professional development. The findings below elaborate the extent of the listed constraints.

The CCTs are overstretched with ever expanding workload amidst declining technical and material support. There are currently 501Coordinating Centre Tutors (CCTs) currently recruited in the 539 Coordinating Centres (CCs) to provide on-site professional development support to about 200,000 primary school teachers in 19,000 primary schools in the country.The above scenario implies that, contrary to the policy that requires every CC to atleast have a CCT, about 39 CCs (7%) are without a CCT, meaning that teachers in schools located in such areas without CCTs are excluded from any form of professional development support.Besides, the above statistics imply that on average, a CC takes care of atleast 370 teachers from 35 primary schools. Given that each CC has one CCT, this translates into a significantly huge workload of 1:35 (CCT to primary schools) or 1:370 (CCT to Teachers). This evaluation found that CCTs have about 9 days to undertake ordinary visits to schools per month, meaning that each day the CCT must visit 4 schools which is unfeasible. Majority of the CCTs indicated that they can only visit atmost two schools per day, implying that 18 primary schools out of the 35 can be provided with some form of professional support. In the obtaining circumstances, it is clear that the CCTs cannot adequately perform their duties as intended and are not able to make any contribution to the quality of teaching and learning within schools. This remains a threat to the achievement of the overarching objective of the UPE-equitable access to quality education for all Ugandan children.

Even when the CCTs are averagely thin on the ground, some districts are worse off than others in terms of CCTs-to-School ratios. For instance, while at national level each CCT is expected to be in charge of a circuit of 35 schools, extremely higher ratios were registered with CCTs serving in districts included in the table below:

Table 4. 8: *Districts with extreme CCT to School Ratios*

DISTRICT	CCs	SCHOOLS	CCT/SCH Ratio	DEVIATION (OVERLOAD)
NAMUTUMBA	2	191	96	61
KAMPALA	5	425	85	50
WAKISO	10	751	75	40
PALLISA	3	214	71	36
LWENGO	3	209	70	35
KALIRO	2	137	69	34
BUIKWE	4	267	67	32
IGANGA	5	331	66	31
KALUNGU	2	132	66	31
BUVUMA	1	66	66	31
BUKEDEA	2	126	63	28
KAMWENGE	4	251	63	28
MASAKA	3	181	60	25
KASESE	8	469	59	24
BUGIRI	3	174	58	23
KWEEN	1	57	57	22
LUUKA	3	170	57	22

KYEGEGWA	3	170	57	22
SEMBABULE	4	220	55	20
KAMULI	5	274	55	20
NTOROKO	1	53	53	18
KUMI	2	105	53	18
NGORA	2	103	52	17
NAKASEKE	4	199	50	15

Source: Author computations based on data from TIET department MoES

Conversely, lower than national CCT-to-School ratios were registered in a number of districts as indicated in the table below:

Table 4. 9: *Districts with low CCT to School Ratios*

DISTRICT	CCs	SCHOOLS	CCT/Sch Ratio	DEVIATION (from national average)
APAC	6	138	23	-12
MARACHA	3	69	23	-12
KIRUHURA	8	183	23	-12
ALEBTONG	4	89	22	-13
KABERAMAIDO	6	133	22	-13
AMURIA	7	155	22	-13
KAABONG	3	65	22	-13
NWOYA	3	65	22	-13
BUSIA	8	170	21	-14
NAKAPIRIPIRIT	2	41	21	-15
BULIISA	2	40	20	-15
BUHWEJU	5	100	20	-15
SOROTI	6	117	20	-16
KITGUM	6	116	19	-16
GULU	11	211	19	-16
OTUKE	3	53	18	-17
AMURU	5	86	17	-18
ADJUMANI	4	68	17	-18
KATAKWI	5	85	17	-18
AMUDAT	1	17	17	-18
LAMWO	6	78	13	-22
KALANGALA	2	25	13	-23
ABIM	4	40	10	-25

Source: Author computations based on data from TIET department MoES

The scenarios presented in the above two tables presupposea highly inefficient teacher professional support system with regards to allocation of CCTs. It is clear that the number of CCTs is not determined by the number of schools within a district. Rather, CCT distribution is largely a function of the geographical boundaries of administrative units particularly the sub-counties. This is a significant constraint to the effectiveness of the TDMS given that it does not allow for the redistribution of the schools to those CCTs with low ratios if they are in different local authority units. To improve on the effectiveness of the TDMS/CCTs, there is need for the remapping of schools with the overarching intent of easing the CCT-to-School ratios and the PTC-to-District ratios into manageable ranges for effective teacher professional support and development. It is also

critical to ensure that schools mapped to a CC are within a considerable and manageable radius (in terms of distance) of the CCT. Our earlier estimation is that a CCT should have a maximum workload of 18 primary schools, while a Core PTC should serve not more than 3 districts.

Under-funding is the other constraint identified as perpetuating the poor performance of the teachers'professional support systems (particularly the CCs and CCTs). As earlier hinted, governmentcurrently provides a capitation grant of UGX 94 per day to provide in-service/outreach or continuous professional development (CPD) for each teacher within the catchment area of the core PTC, for 45 days in a year. This amount is expected to cater for the CCTs fuel, SDA for CCTs, supervision perdiem for administrators, conducting of CC-based CPDs and College-based CPDs, stationery, and CC running costs among others. This, according to our estimations is only 12% of what is required. Further, poor transport and facilitation means remains a cross-cutting constraint to all CCTs that has limited their effectiveness in executing their duties.For instance, besides most of the CCTs motorcycles being out of service, for the functioning few, fuel is a challenge.

4.9. PRIMARY TEACHER DEPLOYMENT

Besides undertraining of primary school teachers, there are concerns of inefficiency within primary teacher deployment. There are continuous reports of inequitable distribution of teachers in primary schools. To this end, the pertinent question for this evaluation aspect is "how efficient is the primary teacher deployment system of Uganda".

Evaluation findings

i). There is noticed improvement in the total number of teachers deployed in the primary school system as seen from a lower Pupil-Teacher Ratio (PTR) of 43:1 compared to 45:1 five years ago (2013). Infact, the Ministry has hit its target that was stated in the sector development plan of 2017-2020, albeit being above the SDG target of 40:1. This has been partly due to consistent recruitment of additional teachers.

ii). There is a weak and inefficient system of teacher deployment that reinforces the huge variations in Pupil-Teacher Ratios (PTR) in schools across and within districts. For instance, whereas the national PTR is 43:1, some schools have PTR as high as 300:1 while others have as low as 10:1. The two extreme scenarios all reflect wastage of the teaching resource. The former implies a significant shortage of teachersparticularly in highly enrolled schools while the latter implies either a surplus of teachers or underutilised staff particularly in lowly enrolled schools.

iii). A significant proportion (50%) of all primary schools has PTRs above the national PTR. Extremely high PTRsareprevalent in government owned schools with an average of 53:1, compared to 23:1 in private schools. Further, within government schools, 68% have their PTRs above national PTR compared to only 13% of the private schools. Stark disparities in teacher distribution exist in schools according to their location. Rural-based schools registered the highest PTR of 55:1 compared to urban schools (urban PTR 49:1). This scenario implies that teachers are concentrated around urban areas mainly to due to better amenities compared to rural areas.

iv). At district level, variations in PTR between and within districts are apparent.While some districts like Moroto, Kiboga, Sheema, Nakasongola have their PTRs in the range of 23-29:1, districts like Agago, Pader, Kotido, Kaabong, Adjumani, and Kumi have PTRs above national average in the range of 67-105:1. Even within the districts, huge disparities between schools manifest. Some schools have favourable ratios close to the district average while others have higher ratios beyond the district average. This implies that whereas there

is no equity in the distribution of teachers between districts, the same trend is reflected in schools within the same district.

v). Hard-to-reach districts on average continue to register higher PTRs compared to the national PTR and those of other districts. Government schools within hard-to-reach districts post higher PTRs compared to their private counterparts. For instance, 72% of the government schools in hard-to-reach districts have their PTRs above national average. Overall, the PTRs in hard-to-reach districts range from as low as 18:1 to as high as 105:1. The persistently higher PTRs within government primary schools in hard-to-reach districts partly imply that the incentives such as allowances targeting teachers in hard-to-reach districts are not yielding the intended results.

Table 4. 10: *Hard-to-Reach Pupil Teacher Ratios disaggregated by private and government schools*

Districts	Enrolment			Teachers			Pupil Teacher Ratios	
	Government	Private	Total	Private	Government	Total	PTR-P	PTR-G
Pader	63,317	3,162	66,479	93	736	829	34	86
Kotido	14,067	3,788	17,855	37	189	226	102	74
Amuru	41,529	9,571	51,100	244	559	803	39	74
Kaabong	37,707	3,459	41,166	33	522	555	105	72
Bukwo	34,076	3,377	37,453	105	508	613	32	67
Adjumani	36,734	7,772	44,506	97	548	645	80	67
Mayuge	75,922	3,001	78,923	166	1,154	1,320	18	66
Bugiri	91,252	5,097	96,349	259	1,403	1,662	20	65
Nwoya	25,542	4,121	29,663	138	409	547	30	62
Buvuma	9,258	7,043	16,301	298	152	450	24	61
Bulambuli	36,581	6,319	42,900	289	603	892	22	61
Bududa	48,926	7,278	56,204	298	830	1,128	24	59
Kitgum	52,486	5,341	57,827	172	993	1,165	31	53
Mubende	92,772	34,006	126,778	1,470	1,792	3,262	23	52
Kween	23,153	3,802	26,955	197	450	647	19	51
Gulu	107,196	14,348	121,544	587	2,208	2,795	24	49
Bukedea	60,632	5,769	66,401	280	1,257	1,537	21	48
Bundibugyo	44,567	6,117	50,684	334	939	1,273	18	47
Abim	22,467	2,874	25,341	50	474	524	57	47
Buhweju	20,885	8,536	29,421	354	469	823	24	45
Rakai	112,251	16,193	128,444	695	2,572	3,267	23	44
Kanungu							23	42

	47,697	21,552	69,249	954	1,132	2,086		
Moyo	29,958	2,337	32,295	100	723	823	23	41
Mitooma	40,964	14,818	55,782	626	1,011	1,637	24	41
Sembabule	60,327	11,056	71,383	437	1,559	1,996	25	39
Kyankwanzi	33,303	6,465	39,768	292	927	1,219	22	36
Nakasongola	32,608	6,103	38,711	344	975	1,319	18	33
Rukungiri	55,805	15,650	71,455	736	1,686	2,422	21	33
Kalangala	4,338	607	4,945	24	146	170	25	30

Source: Authors computations based on EMIS
PTR-P is Pupil Teacher Ratio in Private schools
PTR-G is Pupil Teacher Ratio in Government schools

1. Whereas the proportion of teachers provided with accommodation in primary schools is still very low (10%), it is positive to note that there is a strong link between teachers' accommodation and number of teachers in a school, meaning that there is relatively better targeting and rationalisation of teachers' accommodation as an incentive to attract and retain more teachers in schools with more accommodation demand. This is reflected in a higher coefficient of determination (0.74) between the number of teachers and the available teachers' houses in schools.Relatedly, the policy to provide more teachers accommodation in hard-to-reach districts to make them attractive for teachers is to some extent being implemented. This is reflected in the fact that the proportion of teachers provided with accommodation in schools in hard-to-reach districts (12%) is higher than those outside these locations (10%).

4.10.QUALITY OF UPE BENEFICIARIES AS PROXY FOR TEACHER TRAINING EFFECTIVENESS

Empirical literature indicates that quality teachers tend to impact their learners by enabling them to acquire skills and values for further learning, livelihood and good citizenship (Stronge, 2018)**.** This evaluation measured the quality of outcomes of teacher education by assessing the skills acquired by the beneficiaries of UPE. It is assumed that skills acquisition and application, including employment of the beneficiaries would proxy the quality of the teachers who are the products of the teacher education system.

Evaluation findings

i). Over 90% of UPE beneficiaries indicated that they have acquired reading and writing skills and communication skills through their primary schools. This implies that the skills acquired by the beneficiaries could be attributable to the teachers' abilities in the highlighted areas. On the other hand, fewer beneficiaries felt that they acquired enough vocational skills, citizenship, critical thinking skills, business/entrepreneurship skills as indicated in table 11below

Table 4. 11: ***Skills acquired by UPE beneficiaries from their primary schools***

Skills Acquired	Beneficiaries	Acquired the skill (%)
Reading and writing skills	716	94.1
Communication skills (English, Kiswahili, Local language)	703	92.4
Games and Sports	651	85.5
Social Skills (Living and working cooperatively with others; skills and	642	84.4

values for responsible parenthood)		
Personal Health (Nutrition; Sanitation)	633	83.2
Math skills	623	81.9
Music, Dance and Drama	562	73.9
Work ethics: (respect for work; time management)	551	72.4
Modern farming (crop farming, keeping animals, fishing, forestry)	511	67.1
Basic Vocational Skills (Arts and Craft)	480	63.1
Citizenship (patriotism; cultural heritage; political awareness)	469	61.6
Problem Solving/ critical thinking	448	58.9
Business/ entrepreneurial skills	374	49.1

Source: National Planning Authority survey, 2017

ii). Majority (85%) of the UPE beneficiaries have applied the skills acquired from their primary schools in real life situations particularly in home management, and communication. However, limited skills application was noticed in extra-curricular activities, financial management, critical thinking skills, vocational work skills, leadership skills, lifelong learning skills and ICT skills (see table 4.12 below). The findings imply that primary school teachers are not emphasising application of what they teach in real life. Rather, they seem to be teaching for examinations.

Table 4. 12: *Application of skills learnt by the UPE beneficiaries*

Real Life Examples	**Beneficiaries Interviewed**	**Beneficiaries who have applied learnt skills (%)**
Home Management	651	85.5
Communication Skills	510	67.0
Extra-Curricular	324	42.6
Financial Management	178	23.4
Critical thinking/Problem solving	170	22.3
Vocational Work	132	17.3
Leadership Skills	115	15.1
Cultural Awareness	39	5.1
Further studies/lifelong learning	24	3.2
ICT Skills	14	1.8

Source: National Planning Authority survey, 2017

iii). Few (30%) UPE beneficiaries engage in further learning beyond secondary school level. The evaluation findings show that majority (45.3%) of the UPE beneficiaries continue up to secondary education while 10.9% and 20.4% join vocational and tertiary institutions. This implies that most of the UPE beneficiaries are able to engage in further learning but mainly limited to secondary education level. About 8.8% dropped out before completing the primary school cycle. Some of the reasons given for those that dropped out before completion of primary cycle include (arranged in order of relevance):

a) Loss of parents,
b) Pregnancy,
c) Marriages,
d) Lack of scholastic materials,
e) High costs,
f) Parental decision
g) Poor performance
h) Search for employment

From the list of constraints, poor performance as a constraint to further education could be as a result of incompetence of the teachers. This means that some teachers have limited skills to improve pupil performance.

iv). **With regards to employment, 70% of the UPE beneficiaries are actively engaged in some form of livelihood/employment**. The findings indicate that majority (32%) derive their livelihood from the services sector activities such as transport, hotel, tourism; agriculture (22%) and informal sector activities including fabrication and small-scale trading (8.3%). As hinted earlier, some of the beneficiaries intimated that they were applying some of the what they had learnt from their primary schools in their daily work/occupations. However, it was also made clear that many beneficiaries were unable to apply what was learnt in school to their real life experiences. These two scenarios imply that some teachers were appropriately skilled to enable learners.

SECTION FIVE

RECOMMENDATIONS AND CONCLUSIONS

In light of the above findings, we therefore recommended as follows:

Thematic area: Excess supply of primary teachers beyond those demanded
In order to contain the surge in the supply of primary teachers, which is in excess of the current and future demand, we recommend as follows:

1. Halt any establishment and or licensing of any new PTC. Besides, there is need to rationalise the existence of all the 45 public PTCs, especially in circumstances where a lesser number would as well satisfy the current and future demand for primary school teachers.

2. Maintain the current ceilings on student enrolment in PTCs for the next 12 years.

3. Stop universities from providing Grade III teachers' training given that it is not their area of speciality. Rather, universities should concentrate on providing further teacher training post-Grade III.

Thematic Area: Low Professional Capacity of Primary Teachers

It is clear that the current pre-service training will not provide all the skills required for one to be a competent teacher. This necessitates a focused robust teacher/tutor professional support system to continuously support teachers mainly on how to teach among others. We recommend the following specific interventions:

1. Urgently develop teachers' professional development standards to guide the design, implementation, and funding of teacher professional development in the country.

2. Urgently develop a national teachers' professional development strategy. In order not to reinvent the wheel, this can be embedded within the current scheme of service or the imminent teachers' policy by defining a detailed national teachers' professional development strategy for achieving competent teachers.

3. The TDMS as a strategic intervention towards teacher professional development should be restructured and adequately resourced. Foremost, rather than relying on CCTs as the sole providers of professional development support, and given that they are as well overstretched, there is need to identify and develop senior teachers as mentors and coaches to support the lean CCT structure in providing professional support on-site. In the interim, focus should be placed on adequately resourcing the TDMS and easing the workloads of CCTs. To this end, we recommend for urgent recruitment of CCTs to fill the existing 38 vacancies and additional CCTs to reduce the CCT-to-school ratio from the current 1:35 to the recommended 1:18. Further, there is need to increase the in-service/outreach capitation grant from UGx 94 to UGx 806 per day for each teacher within the catchment area of the core PTC for 45 days a year.

4. Elevate one of the existing institutions to become a National Institute of Teacher Education and Professional Development to provide leadership for particularly the professionalization of the teachers and education administrators.

5. The MoES should fast-track the development and implementation of the National Teachers' Policy as a framework through which to professionalize and homogenize the teaching profession and enhance the development and management of teachers.

Thematic Area: Low PTC Capacity to Deliver Competent Teachers

The findings highlighted the inadequate teaching learning environments within PTCs that cannot support the training of competent primary school teachers. To address this, we recommend as follows:

1. Given that public PTCs in Uganda depend on central government for any resources, and, given that the current policy is to fully cover tuition of teacher trainees, government should capacitate the PTCs with the required resources to function effectively and deliver competent teachers as defined in the teachers' profile. Foremost, there is need to recruit 686 tutors to raise the staffing levels of all public PTCs to the ceilings set by the MoES. In the interim, recruitment should be done of tutors in subjects where there are acute shortages including Maths (43% vacant), English Language (51% vacant), and Science (50% vacant). Other subjects with critical shortages include Kiswahili (56% vacant), Local language (73% vacant), SNE (73% vacant), and ECE (53% vacant). Further, a more feasible strategy to fill the unmet infrastructure needs should be charted and priority should be given to such PTCs that have reported acute shortages of classrooms, toilets, ICT labs, and Integrated Production Skills Workshops.

2. With regards to financing, this evaluation estimates a minimum capitation grant of UGX 3,523 (from UGx 1,993) per day for each pre-service teacher traineeand UGX 806 (from UGx 94) per training day to provide outreach or continuous professional development (CPD) for each teacher within the catchment area of the core PTC for 45 days a year to enable the PTCs to meet their basic recurrent expenditures.

3. It should be a requirement for all PTCs to have improvement plans or strategic plans clearly identifying areas that need improvement and the interventions for improvement. The MoES in collaboration with the National Planning Authority should ensure support to this intervention.

Thematic Area: Misalignment of the Primary Teachers Training (PTE) Curriculum and the Primary School Curriculum

1. To address this, we recommend for the Primary Teacher Curriculum and the Primary School Curriculum to be designed and managed under one roof and preferably by the NCDC just as the laws provide. However, this shall require fundamental capacity augmentation at the NCDC to be able to design and manage the PTE curriculum. In the interim, efforts should be directed towards aligning the two curricula such that primary teacher trainees are fully exposed to the primary school curriculum, in terms of content, pedagogy and structure while still in training. This can be achieved through a framework that enables the intensive collaborations between Kyambogo University and the NCDC during the curricula review exercises.

Thematic Area: Low Entry requirements into the Teaching Profession

1. **In as much as the revised entry academic requirements for the prospective teacher trainees slightly improved their quality, we recommend that entry requirements into**

PTCs should further be raised to "A" level. This is in response to the finding thatthe primary teaching profession continues to attract relatively poor quality candidates who struggle to cope with not only the teacher training demands but also classroom practice when they graduate. Moreover, drawing on best international practice, this evaluation found that in all countries that have good education systems, a primary school teacher must hold a minimum of a bachelor's degree. This is on the realization that primary teachers must be as skilled just as those that teach at higher levels. This is because, it requires great skills and competences and initiative to teach at primary and ensure that all pupils are able to develop their cognitive, emotional and physical skills as bases for the subsequent education levels.

Thematic Area: Poor Conditions of Service of the Tutors

1. The scheme of service needs to be rejuvenated and funded in order to enhance the tutors' and teachers' status, morale and professionalism; as the key ingredients of a quality teacher education and development system. In the interim, a costed action plan and financing strategy for the implementation of the *scheme of service* needs to be developed by the Education Service Commission. Above all, there is need for the MoES to introduce a legal instrument to give full effect to the operations and institutionalization of the scheme of service, as this would guarantee its perpetual implementation.

Thematic Area: Inadequate Training Period to Cover the Loaded Curriculum

1. The MoES in collaboration with the National Planning Authority and other key stakeholders should further study and evaluate the proposal and the possibility to revise the length of pre-service primary teacher training from 2years to 3years in response to the findings that: the ideal time required to accomplish the PTE curriculum is 2,777 hours which approximates to 3 years. However, in case the entry requirement to PTCs is elevated to a minimum of "A" level, there will be no need of revising the length of the training period given that such candidates would have higher aptitude to cope with the training demands within the 2 years.

Thematic Area: Weak and Inefficient System of Teacher Deployment

There is need for a number of policy and instrument reviews to guarantee effective and efficient deployment of primary school teachers as recommended below:

1. Urgently establish a clear policy framework for deployment and legitimate transfer of teachers to address the huge disparities in PTRs within the primary schools. For avoidance of doubt, the PTR should be the principal determinant of teacher deployment such that schools with extreme PTRs should be given priority in deployment. Demands to move teachers away from hard-to-reach areas should be resisted.

2. **The hard-to-reach policy needs to be revisited to increase on its impact on teacher deployment in the hard-to-reach schools.** Foremost, defining hard-to-reach using geographical demarcations is out-dated and leads to poorly targeting the intended beneficiaries. Rather, spatial data should be urgently used to map schools to parameters used in measuring hard-to-reach, as an accurate method to establishing the beneficiaries. Also, given that schools found in hard-to-reach areas continue to exhibit higher PTRs (shortage of teachers), implies that the existing incentives allocated to attract teachers to such areas have not been effective. To this end, such incentives should be revised upwards.

Conclusion

Whereas the Primary Teachers' Education system has a fairly relevant and focused training curriculum, and a fairly elaborate legal and institutional framework, it is significantly constrained to produce competent primary school teachers to deliver UPE as intended. Most of the teachers coming out of the training system know "what" to teach but don't know "how" to teach it. This has been as a result of among other the acute incapacitation of the PTCs, inefficiencies in deployment of teachers, and poor curriculum implementation. The TDMS and other support systems arising out of the various earlier reforms managed to ameliorate some of the skill/knowledge gaps within the primary teachers but only to an extent, due to the highlighted constraints. Therefore, there is need for a systemic approach to address the critical constraints to enable the teacher training system to deliver competent teachers who can implement the UPE as intended.

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APPENDICES

Appendix 1: Alignment of the primary school and PTE curricular-the case Social Studies

PRIMARY SCHOOL SOCIAL STUDIES	PTE SOCIAL STUDIES CURRICULUM
P.4	**UNIT 1 – Introduction to Social Studies and SST Education**
Our District	Topic 1 – SST and SST Education
Location Of	Topic 2 – SST knowledge, skills and values/attitudes
Physical Features	Topic 3 – Introduction to Primary SST syllabus
Vegetation In	Topic 4 – Introduction to teaching strategies for Social Studies
People	**Unit 2 - The Local Environment**
Our Leaders In	Topic 1 – Introduction to the Local Environment
How to Meet Peoples Needs	Topic 2 – The Local Environment – College and its Neighbourhood
	Topic 3 - The Local Environment – Sub-county and county
P.5	Topic 4 - The Local Environment - District
Uganda	**Unit 3 - Globe, map work and photographic interpretation**
Location Of	Topic 1 - Globe and map work
Physical Features	Topic 2 - Photographs
Climate	**Unit 4 - Environment in Uganda**
Vegetation In	Topic 1 – Physical features and climate of Uganda
Natural resources	Topic 2 – Vegetation in Uganda
The People of precolonial	Topic 3 – People of Uganda
Foreign influence in Uganda	**Unit 5 - Development of Uganda as a nation**
How Uganda became a nation	Topic 1 – The Process through which Uganda became a nation
The road to independence	Topic 2 - Uganda as an Independent state
Uganda as an Independent nation	**Unit 6 - Post independence developments and challenges in Uganda II**
The government of Uganda	Topic 1 - Social Political and Economic developments in Post-Independence Uganda
Population, size and distribution	Topic 2 - National programmes and Policies
P.6	Topic 3 - Economic, Political and Social challenges since independence
P.7 - **Africa**	**Unit 7 - The Environment in East Africa**
Location of Africa on the map of the world	Topic 1 - Physical background and people of E. Africa
Physical features	Topic 2 - Population size and distribution to East Africa
Climate of	Topic 3 - Emergence of East African states
Vegetation of	
The people of Africa: ethnic groups, and settlement patterns	
Post-independence Africa	
Economic developments in Africa	
NOT COVERED IN ONE OF THE CURRICULA	
P.4	**UNIT 1 – Introduction to Social Studies and SST Education**
Our District	Topic 1 – SST and SST Education
Location Of	Topic 2 – SST knowledge, skills and values/attitudes
Physical Features	Topic 3 – Introduction to Primary SST syllabus
Vegetation In	Topic 4 – Introduction to teaching strategies for Social Studies
People	**Unit 3 - Globe, map work and photographic interpretation**
Our Leaders In	Topic 1 - Globe and map work
How to Meet Peoples Needs	Topic 2 - Photographs
P.7 - **Africa**	
Location of Africa on the map of the world	
Physical features	
Climate of	
Vegetation of	
The people of Africa: ethnic groups, and settlement patterns	
Post-independence Africa	
Economic developments in Africa	

Source: National Planning Authority survey, 2017

Appendix 2: Alignment of the primary school and PTE curricula-the case of English Language

PRIMARY ENGLISH	PTE ENGLISH CURRICULUM
P.4 Describing people and objects Giving directions What I like and how I feel Behaviour Shopping Time Expression of the future Democracy	Unit 1: introduction to language Topic 1: language and culture Topic 2: the language policy Unit 2: language structure I Topic 1: parts of speech Topic 2: sentence structure Topic 3: present, and past tenses of regular verbs Topic 4: future and conditional tenses of regular and irregular verbs Topic 5: direct and reported (indirect) speech Unit 3: principles and practice of teaching and learning English in upper primary (UP) Topic 1: the aims and objectives of teaching English in the primary' school Topic 2: qualities of a good teacher of English topic 3: the role of the English teacher in the teaching/learning process Topic 4: the structure of the English language syllabus in the primary school curriculum Unit 4: approaches to English language teaching in upper primary classes Topic 1: an overview of the general approaches to teaching English Topic 2: the main approaches to language teaching Topic 3: other approaches to English language teaching unit 5: listening and speaking proficiency Topic 1: speaking skills Topic 2: influence of first language (l1) on learning a second language (L2) Topic 3: the sub skills of listening and speaking unit 6: reading proficiency I Topic 1: reading fluency and comprehension Topic 2: the sub-skills of reading Unit 7: writing proficiency I Topic 1: note-taking and summary writing Topic 2: spelling Topic 3: punctuation Topic 4: capitalization Topic 5: functional writing Unit 8: writing proficiency II Topic 1: creative writing Topic 2: academic writing skills Unit 9: teaching listening and speaking in upper primary topic 1: rationale for teaching listening and speaking in upper primary Topic 2: strategies and activities for teaching listening and speaking in upper primary
P.5 Vehicle repair and maintenance Print media Travelling Letter writing Communication Culture Peace and security Services (banking)	
P.6	
P.7 School holidays Letter writing Examinations Electronic media Rights, responsibilities and freedom Environmental protection ceremonies	
NOT COVERED IN ONE OF THE CURRICULA	
	Unit 1: introduction to language Topic 1: language and culture Topic 2: the language policy Topic 2: qualities of a good teacher of English topic 3: the role of the English teacher in the teaching/learning process Topic 4: the structure of the English language syllabus in the primary school curriculum Unit 4: approaches to English language teaching in upper primary classes Topic 1: an overview of the general approaches to teaching English Topic 2: the main approaches to language teaching Topic 3: other approaches to English language teaching unit 5: listening and speaking proficiency Topic 1: speaking skills

PRIMARY ENGLISH	PTE ENGLISH CURRICULUM
	Topic 2: influence of first language (l1) on learning a second language (L2) Topic 3: the sub skills of listening and speaking unit 6: reading proficiency I Topic 1: reading fluency and comprehension Topic 2: the sub-skills of reading Unit 7: writing proficiency I Topic 1: note-taking and summary writing Topic 2: spelling Topic 3: punctuation Topic 4: capitalization Topic 5: functional writing Unit 8: writing proficiency II Topic 1: creative writing Topic 2: academic writing skills Unit 9: teaching listening and speaking in upper primary topic 1: rationale for teaching listening and speaking in upper primary Topic 2: strategies and activities for teaching listening and speaking in upper primary

Source: National Planning Authority survey, 2017

Appendix 3: Alignment of the primary school and PTE curricula-the case of Integrated Science

INTEGRATED PRIMARY SCIENCE	PTE INTEGRATED SCIENCE EDUCATION
Theme: The World of Living Things **1.** Flowering Plants 2. Bacteria and Fungi 3. Classification of Animals 4. Classification of Plants **Theme: Our Environment** **1.** Changes in the Weather 2. Components of the Environment "Soil" 3. Resources in the Environment 4. Energy Resources in the Environment **5.** Interdependence of Living Things in the Environment **Theme: Human Health** 1. Keeping Clean 2. Classes of Food and Their Values 3. Sanitation and Its Importance 4. Diarrhoeal Diseases 5. Intestinal Worms 6. Examples of Disease Vectors 7. Poisoning: Causes, Types of Poisoning 8. First Aid and First Aid Kit 9. Immunisation 10. Food and Nutrition 11. Primary Health Care 12. Alcohol, Smoking and Drugs in Society 13. Accidents and First Aid 14. Sanitation **Theme: Human Body** 1. Major Organs 2. Teeth and Their Functions **3.** The Digestive System 4. Circulatory System 5. Respiratory System 6. The Reproductive System 7. Muscular-Skeletal System **8.** Excretory System **Theme: Science in Human Activities and Occupations**	Unit 1: laboratory organization and management Unit 2: the world of living things Topic 1: Introduction to the world of living things Topic 2: classification of plants Topic 3: classification of animals Topic 4: Basic functions of living things Unit 3: introduction to science teaching I Topic 1: science and science education Topic 2 – primary science skills, attitudes and knowledge Topic 3: introduction to primary science curriculum Unit 4: force and motion Unit 5: materials and structure Unit 6: air and water Topic 1: air Topic 2: water Unit 7: machines and work Unit 8: the human body Topic 1: the digestive system Topic 2: the excretory system Topic 3: the reproductive system Topic 4: nervous and sensory system Topic 5: nervous and sensory system Unit 9: matter and energy Topic 1: sound energy Topic 2: light energy Topic 3: heat energy Topic 4: alternative energy sources Unit 10: human health Unit 11: introduction to science teaching ii – assessment Topic 1: writing schemes of work Topic 2: lesson planning Topic 3: making and locating instructional materials Topic 4: assessment in science Topic 5: extra-curricular science Unit 12: the environment Unit 13: raw materials and chemical products Unit 14: electricity and magnetism Topic 1: electricity

INTEGRATED PRIMARY SCIENCE	PTE INTEGRATED SCIENCE EDUCATION
1. Growing Common Annual Crops 2. Rabbits 3. Keeping Poultry and Bees **4.** Occupations in Our Community: Crop Growing 5. Keeping Goats, Sheep and Pigs 6. Keeping Cattle 7. Science at Home and in Our Community **Theme: Matter and Energy** 1. Measurement **2.** Heat Energy 3. Sound Energy 4. Electricity and Magnetism 5. Simple Machines and Friction 6. Light Energy **Theme: Managing Changes in the Environment** 1. Types of Changes **Theme:** **The Community, Population and Family Life** 1. Population and Health	Topic 2: magnetism Unit 15: diseases and immunization Topic 1: disease Topic 2: STDS, HIV and AIDS Topic 3: immunization
NOT COVERED IN ONE OF THE CURRICULA	
Human Body (i) Circulatory System (ii) Respiratory System (iii) Muscular-Skeletal System **Science in Human Activities and Occupations** **(i)** Growing Common Annual Crops **(ii)** Rabbits **(iii)** Keeping Poultry and Bees **(iv)** Occupations in Our Community: Crop Growing **(v)** Keeping Goats, Sheep and Pigs **(vi)** Keeping Cattle 8. Science at Home and in Our Community	Unit 1: laboratory organization and management Unit 3: introduction to science teaching I Topic 1: science and science education Topic 2 – primary science skills, attitudes and knowledge Topic 3: introduction to primary science curriculum Unit 4: force and motion Unit 5: materials and structure Topic 4: alternative energy sources Unit 11: introduction to science teaching ii – assessment Topic 1: writing schemes of work Topic 2: lesson planning Topic 3: making and locating instructional materials Topic 4: assessment in science Topic 5: extra-curricular science Unit 13: raw materials and chemical products

Source: National Planning Authority survey, 2017

Appendix 4:Alignment of the primary school and PTE curricula-the case of Mathematics

PRIMARY MATHEMATICS CURRICULUM	PTE MATHEMATICS EDUCATION
• Sets • Numeracy • Interpretation of graphs and data • Geometry • Measurements • Algebra	Unit 1: Rationale and Learning Theories in Mathematics Unit 2: Sets Unit 3: Numeration Systems and Place Values Unit 4: Operation on Numbers Unit 5: Number Patterns and Sequence Unit 6: Fractions Unit 7: Graphs and Interpretation Unit 8 : Relations, Mapping And Functions Unit 9: Geometry I Unit 10: Integers Unit 11: Measures Unit 12: Algebra 1 Unit 13: Organising Mathematics Lessons Unit 14: Assessment in Mathematics Unit 15: Organising Mathematics Classrooms Unit 16: Mathematical Computations Unit 17: Business Mathematics

PRIMARY MATHEMATICS CURRICULUM	PTE MATHEMATICS EDUCATION
	Unit 18: Algebra II Unit 19: Geometry II Unit 20: Statistics Unit 21: Probability 1 Unit 21: Probability 2
NOT COVERED IN ONE OF THE CURRICULA	
	Unit 1: Rationale and Learning Theories in Mathematics Unit 8 : Relations, Mapping And Functions Unit 13: Organising Mathematics Lessons Unit 14: Assessment in Mathematics Unit 15: Organising Mathematics Classrooms Unit 16: Mathematical Computations Unit 17: Business Mathematics Unit 18: Algebra II Unit 19: Geometry II Unit 20: Statistics Unit 21: Probability 2

Source: National Planning Authority survey, 2017

Appendix 5:MTEF for primary teacher training (figures in Bn)

	PLANNED FY 2013/14		PLANNED FY 2014/15		PLANNED FY 2015/16			PLANNED FY 2016/17		PLANNED FY 2017/18	
ACTIVITIES	Budget	Outturn	Budget	Outturn	Budget	Outturn	Budget		Outturn	Budget	Outturn
Preservice Training Non-Wage	8.351	8.351	7.926	7.926	7.785	7.785	7.885		7.885	8.105	7.885
Preservice Training Wage	12.306	12.306	12.306	12.306	9.942	9.942	12.080		12.080	12.046	12.080
In service Training Non-Wage (incl. Allowances)	3.039	3.039	3.464	3.464	3.805	3.805	3.805		3.805	3.805	3.805
In service Training Wage	-	-	1.380	1.380	1.014	1.014	1.232		1.232	1.228	1.232
Preservice(total budget)	20.657	20.657	20.232	20.232	17.727	17.727	19.965		19.965	20.151	19.965
In service (total budget)	3.039	3.039	4.844	4.844	4.819	4.819	5.037		5.037	5.033	5.037

Source: MoFPED 2018

Appendix 6: District Inspectors of Schools

District	Sex of Respondents		
	Female	Male	
	No.of respondents	No.of respondents	Total
ABIM	1	0	1
AMURIA	0	1	1
APAC	1	0	1
ARUA	0	1	1
BUIKWE	1	0	1
BUKOMANSIMBI	0	1	1

BULIISA	0	1	1
BUSHENYI	0	1	1
BUSIA	0	1	1
BUTAMBALA	1	0	1
BUYENDE	0	1	1
GULU	0	1	1
ISINGIRO	0	1	1
JINJA	1	0	1
KAABONG	0	1	1
KABALE	0	1	1
KABAROLE	0	1	1
KABERAMAIDO	1	0	1
KALANGALA	0	1	1
KAMPALA	4	0	4
KAMULI	0	1	1
KAPCHORWA	0	1	1
KAYUNGA	0	1	1
KIBAALE	0	1	1
KIBOGA	0	1	1
KIRYANDONGO	1	0	1
KISORO	0	1	1
KOBOKO	0	1	1
KOLE	0	1	1
KOTIDO	0	1	1
LIRA	0	1	1
LUWERO	0	1	1
LWENGO	0	1	1
MARACHA	0	1	1
MASAKA	1	0	1
MASINDI	1	0	1
MBALE	1	0	1
MBARARA	0	1	1
MOROTO	1	0	1
MUBENDE	0	1	1
MUKONO	1	0	1
NAKAPIRIPIRIT	1	0	1
NAKASEKE	0	1	1
NAKASONGOLA	0	1	1
NAMUTUMBA	0	1	1
NAPAK	1	0	1
NEBBI	0	1	1
NTUNGAMO	0	1	1
OTUKE	0	1	1
PALLISA	1	0	1
RAKAI	1	0	1
RUKUNGIRI	1	0	1
SEMBABULE	0	1	1
SIRONKO	0	1	1

SOROTI	0	1	1
TORORO	0	1	1
WAKISO	1	0	1
YUMBE	0	1	1
ZOMBO	0	1	1
Total	22	40	62

Appendix 7

Staff projections in light of the Planned Student Tutor Ratio

The Ministry of Education and Sports has set a quality outcome target for Student Tutor Ratio (STR) of 12:1 in the next two financial years (FY2018/19 and FY2019/20). This is one of the many interventions to improve teacher education. It is critical for this evaluation to highlight the staff gap that would require filling if this target is to be hit within the two years as indicated in the ESSP. The table **A** below highlights the assumptions that have been taken in the projection of the staff shortage arising out of a target STR of 12:1. Specifically, whereas enrolment in PTCs has been on a declining trend since 2010, partly due to changes in entry requirements, this evaluation take a positive outlook by assuming that enrolment in PTCs could increase to 17,855 by 2020. This would translate into an increase in enrolment of approximately 4%. The targeted STR value of 12:1 has been adopted from the current ESSP which is an aspiration of the MoES. Further, an attrition rate of 3% per year has been adopted from the ESSP. Also, based on the ESSP, it is anticipated that the MoES would recruit only 40 tutors in the next two financial years (FY2018/19 and FY2019/20). The following formula for projecting tutors is adopted from TISSA report (2014) as below:

$$TT_t = \frac{EN1_t + EN2_t}{STR_t}$$

Where TT_t represents the total number of tutors at time *t*, $EN1_t$ and $EN2_t$represent enrolment in year1 and year2 at time t respectively and STR_t is the Student Tutor Ratio at time *t*.

Table A: Assumptions taken for the projection of PTC Tutor requirement by 2020

Key Indicators	**Baseline (2017/18)**	**Target values**	
		FY2018/19	**FY2019/20**
Student Tutor Ratio	18:1	12:1	12:1
Increase in enrollment	4%	2%	2%
Attrition rate	3%	3%	3%
Number of tutors planned to be recruited	20	20	20

Source: Authors computations using data from TIET department MoES and ESSP2017/18-2019/20

Based on the assumptions taken, it is clear from table **B** that the total stock of tutors will have to be increased to 1,488 by FY 2019/20 to achieve the set quality target of an STR of 12:1. However, according to the ESSP, the plan is to recruit 40 tutors between FY2018/19 and 2019/20. This is anticipated to increase the available stock of tutors to 975 by 2019/20. If there are no plans for additional recruitment of tutors, a shortage of 544 will remain. **Therefore, the quality target of an STR of 12:1 will not be achieved by 2019/20** and this could bear a significant negative impact on the quality of teacher trainees.

Table B: Number of tutors that shall be required to achieve the set target of STR 12:1 by 2020

	2017	**2018/19**	**2019/20**
Total Enrolment	17,161	17,505	17,855
Projected No. of tutors Required (A)	1621*	1,459	1,488
Number of tutors available (B)**	935	955	975
Attrition (3%) (C)***		30	31
Tutor Shortage (A-B+C)		534	544

** This figure was set by TIET-MoES as the current total staff establishment for PTCs.*
*** The MoES plans to recruit 20 tutors in FY2018/19 and 20 tutors in FY2019/20*
**** The ESSP provides for tutor attrition at 3% per year.*

Appendix 8

Details of estimated unit cost for pre-service teacher trainee.

In computing the annual unit cost of pre-service teacher trainee, the following assumptions were taken:

1. Enrolment for a PTC is assumed to be 450 teacher trainees in total.
2. There are 3 terms in an academic year of study but the costs have been annualized
3. All cost of training is the responsibility of the central government, therefore no student contribution.
4. A typical academic year has 250 learning days
5. Only recurrent costs are involved in this costing

Item	Unit cost
Feeding	374,563
Teaching Practice	100,000
Stationery	33,064
Subject textbooks and teaching materials	7,600
Sanitation	17,000
Physical Education and Sports, Music, Drama	20,000
ICT	34,111
Examinations [registration, invigilation and moderation]	88,673
Utilities	54,928
Board of Governors	40,733
UNSA and ID cards	5,000
Insurance	25,000
Contingencies and inflation factor (10% of total)	80,067
Annual Unit cost of training a GIII teacher	**880,739**
Capitation per day (pre-service)	**3,523**

Appendix 9

Details of estimated unit cost for outreach or Continuous Professional Development.

In computing the annual unit cost of outreach/CPD, the following assumptions were taken:

1. On average, each core PTC provides outreach/CPD programmes to approximately 10,000 primary school teachers within the catchment area.
2. Each primary school teacher participates in an outreach/CPD training within a year
3. There are majorly two cost centres during the provision of outreach/CPDs ie CCT and the Core PTC
4. A typical academic year has 45 activity days for outreach/CDP.
5. All cost of training is the responsibility of the central government, therefore no student contribution anticipated.
6. Only recurrent costs are considered in this costing
7. Provision for contingencies is at 10% of the total cost

Item	Unit cost
CCT based running costs	
Office Imprest	276
General maintenance(Office Equipment, furniture etc)	920
Stationery	627
Utilities	184
CCT meetings (with DEO, DIS, PTC)	156
Cluster meetings (in-service training, CPD, Mgt Training)	1,840
Joint Inspection with DIS	3,983
Routine visits to schools including observing lessons, mtg H/T, Mtg SMC, Mtg Trs	17,922
Motorcycle Maintenance	552

College-Based Costs	
Feeding (not all teachers train at the PTC)	131
Stationery	87
Off payroll wages (for support staff attached to outreach)	1,267
Board of Governors meetings	294
CCT meetings	2,371
Transport and fuel (outreach activities)	1,217
Per Diem and Safari Day allowances	555
Vehicle Repairs	573
Contingencies and inflation factor (10% of total)	3,296
Annual Unit cost for outreach/CPD	**36,251**
Capitation per day (in-service/outreach for 45 days a year)	**806**

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