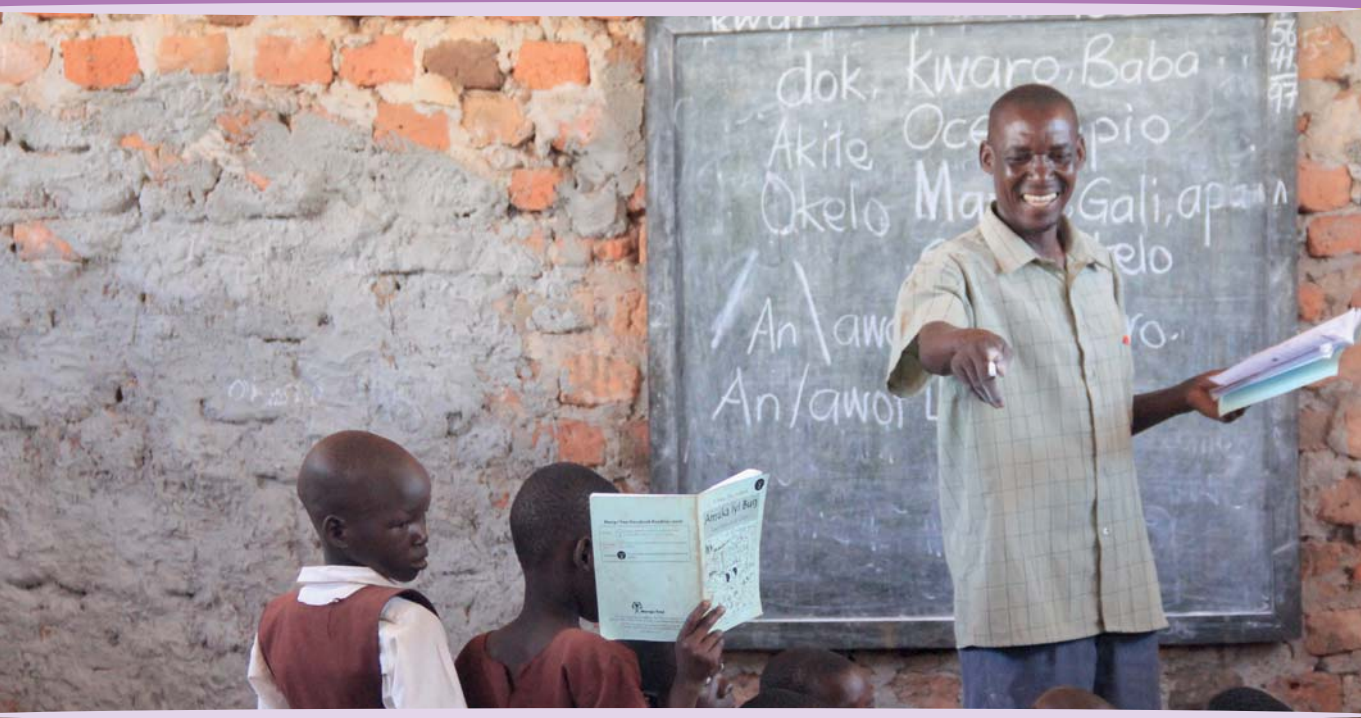
MINISTRY OF EDUCATION AND SPORT

TEACHERS INITIATIVE IN SUB-SAHARAN AFRICA
(TISSA)

UGANDA



TEACHER ISSUES IN UGANDA:

A shared vision for an effective teachers policy

United Nations
Educational, Scientific and
Cultural Organization

International Institute
for Educational Planning

Pôle de Dakar
EDUCATION SECTOR ANALYSIS

TEACHER ISSUES IN UGANDA:

A SHARED VISION FOR AN EFFECTIVE TEACHERS POLICY

June 2014

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The International Institute for Educational Planning (IIEP) was established in 1963. It supports Member States in planning and managing their educational systems to help them achieve national goals and development objectives agreed to at the international level. IIEP develops sustainable educational capacities, research, technical assistance, networking and information sharing.

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Foreword

Education is a key factor for promoting national development objectives and is instrumental to the achievement of Uganda's Vision 2040. The Education and Sports Sector Plan (2007-2015) clearly elaborates the mission of the Ministry of Education and Sports, that is, to "support, guide, coordinate, regulate and promote quality education and sports to all persons in Uganda for national integration, individual and national development." Therefore, as we witness a strong economic growth in Uganda, we do expect that the education sector continues to benefit in resources from both the public and private sector; and in particular, substantial resources go to the teaching work force wage bill.

This TISSA report provides a holistic overview of teacher issues in Uganda that are based on a meticulously undertaken assessment using the methodological guidelines for the analysis of teacher issues in sub-Saharan African countries, a UNESCO initiative. The results indicate that Uganda faces demographic pressure with increasing number of school going age population that translates into the need for more teachers, especially in basic education. The inability of teacher training institutions to ensure adequate supply of well trained pre-service and in-service training teachers pauses a big problem of quantity and quality of teachers in the country. Though access to primary and secondary education has increased over the years, there is a problem of many pupils starting school late and high dropout rate, leading to low completion rate.

The study indicates that there is low performance especially in literacy and numeracy that requires attention. It is therefore important that the Ministry puts more effort to address the issue of retention in schools and strengthen the pre-service and in-service training of treachers, to ensure sufficient number of qualified teachers and instructors.

The study provides reliable and comprehensive information that is useful to policy makers and development partners. This is the first step of a broader process of teacher policy formulation that is to be accompanied by an action plan for its implementation. Already, the study results have generated a lot of debate and were useful during the review of the ESSP as a basis of analysis of teacher effectiveness in Uganda. I do also note that UNESCO has gone ahead to support Uganda to implement some of the recommendations of the TISSA report through the Capacity Building on Education for All on teachers programme and the Chinese Funds In Trust(CFIT).

I would therefore, like to encourage all the development partners to make use of the information in the TISSA report to ensure appropriate interventions are implemented that are evidence based. Already we have several teacher projects that are ongoing and also under the Global Partnership in Education, the aspects of teacher initiatives are also incorporated. This study therefore forms a basis for improving the conditions of work for teachers towards improving quality of education in Uganda.

Major (Rtd) Jessica Alupo Epel (MP)
Minister of Education and Sports
Uganda

Preface

The Ministry of Education and Sports goal is to increase and improve equitable access to quality education. Several reforms have been initiated in education including the ongoing curriculum review that is a manifestation of the Government's commitment to improving quality of education. This TISSA report, which is a comprehensive study on teacher issues initiated by UNESCO, documents the challenges that affect our education institutions with emphasis on areas that impact on teaching and learning. The study indicates that the share of the education budget of the government budget has declined contrary to the increased investment needs of the education sector. As much as we laud the achievements of UPE and USE, the report also indicates that only 40 percent of the pupils complete the full cycle of primary education while participation levels at secondary education is still low.

The TISSA report also provides information on the status of: teacher demand and supply; teacher training; recruitment, deployment and management; job motivation and satisfaction; and teacher remuneration. The education institutions have challenges of High Pupil Teacher Ratio and the need to have adequate resources for employing more teachers to meet the increasing enrolment in schools especially primary and secondary education. The fact that pupils are not performing well in literacy and numeracy is an indication in pupils having learning difficulties. This could also be attributed to among other issues to the challenges of teacher quantity and even teacher quality. The study identified weaknesses in initial teacher preparation in our teacher training institutions, as well as, limited opportunities for continuous professional development. It is therefore important that mechanisms are put in place to address the challenges in pre-service and in-service training programmes. Teacher Training is critical and therefore the ongoing development of the STDMS is to go a long way in addressing the weakness in the opportunities for upgrading the skills of the teachers.

In this regard, it is important that all stakeholders engage in constructive dialogue to address the critical barriers and bottlenecks to achieving quality education for all children in Uganda. A number of teacher interventions are in place that is to improve on teacher effectiveness for enhanced quality learning outcomes. Some of the key strategies to address teacher's issues include: ensuring teachers are motivated, empowered and better remunerated; create & support a teaching force that is passionate about their profession; focus on teaching methodology and innovations; have a conducive teaching and learning environment in schools and; have adequate learning aids and materials for effective teaching and learning to take place.

I therefore, would encourage the Ministry officials and development partners to develop a strategy that would enhance quality education. The UNESCO programme of Capacity Building on Education for All, has already identified priority areas of intervention based on the TISSA report and consultation among the Teacher Education Working Group. The initiatives are ment to strengthen the capacity of the education system to address the teacher issues that include the review of the teacher policy and harmonization of pre-service and in-service teacher training programmes. Other development partners are also engaged in improvement of the teacher areas that would enhance teacher effectiveness. In order to improve on the learning outcomes, the Government is to continue to focus on teacher effectiveness, by increasing resources to teacher development to build their knowledge, understanding, and pedagogical skills. It is clear that teacher training coupled

with practice is critical to developing an all-round, empowered, passionate and motivated teacher who can confidently stand before the learners and deliver quality education. The holistic approach to teacher training will produce a teacher who is both qualified and competent to make good judgment and continually renew his/her knowledge and skills for the benefit of the Ugandan child.

I therefore urge all the stakeholders to continue with their support and more resources are to be mobilized by the Government to ensure that we have adequate qualified teachers to sustain quality teaching and learning.

Dr. Rose Nassali Lukwago,
Permanent Secretary
Ministry of Education and Sports
Republic of Uganda

Acknowledgements

This diagnosis of teacher issues in Uganda was prepared through a close collaborative effort by the government of Uganda, represented by a multi-disciplinary team, the Pôle de Dakar (UNESCO/BREDA), the UNESCO Office in Nairobi and the Task Force on Teachers for EFA.

We thank the Honorable Minister Geraldine Namirembe Bitamazire (Ministry of Education and Sport - MoES) for initiating the process; the Honorable Minister Jessica Alupo (MoES) for seeing the diagnosis through to its finalization; the Permanent Secretary Felix Lubanga (MoES) for his constant support and the Permanent Secretary Rose Lukwago for putting lot of effort in the dissemination of the results; the Secretary General of the UNESCO National Commission in Uganda (UNATCOM), Augustine Omare Okurut, for his support throughout the process; and the Principal of Kibuli Primary Teacher College, Ahmed Kyeyune, for his support in the organization of the workshops for the study.

The government team was placed under the authority of the Ministry of Education and Sport and was composed of staff from MoES, Kyambogo University (KyU), the Ministry of Finance Planning and Economic Development (MoFPED), the Ministry of Public Service (MoPS), Uganda Bureau of Statistics (UBOS), Uganda National Teachers Union (UNATU), the Forum for African Women Educationalists and UNATCOM. Acting under the direct supervision of the Commissioner for the Teacher Instructor Education and Training department (TIET/MoES), Margaret Nsereko, the government team was successively coordinated by Florence Aguti (Acting Commissioner for Primary Teachers) and Moses Bateganya (Acting Commissioner for Vocational and Technical Tutors).

The government team detached from MoES included Patrick Balyogera (Directorate of Education Standards - MoES); Ronald Kabunga, Alex Kazinga Ngobi, George Oburu and Michael Ssozi (EPPAD - MoES); Alfred Kyaka (Government Secondary Schools - MoES); Ismael Mulindwa (Private Schools and Institutions - MoES); Jane Egau Okou, Acting Commissioner (TIET - MoES); Mirembe Eseza (Special Needs and Inclusive Education - MoES); James Mugerwa (BTVET - MoES); Enock Bongyeirwe and Henry Ssemakula (Guidance and Counseling - MoES); Sammy Odongo (Physical Education and Sports - MoES); Beatrice Kabwa (Education Service Commission - MoES); Joseph Kintu (National Curriculum Development Centre - MoES); Monday Deus (IMU - MoES); Florence Nabitaka (CMU - MoES) and Monica Katusabe (Personnel Department - MoES). Other members included Ali Kyakulumbye and Godfrey Bakaira (Teacher Education - KyU); Betty Ligyalingi (MoFPED); Robert Lwasa (MoPS) and Dorcas Nabukwasi (UBOS). Finally, the national team's union members were James Tweheyo, Secretary General, Teopista Birungi, former Secretary General and Nankobe Cletus (UNATU); Rose Agoi and David Twebaze (UNATCOM) and John Willy Arinaitwe (Principal Association Union).

The Pôle de Dakar (UNESCO/BREDA) team consisted of Patrick Nkengne (Team Leader, Education Policy Analyst), Diane Coury (Education Policy Analyst) and Olivier Pieume (Education Policy Analyst). UNESCO followed the process from start to finish, thanks to Yayoi Segi-Vltchek (Nairobi Office), Jean Adotevi (UNESCO/BREDA Office in Dakar), and Edem Adubra (UNESCO Task Force), Charles Obiero (Uganda CapEFA coordinator), Endris Awol and Omar Diop (UNESCO-IICBA).

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Table of contents

List o tables

List of figures

Abreviations

ADB	African Development Bank
BA	Bachelor of Arts
BREDA	UNESCO's Regional Bureau for Africa
BSc	Bachelor of Science
BTVET	Business and technical vocational education and training
CBET	Competence-based education and training
CCT	Coordinating Center Tutors
COUPSTA	Coalition of Ugandan Private School Teachers' Associations
CPD	Continuous professional development
CTTE	Certificate in Technical Teacher Education
CVTI	Certificate in Vocational Training Instruction
DEP	Diploma in Education - Primary
DES	Diploma in Education - Secondary
DTE	Diploma in Teacher Education
DTTE	Diploma in Technical Teacher/Instruction Education
DVTI	Diploma in Vocational Training Instruction
EAC	East African Community
ECD	Early childhood development
EFA	Education for All
EFA-FTI	Education for All Fast-Track Initiative
EMIS	Educational management and information system
EPPAD	Education Planning and Policy Analysis Department of MoES
ESC	Education Service Commission
ESSP	Education Sector Strategic Plan
FENU	Forum for Education NGOs in Uganda
GDP	Gross domestic product
GER	Gross enrollment rate
GIR	Gross intake rate
GTZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HTC	Health Tutors College
ICT	Information and communications technology
ITC	Instructor Training College
KyU	Kyambogo University

LAY	Latest available year (with data)
LGs	Local governments
LICs	Low income countries (GDP per capita under US$ 800)
MDGs	Millennium Development Goals
MoES	Ministry of Education and Sport
MoFPED	Ministry of Finance Planning and Economic Development
MoGLSD	Ministry of Gender, Labour and Social Development
MoPS	Ministry of Public Service
NAPE	National Assessment of Progress in Education
NASPTSU	National Survey on Primary Teacher Satisfaction in Uganda
NDP	National Development Plan
NGO	Nongovernmental organization
NTC	National Teacher College
PCR	Primary completion rate
PEAP	Poverty Eradication Action Plan
PLE	Primary Leaving Examination
PTC	Primary Teacher College
PTE	Primary Teacher Education
PTR	Pupil-teacher ratio
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Educational Quality
SNE	Special Needs Education
SSA	Sub-Saharan Africa
STR	Student-trainer ratio, in this report
TIET	Teacher Instructor Education and Training department of MoES
TISSA	Teacher Initiative in Sub-Saharan Africa
U7, U6, etc.	Grades on the salary scale, U7 being the lowest
UACE	Uganda Advanced Certificate of Education
UBOS	Uganda Bureau of Statistics
UCE	Uganda Certificate of Education
UNATCOM	UNESCO National Commission in Uganda
UNATU	Uganda National Teachers Union
UNDP	United Nations Development Programme

UNEB	Uganda National Examination Board
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFPA	United Nations Population Fund
UNHS	Uganda National Household Survey
UNICEF	United Nations' Children's Fund
UNIDO	United Nations Industrial Development Organization
UPE	Universal primary education
UPPET	Universal postprimary education and training
USAID	United States Agency for International Development
USE	Universal secondary education
USh	Ugandan shilling
WHO	World Health Organisation

INTRODUCTION

Uganda has embarked on major transformation, with a vision to move from a peasant society to a modern and prosperous country by 2040. Education is seen to be a key factor for the achievement of this objective. Since 1996, the sector has undergone various reforms in order to send all children to school and improve their skills. While implementing these reforms, one aspect the education system must heed relates to teacher issues. There are many reasons why a constant focus should be placed on teachers:

(i) Teacher pay represents 80 percent of the recurrent education budget. Therefore, with proper teacher management, about 80 percent of education resources are used effectively.

(ii) The quality of teachers determines the quality of education, meaning that good teacher training is a condition for the development of quality education.

(iii) Teachers are at the frontline of the implementation of education reforms; therefore, the system must ensure that they are aware of the reforms and can effectively implement them as planned.

(iv) The number of teachers must increase for education objectives to be met. Therefore, those current teacher issues that are not resolved are destined to grow in scale.

Ugandan education authorities are aware of the necessity to tackle teacher issues. Proof of this is the number of studies that have been conducted to inform education sector decision making. These include repeated studies on teacher absenteeism, the recent EMIS survey on teacher attrition and joint monitoring reports, which underline issues related to teacher deployment. The major drawback of these studies is that they analyze teacher issues in isolation; yet these issues are intrinsically connected to all aspects of education sector performance[1].

The expansion of the education system, for instance, requires the recruitment of more teachers. The number of new teachers needed should be coherent with existing national teacher training capacities and with the resources needed to pay the salaries of teachers, trainers and tutors. Teachers must also have proper career development options. Consequently, when analyzing teacher issues, a holistic approach is preferable, and the methodology used should reflect this. UNESCO has developed such a tool: the Teachers Initiative in Sub-Saharan Africa (TISSA). Its aim is to analyze teacher issues in an integrated manner.

The TISSA methodology was used in Uganda in 2012. This report summarizes the findings of the analyses. It is organized into six chapters:

[1] One notable exception is the SABER teacher study conducted in 2012. It analyzes through a comprehensive approach many of the institutional aspects of the implementation of the teacher policy.

(i) Chapter 1 presents the country context, highlights the importance of education in the development plan and describes the context for teacher policy, including the current performance of the education system.

(ii) Chapter 2 estimates the number of teachers the system will have to recruit in the near future to achieve education objectives, for primary, secondary, technical and vocational education, and teacher training.

(iii) Chapter 3 discusses teacher training, including the current capacity of teacher training institutions, the cost of training a teacher and efficiency issues.

(iv) Chapter 4 deals with teacher recruitment, deployment, absenteeism and attrition.

(v) Chapter 5 reviews teacher remuneration and opportunities for career development.

(vi) Finally, Chapter 6 is devoted to what teachers' job satisfaction, perceptions of their profession and the current context for social dialogue.

The evidence-based findings of this analysis aim to contribute to a shared vision of real teacher issues, which is a preliminary step to designing teacher policies that effectively tackle them.

1 One notable exception is the SABER teacher study conducted in 2012. It analyzes through a comprehensive approach many of the institutional aspects of the implementation of the teacher policy.

EXECUTIVE SUMMARY

Context of the Study

This report provides a holistic overview of teacher issues in Uganda. It was elaborated using the methodological guidelines for the analysis of teacher issues in Sub-Saharan African countries produced by UNESCO in the context of the TISSA initiative. The aim of this initiative is to assist countries in designing accurate teacher policies based on reliable and comprehensive information. This report is therefore the first step in a broader process of teacher policy formulation that will be accompanied by an action plan for its implementation.

Methodology

Elaborated upon request by the Ministry of Education and Sport (MoES), this report is the result of a participatory process that involved the Pôle de Dakar, UNESCO-BREDA's education sector analysis unit, and a national team nominated by MoES. National team members were selected from different institutions due to both the need to analyze various dimensions of teacher issues and the need to reach a shared vision of them, a preliminary step for the designing of a consensual policy. They included: MoES, Kyambogo University, the Ministry of Finance Planning and Economic Development (MoFPED), the Ministry of Public Service (MoPS), the Uganda Bureau of Statistics (UBOS), the Uganda National Teachers Union (UNATU), the Forum for African Women Educationalists (FAWE) and the UNESCO national commission.

Conducted between October 2011 and May 2013, the study collected data from EMIS, MoFPED, MoPS, UBOS and teacher training institutions. It also carried out interviews with authorities of MoES, UNATU, the Coalition of Ugandan Private School Teachers' Associations (COUPSTA), primary and national teacher colleges (PTCs and NTCs) and organized a national survey on teachers' job satisfaction. Analyses of these data reveal important findings that support key recommendations, successively highlighted below.

Main Findings

1. Uganda is undergoing relatively strong economic growth, but the education sector is not benefiting. Uganda has enjoyed relatively strong economic growth over the last decade. Since 2001, real GDP and real GDP per capita have grown at respectively 7.4 percent and 3.9 percent on average per year. Despite this economic growth, the government is facing challenges in revenue generation: indeed, domestic revenues, despite an improvement over 2001-11, remain low (16.4 percent of GDP in 2011, compared to an average of 18.1 percent for other EAC countries). Over the period, external support in the form of grants has decreased from 7.6 percent of GDP in 2001 to 2.3 percent in 2011.

2. The share of public recurrent expenditure devoted to education has sunk from 27 percent to 19 percent over the 2004-11 period. Public recurrent education expenditure has deteriorated as a share of GDP also, from 4.2 percent to 3.3 percent, a level below that observed in other LICs (3.9 percent on average). In a growth context, the government would have been expected at least to maintain the share of its allocation to education. The fact that it is not clearly questions the priority the government places on education.

3. Combined with the lack of education resources, demographic pressure is a major challenge to the achievement of education objectives. The school-aged population (6 to 18 years) is growing at a very high rate. In 2010 it stood at 10.9 million; it is expected to reach 20.6 million by 2025. This implies that the education system will have to double its current intake capacity to achieve universal primary education (UPE) and universal secondary education and postprimary education and training (USE/UPPET) objectives by 2025.

4. Access to primary education is universal, but a considerable share of students start school late. Since the introduction of the UPE programme, the number of children enrolled in primary has increased from 2.9 million in 1997 to over 6.9 million in 2001. In 2010, 8.7 million children attended primary school. Currently, it is estimated that 98 percent of a given generation access the first grade (P1). However, half of P1 new entrants are more than six years old.

5. The main reasons explaining school non-attendance are age and the cost of education: (i) At six years old, children are considered too young for P1. Some parents wait until children are eight, nine or even ten years old before sending them to school. (ii) Although the UPE programme abolished education fees, other education costs still represent a barrier to attendance for some parents.

6. Education system performance indicators are generally low. Given that many children start school late, they are overage throughout their school career. This increases the probability of dropout, especially when taking into account the rising opportunity costs of education with age. As a result, the primary completion rate is low, affecting access rates to the subsequent cycles. Indeed, although almost every child enrolls in P1, only 63 percent of a generation reaches P7, only 49 percent enter lower secondary and ultimately, only 10 percent reach S6 (final year of upper secondary).

7. Repetition remains high despite the implementation of the no-repetition policy, which has helped reduce the share of repeaters in primary from 16 percent to 11 percent over 2006-10. The combination of repetition and dropout seriously undermines efficiency in the use of scarce education resources. It is estimated that 57 percent of resources devoted to primary education are inefficiently spent on repetition and dropout.

8. The quality of education is also an issue: various assessments of students' achievements at national and international levels have concluded that many students do not acquire the minimum knowledge expected for their grade. For instance, 59 percent of P6 students are not proficient in English literacy and 54 percent are not proficient in numeracy. Uganda ranked 11th out of 15 countries in the international SACMEQ programme.

9. To achieve national education objectives, the system will have to significantly increase the size of its teaching force. Two scenarios for the expansion of the education sector were analyzed. The first assumes an improvement of key education indicators according to the trends observed between 2006 and 2010; the second assumes the achievement of UPE and USE/UPPET policy goals by 2025. The first scenario shows that if the government continues to recruit teachers according to recent trends, education system indicators will not meet the levels expected in the Education Sector Strategic Plan. The second scenario, which is more in line with MoES objectives, underlines the need to significantly expand the number of teachers. In primary, government teacher numbers will have to expand at a slightly higher rate (5.0 percent, compared to 4.4 percent in the recent past). For secondary, average annual growth in government teaching staff numbers will have to increase from 7.6 percent to 12.0 percent.

10. Pre-service training must be strengthened to equip a sufficient number of teachers with the adequate qualifications. Despite MoES regulations that no unqualified candidates should be recruited as teachers, 2010 EMIS data reveals that 12.7 percent of primary teachers and 16.1 percent of secondary teachers were underqualified, most of them (85 percent) in private schools. The business, technical and vocational education and training (BTVET) sector also suffers from teacher qualification issues: of the estimated 5,000 instructors, 60 percent need upgrading, especially in competencies related to occupational skills, industrial experience and instructional skills.

11. The training system will have to further expand its physical intake capacity by a factor of 1.8 to train the required number of primary teachers and BTVET instructors by 2025. This, despite the success of the dual strategy relying on the output of teacher training college graduates and the provision of in-service courses to upgrade and certify underqualified teachers in reducing the share of underqualified teachers in government schools. On the other hand, NTCs and universities are already producing more secondary teachers than required.

12. Furthermore, PTCs do not appear to provide trainees with the required skills. Indeed, colleges have virtually no impact on pupils' or teachers' final performance (good PTCs are good because their trainees had initially good skills); primary teachers' proficiency levels are low in oral reading (37 percent), numeracy (66 percent) and literacy (73 percent - NAPE/UNEB, 2011a); and pedagogical training is weak, as highlighted by teachers' difficulty in transmitting their higher knowledge to students. These results call for further analysis to better understand the main factors driving training college quality and to identify the levers that could positively impact on effectiveness, including how resources are mobilized and used. Indeed, the level of capitation grants (USh 1,800 per trainee per day) is inadequate.

13. There is little coherence between the number of teachers and the number of pupils at the school level, calling the teacher allocation process into question. The staff establishment formula sets the basis for teacher allocations to government primary schools. On the basis of 2010 EMIS data, there are enough teachers to post one to each class. In fact, only 17.3 percent of primary schools have the adequate number of teachers. About 37.0 percent have more teachers than they should, whereas 45.7 percent face a deficit. Similarly for secondary: despite there being enough teachers overall, 40 percent of deployments do not reflect school-level needs.

14. The primary criterion used to allocate a teacher (the existence of a class/stream) can be questioned. Indeed, schools with similar enrollment levels have significantly different numbers of classes/streams, and vice-versa. This highlights issues related to the decision and conditions to create new classes/streams, and calls for greater in-depth analysis.

15. Teacher dissatisfaction is a major concern in the Ugandan education system and is associated with teacher absenteeism. In a national survey on government primary teacher job satisfaction, 47 percent indicated that they were dissatisfied with their job, 59 percent indicated that if they were to start their career anew, they would not be teachers, and about 78 percent believe that their colleagues are dissatisfied with their job. Only 16 percent of teachers aspire to remain in the profession over the next two years.

16. Although it is not the only factor, this general feeling of dissatisfaction affects teachers' attendance at work. Repeated joint assessment reviews conducted since 2008 indicate that teacher absenteeism is high (17 percent to 30 percent). This level would be even higher if accounting for cases where teachers are in school, but are not actually teaching. EMIS data for 2010 revealed that in lower secondary, teachers give 12 hours of class per week on average, instead of the set 16 hours; similarly, at the upper secondary level, teachers give 9 hours of class per week, instead of the 12 hours set by MoES.

17. Teachers believe their salary is low, whereas it is actually higher than for similarly graded civil service jobs. Primary teachers indicate salary as the main cause of dissatisfaction. Certainly, their purchasing

power has fluctuated in recent years and has deteriorated since 2011. At the secondary level, teacher pay has decreased in real terms by over 25 percent since 2005. However, teacher salaries in Uganda are comparatively good. Primary teacher pay (in purchasing power parity US$) is relatively higher in Uganda than in the average LIC. In addition, within the Ugandan public sector, entry pay is 22 percent higher for primary teachers (U7-upper grade) than for other civil servants (with the exception of medical and legal staff). Finally, the public sector is generally more attractive than the private sector, offering better wages to teachers with similar qualifications.

18. One of the main teacher issues remains the limited scope for real career development. The current teaching career structure provides limited opportunities for real career development. Upward mobility within subsectors is particularly slack, especially for primary teachers which represent the bulk of the teaching force (80 percent). Indeed, for every 100 U7 positions, there are just nine U6 positions and seven U5 positions for which primary teachers are eligible. Despite their scarcity, these positions are highly remunerated, explaining that 70 percent of primary teachers wish to be promoted to an administrative position. Promotion and professional recognition are the main factors of teacher satisfaction, after salary.

Recommendations

The findings of the study have helped to identify critical areas upon which to focus next steps:

1. Increase the resources devoted to the education sector. The share of education resources in the government budget has sunk over recent years. Given the challenges the education sector is to face and the context of high growth of the school-aged population, it is urgent to at least restore education resources to their previous levels (close to four percent of GDP). The smooth development of the sector hinges on this.

2. Create an environment to attract good candidates to the teaching profession, especially in science-related subjects, to guarantee that the number of candidates will be sufficient to fill all vacancies in the future. The need for MoES to develop strategies to attract candidates to the teaching position is particularly important in science-related subjects (math, chemistry, physics and biology) where at the moment, the number of eligible applications received is lower than the vacancies.

3. Ensure teachers are allocated to schools according to needs. The rules for the identification of teacher needs and postings exist, but are not implemented. It is important to understand why and the difficulties education officers face in teacher deployment. Moreover, the appropriateness of the current rule, primarily based on the number of streams per school, should be reviewed. Clear rules that set the conditions for the creation of new streams must at very least be defined.

4. Strengthen the in-service training system to offer teachers real opportunities for continuous professional development throughout their careers. This entails tackling major challenges facing coordinating center tutors. In addition, a clear overview of teacher training needs (provided by a mapping exercise) would help to orient training content accordingly.

5. Improve promotion opportunities for teachers. While the scheme of service aims to offer teachers greater career opportunities, its implementation has been limited following funding restrictions. However, implementing this scheme will prove crucial to avoid further resentment among teachers that could hamper the quality of the teaching provided. Innovative approaches to financing should be considered.

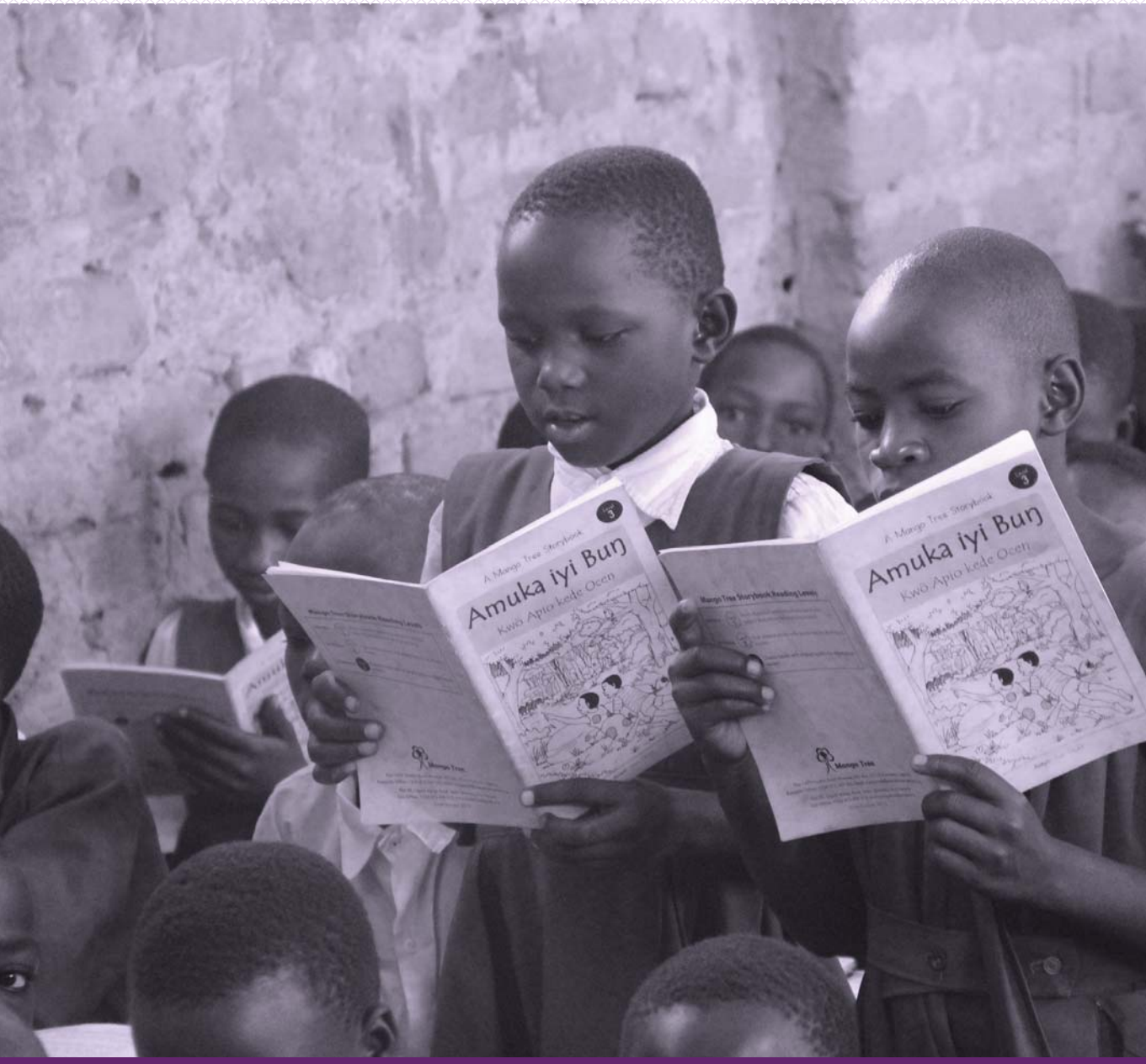
6. Discuss teacher wages in the context of global education policy where trade-offs are analyzed based on financially simulated options. This is necessary to reach sustainable and efficient options that favor both teaching quality and equity. Indeed, the teacher wage bill already represents a sizeable share of recurrent

public education expenditure, which imposes limits on the extent to which the wage bill can now grow. Yet, ensuring that teachers receive salaries that allow them to sustain a decent living and stay motivated is also important. A financial modelization exercise could help to disentangle the most cost-effective options.

7. Create a permanent structure for social dialogue between the government and teachers. As recommended at the international level by conferences and institutions focusing on teachers and as repeatedly requested by teacher unions, there is a need to create a permanent structure for social dialogue between the government and teachers. Its main objectives should be to dispel misunderstanding and solve key issues before teachers go on strike, and provide a space to share information and involve teachers in education policy formulation and reform from its very initial stages (and not only at the implementation stage, as now).

8. Improve the data collection system. Due to the lack of data, some aspects of the study could not be analyzed, such as issues related to private schools, enrollment in teacher training institutions and subsectors like early childhood development, BTVET or higher education. MoES must further support and improve the education management information system (EMIS). The support needed is not necessarily financial. A commitment to force all schools (especially private schools) to respond to the EMIS questionnaires and a clarification of mandates (in particular about who should collect data on higher education, EMIS or the National Council for Higher Education) would help. The clear identification of key data needed by MoES and an analysis of the resources available for EMIS' functioning should ultimately contribute to the quality of the data collected in the education sector.

Having analyzed teacher issues from various angles, this report provides MoES and its partners with useful information to support the development of a comprehensive teacher policy. The challenge now remains for the ministry and education stakeholders to translate all this information into teacher policy levers via the development of coherent and comprehensive strategies and interventions that will ultimately allow the improvement of teachers' working conditions and ultimately education quality. To facilitate MoES' task, it is strongly recommended that working groups be created for each recommendation, with the mandate to define concrete action to be taken by the government to solve the issues, in coherence with the country context. Each working group should also be in charge of providing information on the financial implications of the proposed actions.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Mango Tree
A Mango Tree Storybook
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CHAPTER 1

NATIONAL CONTEXT AND EDUCATIONAL DEVELOPMENT

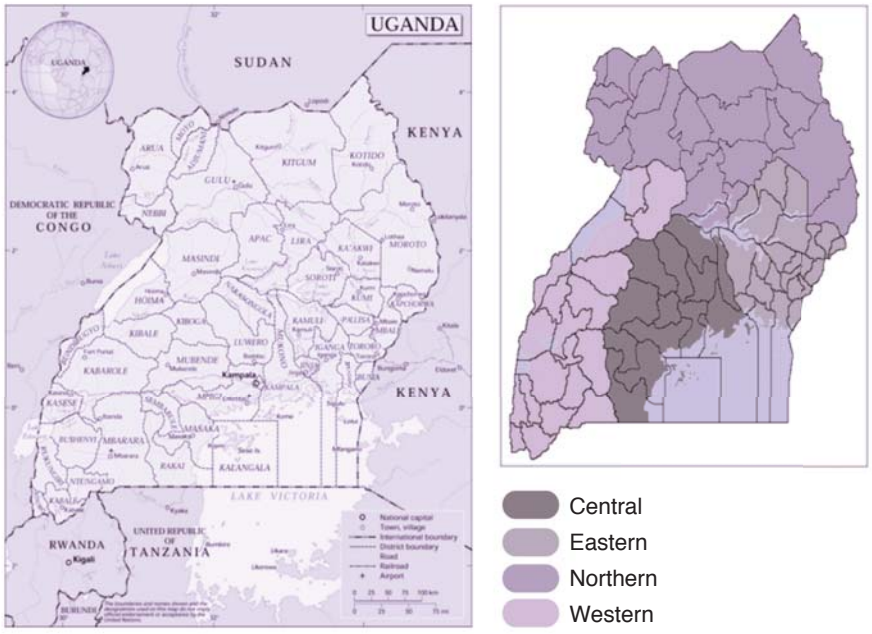
This chapter succinctly presents a current overview of Uganda. It is organized into two sections: (i) a description of the national context, covering geography, economy, politics and society, and (ii) a general presentation of the education system. Both are central to the analysis of teacher issues.

Section 1: The Country Context

1.1 Geographical Location

The Republic of Uganda is a landlocked country located in the Eastern region of Africa, straddling the equator, which lies mostly between latitudes 40N and 10S and between longitudes 290E and 350E, at 1,200 meters above sea level. Uganda occupies an area of about 241,500 square kilometers and is bordered by Kenya to the East, Tanzania and Rwanda to the South, Democratic Republic of Congo to the West and South Sudan to the North. Uganda lies almost entirely within the Nile basin and the southern part of the country includes a substantial part of Lake Victoria, which is shared with Kenya and Tanzania. The country is administratively divided into 112 districts, spread across four geographical regions: Northern, Eastern, Central and Western (See Figure 1.1).

Figure 1.1: Map of Uganda



Source: www.ugandapicks.com and www.wikipedia.com, accessed in October 2012.

Due to its position straddling the equator, the country has a favorable climate.[2] Most of the country is a plateau, surrounded by a rim of mountains, making it suitable for agriculture. In addition, the country is well endowed with fertile soils and a wide range of vegetation, ranging from tropical rain forest in the South to savanna in the North and semi-arid vegetation in the North East. It is also well endowed with national resources which include oil, gold, copper, cobalt, hydropower, limestone and salt.

1.2 Population and Demographic Characteristics

According to the last census, the size of the Ugandan population was 24.3 million in 2002 and is growing at a very high rate (3.3 percent)[3]. Thus the Uganda Bureau of Statistics estimated that the figure had reached 31.7 million in 2010.[4] It is expected that by 2025, Uganda will have 53.6 million inhabitants (See Table 1.1).

The population is characterized by high density (126 inhabitants per square kilometer), a high share of people living in rural areas (about 87 percent of the territory is rural), the prevalence of poverty (69 percent of the population lives on less than US$ 1 per day)

Demographic trends in Uganda have been changing rapidly, mainly because of high fertility, with an average rate of 6.7 children per woman, coupled with declining infant mortality and low life expectancy. Nearly half the population is below the age of 15 and the population structure is expected to remain youthful for the next fifteen years.

Table 1.1: Evolution of the School-Aged Population, 2010-25
Numbers and Percent

	2010	2015	2020	2025	2025/2010 Ratio
Total Population	**31,784,320**	**37,906,700**	**45,056,717**	**53,645,446**	**1.7**
3-5 Years	3,651,770	4,441,890	5,092,124	6,013,077	1.6
6-12 Years	6,538,950	8,317,330	10,588,112	13,473,293	2.1
13-16 Years	2,966,970	3,539,910	4,396,614	5,352,059	1.8
17-18 Years	1,368,310	1,526,320	1,611,902	1,749,507	1.3
Total 6-18 Years	10,874,230	13,383,560	16,596,627	20,574,859	1,9
Total 6-18 Years (%)	34.2%	35.3%	36.8%	38.4%	

Source: Projections up to 2017 by UBOS and for 2018-25 (using the annual average growth rate observed between 2003 and 2017).

[2] Uganda has a tropical climate. It is generally rainy with two dry seasons (December to February and June to August). The Eastern, Central and Western regions have heavy rains from March to May and light rains between September and December. The Northern region has one main rainy season from March to October although with light rainfall.

[3] Estimation by the Uganda Bureau of Statistics (UBOS).

[4] The estimates take the effects of extremely high mortality due to AIDS and malaria into account.

This demographic trend poses several challenges to future growth and structural transformation as well as to the pace of development. One key challenge is with respect to the education sector. Indeed, apart from its large size, the school-aged population is growing quickly (See Table 1.1 above). In 2010, 10.9 million Ugandans were aged 6 to 18 years, representing 34 percent of the population. The education system is already facing capacity constraints and is not able to provide for all. However, it is estimated that by 2025, the size of the school-aged population will reach 20.6 million, equivalent to 38 percent of the population. Education supply will need to expand rapidly if universal primary education (UPE) and universal secondary education, also known as universal postprimary education and training (USE/UPPET) are to be achieved. A major constraint related to population growth will be the ability of the system to recruit enough teachers.[5]

1.3 Political and Administrative Context

Uganda gained independence from Great Britain on October 9, 1962. The period since then has been marked by intermittent conflicts under different political leaderships. The accession to power of the broad-based National Resistance Movement's (NRM) government in 1986 under President Yoweri Museveni finally put an end to political struggles. Unlike his predecessors, Museveni moved towards a more democratic system as he had promised to do at the beginning of his interim administration. A popularly elected constituent assembly debated the Odoki Commission's constitutional outline over 1994-95 and adopted a new constitution on September 22, 1995, which included strong restrictions on political party activity.[6] The 1995 constitution established Uganda as a republic with executive, legislative and judicial branches. The constitution provides for a president to head the executive branch, to be elected every five years. Legislative powers are vested in the parliament. The Ugandan judiciary consists of Magistrates' Courts, High Courts, Courts of Appeal and the Supreme Court. Democratic presidential elections were held in 1996, 2001, 2006 and 2011, all of which have been won by President Yoweri Museveni.

Uganda has politically recovered and bloomed into a successful democracy despite continued resistance by the Lord's Resistance Army (LRA) in the North. Beyond the proclamation of a people-centered constitution and the periodic elections of leaders at all levels, progress has also been achieved in terms of collective decision making through a decentralized governance system, the rule of law, the respect and protection of human rights and institutional reforms to strengthen the three branches of government. Political development in Uganda is a source of inspiration and hope for other African countries plagued with military rule and dictatorships. The peace and stability enjoyed in the country has led to sustainable growth and multi-faceted development.

1.4 Cultural and Social Aspects

Uganda is endowed with a rich and diverse cultural heritage that is deeply rooted in the way society identifies, organizes, preserves, sustains and expresses itself. The historical roots of Ugandan communities, in precolonial times, are based on forms of social, political and economic organization around families, clans and/or traditional leaders.

[5] This will be further discussed in Chapter 2.

[6] See HRW, 1999.

Ugandans have different beliefs, traditions, values and myths that are deeply rooted in their cultural and religious values.[7] These have continued to play a vital role in modeling society, propagating social harmony and development. Some, however, are in conflict with modern laws, such as widows' inheritance and female genital mutilation, which have led some people to regard culture as backward. Despite the continued belittling of traditional norms and the adaptation of foreign cultural norms to the Ugandan context, many communities continue to attach great value to their cultures and endeavor to conserve, inculcate and sustain them. It is somewhat surprising that these values are also still very ingrained in urban ways of life.

Traditional kingdoms or chiefdoms still exist alongside the central government and remain at the core of modern day Uganda: Buganda, Busoga, Bunyoro, Toro, Ankole, Lango, Acholi, Adola, Rwenzururu and others. These still have a very strong influence on Ugandan ways of life, particularly in protecting, encouraging and sustaining the norms and traditions of their cultures and providing guidance to society.

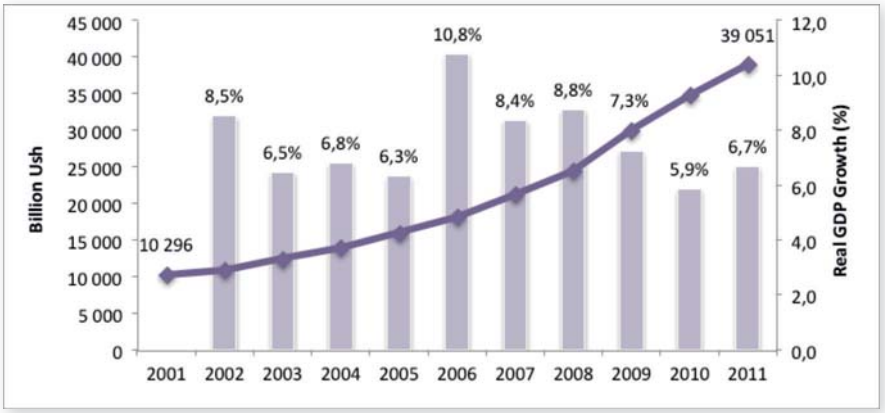
The official language in Uganda is English, although Swahili is being promoted in the context and spirit of the East African Community (EAC), which Uganda contributed to establish from its inception in 1993. Often therefore, information is shared in both English and indigenous languages.

1.5 Macroeconomic Context

Largely due to improved political stability, and despite the conflict in the North, Uganda has experienced positive economic growth over the last two decades. Real GDP has increased steadily at an average annual growth rate of seven percent between 2000/01 and 2010/11, despite recently weaker demand both domestically and internationally due to the global economic crisis, high depreciation and inflation (UBOS, 2012).[8] Given this generally positive outlook, real GDP per capita (in 2011 prices) increased from USh 807,299 in 2000/01 to USh 1,185,543 in 2010/11, at an average annual growth rate of 3.9 percent over the period (See Figure 1.2 below).

Figure 1.2: GDP and Real GDP Growth, 2000/01-2010/11

USh (Constant 2011 Prices) and Percent



Source: MoFPED and UBOS, from Annex 1.1.

Note: 2011 figures are projections. 2011 refers to FY 2010/11.

[7] MoGLSD, 2006.

[8] Growth is however expected to have slowed in 2011/12.

In order to finance their outlays, governments rely on two types of financial resources: domestic finance and external support through grants and loans. Domestic financial resources include taxes and non-tax revenues levied by the state upon its national wealth. The level of revenues collected depends both on the level of national wealth and on the efficiency of tax collection.

Domestic revenues as a proportion of GDP steadily improved between fiscal years 2000/01 and 2007/08, growing from 10.5 percent to 13.3 percent. This was on account of administrative tax reforms that enabled the tax authorities to reap the benefits of a robust economy. However with the onset of the global economic crisis a significant reduction in the domestic effort was observed, with revenues falling to 12.4 percent of GDP in 2009/10. However, with the addition of new resources from the oil industry expected in 2010/11, domestic revenues are projected to rise to 16.4 percent of GDP. Despite this improvement, the domestic revenues to GDP ratio remains lower than in other EAC countries (18.1 percent on average).

External support in the form of grants has witnessed a considerable drop over the period. Grants as a share of GDP have decreased steadily over the decade, from 7.6 percent to reach 2.3 percent of GDP in 2010/11. Thus the share of grants within total government revenue has decreased from 42.0 percent in 2000/01 to 12.2 percent in 2010/11 (See Table 1.2 below). However, this also highlights Uganda's reduced reliance on external funding to finance its recurrent expenditure.

These changes have resulted in the stabilization of government resources over the period, although the end of the period was marked by a slight deterioration in the global resources mobilized, offset by a new improvement in 2010/11, when total resources stood at 18.7 percent of GDP.

Simultaneously, government expenditure has been growing marginally, notably over the 2000/01 to 2008/09 period following the fiscal consolidation strategy that was adopted in 2003/04 and whose objective was to mitigate the "Dutch disease" effects that large donor inflows in support of the poverty reduction strategy were bound to cause.[9] This strategy involved efforts to enhance domestic revenue mobilization, to be matched by a deliberate slowdown in the growth of fiscal spending. However, expenditure has increased from 17.2 percent of GDP in 2008/09 to 23.0 percent of GDP in 2010/11.[10]

Table 1.2: Evolution of Total Government Revenue, Expenditure and Deficit, 2000/01-2010/11
Percentage of GDP

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011(*)
Total Revenue	**18.1**	**18.0**	**17.6**	**20.2**	**19.3**	**17.7**	**18.0**	**16.3**	**15.5**	**14.8**	**18.7**
Domestic	10.5	11.5	11.5	11.9	11.9	12.7	12.8	13.3	12.6	12.4	16.4
Grants	7.6	6.6	6.1	8.2	7.3	4.9	5.1	3.0	2.9	2.5	2.3
Grants (% of Total)	42.0%	36.3%	34.5%	40.7%	38.1%	27.9%	28.6%	18.5%	18.9%	16.7%	12.2%
Total Expenditures (1)	**20.4**	**23.1**	**21.4**	**21.7**	**20.4**	**19.5**	**19.8**	**18.1**	**17.2**	**19.6**	**23.0**
Recurrent	10.9	13.0	12.8	13.6	12.4	12.3	11.5	11.8	10.9	12.3	15.3
Interest	1.1	1.3	1.4	1.9	1.5	1.4	1.1	1.3	1.2	1.1	1.1
Development	8.5	8.9	8.3	8.0	7.7	6.9	7.1	5.9	5.5	7.1	7.3
External	5.2	4.8	4.6	4.8	4.6	4.1	3.8	2.8	1.5	2.5	2.7
Domestic	3.2	4.2	3.7	3.1	3.1	2.9	3.4	3.0	4.0	4.6	4.6
Deficit incl. Grants	-2.2	-5.0	-3.8	-1.6	-1.1	-1.9	-1.9	-1.9	-1.7	-4.7	-4.3
Deficit excl. Grants	-9.8	-11.6	-9.8	-9.8	-8.5	-6.8	-7.0	-4.9	-4.6	-7.2	-6.6

Source: MoFPED. See Annex 1.2 for the full table.
Note: (1) Includes net lending and domestic arrears. * Projections. 2011 = FY 2010/11.

[9] The Dutch disease is the apparent relationship between an increase in the exploitation of natural resources and a decline in the manufacturing sector: an increase in revenues from natural resources (or inflows of foreign aid) strengthens nations' currencies compared to other nations (manifest in the exchange rate), resulting in their other exports becoming more expensive for other countries to buy, thus making the manufacturing sector less competitive.

[10] In 2010/11 recurrent expenditure accounted for 66.4 percent of total expenditure, against 53.5 percent in 2000/01. The share of staff costs remained reasonably stable over the 2000/01 to 2008/09 period at about 38 percent of recurrent costs, before registering a huge drop in 2009/10 and 2010/11 (to 28 percent), offset by rising spending in non-salary non-interest recurrent spending, to 65 percent. Interest payments averaged 10.5 percent of recurrent expenditure over the decade and accounted for 7 percent of recurrent expenditure in 2010/11, their lowest level for a decade. In 2007, Uganda benefited from the MDRI (Multilateral Debt Relief Initiative), which allowed its stock of debt to decrease to 23 percent of GDP in 2007 from a high 72 percent in 2006. This level has been stable since (World Bank data). The contraction of development expenditure has been relatively harsher, partly linked to the withdrawal of external support.

Consequently, the fiscal deficit was reduced from 9.8 percent to 4.6 percent between 2000/01 and 2008/09, but increased thereafter to reach 6.6 percent of GDP in 2010/11.

In 2010, Uganda adopted a five-year National Development Plan (NDP) with the theme Growth, Employment and Socio-Economic Transformation for Prosperity. The plan was formulated on the basis of a broader national vision for "transforming Uganda from a peasant society to a modern and prosperous country over the next 30 years," by improving specific development indicators associated with socioeconomic transformation. It is expected that after the implementation of the NDP, the country will achieve middle-income status.

Section 2: The Ugandan Education System

Education is seen as a key factor for the achievement of national development objectives. Uganda's education policies stem from the government White Paper on Education of 1992 and the Education Sector Strategic Plan (ESSP) of 2004. The White Paper on Education is seen as the foundation of the country's education structure, policy and programming. Though some of its tenets have been revised, the White Paper continues to guide the sector in its promotion of: citizenship; moral, ethical and spiritual values; scientific, technical and cultural knowledge, skills and attitudes; literacy, to equip individuals with basic knowledge; and overall to enable Ugandans to contribute towards the building of a self-sustaining national economy. The ten-year ESSP was elaborated in 2004 with the aim to help the Ministry of Education and Sport (MoES) fulfill its mission to "support, guide, coordinate, regulate and promote quality education and sports to all persons in Uganda for national integration, individual and national development." The ESSP was revised in 2007, re-costing and updating the strategic plan, prompted by the addition of six objectives to Uganda's education policy agenda :

i. Bring the ESSP into full compliance with EFA-FTI goals (the 2004-15 ESSP was initially designed to fit within certain financial constraints);

ii. Improve the quality of primary education through the introduction of local language instruction and a simplified thematic curriculum (USE/UPPET policy);

iii. Ensure that all pupils successfully completing primary Grade 7 gain access to either academic secondary education or Business and Technical Vocational Education and Training (BTVET);

iv. Strengthen science and technology education by providing secondary schools with science laboratories, ICT laboratory rooms and well-stocked libraries;

v. Increase participation in tertiary education in order to ensure that Uganda meets its needs for a high-level work force; and

vi. Increase the attractiveness of the teaching profession through the introduction of a scheme of service with a career ladder for teachers and school administrators and differentiated salaries according to status.

As seen from the sixth objective, teachers' career development is specifically targeted by the revised ESSP.[11] Throughout the document, many actions are planned in favor of teachers, such as to improve the provision of instructional materials to strengthen the training of and in-service support to teachers, and to supply housing to teachers in rural areas. In order to inform the decisions to be made relative to achieving these objectives, a global assessment of teacher issues was conducted. This report is the result of the evaluation.

2.1 Structure of Education in Uganda

Uganda's current formal education structure was inherited from the colonial government. It provides four levels of education: (i) an initial non-compulsory preschool phase for early childhood development; (ii) seven years of primary education for children aged 6 to 12 years; (iii) four years of lower secondary for children aged 13 to 16 years (leading to the Uganda Certificate of Education), followed by two years of advanced secondary education (leading to the Ugandan Advanced Certification of Education); and (iv) tertiary and university education (See Table 1.3).[12] Note that to date, preprimary is provided only by private schools to children aged 3 to 5 years, and mainly in urban areas.[13] The government is planning to fund preprimary education in the future. So far, much has been invested into preprimary policy formulation and monitoring with the support of various stakeholders such as UNICEF. A learning framework has been developed under the supervision of the Ministry of Education and Sport (MoES) through its Basic Education Department.

Table 1.3: Structure of the Formal Ugandan Education System, 2011

	Cycle	Award	Progression Opportunities
Education Level			
Preprimary	3 years	-	1. Primary education
Primary	7 years	Primary Leaving Examination (PLE)	1. Lower secondary (O' Level)
			2. Technical schools
			3. Community polytechnics
Lower Secondary (O' Level)	4 years	Uganda Certificate of Education (UCE)	1. Upper secondary (A' Level)
			2. Primary Teachers College
			3. Technical/vocational institutions
			4. Farm institutes
			5. Health institutions
			6. Other departmental training institutions
Technical Institutes	3 years	Certificate	1. Technical colleges
			2. Universities
Upper Secondary (A' Level)	2 years	Uganda Advanced Certificate of Education (UACE)	1. University
			2.Uganda College of Commerce
			3. National Teachers College
			4. Uganda Technical College
			5. Other training institutions
Primary Teachers College	2 years	Certificate	National Teachers College
Uganda College of Commerce	2/3 years	Diploma	University
National Teachers College	2 years	Diploma	University
Uganda Technical College	2 years	Diploma	University
University	3/5 years	Diploma/Degree	Postgraduate studies

Source: MoES, 2011.

[11] The 2004-15 ESSP is directly linked to broader national policies such as Uganda Vision 2025 and the Poverty Eradication Action Plan (PEAP, 1997), as well as international goals such as EFA and the MDGs.
[12] See Annex 1.3 for a flowchart of education careers.
[13] Baby class (3 year-olds), middle class (4 year-olds) and top class (5 year-olds).

Nonformal education offers a modular programme of three to six months, open to all, to acquire vocational and technical skills based on competence-based education and training (CBET).

2.2 Education Management and Administration

Following the civil service decentralization process of 1998, the management and provision of basic education is now largely in the hands of the local governments (LGs). The MoES remains responsible for policy formulation and maintaining standards through teacher training, curriculum development and examinations. This enhances flexibility, transparency and accountability. It can also allow local administrators to be creative in seeking solutions to problems that are unique to their localities. Local governments on the other hand are tasked with implementing UPE, supervising the disbursement of UPE capitation grants and ensuring the successful management and administration of basic education in their district.

The overall responsibility for the education sector falls under the leadership of the Cabinet Minister for Education. The Cabinet Minister is assisted by three State Ministers who are respectively responsible for primary education, higher education and physical education and sports. These are mainly political heads that are mandated with the task of achieving government goals and aspirations in education. They do not engage in the day-to-day administrative affairs of the sector, but act as opinion leaders. The overall daily administration lies in the hands of the Permanent Secretary, who is the Chief Accounting Officer and overall supervisor of the education sector.

The MoES has 13 technical departments, headed by commissioners: (i) Preprimary and Primary Education; (ii) Secondary Education; (iii) Private Schools and Institutions; (iv) Business, Technical and Vocational Education and Training; (v) Higher Education; (vi) Special Needs and Inclusive Education; (vii) Guidance and Counseling; (viii) Teacher Instructor Education and Training; (ix) Education Planning and Policy Analysis (EPPAD); and (x) Physical Education and Sports; as well as (xi) Finance and Administration; and (xii) HIV/AIDS and (xiii) gender units.

Other support sections operate under the leadership of the Under-Secretary of Finance and Administration, who reports directly to the Permanent Secretary. These include: Accounts, Procurement, Personnel and Administration. Further semi-autonomous institutions include: the National Curriculum Development Centre (NCDC), the Uganda National Examinations Board (UNEB), the Uganda Business Technical Examination Board (UBTEB), the National Council for Higher Education (NCHE), the Directorate of Education Standards (DES), the Directorate of Industrial Training (DIT), the National Council of Sport (NCS), the Education Service Commission (ESC), National Health Service Training Colleges and public universities.

All commissioners but the one for Education Planning and Policy Analysis are supervised by and answerable to the Director of Education. The Director of Education, the Under Secretary and the Commissioner of Education Planning report to the Permanent Secretary.

2.3 Uganda's Education Budget 2000/01 - 2010/11

Public financing education sector indicators show mitigated results. Indeed, although education expenditure has increased in real terms over the 2003/4 to 2010/11 period (from USh 968 billion to USh 1,283 billion), it has deteriorated as a share of GDP (to reach 3.3 percent, from 4.2 percent in 2003/04). The latter level is below in the average for other low income countries (LICs, sampled for this report as countries with GDP per capita under US$ 800), that devote 3.9 percent of their GDP to education.

The situation in terms of recurrent education expenditure is not favorable; indeed, it is deteriorating. While recurrent spending on education has increased in real terms between 2003/04 and 2010/11, its share of total government recurrent expenditure (excluding debt service) has decreased from 27 percent to reach a low 19 percent (See Table 1.4). This is below both the average for other LICs in the region, which allocate 22 percent

of recurrent expenditure to education, and the FTI benchmark of 20 percent. Data for 2011/12 show a drop in recurrent education expenditure even in real terms. Government efforts are to be deployed to revert this trend so as not to jeopardize the development of the education system, both in terms of quality and quantity, which could ultimately affect the building of Uganda's human capital and hamper its future economic development.

Table 1.4: Trends in Education Expenditure, 2003/04-2010/11

	2003/04	2007/08	2008/09	2009/10	2010/11	Growth Rate 2003/04-2010/11	
						Total	Annual
Total Education Expenditure (Billion USh, Current)	**582**	**773**	**896**	**1 093**	**1,283**	**120%**	**12%**
Recurrent	445	681	756	889	1,071	141%	13%
Development	138	92	140	204	212	54%	6%
Domestic	77	56	66	94	111	44%	5%
Donor (1)	60	37	74	110	101	67%	8%
Share of Recurrent in Total	76.4%	88.1%	84.3%	81.3%	83.5%	—	—
Share of Donor in Development	43.9%	39.7%	52.8%	53.7%	47.5%	—	—
Total Education Expenditure (Billion USh, 2011 Prices)	**968**	**1,018**	**1,030**	**1,146**	**1,283**	**33%**	**4%**
Recurrent	739	896	868	933	1,071	45%	5%
Development	229	122	161	214	212	-7%	-1%
Domestic	128	73	76	99	111	-13%	-2%
Donor	100	48	85	115	101	0%	0%
Total as % of GDP	4.2%	3.2%	3.0%	3.1%	3.3%	—	—
Recurrent Education Expenditure							
As a % of GDP	3.2%	2.8%	2.5%	2.5%	2.7%	—	—
As a % of Total Govt. Rec. Exp. (Excl. interest)	27.2%	26.5%	25.8%	22.7%	19.4%	—	—
As a % of Govt. Domestic Revenue (excl. Grants)	26.6%	21.0%	20.0%	20.6%	16.7%	—	—

Source: MoES, MoFPED and authors' computations.

The evolution of the development budget has been volatile. However, development expenditure remains strongly supported by donors whose contribution amounted to an average of 49.5 percent of the development budget over the 2007/08 to 2010/11 period.

The allocation of recurrent public resources witnessed some changes over the 2003/4 to 2010/11 period (See Table 1.5). Although the primary sector still enjoys the highest share (54 percent), its public financing has dropped compared to 2003/04, when it received 61 percent. Simultaneously, the share allocated to secondary education has strongly increased, from 18 percent to 30 percent, while the one devoted to BTVET has remained stable at about 3.4 percent. The share allocated to tertiary education has remained stable at about 11.4 percent, although a decrease was observed in 2010/11, to 10 percent.

Teacher education, delivered mainly through primary and national teacher colleges (PTCs and NTCs), is the only subsector which has suffered a budget cut, of a third in real terms. In 2010/11 it absorbed 2.5 percent of the recurrent education budget. Nonformal education, with 0.5 percent of the recurrent budget in 2010/11, is still poorly publicly funded.

Table 1.5: Distribution of Recurrent Expenditure, by Education Level, 2003/04-2010/11
Percent

	2003/04	2007/08	2008/09	2009/10	2010/11	2003/04-2010/11 Variation
Education Level						
Primary	60.9%	58.3%	53.8%	49.7%	53.8%	28%
Secondary	17.8%	21.5%	27.7%	32.4%	29.8%	143%
Teacher education	5.7%	3.7%	3.3%	2.3%	2.5%	-37%
BTVET	3.5%	3.5%	3.3%	3.1%	3.4%	41%
Tertiary	11.4%	12.3%	11.2%	11.9%	10.0%	28%
Literacy	0.7%	0.7%	0.7%	0.7%	0.5%	5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	—
Total (Billion USh, 2011 Prices)	**739**	**896**	**868**	**932**	**1,071**	**45%**

Source: MoES financial database and authors' computations, based on Annex 1.4.

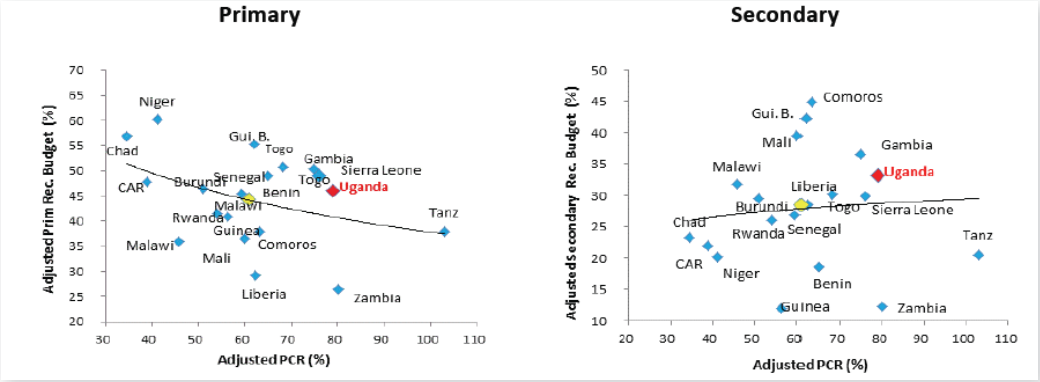
To better assess Uganda's subsector allocations, comparisons with other countries are paramount. To better contextualize the comparison it is worthwhile considering national progress towards UPE. Figure 1.3 below shows the relationship between the primary completion rate (PCR) and the share of primary education in education expenditure, as well as that between the PCR and the share of secondary education in education expenditure. Countries that are closer to achieving universal primary completion should allocate a larger proportion of their education budget to postprimary levels, the demand for secondary and higher education being higher. In the same vein, countries still facing challenges with UPE would be expected to prioritize to the financing of the primary sector, achieving this goal being the first priority. Although overall, countries less advanced towards UPE devote a higher share of their spending to primary education, there are numerous disparities.

Uganda is among those countries that put greater effort into both their primary and secondary cycles than the average. Postprimary demand has tended to expand over the years, fuelled by higher primary enrollment and completion. The education system seems to have responded positively, increasing the allocation of resources to the secondary cycle to adequately cater for the greater numbers. This has been achieved at the expense of the share of the budget allocated to tertiary and university education (between 10 percent and 11.5 percent), a level much lower than in other LICs in the region, which devote 18.6 percent of their recurrent education budget to tertiary on average.

The reliance on public-private partnerships has been effective in halving most of the cost of higher education borne by students, who are known to come from wealthier families.

Figure 1.3: Primary Completion Rate and Expenditure Priority for Primary and Secondary Education, 2011 or LAY

Percent



Source: Table 1.3 for Uganda; Pôle de Dakar/UNESCO-BREDA database for other countries.

Note: The completion rates and shares of the recurrent budget are both calibrated to 6-year cycles.

The analysis of unit costs (per student costs) provides some additional insight (See Table 1.6). Indeed, the cost per primary pupil is quite low compared to other countries, at USh 80,312 or 0.07 percent of GDP per capita, 30 percent lower than the average for other LICs. On the other hand Uganda is investing relatively more in its secondary school pupils, at USh 544,533 or 0.46 percent of GDP per capita), 1.5 times the average for the sample of LICs. Yet training a primary teacher is twice as costly as training a lower secondary school teacher. The differences in these costs call for further analysis to better understand what drive PTC and NTC costs, how efficiently teachers are used and the existence of economies of scale that strongly affect unit cost levels.

Table 1.6: Recurrent Public Spending per Student, by Education Level, 2010/11

	Amount (Billion USh)	Enrollment	Cost per Student (USh)	% GDP p.c.	Ratio Uganda/ LIC Average
Education Level					
Primary	576.0	7,171,690	80,312	0.07%	0.71
Secondary	319.0	585,798	544,553	0.46%	1.46
Teacher Education					
PTC	21.6	17,500 *	1,233,076	1.04%	n/a
NTC	3.9	6,500 *	605,380	0.51%	n/a

Source: MoES financial database and EMIS 2010 for Uganda; Pôle de Dakar/UNESCO-BREDA database for other countries.

Note: Transfers to private schools were removed from the computation. * Estimations

This does not indicate that Uganda is overinvesting in secondary education while underinvesting in primary. Resources need to be channeled to postprimary levels to ensure the smooth development of the sector. The increased allocation to BTVET observed in 2011/12 is also positive. The major issue for the government is to restore its global education budget allocation to a level close to four percent of GDP, to allow resources to better match the current expansion needs of the system while ensuring quality is not hampered. Indeed, as Table 1.7 shows, a considerable share of the primary recurrent budget is absorbed by teacher wages (85 percent), leaving few resources for teaching or learning materials or other inputs that are crucial for quality. In other subsectors, the non-teacher allocation is more balanced, offering greater financial leeway for schools to operate: the share of transfers spent on non-teaching wages accounted for between 47 percent (teacher training education) and 64 percent (BTVET) in 2010/11, whereas at the secondary level non-wage spending represented over half the recurrent budget (52 percent).

Table 1.7: Distribution of Recurrent Expenditure, by Education Level and Type of Expenditure, 2010/11
Percent

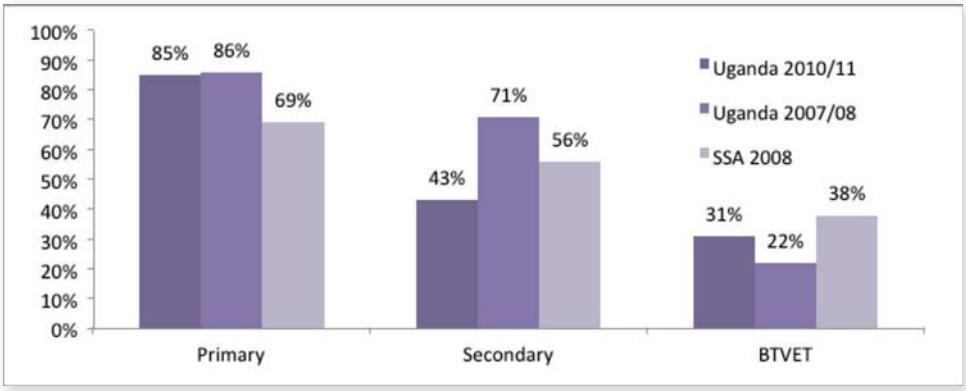
	Teacher Wages	School Functioning	Central Admin	Exam Fees	Social Spending	Transfers to Private Sector	Total	Non-Teacher Salary Spending
Level								
Primary	85.3	10.7	3.2	0.8	0.1	0.0	100.0	14.7
Secondary	43.0	52.1	2.3	2.4	0.0	0.2	100.0	57.0
Teacher Education	50.9	47.2	1.8	0.0	0.0	0.0	100.0	49.1
BTVET	30.6	63.7	5.7	0.0	0.0	0.0	100.0	69.4
Tertiary	90.5		6.9	0.0	0.5	2.1	100.0	n/a

Source: MoES financial database and authors' computations.

Uganda tends to allocate relatively more of its primary recurrent resources to teacher wages than other countries in the region (85 percent against 69 percent respectively). In this regard, any increase in the education budget could be partly channeled to primary non-teaching salary items. At the secondary level, the share of teacher wages has decreased to a level below that observed in 2008 in other Sub-Saharan African (SSA) countries (See Figure 1.4 below).[14] For BTVET, although the share of teacher wages has increased, the 2010/11 level still remains lower (31 percent) than that observed in other SSA countries in 2008 (38 percent).

[14] The decrease in real secondary wages observed since 2005 (See Chapter 5) could provide an explanation for the drop in the share of teacher wages within the secondary budget.

Figure 1.4: Share of Teacher Wages in Total Recurrent Budget, by Education Level, Uganda and SSA, 2011
Percent



Source: Table 1.5 for Uganda; UIS, 2011 for other SSA countries.

2.4 Performance of the Education System

The Ugandan education system underwent major changes in 1997. That year the government adopted the UPE programme which abolished all tuition fees and all parent-teacher association charges for primary education. As a result, the number of children enrolled in primary increased from 2.9 million in 1997 to over 6.9 million in 2001. In 2010, the system accommodated over 8.0 million primary school pupils.

The government reacted to this sudden increase in education demand by adopting a set of policies to ensure the smooth development of the system: (i) the building and renovation of schools; (ii) the purchase of instructional materials; (iii) the implementation of a school feeding programme; (iv) policies for the training, hiring and retention of teachers; (v) measures to combat absenteeism; (vi) a hard-to-reach hard-to-stay strategy to motivate teachers to accept and retain posts in isolated areas; (vii) curriculum reforms; and (viii) decentralization. These interventions have yet to materialize into fully satisfactory enrollment and retention rates.

School Coverage

School coverage indicators generally point to universal access to school, but low completion levels. Enrollment rates are produced using data collected by the Education Management and Information System (EMIS) at the Education Planning and Policy Analysis department of MoES. It still faces difficulties in collecting data on private institutions. In preprimary for instance, ECD centers are all private; only a third provide information on enrollment. In primary, about 80 percent of private schools provide this information, compared to 67 percent of private secondary schools. Table 1.8 below presents the evolution of enrollment and enrollment rates over the 2000-10 period.

Table 1.8: Enrollment and Gross Enrollment Rates, 2000-10
Number and Percent

	Statistical Abstract 2000			Statistical Abstract 2010		
	Govt.	Private	GER	Govt.	Private (a)	GER (a)
Education Level						
Preprimary (b)	-	56,367	-	-	498,644	**14.7%**
Primary	5,351,099	1,148,208	**128.3%**	7,171,690	1,515,060	**132.8%**
Secondary (S1-S6)	216,292	302,639	**13.0%**	585,798	953,642	**36.4%**

Note: (a) Private enrollment for 2010 is an estimation based on those schools who reported this information, adjusted to take the schools not captured in the statistical abstract into account, assuming that the latter are approximately similar in size to the former. (b) All preprimary schools are private. In 2010, EMIS ran a census of the ECD centers and was therefore able to capture each preprimary pupil.

The number of students has increased in all subsectors over the 2000-10 period.

1. Whereas 56,367 preprimary pupils were reported in 2000, 498,644 enrolled in 2010, equivalent to a gross enrollment rate (GER) of 15 percent. The government intends to increase its involvement in this subsector. Current actions include the development of a curriculum and Early Childhood Development (ECD) standards.

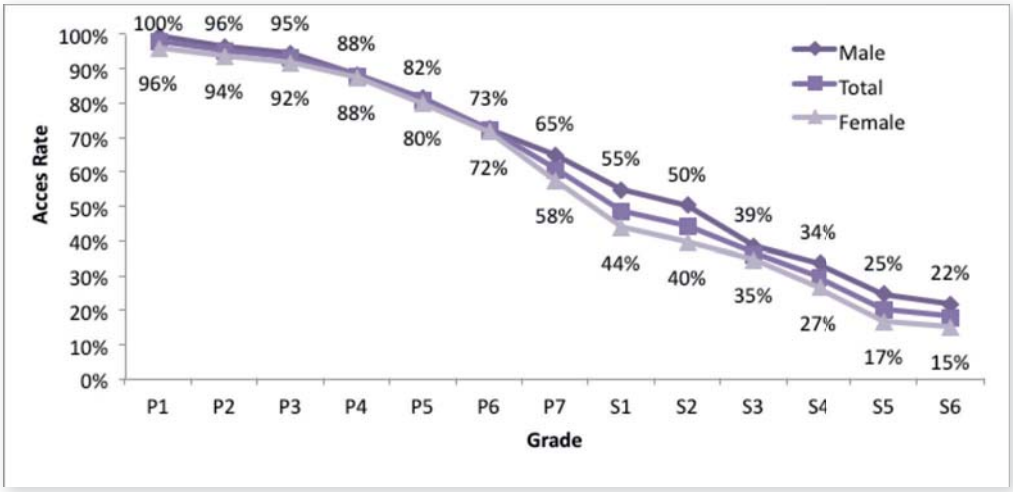
2. The number of pupils enrolled in primary has increased from 6.5 million in 2000 to 8.4 million in 2010. The GER in 2010 was 133 percent, equivalent to a five percentage point increase over its 2000 value.[15] The main provider is the government, the share of pupils in private schools being under 15 percent.

3. The secondary level has also witnessed a significant increase in the number of pupils, from about 518,900 in 2000 to almost 1.5 million in 2010.The secondary GER (excluding BTVET) was 36 percent in 2010. At this level, the major provider is the private sector, accounting for over 50 percent of enrollment.

Although the GER gives an indication of school participation, it is distorted by repetition, which makes it an imperfect measure of schooling coverage. It is more an average measure of schooling coverage than a true reflection of the pattern of a cohort of children through their schooling careers. In order to allow a more refined analysis of schooling patterns that addresses access and retention issues, the schooling profile is used. This is a series of ratios that shows, for a given generation, the share that ever attended a given grade. Figure 1.5 below presents the schooling profile based on data collected during the Uganda National Household Survey in 2009-10 (UNHS, 2009/10), and a transversal schooling profile is presented in Annex 1.5.

[15] This figure, greater than 100 percent, indicates that the system accommodates more than the expected number of children at the primary level.

Figure 1.5: Schooling Profile of a Given Generation of Children, 2009/10



Source: Authors' computation based on UNHS, 2009/10 data.

Access

In a given generation, almost all children (98 percent) attend the first year of primary, P1. Some may enroll aged six as expected, but others will wait until aged eight, nine or even ten years old. Two main reasons explain late entry. The first is related to children's age: at six years, children are considered too young to go to school. The second is the cost of education: although the UPE programme abolished education fees, some parents still consider that the cost of education is a barrier to school attendance. As shown by Annex 1.6, only a quarter of children attend grade P1 on time.

The remaining two percent represent the share of those who will never go to school in a given generation. The Uganda National Household Survey conducted in 2009-10 identified two major reasons why some children never attend school. (i) Willingness: in 28 percent of cases, parents are reluctant to send their children to school. (ii) Economic considerations: in about 16 percent of cases, education is considered too expensive. Indeed, despite the fee free primary education policy, other costs are still borne by parents.

No significant gender disparity exists in primary attendance: almost 98 percent of both boys and girls attend P1 and about 72 percent of each reach P6. From P7 onwards however, the share of girls going to school is significantly lower than that of boys.

Retention

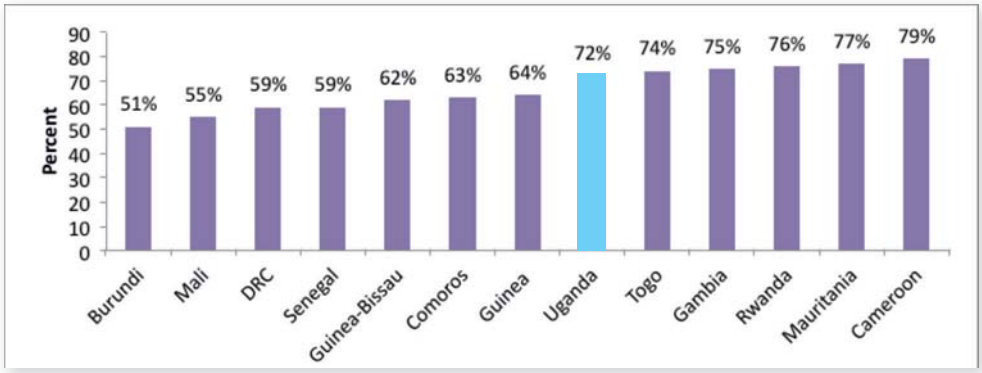
The share of a generation attending school decreases with each grade, to reach 61 percent at P7. This means that 39 percent of a given generation never complete the primary cycle. It also shows that many children dropout before the end of the cycle. There is a need to improve the efficiency of the system to ensure that all those who enter P1 complete P7.

In 2007, the Government of Uganda introduced the Universal Secondary Education / Universal Post Primary Education and Training programme (USE/UPPET). The objective was to increase access to quality secondary education for pupils completing P7. Those who continue their education can opt between lower secondary[16] and vocational and technical institutions. Figure 1.5 above shows that 49 percent of a generation accesses lower secondary. The remaining 51 percent may have chosen vocational education or dropped out. Although 49 percent of a generation starts secondary Grade 1 (S1), only 30 percent of reach S4. Very few students attend upper secondary; indeed, the share of a generation registering for S5 is only 20 percent. About two percent of them will leave the system before the end of the cycle.

Completion

The PCR is frequently used to assess countries' progress towards the goal of UPE. Progress in Uganda is compared to progress in 12 LICs in Figure 1.6. As the duration of primary education in these countries is 6 years, the access rate to Grade 6 in Uganda was used for the comparison.

Figure 1.6: Primary Completion Rate, Selected LICs, 2010
Percent



Source: EMIS/MoES for Uganda; Pôle de Dakar/UNESCO-BREDA database for other countries

The comparison of countries' performance in terms of progress towards UPE[17] puts Uganda in the middle ground, with an access rate to P6 of 72 percent on a scale ranging from 79 percent in Cameroon to 51 percent in Burundi.

Education System Efficiency

Resources are scarce and need to be used efficiently. Ideally, resources allocated to education systems should be used to train children throughout a given cycle. It has been demonstrated that the completion of at least the primary cycle is a minimum requirement for life-long literacy. Therefore, resources spent on students who start P1 but never reach P7 can be considered as partially wasted. In the same vein, the optimal completion of primary education requiring seven school years, repetition is a cost to be avoided. Dropout and repetition constitute two key factors of inefficiency. Taking the level of dropout and repetition in a system into account, an index of system efficiency can be computed: the internal efficiency coefficient (IEC - See Annex 1.7 for the methodology). The IEC is comprised between 0 and 1. The higher the value of the index, the more efficient the system is; conversely, the lower the value of the index, the more inefficient the system is.

[16] Figures for secondary include lower and upper secondary. BTVET enrollment was not captured.

[17] As stated during the Education for All Forum in Dakar in 2000: "Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and those belonging to ethnic minorities, have access to, and complete, free and compulsory primary education of good quality."

Table 1.9: Internal Efficiency Coefficient, Primary and Secondary Government Schools, 2010

	Internal Efficiency Coefficient (Government Schools)
Sub-Cycle	
Primary	0.43
Lower Secondary	0.86
Upper Secondary	0.87

Source: Authors' computation based on EMIS data.

In government primary schools, the IEC is equal to 0.43; this means that more than half of the resources (57 percent) devoted by the government to primary schools are spent inefficiently. This is partly due to repetition (EMIS data show that despite the no repetition policy, 10 percent of primary pupils were repeaters in 2010), but mostly to dropout. Indeed, it is estimated that without dropout, the IEC would be 0.88 rather than 0.43. This suggests that fighting dropout is a key condition to improve the system's internal efficiency.

At the secondary level (lower and upper), the use of resources in government schools is more efficient; the IEC is equal to 0.86, meaning that only 14 percent of resources are wasted. At this level, dropout is low and the repetition rate is 2.6 percent.

Education Quality

Education quality is a serious issue in Uganda. Beyond access to school and system efficiency, it is important to know whether pupils who complete a cycle acquire the expected knowledge. Regular assessments are conducted to provide this information. At the national level, the Uganda National Examinations Board (UNEB) conducts a National Assessment of Progress in Education (NAPE) each year. The aim of NAPE assessments is, among others, to determine the level of pupils' achievements in numeracy and literacy. At the international level, Uganda has participated in the Southern and Eastern African Consortium for Monitoring Educational Quality (SACMEQ). SACMEQ is a programme that assesses pupils' achievements after six years of education, during P6. Uganda participated in 2007, targeting 235 government schools nationwide (SACMEQ, 2010a).

The 2011 NAPE assessment shows that the quality of education is low. It targeted students from P3, P6 and S2. As shown in Table 1.10, with the exception of numeracy in P3 and English language in S2, the majority of students are not rated as proficient in the subjects evaluated. The issue is widespread around the country; indeed, in 60 districts out of 112, more than half of the students are not rated as proficient.

Table 1.10: Share of Pupils who are not Proficient, Various Subjects, 2011

	P3	P6		S2
Subjects			**Subjects**	
Numeracy	37%	54%	Mathematics	62%
Literacy in English	52%	59%	English Language	34%
Oral Reading	54%	–	Biology	80%

Source: NAPE/UNEB, 2011a.

The last SACMEQ assessment conducted in Uganda in 2007 confirms the low level of education quality. It revealed that 47 percent of pupils enrolled in P6 don't achieve the minimum expected level in reading. The picture is worse in numeracy where 75 percent of pupils don't achieve the minimum required level.

Table 1.11: SACMEQ III Results, Uganda and Other Participating Countries, 2007

	Reading		Mathematics	
	Mean Score	S.E.	Mean Score	S.E.
Country				
Tanzania	577.8	3.40	552.7	3.51
Seychelles	575.1	3.10	550.7	2.45
Mauritius	573.5	4.92	623.3	5.83
Swaziland	549.4	2.98	540.8	2.39
Kenya	543.1	4.92	557.0	3.98
Zanzibar	536.8	3.11	489.9	2.35
Botswana	534.6	4.57	520.5	3.51
Zimbabwe	507.7	5.65	519.8	4.98
Namibia	496.9	2.99	471.0	2.51
South Africa	494.9	4.55	494.8	3.81
Uganda	**478.7**	**3.46**	**481.9**	**2.92**
Mozambique	476.0	2.82	483.8	2.29
Lesotho	467.9	2.86	476.9	2.61
Zambia	434.4	3.37	435.2	2.45
Malawi	433.5	2.63	447.0	2.89

Source: SACMEQ, 2010b

When comparing results to those of other countries, it appears that the level of pupils' achievements in Uganda is rather low (See Table 1.11 above). Ugandan P6 pupils scored a mean of 479 points in reading, and 482 points in mathematics. Uganda is ranked 11 out of 15 countries.

These results confirm the fact that, in general, most pupils fail to reach the level of achievement and knowledge expected for their grade. The quality of education is therefore an issue the education system must tackle.

Conclusion

This chapter has set the context that impacts on education policy and ultimately teacher policies. It is a context marked by a lack of resources for the sector and a huge demand for education. Indeed, although the country is undergoing relatively high economic growth with real GDP and GDP per capita growth respectively reaching 7.4 percent and 3.9 percent, the government faces challenges in terms of revenue generation. In addition, external support in the form of grants has decreased from 7.6 percent of GDP in 2001 to 2.3 percent in 2011. In such a context, the share of resources devoted to education has sunk, from 27 percent to 19 percent over 2004-11. It has deteriorated as a share of GDP from 4.2 percent to 3.3 percent, a level below that observed in other LICs which devote 3.9 percent of their GDP to education on average. This clearly questions the priority the Ugandan government places on education.

This scarcity of resources is hitting the education sector precisely when the size of the school-aged population (6 to 18 years) is growing fastest. Estimated at 10.9 million in 2010, it is expected that it will reach 20.6 million in 2025. This further strengthens the constraints the education sector is facing.

In terms of performance, apart from the fact that access to education is universal with about 98 percent of a generation attending P1, education indicators are generally low. Half of children go to school for the first time after they are six years old, which is late. The main reasons are their parents thinking they are too young for school and the cost of education, despite the abolition of fees. Indeed, many costs other than fees are still borne by parents.

Even though many children go to school, a considerable share (about 39 percent) never completes the primary cycle. System efficiency, especially at the primary level, is undermined by a high level of dropout and repetition. The combination of both seriously undermines the efficient use of scarce education resources. It is estimated that 57 percent of primary education resources are inefficiently spent on repetition and dropout. As a result, the primary completion rate is low, affecting access rates to subsequent cycles. Indeed, although almost every child enrolls in P1, only 61 percent of a generation reaches P7, only 49 percent enter lower secondary and ultimately, only 10 percent reach S6.

The quality of education is also an issue: various assessments of pupils' achievements at national and international levels have concluded that many do not acquire the minimum knowledge expected for their grade. For instance, 59 percent of P6 students are not proficient in English and 54 percent are not proficient in math.

Knowing the constraints the education sector faces and the current status of the system is a prerequisite to any attempt to develop a long-term teacher policy. Taking into account these results, Chapter 2 will examine two scenarios for the expansion of the education system and will derive their implications in terms of teacher needs.

CHAPTER 2 ESTIMATION OF REQUIRED TEACHER NUMBERS

Chapter 1 has shown that the Ugandan population is growing at a very fast rate (3.3 percent). In terms of education this demographic pressure is problematic because the system, already under strain and showing low performance, will have to accommodate 20.6 million children aged 6 to 18 years by 2025.[18] Currently, the system enrolls 10.2 million pupils in this age group, which implies that it will need to double its current intake capacity to achieve UPE and USE/UPPET objectives by 2025. The expansion of the system will involve planning the building/renovation of infrastructure (schools, classrooms and so on) as well as providing schools with learning materials and equipment (books, desks and so on). While expanding, the system will also have to recruit an adequate number of teachers.

Knowing the number of teachers the education system will need in advance is very important because it helps to plan their management in terms of recruitment, initial training, remuneration and career development. Reliable estimations of the number of teachers the system will have to recruit in the coming years are therefore needed on a regular basis. A prerequisite for the computation of reliable estimations is that the objectives assigned to the education system must be clearly defined. For instance, goals in terms of universal enrollment and repetition rates must be set, among others.

The Ugandan education system has so far been assigned the following goals: (i) all children must complete primary education and enroll in secondary education (UPE and USE/UPPET policies); and (ii) repetition rates should tend towards zero (automatic promotion policy). In addition to these objectives, operational school targets and education standards should be set, defining the average number of pupils per class or stream, the intended pupil-teacher ratio, effective teaching time per subject or week, and so on.

This chapter aims to estimate the number of teachers the Ugandan education system will have to recruit in the near future. Two scenarios are analyzed:

The first, called the low scenario, is based on the hypothesis that the system will continue to expand according to recent trends.

The second, called the high scenario, is more ambitious and is based on the hypothesis that education actors will take all possible actions to achieve the education sector objectives adopted by the government, especially the UPE and USE/UPPET policies.

For both scenarios, additional assumptions had to be formulated on key aspects of education policy that are currently not clearly defined. For instance, the initial education sector strategy envisaged that education goals would be reached by 2015. Given progress over recent years (See Chapter 1, Section 2.4) this is no longer considered to be realistic. However, a new time-frame is yet to be set. This study makes the assumption that education goals will be achieved by 2025. This may seem far off, but in fact it is still ambitious in the light of the current status of the system and its performance.

Chapter 2 is organized into four sections: (i) an estimation of the number of primary teachers to be recruited; (ii) an estimation of the number of secondary teachers to be recruited; (iii) an estimation of the number of teachers to be recruited for BTVET; and (iv) an estimation of the number of teachers to be recruited in primary and national teacher colleges (PTCs and NTCs). Each section starts with the presentation of the general

[18] This is the total population targeted by the UPE and the USE/UPPET policies.

formula used to project teacher needs. Hypotheses are then formulated on the evolution of key factors. Finally, on the basis of the formula and the hypotheses retained, teacher needs are projected.

Section 1: Projection of the Required Number of Primary Teachers

The formula used to project the total number of primary teachers the system needs each year is described in Annex 2.1. It shows the relationship between the number of teachers required and a set of education indicators. For government schools for instance, the following factors should be taken into account in the projection of primary teacher needs: the gross intake rate (GIR), the primary completion rate (PCR), the share of repeaters (r), the share of pupils in private schools (α), the pupil-teacher ratio in government schools (PTR_{gov}) and the teacher attrition rate (λ).[19] The formula to compute the total number of teachers required TP_{rim} is:

$$T_{Prim} = (1-\alpha) \times \frac{Pop_{6-12}}{PTR_{gov}} \times \frac{(GIR+PCR)}{2\times(1-r)}$$

The formula to determine the number of new teachers to recruit in a given year t (NTt) is the difference between the total number of teachers required TPrim and the existing number of teachers:

$$NT_t = T_{Prim(t)} - (1-\lambda) \times T_{Prim(t-1)}$$

For 2010, values for the indicators included in the formula are known. The expected figures for 2025 depend on the scenario chosen. The values given to the indicators for the years 2011 to 2024 are computed using a linear projection (See Annex 2.2).[20]

Assumptions

Gross intake rate: In 2010, the GIR was 158 percent. According to the high scenario, by 2025 all Ugandans should have access to quality primary education: therefore the expected GIR for 2025 is 100 percent. This implies addressing out-of-school and late entry, eliminating both by 2025. According to the low scenario, education stakeholders' efforts will increase enrollment and reduce late entry, although only partially. The expected GIR value is set at 115 percent.

Primary completion rate: The effectiveness of the USE/UPPET policy relies on all children completing primary. Therefore, according to the high scenario, the expected PCR is 100 percent. This will only be possible if efforts are made to significantly increase the internal efficiency of the system; a key action being to reduce dropout to zero. For the low scenario, maintaining recent trends, the PCR is expected to reach 80 percent by 2025.

Share of repeaters: The share of repeaters has a direct impact on class sizes and the number of teachers needed. According to the high scenario, if the government implements a no repetition policy, the share of repeaters is expected to reach two percent by 2025 (indeed, some residual repetition will always be present, due to illness, missing exams and so on). According to the low scenario, it is assumed that efforts to reduce repetition will effectively halve it by 2025, to five percent.

[19] A similar formula can be derived for the projection of teacher needs in private schools (See Annex 2.1).

[20] For simplicity's sake, the evolution of the indicator between 2011 and 2024 is assumed to be constant.

Share of private enrollment: Given resource constraints, it may be difficult for the government to provide primary education to all children. A strategy to overcome this situation is to stimulate the involvement of the private sector in the supply of primary education. The more private teachers are recruited, the fewer government teachers will be required. Both the high and low scenarios assume that the share of pupils enrolled in the private sector will increase from 17 percent to 20 percent by 2025.

The pupil-teacher ratio: Although no PTR target has been set, discussions with MoES authorities have suggested that a PTR of 45:1 is desirable. This figure is retained for the high scenario. For the low scenario, based on the current value of 57:1 in government schools, the PTR should reach 55:1 by 2025. In both scenarios, the expected PTR for private schools was set at 30:1, mildly higher than the current ratio of 26:1.[21]

Attrition rate: Education systems need to plan ahead to compensate for teacher attrition, which can be due to retirement, prolonged illness, death, dismissal, resignation, or transfers. In 2012, EMIS estimated that the attrition rate for government primary teachers was four percent.[22] The attrition rate for private teachers is unavailable, but estimated at 4.5 percent given the lesser job security. Both scenarios assume that these figures will remain constant over the period.

Table 2.1: Assumptions for the Projection of Primary Teacher Requirements, 2010-25

	2010 Value	Mathematics	
		Low Scenario	*High Scenario*
Key Indicators			
GIR (Grade 1)	158%	115%	100%
PCR (Grade 7)	62%	80%	100%
Share of Repeaters	11%	5%	2%
% of Pupils in Private Schools	17.4%	20.0%	20%
PTR (Government Schools)	57:1	55:1	45:1
PTR (Private Schools)	26:1	30:1	30:1
Attrition Rate (Government Schools)	4.0%	4.0%	4.0%
Attrition Rate (Private Schools)	4.5%	4.5%	4.5%

Table 2.1 above provides a summary of the assumptions made for the projection of primary teacher requirements, according to each scenario. It is very important to keep in mind that shifting a key indicator from its value in 2010 to the value expected by 2025 will require the implementation of adequate and sound policies. Table 2.2 uses the formulas above, EMIS 2010 data and the assumptions made to estimate the total number of primary teachers needed and the number of new teachers to be recruited, by scenario and type of school ownership.

[21] Private schools may be reluctant to increase their PTR. Given that this shift will be beneficial for the education system however, the government may wish to start negotiations with them soonest.

[22] See Chapter 4, Section 4 for more details.

Table 2.2: Projected Number of Primary Teachers, by Scenario and School Ownership, 2010-25
Number of Teachers

	Low Scenario			*High Scenario*		
	Government Schools	**Private Schools**	**Total**	**Government Schools**	**Private Schools**	**Total**
2010	126,448	57,827	184,275	126,448	57,827	184,275
2015	151,392	69,288	220,680	160,453	69,075	229,528
2020	181,220	83,001	264,220	204,895	82,586	287,481
2025	216,580	99,266	315,846	263,186	98,695	361,880
2025/2010 Ratio	*1.7*	*1.7*	*1.7*	*2.1*	*1.7*	*2.0*
Average Annual New Recruitments	**12,596**	**6,156**	**18,752**	**16,366**	**6,105**	**22,471**

Source: Authors' computations based on UBOS and EMIS data and the hypotheses made in Table 2.1.

The projections show that the size of the teaching force will have to increase significantly between 2010 and 2025. The magnitude of the expansion varies according to the scenario considered. If the education system evolves following past trends (low scenario), the number of teachers will increase by a factor of 1.7 (from 184,275 to 315,846 teachers). If UPE and USE/UPPET policies are achieved by 2025 (high scenario), the total number of teachers will have to double (from 184,275 to 361,880 teachers).

In terms of new recruitments, these scenarios imply average annual recruits of government teachers of 12,596 (low scenario) and 16,366 (high scenario). Both scenarios suggest that private schools will have to recruit about 6,150 new teachers per year.

Section 2: Projection of the Required Number of Secondary Teachers

At the secondary level, teaching is organized by subject. It is therefore preferable to estimate the number of teachers needed for each. This implies having detailed information such as the current number of teachers for each subject and the number of hours of class each stream is supposed to receive per subject. Unfortunately, no institution collects this information to date, meaning that this study was not able to project teacher requirements by subject. However, available data do allow to project the total number of secondary teachers required in the near future. Given that the organization of teaching in lower secondary (S1 to S4) is different to that in upper secondary (S5 and S6), projections of teacher needs have been performed for each separately. As for primary, two scenarios, high and low, are considered.

2.1 Projection of Teacher Needs for Lower Secondary

In addition to the primary completion rate (PCR), the share of repeaters (r) and the share of pupils in private schools (□) as above, the following factors should be taken into account for the projection of lower secondary teacher needs: the survival rate from S1 to S4 (Surv), the transition rate from P7 to S1 (TrS1), the school-aged population for the cycle (Popcycle), the number of hours of class students should receive (SHgov), the average number of pupils per stream (PPS) and the teacher workload (THgov). The formula used for the projection of teacher needs TSec at lower secondary level in government schools is thus the following:

$$T_{Sec} = (1-\alpha) \times \frac{(1+Surv) \times PCR \times Tr_{S_1} \times Pop_{cycle} \times SH_{gov}}{2 \times (1-r) \times PPS_{gov} \times TH_{gov}}$$

Detailed explanations of how the formula is obtained are presented in Annex 2.3. It is worthy of note that the performance of the primary cycle has an impact on secondary teacher requirements. Indeed, the higher the primary completion rate, the greater the number of teachers needed at the secondary level.

As above, the formula to determine the number of new teachers to recruit in a given year t (NTt) is the difference between the total number of teachers required TSec and the existing number of teachers:

$$NT_t = T_{Sec(t)} - (1-\lambda) \times T_{Sec(t-1)}$$

Assumptions

Before projecting teacher needs, assumptions must be made with respect to the targeted values for some indicators in the formula. Note that for the PCR, the hypotheses were made in Section 1 above. Similarly, the projected evolution of the school-aged population for the cycle was performed in Chapter 1. Two indicators are retained below to reflect pedagogical organization instead of the PTR: the number of pupils per stream, and teachers' workload.

Transition rate from P7 to S1: According to the USE/UPPET policy, all children completing P7 should register in either S1 or in BTVET. By 2025, the number of children completing P7 is expected to reach 1.7 million. However, the government has not set a target for the share that is to proceed to S1 and the share to enter vocational training. According to the low scenario, the transition rate from P7 to S1 is expected to reach 86 percent in 2025, up from 61 percent in 2010. This same target was also retained for the high scenario.

Survival rate from S1 to S4: The lower secondary survival rate is a proxy for completion of the sub-cycle. The low scenario expects the value to reach 85 percent by 2025, up from 72 percent in 2010. The high scenario in principle assumes that every student will reach S4. It is only realistic to expect some residual dropout to remain however, as children choose to switch to vocational training, start a small business, or get married. The assumption here is hence that the survival rate will reach 95 percent.

Average number of pupils per stream: In 2010, the average number of pupils per stream in government schools was 63. Although this seems relatively high, no official target value exists for this indicator. Discussions with MoES officials revealed a desire to reduce the average number to 45 (which will imply building new classes). This is rather ambitions given the evolution of this indicator in the recent past. The current projections use a target value of 60 for the low scenario and 45 for the high scenario.

Teachers' average workload: This refers to the number of hours of class teachers effectively give per week. Although this is supposed to be 16 hours for lower secondary, real workloads can be more or less depending

on the characteristics of the school where teachers are posted, such as the availability of the adequate number of teachers for a given subject, the number of streams, the type of subjects offered and so on. On the basis of EMIS data for the number of teachers and streams in lower secondary and the supposed number of hours of class per stream, it was computed that in 2010, lower secondary teachers effectively taught 12 hours on average.[23] This indicates that overall, lower secondary teachers are underutilized. The target for both scenarios was therefore set at 16 hours of teaching per week by 2025, assuming MoES will analyze the situation and take measures to progressively bring effective teaching hours into line with the set target.

Share of students in private schools: In 2010, 62 percent of secondary schools were private. Although the government has recently decided to increase its participation in secondary education, no clear target has been set. The low scenario assumes that the share of students in government schools will increase to 40 percent by 2025 (from 38 percent), and the high scenario assumes an increase to 50 percent. The high scenario will require a remarkable effort on behalf of the government, due to the compounded increase in enrollment: numbers will increase overall and the government will cater for a greater proportion of them.

Teacher attrition: Attrition among teachers in government secondary schools stood at five percent in 2011 (EMIS data). Both scenarios assume that the government will take action to maintain attrition at this level. Again, given the relative insecurity of employment in private schools, the attrition rate is set at a slightly higher rate (5.5 percent).

Pupil-teacher ratio in private schools and share of repeaters: The impact these factors have on the number of teachers required is presented in Section 1. Expected values for these indicators by 2025 were also set (See Table 2.3 below).

Table 2.3 below provides a summary of the assumptions made on key indicators needed for the projection of lower secondary teacher requirements. As discussed previously, each targeted value is associated with specific policies the government will have to implement.

Table 2.3: Assumptions for the Projection of Lower Secondary Teacher Requirements, 2010-25

	2010 Value	Target value for 2025	
		Low Scenario	*High Scenario*
Key Indicators			
Transition Rate (Primary --> Lower secondary)	66%	86%	86%
Survival Rate	72%	85%	95%
Share of Repeaters	2.3%	2.0%	1.0%
% of Pupils in Private Schools	62%	60%	50%
Pupil-Teacher Ratio (Private schools)	19:1	25:1	25:1
Attrition Rate (Private schools)	5.5%	5.5%	5.5%
Pupils per Stream	63:1	60:1	45:1
Effective Average Teaching Workload (Hours per Week)	12	16	16
Attrition Rate (Government schools)	5%	5%	5%

[23] The number of hours of class per stream is computed as 10 periods of 40 minutes per day, or 33.3 hours per week, on average.

Table 2.4 uses the formulas above, EMIS 2010 data and the assumptions made to estimate the total number of lower secondary teachers needed and the number of new teachers to be recruited, by scenario and type of school ownership.

Table 2.4: Projected Number of Lower Secondary Teachers, by Scenario and School Ownership, 2010-25
Number of Teachers

	Low Scenario			High Scenario		
	Government Schools	Private Schools	Total	Government Schools	Private Schools	Total
2010	23,114	44,054	67,168	23,114	44,054	67,168
2015	31,462	58,120	89,582	41,054	60,702	101,756
2020	44,319	79,233	123,552	74,000	84,179	158,178
2025	60,869	105,191	166,060	128,921	111,399	240,321
2025/2010 Ratio	*2.6*	*2.4*	*2.5*	*5.6*	*2.5*	*3.6*
Average Annual	**4,396**	**7,815**	**12,211**	**9,981**	**8,415**	**18,397**
New Recruitments						

Source: Authors' computations based on UBOS and EMIS data and the hypotheses made in Table 2.3.

Projections show that the size of the teaching force will have to increase significantly between 2010 and 2025. The magnitude of the expansion also varies markedly according to the scenario considered. Following past trends (low scenario), 2.5 times as many teachers will be needed (an increase from 67,168 to 166,060 teachers). Should UPE and USE/UPPET goals be achieved by 2025 (high scenario), the number of teachers will have to increase by a factor of 3.6 (from 67,168 to 240,321 teachers).

This represents an annual average of 4,396 new recruitments per year according to the low scenario, or 9,981 according to the high scenario. Projections suggest that private schools will have to recruit between 7,815 and 8,415 new teachers per year.

2.2 Projection of Teacher Needs for Upper Secondary

The projection of teacher needs for upper secondary is conducted according to the same approach as the projection for lower secondary. The values given to the key indicators and the assumptions they are based on do however vary. Table 2.5 summarizes the assumptions.

The key points highlighted by this table are:

1. Teacher workload: while supposed to be 12 hours per week, upper secondary teachers are underutilized. Indeed, upper secondary teachers give 9 hours of class per week, on average. It is assumed that MoES will improve teacher utilization by 2025, in line with the 12-hour week target.

[24] Here again, projections by subject were not feasible.

Table 2.5: Assumptions for the Projection of Upper Secondary Teacher Requirements, 2010-25

	2010 Value	Target Value for 2025	
		Low Scenario	High Scenario
Key Indicators			
Transition Rate (Primary --> Lower secondary)	37%	55%	55%
Survival Rate	89%	95%	95%
Share of Repeaters	3.3%	3.0%	1.0%
% of Pupils in Private Schools	64%	50%	50%
Pupil-Teacher Ratio (Private schools)	11:1	20:1	20:1
Attrition Rate (Private schools)	5.5%	5.5%	5.5%
Pupils per Stream	38	45	45
Effective Average Teaching Workload (Hours per Week)	9	12	12
Attrition Rate (Government schools)	**5%**	**5%**	**5%**

2. Pupils per stream in government schools: In 2010, there were 38 students per stream, on average. Both scenarios assume that the government will increase numbers to an average of 45 students per stream by 2025, a cost-effective means to increase intake capacity.

These assumptions are reflected in the projection of upper secondary teacher needs in Table 2.6 below. Projections again show that the size of the teaching force will have to increase significantly between 2010 and 2025. According to the low scenario the number of teachers will almost double (from 13,870 to 27,519 teachers). The high scenario indicates that the number of teachers will have to increase by a factor of 2.6 (from 13,870 to 35,686 teachers).

This represents an average of 733 new recruits per year according to the low scenario or 974 new recruits per year according to the high scenario, in government schools. Projections suggest that private schools will have to recruit between 455 (low scenario) and 807 (high scenario) new teachers per year.

Table 2.6: Projected Number of Upper Secondary Teachers, by Scenario and School Ownership, 2010-25
Number of Teachers

	Low Scenario			High Scenario		
	Government Schools	Private Schools	Total	Government Schools	Private Schools	Total
2010	2,857	11,014	13,870	2,857	11,014	13,870
2015	4,563	13,227	17,790	5,085	14,739	19,824
2020	6,661	15,185	21,846	8,075	18,408	26,483
2025	9,687	17,832	27,519	12,562	23,125	35,686
2025/2010 Ratio	*3.4*	*1.6*	*2.0*	*4.4*	*2.1*	*2.6*
Average Annual New Recruitments	**733**	**455**	**1,187**	**974**	**807**	**1,781**

Source: Authors' computations based on UBOS and EMIS data and the hypotheses made in Table 2.5.

Section 3: Projection of the Required Number of Formal BTVET Teachers

In principle, projections for the BTVET subsector should be made by area of specialization. Unfortunately, due to lack of accurate data, only the total numbers of teachers to recruit are computed, for upper and lower BTVET. The following factors are taken into account in the projection of BTVET teacher needs: enrollment in the BTVET sector (ENROLBTVET), the pupil-teacher ratio (PTR), the share of secondary students enrolled in BTVET (%BTVET) and total secondary enrollment (ENROLsec).

The formula to compute the total number of teachers required TBTVET is:

$$T_{BTVET} = \frac{ENROL_{BTVET}}{PTR} = \frac{\%BTVET \times ENROL_{Sec}}{PTR}$$

Assumptions

Estimated enrollment: The number of students expected to enroll in BTVET is generally expressed as a percentage of those enrolling in ordinary secondary. In 2010, this was 0.8 percent for lower level BTVET and 6.7 percent in middle level BTVET. Both scenarios assume that it will reach two percent in lower level BTVET and seven percent in middle level BTVET by 2025, in line with the SSA average.

Pupil-teacher ratio: Both scenarios assume that the PTRs of 2010, 21:1 in lower and 20:1 in middle level BTVET, will remain constant.

Teacher attrition: The rate for this cycle is not available. It is assumed to mirror other cycles, and was therefore set at a constant five percent over the period.

Table 2.7 below provides a summary of the assumptions made for the projection of BTVET teacher requirements, according to each scenario.

Table 2.7: Assumptions for the Projection of Formal BTVET Teacher Requirements, 2010-25

	2010 Value	Target Value for 2025	
		Low Scenario	High Scenario
Lower BTVET Key Indicators			
Enrollment (% of Ordinary Secondary)	0.8%	2%	2%
Enrollment (Number)	11,500	87,660	111,399
Pupil-Teacher Ratio	21:1	21:1	21:1
Teacher Attrition Rate	5%	5%	5%
Upper BTVET Key Indicators			
Enrollment (% of Ordinary Secondary)	6.4%	7%	7%
Enrollment (Number)	12,000	49,930	83,248
Pupil-Teacher Ratio	20:1	20:1	20:1
Teacher Attrition Rate	5%	5%	5%

Table 2.8 uses the formulas above, EMIS 2010 data and the assumptions made to estimate the number of new BTVET teachers to be recruited, by scenario and level.

Table 2.8: Projected Number of Formal BTVET Teachers to Recruit, by Scenario and Level, 2010-25
Number of Teachers

	Low Scenario		High Scenario	
	BTVET (Lower level)	BTVET (Middle level)	BTVET (Lower level)	BTVET (Middle level)
2010	548	602	548	602
2015	855	1,029	1,294	1,262
2020	1,360	1,606	2,764	2,328
2025	2,087	2,496	5,305	4,162
2025/2010 Ratio	*3.8*	*4.1*	*9.7*	*6.9*
Average Annual New Recruitments	**158**	**257**	**422**	**420**

Source: Authors' computations based on UBOS and EMIS data and the hypotheses made in Table 2.7.

Huge growth in numbers of formal BTVET teachers is needed. At the lower level, the low scenario shows that the number will have to increase by a factor of 3.8 (from 548 to 2,087 teachers). This implies the recruitment of about 158 new teachers per year. In the high scenario, the number of new annual recruits reaches 422, bringing the size of the teaching force to 5,305.

At the middle level BTVET, the number of teachers will have to quadruple (low scenario) or increase by a factor of 6.9 (high scenario), bringing the size of the teaching force from 602 to 2,496 or 4,162 teachers, respectively. This implies the recruitment of between 257 and 420 new teachers per year.

Section 4: Projection of the Required Number of PTC and NTC Teacher Trainers

The formula below projects the total number of teacher trainers to be recruited in primary and national teacher colleges (PTCs and NTCs). Ideally, data would enable recruitment projections by discipline. The following factors are taken into account in the projection: enrollment in PTCs/NTCs (ENROLt), the student-trainer ratio (STRt), total enrollment in PTC/NTC Grade 2 (EY2) and total enrollment in PTC/NTC Grade 1 (EY1).[25] The formula to compute the total number of teacher trainers required TTt, where t represents a given school year and t+1 the following school year, is:

$$TT_t = \frac{ENROL_t}{STR_t} = \frac{EY1_t + EY2_t}{STR_t} = \frac{NT_{t+1} + NT_t}{STR_t}$$

[25] Ideally, EY2 should match the number of new recruits in year t in primary/secondary (NTt) and EY1 the number of new teachers to be recruited in the following year t+1 (NT_{t+1}).

Assumptions

Student-trainer ratio: In 2010, the STR was 22:1 in PTCs and NTCs. Both scenarios assume that this will increase to 25:1 by 2025.

Teacher attrition rate: There is no information on the magnitude of the teacher attrition rate in PTCs and NTCs. As previously, it is assumed to be five percent and constant.

Enrollment: Values for EY2 and EY1 are respectively derived from the projections of new teachers to be recruited in primary for PTCs and lower secondary for NTCs.

Table 2.9 provides a summary of the assumptions made for the projection of PTC and NTC teacher trainer requirements, according to each scenario.

Table 2.9: : Assumptions for the Projection of PTC and NTC Teacher Requirements, 2010-25

	2010 Value	Target Value for 2025	
		Low Scenario	High Scenario
Key Indicators			
Pupil-Teacher Ratio	22:1	25:1	25:1
Teacher Attrition Rate	5%	5%	5%

Table 2.10 below uses the formulas above, EMIS 2010 data and the assumptions made to estimate the number of new PTC and NTC teachers to be recruited according to each scenario, respectively. Projections show that the system will need to increase its teaching force in PTCs and NTCs between 2010 and 2025, although to a lesser degree than for other teachers. Following past trends (low scenario), the number of teachers in PTCs should increase by 70 percent, from 750 to 1,297 teachers, and NTC numbers would need to increase by 140 percent, from 227 to 543 teachers. The alternative scenario where UPE and USE/UPPET goals are achieved by 2025 (high scenario) indicates that the number of teachers will have to increase by a factor of 2.5 in PTCs (from 750 to 1,891 teachers) and by a factor of 7.2 in NTCs (from 750 to 1,628 teachers).

Table 2.10: Projected Number of PTC and NTC Teacher Trainers, by Scenario, 2010-25
Number of Teachers

	Low Scenario		High Scenario	
	PTCs	NTCs	PTCs	NTCs
2010	750	227	750	227
2015	985	337	1,212	618
2020	1,134	415	1,511	984
2025	1,297	543	1,891	1,628
2025/2010 Ratio	*1.7*	*2.4*	*2.5*	*7.2*
Average Annual New Recruitments	**89**	**40**	**143**	**133**

Source: Authors' computations based on UBOS and EMIS data and the hypotheses made in Table 2.9.

This represents an average of 89 (low scenario) or 143 (high scenario) new tutors (trainers) to recruit for PTCs each year, and 40 (low scenario) and 133 (high scenario) for NTCs.

Conclusion

This chapter has proposed projections of teacher needs based on two scenarios. The first assumes an evolution of the education system according to past trends. The second scenario is more ambitious and assumes that ESSP education objectives will be achieved by 2025. The main finding from both scenarios is that the education system will have to increase its effort in terms of teacher recruitment substantially to both achieve education objectives and sustain recent growth trends.

Due to the lack of accurate data, it was not possible to break down teacher needs by subject at the secondary level. The EMIS system must be improved to make this possible in the future.

In addition, the close monitoring of some education indicators is necessary, such as the teacher workload and the share of repeaters. Lower secondary teachers are supposed to teach 16 hours per week and an upper secondary teachers, 12 hours per week. In fact, the former teach 12 hours per week and the latter teach 9 hours per week, on average. This unnecessarily inflates the number of required teachers. A similar conclusion can be drawn when analyzing the link between the share of repeaters and teacher needs in primary. Despite the no repetition policy, the share of repeaters is still high, increasing overall enrollment and teacher requirements as a result.

The major questions raised by this analysis are: the strategy the government will develop to attract and retain the required number of teachers; the ability of the teacher training system to train the required number of teachers and equip them with adequate skills; and how to manage the growing size of the teaching force. The following chapters tackle these issues.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CHAPTER 3 TEACHER TRAINING

As in any education system, Ugandan teachers play a central role, being at the frontline of the transmission of knowledge. This explains why so much emphasis is given to the academic and professional qualifications teachers need to ensure they adequately master subject syllabus and are prepared to handle a class and pupils. An equally important issue is the ability of the training apparatus to effectively equip future teachers and those already in class with the required professional skills and competencies to teach effectively.

This chapter explores teacher training issues from various angles. Section 1 provides a brief overview of the teacher training options available in Uganda. Section 2 looks at pre-service and in-service training needs, by examining the gap between the qualifications held and those required, for both current and new teachers. The ability of teacher training colleges to meet these needs is assessed in Section 3 by confronting the qualification shortfall with current enrollment levels. Section 4 concludes by providing some insight into the quality of primary teacher training.[26]

Section 1: Current Teacher Training System

This section provides a brief overview of teacher pre-service and in-service training courses available in Uganda. Different opportunities are available according to education levels and streams (general, and technical and vocational). Providers are both public and private institutions, which include: [27]

- ECD Teacher Training Institutions;

- Primary Teacher Colleges;

- National Teacher Colleges;

- Instructor Training Colleges;

- Health Tutor College; and

- Universities.

Teacher training is covered by two government departments: the Teacher Instructor Education and Training Department (TIET) of MoES and Kyambogo University. TIET has three divisions, namely: (i) the Preprimary and Primary Teacher Education (PTE) division, responsible for the training of ECD and primary teachers; (ii) the Secondary Teacher Education (STE) division, which deals with lower secondary teacher training; and (iii) the Instructor/Tutor Education (ITE) division, responsible for the training of teaching personnel for BTVET institutions. Both pre-service and in-service trainings are available. Kyambogo University deals with all university trainings.

Pre-service training covers all basic teacher training courses for all levels of education. Various policies and guidelines provide a clear framework of the available programmes. Kyambogo University plays a central role in this respect, handling PTC, NTC and some technical ITC programmes' entry requirements, admissions, registration, content and certification processes. Some colleges and universities also develop their own

[26] Due to data constraints, the scope of the analysis is limited, mostly to primary teacher colleges (PTCs).
[27] Associations, such as the Young Men's Christian Association (YMCA) also offer teacher training courses.

courses. The Mulago Health Tutors College's programmes fall under Makerere University. TIET/MoES also offer some health-related programmes.

ECD Teacher Institutes train preprimary teachers. All 93 are private. ECD guidelines exist and provide a framework for training. There are three main channels to obtain a qualification, each leading to a specific award. They are currently undergoing the licensing and registration process. Kyambogo University coordinates the setting, standardization and administration of examinations with other tertiary institutions offering ECD programmes.

Primary Teacher Colleges (PTCs) train primary teachers. A small share of PTC graduates teach in preprimary schools. Of the 52 PTCs to date, 7 are privately owned.

National Teacher Colleges (NTCs) train secondary teachers. Primary teachers intending to upgrade also train at NTCs. There are six such colleges in Uganda, of which one is private.[28]

Instructor Training Colleges provide BTVET teacher training. The current four institutions are: Kyambogo University, Abilonino Instructors College, Nakawa Vocational Training Institute and the private institution Kampala Institute of Technical Teacher Education.[29]

Mulago Health Tutor College trains tutors for health training schools such as nursing schools and schools for medical laboratory technicians.

Universities train their graduates for upper secondary school teacher posts.[30] Primary and secondary teachers who wish to upgrade can also enroll at university in a specific area of study, such as measurement and evaluation; guidance and counseling; or curriculum and learning. Following the liberalization of the university sector, the number of public and private universities offering teaching-related degree courses has proliferated, the most common options being:

- A three-year degree course (BA, BSc) followed by a one-year postgraduate qualification in teaching;

- A three-year degree with education; this is a normal university course with the education component taken during vacation periods; or

- A two-year degree course at Kyambogo University for qualified teachers already holding a Diploma in Secondary Education.

Tables 3.1 and 3.2 below provide an overview of the main pre-service and in-service teacher training programmes available in Uganda, for general and BTVET streams respectively.

[28] Over 2002-05, the number of NTCs was reduced from 10 to 5, following an evaluation conducted in the early 2000s. The government either closed down NTCs or withdrew its support from nongovernmental ones.

[29] Other private sector initiatives organized by the Uganda Association of Private Vocational Institutions (UGAPRIVI) with support from development partners such as GTZ, ADB, DED, and UNIDO also train instructors (MoES, 2010). No data were available.

[30] S5-S6 teachers are expected to be university graduates

Table 3.1: General Stream Teacher Training Programmes, 2012

Award	Academic Entry Requirements	Duration/ Mode of Delivery	Institutions
Preprimary			
Certificate in Child Care	PLE Certificate	Pre-service; 1 year	ECD Teacher Training Institutions
Certificate in Community Child Care	None	In-service; 12 weeks	
ECD Teacher Certificate	O' Level (4 passes)	Pre-service 2 years	
Primary			
	UCE/O' Level (6 passes)	Pre-service; 2 years incl. school practice	PTCs
Grade III Teacher Certificate - Pre-service	UCE/O' Level (6 passes) + a recommendation.	In-service; 3 years, part-time	PTCs
Grade III Teacher Certificate - In-service	Grade III Certificate + 2 years experience	In-service; 2 years	Universities
Secondary			
Diploma In Education - Secondary (DES) / Grade V Secondary Certificate	A' Level (2 passes) + O' Level (6 passes). Special provisions for Business and Technological studies.	Pre-service; 2 years	NTCs Universities
Bachelor in Education (BEd)	A' Level (2 passes) or Grade V Primary Certificate or Diploma in Teacher Education (DTE), DEP, DES or DSNE + 2 years experience	Pre-service; 3 years. In-service; 2 years	Universities
Bachelor Degree with Education (BSc/Ed or BA/Ed)		Pre-service or in-service; 3 years	Universities
Postgraduate Diploma in Education		In-service; 1 year	Universities
Masters in Education		In-service; 2 years +	Universities
PhD in Education			Universities
Special Needs Education (SNE)			
Diploma Grade V – SNE / Diploma – Special Needs Education (DSNE)	Grade III Teaching Certificate	In-service; 3 years, incl. school practice	PTCs
PTC (Primary Teacher Colleges)			
Bachelor in Teachers Education (BTE	A' Level (2 passes) or Grade V Teacher Certificate or DTE, DEP, DES or DSNE + 2 years experience	In-service; 2 years	Universities

Source: MoES/USAID, 2011.

Table 3.2: BTVET Teacher/Tutor/Instructor Training Programmes, 2012

Programme	Entry Requirements	Mode of Delivery	Institutions
Technical/Vocational			
Certificate in Technical Teacher Education (CTTE)	O' Level or Junior Certificate in a Technical Course (UJTC) + Craft Certificate Part II	Pre-service or in-service; 1 year	ECD Teacher Training Institutions
Certificate in Vocational Training Instruction (CVTI	O' Level + Craft II Certificate + a nomination.	In-service; 1 year	
Diploma in Technical Teacher/Instruction Education (DTTE)	O' Level + Craft II Certificate + 2 years experience in industry	Pre-service; 2 years	
Diploma in Vocational Training Instruction (DVTI)	Any specialized BTVET diploma or degree + 2 years experience in industry + a nomination.	In-service; 2 years	ITCs
Diploma in Training Institution Management (DTIM)		In-service; 1 year	ITCs
Degree in Technical Teacher Education	A' Level (2 passes in physics and math) + O' Level or higher diploma in specific fields. Mature entry schemes.		Kyambogo University
Postgraduate Diploma in Vocational Pedagogy (DGDVP)		In-service; 1 year	Kyambogo University
Health			
Diploma in Health Tutor		Pre-service or in-service; 2 years	HTC, Mulago
Bachelor of Medical Education	Registered nurse or diploma in any Allied Health Professional course + 2 years experience or degree in medical/health profession with an interest in teaching	3 years	HTC, Mulago
Bachelor of Health Tutor Education	Nursing or Allied Health Professional course or nursing diploma holder + 4 years experience + registration with professional councils	3 years	HTC, Mulago
Postgraduate Diploma in Medical Education		1 year	HTC, Mulago
Certificate in Clinical Instruction		3 months	HTC, Mulago

Source: MoES/USAID, 2011.

Note: HTC – Health Tutors College.

Continuous Professional Development (CDP): the Role of In-Service Training

Whereas initial teacher education programmes offer the basic knowledge and skills required for the profession, teachers have the possibility to specialize and upgrade later on, with several in-service teacher education programmes to choose from. For instance, primary teachers might upgrade from a Grade III Teaching Certificate to a Diploma in Education - Primary, then to a Bachelor in Education or even a Masters degree. Similar options are available to teachers in the other cycles. The preferred mode of upgrade consists in study leave with pay.[31] Such leave should in principle be granted on the basis of the relevance of the subject of specialization chosen by the teacher, although past evidence suggests that this is not always the case (Teacher Report, 2007).

Courses are also available for un/underqualified teachers, such as the Grade III in-service training course that allows them to qualify after a three-year part-time course offered by the main PTCs. Initially set up in response to the recruitment of underqualified primary teachers by MoES following the fee-free primary education policy, these programmes are gradually being phased out as needs wane. As a result, few colleges still offer these programmes. NTCs also offer training for secondary teachers who wish to improve their skills in English and Kiswahili (through the Advanced Certificate of Teaching of the English Language and of the Kiswahili Language).

Some other initiatives to strengthen teachers' competencies include the Certificate of Proficiency in Teaching (C-PT), and the Certificate in Teacher Education Proficiency (C-TEP), two in-service training programmes respectively designed to equip teachers and tutors with enhanced pedagogical skills.[32] Likewise, the Secondary Science and Mathematics Teachers (SESEMAT) programme provides training for science and math teachers.[33] As of 2011, 4,911 teachers benefited from the latter programme (NAPE/UNEB, 2011a). However, as a recent evaluation has demonstrated, the programme suffers from a major weakness: it does not account well for the current situation of resource scarcity in schools, limiting its effectiveness (MoES/CGDE, 2011). Some partial evidence suggests that the C-PT and C-TEP programmes provide inadequate coverage of current needs (Kyeyune et al., 2011).

To date, courses intended for school managers are limited. Head teachers are selected on the basis of their classroom experience and therefore generally lack leadership and managerial skills. Some support is however provided by coordinating center tutors (CCTs) in the form of training and support on management and planning issues, and in the use of customized performance targets.[34] The support from CCTs to managers seems not to provide the expected results however, due to various challenges faced in adequately conducting their tasks (See Box 3.1).

[31] A formal application should be submitted by the teacher to their head of institution, which is then submitted to district education officers and chief administrative officers for primary teachers and to the Permanent Secretary of MoES for postprimary teachers/tutors. Once accepted, teachers apply for the study leave which is granted by the Education Service Commission.[29] Other private sector initiatives organized by the Uganda Association of Private Vocational Institutions (UGAPRIVI) with support from development partners such as GTZ, ADB, DED, and UNIDO also train instructors (MoES, 2010). No data were available.

[32] The C-TP course is a needs-based course designed to bridge existing gaps in PTE practices. The C-TEP course aimed to strengthen the capacity of PTC tutors to deliver college training programmes using appropriate methods and was administrated and delivered by KyU in a cascaded approach whereby college principals were trained first and then delivered the course to tutors, working with KyU lecturers. Among the 900 tutors and principals who took the course, less than 50% passed the examination (Kyeyune, 2011). Replicas of the course have been adapted for district education officers (the Certificate in Proficiency in Education Leadership, C-PEL) and for teachers (the Certificate in Proficiency in Teaching, C-PT) (MoES/USAID, 2011).

[33] This programme is part of a global programme set by MoES to promote quality teaching of math and sciences. Its implementation started in 2005 according to a cascaded approach through specially set up regional training centers. Initially intended for secondary teachers, the programme was extended to support science and math tutors/lecturers in PTCs and NTCs. It promotes learner-centered teaching methods.

[34] Customized performance targets were devised to serve as administrative tools, enhance accountability in resource use and create measurable performance indicators for head teachers and tutors in the framework of school performance reviews and improvement planning. They also provide measurable performance indicators to aid individual teacher and institutional performance reviews, to improve the quality of education.

Box 3.1: Coordinating Center Tutors - A Central Element in Supporting Teachers

Coordinating center tutors (CCTs) are at the heart of core primary teacher colleges' organization. The system was initially developed with the dual objective of eliminating underqualified teachers by enabling them to attain the necessary qualifications required of primary teachers, and providing regular pedagogical training and instructional support to teachers at the school level.

There are 23 core PTCs distributed throughout the country. Each is in charge of a network of coordinating centers (CCs, of which there are currently 570), managed by tutors, who in turn are responsible for supporting schools in their catchment area. Core PTCs offer both pre- and in-service training, and run additional outreach activities through their CCTs, such as community mobilization, continuous professional development for all primary teachers and support to and supervision of teachers in the field. Teachers undergo training in various areas, identified in consultation with head teachers and other teachers in the CC schools.

CCTs currently face a series of challenges that tend to weaken the effectiveness of their support. The most prevalent ones include (Kyeyune et al., 2011):

- Inadequate transport, making school visits difficult (not all have a motorbike and fuel allowances are also lacking);

- Limited skills for some CCTs, making the quality of the support offered to teachers poor;

- Lack of adequate guidance on how to conduct school performance reviews and school improvement planning, resulting in poor implementation of these by school heads;

- Limited impact of remediation strategies through continuous professional development and peer group meetings, following low teacher attendance and poor implementation of the cascaded approach, and despite generally appropriate planning;

- Lack of tutors in all CCs, implying that not all teachers are reached;

- Excessive workload of tutors, further limiting their support, both quantitatively and qualitatively. A catchment area remapping exercise is currently underway, including the revision of tutors' job descriptions to help readjust their tasks and workload; and

- Poor quality of supervision of tutors' support to teachers by deputy principals, whose outreach faces similar constraints in terms of inadequate transport and conflicting priorities, due in part to demands from NGOs and development partners.

Finally, a major challenge lies in the fact that the CCT system is not linked to the district-level administrative structures that govern education service delivery under the decentralized governance system. This particular challenge is to be addressed with the support of the Global Partnership for Education for a project aiming to remap the coordinating centers.

The current in-service teacher education/CPD system fails to offer teachers holistic options to improve their professional competencies in a harmonious way, even at the primary level. This, despite the Teacher Development and Management System (TDMS), created to address gaps in primary teachers' skills. The current system is fragmented and lacks a systematic approach to professional development. Teachers still upgrade according to their own interests and ambition, rather than according to a national plan aligned with education needs, meaning that the current system could prove inefficient in covering actual needs. Nor it is

equitable. Indeed, in many cases, teachers have to sponsor themselves to climb the career ladder, leaving those unable to do so at a professional disadvantage. Finally, upgrading is not always followed by systematic salary or benefit increases, which generates frustration among those teachers who went to the effort.[35]

Section 2: Teacher Qualification Levels and Needs

This section provides a review of the minimal qualifications expected of teachers and assesses to what extent the current education system is meeting or falling short of the required number of qualified teachers.

2.1 Minimal Requirements to Teach in Uganda

Minimum entry requirements to the teaching profession are set by: (i) Kyambogo University (KyU), for primary and national teacher colleges (PTCs and NTCs) and instructor training colleges (ITCs); and (ii) Makerere University for Health Tutor College (HTC) students. Student selection is conducted by a joint admissions board (formed by MoES, KyU (chair) and all tertiary institutions). Students are ranked. The best are offered a scholarship; the rest pay for themselves. The government provides full sponsorship for the initial training of primary school teachers who train in public institutions.[36] Less than 80 percent of pre-service trainees in NTCs are sponsored by the government; the share is believed to be lower in universities.[37]

Preprimary teachers should hold at least a Certificate in Community Child Care, granted after a twelve-week course, open to all. Alternatives are the Certificate in Child Care and the ECD Teacher's Certificate. More stringent entry requirements apply for these: the former is obtained after one year of training and requires holding the Primary Leaving Examination (PLE); the latter involves two years of training with O' Level as a prerequisite (See Table 3.1 above).

Primary teachers should hold at least a Grade III Certificate obtained after two years of training. Entry to this PTC programme requires the successful completion of the Uganda Certificate of Education (UCE) examination, or O' Levels. Minimum entry requirements are six passes including English, math and any two science subjects (agriculture, biology and physics/chemistry). Students may apply to PTCs up to three years after obtaining their UCE; a measure that enables those who fail their A' Levels to apply. Other awards include the Diploma in Education - Primary (Grade V Primary Certificate) that is obtained after one year of in-service training, for holders of the Grade III or Grade II Certificate.[38]

O' Level (lower secondary) teachers should hold at least a Diploma in Education - Secondary (also known as Grade V Secondary Certificate) obtained after two years of training. Teachers specialize to teach arts, science or vocational subjects. Minimum entry requirements are usually two principal passes at A' Level in the subjects to be taught. In addition, applicants are required to have passed English and math at O' Level. Due to a shortage of math and science trainees, one principal pass in a relevant subject and two subsidiary passes are accepted for these streams.

A' Level (upper secondary) teachers are required to hold a bachelor degree in Education (BA/Ed, BSc/Ed or BVoc/Ed), or a bachelor degree and a postgraduate diploma in education.

Special needs education teachers should hold the Grade III Certificate and follow specific training for three years.

BTVET Instructors should hold: (i) a Certificate in Technical Teacher Education (CTTE); or (ii) a Certificate in Vocational Training Instruction, a one-year course for O' Level or Craft II Certificate holders; or (iii) a university degree, in three years; or (iv) a Diploma in Technical Teacher Education (DTTE) or Vocational Training Instruction, obtained after two years of study.

[35] As discussed in Chapter 5, positions and salary grades/steps do not automatically change to reflect skills' upgrading. This can only happen after vacancies are advertised.
[36] Repetition results in losing the scholarship. In-service trainees are not entitled to government sponsorship.
[37] In principal, equal opportunities are given to all teacher trainee applicants, regardless of confession, gender, tribe or region of origin. Pressure from local authorities and other stakeholders to select their applicants, even when not meeting the minimum requirements, has however been recorded (PTC questionnaires).
[38] The Grade II Certificate is no longer offered, and Grade II teachers are now considered to be undertrained.

Health tutor instructors must hold either a Health Tutor Diploma or Bachelor of Medical Education, or Health Tutor Education, that respectively entail two and three years of study, with varying academic/professional requirements (See Table 3.2 above). Shorter training programmes are also available, training tutors at postgraduate diploma (a one-year programme) and certificate level (a three-month course).

2.2 Balance of Teachers with the Required Profile

This sub-section assesses the extent to which active chalk-in-hand teachers have the required professional certification, to provide a first assessment of potential training needs.

The number of qualified teachers in government primary schools has increased steadily in recent years, following both the output of qualified teachers from PTCs and the provision of in-service courses to upgrade and certify underqualified teachers. This trend was further supported by the retirement of undertrained teachers (Grade II).

Nevertheless, available data on primary and secondary teachers show that in 2010, 12.7 percent of primary teachers and 16.1 percent of secondary teachers were underqualified (See Table 3.3 below). Although this proportion has decreased over the years, especially among teachers in government schools, the number of teachers who were still unqualified in 2010 stood at 23,363 in primary and 13,021 in secondary schools.

The fact that private schools employ significant shares of underqualified teachers is cause for some concern. Over 2006-10, approximately 35 percent of private primary teachers were underqualified. In secondary, despite a slight decrease, still 20 percent of private teachers were underqualified. This latter situation is all the more alarming that private schools host most secondary students (62 percent). In comparison, the proportion of underqualified teachers in government primary schools stood at a very low 2.7 percent (3,363 teachers) in 2010; a downward trend was also recorded in secondary, to 6.2 percent (1,614 teachers).

Table 3.3: Estimated Share of Underqualified Primary and Secondary Teachers, by School Type, 2006-10
Number and Percent

	2006	2007	2008	2009	2010
Primary					
Number of teachers	187,382	164,573	160,248	196,904	184,326
Share of Underqualified					
Total	18.0%	13.3%	11.6%	14.3%	12.7%
Government Schools	11.2%	7.6%	5.7%	3.4%	2.7%
Private Schools	34.9%	35.2%	33.8%	34.5%	34.6%
Secondary					
Number of teachers	84,891	91,528	86,528	91,611	81,038
Share of Underqualified					
Total	19.0%	18.9%	18.1%	16.9%	16.1%
Government Schools	9.4%	8.6%	7.9%	6.4%	6.2%
Private Schools	22.1%	22.3%	21.9%	21.2%	20.7%

Source: EMIS, various years. See full table in Annex 3.1.

Note: Teacher numbers are estimated based on EMIS figures and schools' under-reporting levels.

The distribution of teachers by type of certification shows that at the primary level, most teachers hold a Grade III Certificate (64 percent), whereas 17 percent hold a DEP. In government schools, the respective proportions are slightly higher, at 67 percent and 21 percent. It is worthy of note that the vast majority of underqualified teachers were educated to at least O' Level (94 percent). However, they may not have the required passes in math, English and sciences.

Table 3.4: Estimated Distribution of Primary and Secondary Teachers, by Qualification and School Type, 2010
Percent

	Primary				Secondary		
	Government	Private	Total		Government	Private	Total
Qualification				**Qualification**			
Underqualified	2.7	34.6	12.7	Underqualified	6.2	20.7	16.1
Qualified	97.3	65.4	87.3	Qualified	93.8	79.3	83.9
Grade III	67.0	53.2	62.6		—	—	—
Grade IV	1.1	2.3	1.5		—	—	—
Grade V	4.9	4.1	4.7	Grade V/DES	44.6	45.8	45.4
DEP	21.2	4.3	15.9		—	—	—
Graduate	3.1	1.6	2.6	Graduate	49.2	33.5	38.5
Total	100.0	100.0	100.0	Total	100.0	100.0	100.0
Number	126,448	57,878	184,326	Number	25,970	55,068	81,038

Source: EMIS, 2010. See also Annexes 3.2 and 3.3.
Note: Teacher numbers are estimated based on EMIS figures and schools' under-reporting levels.

At the secondary level, estimated data suggests that 45 percent of teachers hold a Grade V/DES whereas 38 percent are graduates (See Table 3.4 above). In government schools, the share of graduates is higher, at 49 percent. Most underqualified teaching staff (75 percent) possess at least an A' Level. They are mainly found in private schools.

BTVET Teaching Staff Balance

Available data on BTVET teaching staff are derived from two studies conducted in 2006 and 2007.[40] Among the estimated 5,000 instructors employed in BTVET, only 30 percent met the minimum requirements to teach (40 percent in public and 21 percent in private institutions). This indicates that 3,500 instructors need upgrading and training, especially in competencies related to occupational skills, industrial experience and instructional skills (Kohn et al., 2006).

Table 3.5: Distribution of BTVET Teachers and Non-Teaching Staff According to Qualification, by Institute Ownership, 2006
Number and Percent

	Public		Private		
	Total	Trained	Total	With pedagogic and management training	With work experience in industry or business
Category					
Managers *	—	—	1,008	82 (8%) with management training	
Instructors	2,500	1,000 (40%)	2,520	508 (20%) CTTE 13 (1%) DTTE 302 (12%) with some pedagogical training	2,010 (80%)

Source: Kohn et al., 2006.
Note: * Managers include heads/principals, deputies, deans and bursars.

[40] Kohn et al., 2006 and Kiwanuka et al., 2007.

Continuous professional development or upgrading for underqualified teachers still remains a challenge. The teacher training system's ability to adequately deal with these issues and provide appropriate initial training and upgrading is reviewed in the next section. Indeed, teacher training capacity is critical to the education system's expansion, but also in the light of teacher attrition.

Section 3: Teacher Training Output Capacity

3.1 Pre-Service Training

To explore the ability of the current teacher training system to train both undertrained and new teachers, this section begins by comparing teacher training college and university annual teacher graduate outputs and the number of new teachers needed by the education system. Two figures of teacher needs are provided, reflecting low growth and high growth scenarios. As in Chapter 2, the high scenario is a particularly ambitious one, under which major education goals would be achieved by 2025, and the low scenario is less optimistic, based on sustained growth levels. Table 3.6 provides the relevant information for primary Grade III, secondary teachers and BTVET instructors.

Table 3.6: Annual Pre-Service Teacher Training Outputs and Needs, by Subsector, 2025

	Institutions	Average Enrollment 2010/11-2011/12	Curriculum Duration	Average Number of Graduates 2010/11-2011/12	Estimated New Teachers Required in Government (Private) Schools (1)			
					2011		2025	
					Low	High	Low	High
Primary and Lower Secondary								
Primary	52 PTCs	19,500 *	2 years	8,769 Grade III	9,887 (4,820)	11,358 (4.778)	15,925 (7,890)	22,999 (7,740)
Lower Secondary	6 NTCs	4,900 *	2 years	2,350 * DES/Grade V	2,175 (4,084)	3,550 (4,601)	6,578 (11,219)	19,246 (11,674)
	University			12,000 ** Diploma + Degree				
Upper Secondary					462 (496)	540 (776)	1,130 (552)	1,602 (991)
BTVET (Post-P7 and Post-S4)								
ITC	4	430 *	1-2 years	360 * Certificate + Diploma	205 (2)	295 (2)	699 (2)	1,670 (2)
HTC	1	50 *	2 years	30				

Source: TIET/MoES. (1) Authors' computations based on UBOS and EMIS data.

Note: Figures in brackets are teachers employed in private schools. * Estimates. ** Estimate based on the figure from the Teacher Report, 2007. (2) Figures based on instructors in both government and private institutions.

Table 3.6 highlights the following:

1. The total Grade III intake capacity of PTCs is currently of about 19,150 students.[40] It is estimated that approximately 8,800 graduated over 2010-12. This output is slightly below current new primary teacher needs in government schools, that reached 9,887 in 2011 (low scenario). This entails a capacity shortfall of 1,120 teachers, or 11 percent.[42]

2. Over 2010-12, NTCs hosted 4,900 DES trainees on average per year, of which an estimated 2,350 graduated. Universities produce an estimated 12,000 teacher diploma and degree graduates (Teacher Report, 2007). This global output of 14,000 is well above the number of public secondary teachers needed in 2011, estimated at between 3,000 (low scenario) and just over 4,000 (high scenario). At present, Uganda is training secondary teachers in excess.

3. In BTVET, the estimated annual number of trainees graduating is 390, well above current new instructor needs, according to both low (205) and high (295) scenarios. However, this figure does not fully indicate if instructors have the required certification and subject

specialization to teach.[43] Further analysis is needed to adequately estimate the global ITC intake capacity by award or specialization.

Under current intake conditions, NTCs and ITCs are able to cover current teacher needs, whereas PTCs are not. However, to sustain education expansion, both primary teacher and BTVET instructor training systems will need to expand their physical intake capacity by a factor of 1.8 (low scenario) to comply with teacher needs by 2025. The system produces more secondary teachers than government schools can absorb; at this pace, there is likely to be a stark oversupply of secondary teachers in 2025. This investment would not be lost if private sector schools employed the excess graduates, especially given the dire level of their teachers' qualifications. Should secondary teachers working in private schools be accounted for, the current combined capacities of NTCs and universities will be insufficient to fully cater for teacher training needs by 2025, and would require an increase of the current output by a factor of 1.3.

The issue of teachers' qualifications in private schools should not be overlooked. As noted, many of them are underqualified, and their number is expected to grow. Although teaching quality standards in private schools are in principle controlled by national authorities, they are inadequately enforced. Greater resources are called for to ensure the proper monitoring of teacher qualifications.

[41] Ceilings are set by MoES for both PTCs and NTCs, which are constrained by both dormitory facilities and the number of students that can be sponsored by the government. In 2011, overall PTC ceilings ranged from 270 to 450 students, with first year intake capacity ranging from 135 to 225 students.

[42] The gap widens further when teachers working in private schools are accounted

[43] There is only one HTC in the country (Mulago). While its physical capacity is 150, its current enrollment is lower. On average, thirty students graduated annually over 2010-12. There is also an ongoing process to upgrade the awards offered from diploma to bachelor. The first group of Bachelors of Medical Education is set to graduate in October 2013.

3.2 In-Service Training

As seen in Table 3.3, many active teachers (although mainly private) are un- or underqualified, and need further training to upgrade their competencies to the required certification level. The main focus of in-service training to date has been to ensure that all public teaching staff achieve the minimum required Grade III Certificate. The programme, offered by core PTCs, is now being phased out following the considerable drop in the number of teachers requiring it. In this context, the number of primary in-service teacher trainees has dropped from 2,895 in 2008/09 to 1,856 in 2010/11 to an estimated 1,200 in 2011/12. In view of the current 3,363 primary teachers in need of upgrading and under current training supply conditions, roughly a decade will be needed to upgrade all teachers.

Note that no such programmes are currently available for underqualified secondary teachers and BTVET instructors, although the current reform of the BTVET subsector in general and the introduction of a vocational qualification framework in particular will require highly competent and well-motivated instructors in sufficient numbers. While the new instructor training measures started by the Nakawa vocational training institute and the Uganda Association of Private Vocational Institutions (UGAPRIVI) and the imminent opening of the Jinja vocational training institute are promising, current instructor training capacities are not sufficient to cater for the huge demand for in-service skills upgrading in the BTVET subsector.

Section 4: Teacher Training Quality Issues

This section focuses on different aspects of teacher training quality. Quality in education can reflect the level of resource allocation to the sector, but can also be measured by students' learning outcomes. According to the latter approach, an education of quality would ensure that students acquire determined competencies and skills. The analysis will rely on both approaches by examining PTC Grade III programme implementation, reviewing curriculum features and staffing issues, and final examination determinants, in turn.[44]

4.1 PTC Grade III Certificate Programme Overview

Curriculum Issues

The curriculum of the PTC Grade III programme is a national curriculum taught by all colleges, designed by Kyambogo University. It aims to provide teacher trainees with the required skills to perform as teachers for all primary grades. The certificate is given upon successful completion of a two-year pre-service training course, or after three years' in-service training by licensed teachers.

Various studies have highlighted the poor quality of teaching and learning in primary schools, including the National Assessment of Progress in Education (NAPE) reviews and a baseline study carried out by Kyambogo University and MoES in 2006/07 on PTE curriculum implementation (KyU, 2012). The main gaps identified by this study include:

- Lack of emphasis on new subjects being introduced to primary education, and content not always related to the primary curriculum;

[44] The focus on PTCs is mainly driven by the availability of data. The authors received nine questionnaires from PTCs and one from an NTC, and conducted interviews with senior staff from two PTCs and one NTC.

- Lack of emphasis on the thematic curriculum introduced in early primary grades;
- Curriculum mainly focused on content, at the expense of pedagogy and good classroom practice;[45]
- Inability of PTC graduates to apply a number of essential teaching methods;
- Lack of mastery by some graduates of curriculum content;
- Failure to include course-work assessments in the final grading; and
- Low emphasis in specialization in terms of teaching primary.

In line with government priorities as outlined in the poverty eradication action plan and the education sector review to improve the quality of education, the PTE certificate programme was recently reviewed in order to bridge the gaps identified. To ensure that the revised curriculum focuses on improving teaching methods, it was decided that teachers should specialize in either lower or upper primary.[46] In addition, it was proposed to include a separate syllabus within the Professional Education Studies course syllabus on general methods to enable teacher tranees to develop their pedagogical knowledge and skills and learn to use a variety of instructional strategies to effectively promote pupils' learning. New disciplines were introduced: Kiswahili Education, Local Language Education, Agriculture Education and Early Childhood Development, adding to the six standard ones (Professional Education Studies, Language Education, Social Studies, Mathematics, Science and Cultural Education). Supervised school practice was maintained (See Annex 3.4 for full details of the new PTE curriculum).

Table 3.7: PTC Grade III Certificate Training - Weekly Academic Time Allocation, 2012

Hours and Percent

	Hours/Periods Taught par Week			Distribution of Hours Taught par Week		
	Average	Min	Max	Average	Min	Max
Key Subjects						
Professional Education Studies	4.6	3.0	6.0	11.5%	7.5%	15.0%
Special Needs Education	1.0	1.0	1.0	2.5%	2.5%	2.5%
Early Childhood Education	2.0	2.0	2.0	5.0%	5.0%	5.0%
Social Studies Education	3.2	2.0	4.0	8.0%	5.0%	10.0%
Science with Health	4.0	4.0	4.0	10.0%	10.0%	10.0%
Mathematics Education	5.0	4.0	6.0	12.5%	10.0%	15.0%
Cultural Education *	10.0	10.0	10.0	25.0%	25.0%	25.0%
Languages						
English Language Education	4.2	4.0	5.0	10.5%	10.0%	12.5%
Kiswahili Education	2.2	2.0	3.0	5.5%	5.0%	7.5%
Local Language Education	1.7	1.0	2.0	4.4%	2.5%	5.0%
Production Skills						
Agriculture	2.0	2.0	2.0	5.0%	5.0%	5.0%
ICT	2.0	2.0	2.0	5.0%	5.0%	5.0%
Home Economics	1.5	1.0	2.0	3.8%	2.5%	5.0%
Weighted Average	40.0	—	—	100.0%	—	—

Source: Based on PTC questionnaires.

Note: * Cultural Education includes Religious Education, Music, Physical Health Education, Art and Crafts and Community Service/Library/ Debate/Instructional Materials, in equal proportions (2 hours each).

[45] The focus of the pedagogical content in the curricula was mainly on memorization, rather than on the development of pedagogical understanding, skills and strategies that are necessary to bring about learning among primary school pupils and student teachers/tutors.

[46] The question of teacher specialization in lower/upper primary was a major concern as it was not deemed feasible for teachers to teach all primary grades. Year 2 of the programme is devoted to specialization.

A trial version of the new curriculum was tested by some PTCs in 2011 and 2012, in conjunction with the previous 1995 curriculum (See Table 3.7). Full deployment of the new programme is planned for 2013. In principle, a PTC course academic year consists of 35 weeks of 40 periods each, spread over three terms, equivalent to an annual trainee workload of 1,400 periods. The curriculum consists in a mixture of academic and practical studies. Professional education studies, math, English, science with health and social studies absorb about 50 percent of teaching time.

However, according to the PTC heads interviewed, the curriculum is not always fully covered due to activity overload, lack of required teaching staff and tutor absenteeism. In addition, students' poor foundations in some subjects such as science and math, and the absence of a reading culture, further alter the smooth running of the prescribed programme. Lack of funds to purchase required teaching and learning materials were also mentioned as a constraint. In some cases, the poor attitude of some teaching staff towards the profession was perceived as detrimental.

Teaching and learning methods further impact on the delivery of the curriculum. Due to the lack of teaching staff, PTCs tend to rely on participatory teaching methods in addition to formal teaching to cover the curriculum, such as project work, resource persons and small group discussions and tutorials. However, as shown in the 2006 baseline study, teaching in PTCs remained lecture-centered and learning by memorization was primarily encouraged. In some cases, poor content mastery by tutors meant they were unable to properly teach their subject (MoES, 2007).

Although some extra-curricular activities are also carried out, they remain limited due to a lack of funding. They include: games and sport, music and drama, communal work, inter/intra-class competitions, regional competitions, public lectures, subject weeks and clubs.

Supervised School Practice

School practice is part of the curriculum and is organized into three parts:

1. A child study in Year 1: Trainees choose one or two pupils that they follow to become acquainted with the pupils' home backgrounds, behavior, learning interests and challenges. Child study lasts for three weeks and is conducted under the supervision of tutors and school teachers. Trainees compile a report which is submitted to their college and taken into account for graduation. Child studies are intended to provide some initial understanding of children's behavior.

2. Two school practices in Year 2: Trainees are expected to practice classroom teaching and other routine activities (preparing schemes, instructional material and teaching files), during two six-week stints (a semi-final practice at the beginning of the year and a final school practice at the end of the year). In both cases, trainees are assessed by their tutors and their performance is taken into account in their final grade.[47]

The effective realization of supervised school practice faces a number of challenges, mostly related to the lack of adequate funding: difficulties associated with the transportation of tutors and students, delays in the

[47] School practice generally involves the following activities: school identification, posting of trainees, demonstration lessons, scheming, supervision and grading.

payment of tutor allowances and inadequate instructional material. The poor attitude and weak cooperation of some schools represents a further constraint on the quality of the experience.[48]

Assessment of Trainees

The assessment of trainees' progress is ensured through a variety of forms, including continuous assessment, regular tests, group assignments and project work, and end-of-term exams for all subjects. Some PTCs organize remedial lessons to improve trainee performance and clinical supervision. A promotional exam is sat by trainees at the end of Year 1. Candidates who fail certain papers are given the option to repeat them the following year, but their sponsorship is suspended.

The final assessment, leading to the award of the Grade III Certificate, is sat at the end of Year 2. This examination, as for the Year 1 promotional one, is national. To pass, trainees must score at least 40 percent in the six compulsory papers and have passed the final school practice.[49] Should they need to, trainees are offered the possibility of repeating the failed papers within the following two academic years, at their own expense.

The implementation of continuous assessment, due to become an integral part of Grade III Certificate trainees' grading as of 2012, has raised several issues. Tutors have yet to assume full ownership of the approach, which is negatively portrayed as a mere tool for grading and placement, rather than one to measure and support learners' progress. In addition, a lack of adequate training on how to use continuous assessment has limited its use. This is all the more cause for concern that MoES is promoting it as an integral part of the teacher training process, and a key quality enhancement mechanism to enable pupils to achieve better learning outcomes (MoES, 2010). With a view to institutionalizing continuous assessment in curriculum implementation and ensuring proper mastery of the approach by primary teachers, MoES has developed a handbook and a self-instructional training manual (MoES/UNESCO, 2011).

4.2 PTC Tutor Staffing Issues

The recruitment procedures for PTC tutors are the same as for government teachers: the Ministry of Finance allocates the funds and MoES determines the vacancies. The Education Service Commission then advertises the position, interviews the various candidates and makes appointments based on the available resource envelope. MoES then posts tutors to the colleges in greatest need.

Tutors are trained by Kyambogo University and are now required to have a degree in education. Practicing tutors who hold only a Diploma in Teacher Education (DTE) are encouraged to upgrade their qualifications. All tutors teach their subject of specialization.

Most PTCs face major teaching staff shortages.[50] Available data show that on average, half of the teaching positions are not filled, with major gaps being registered in Special Needs Education (shortfall of 87 percent), Local Languages (shortfall of 85 percent) and to a lesser extend Professional Education Studies (52 percent), Kiswahili (51 percent) and English (50 percent). Math and science teachers are also in short supply, with 44 percent of positions unoccupied (See Figure 3.1 below).

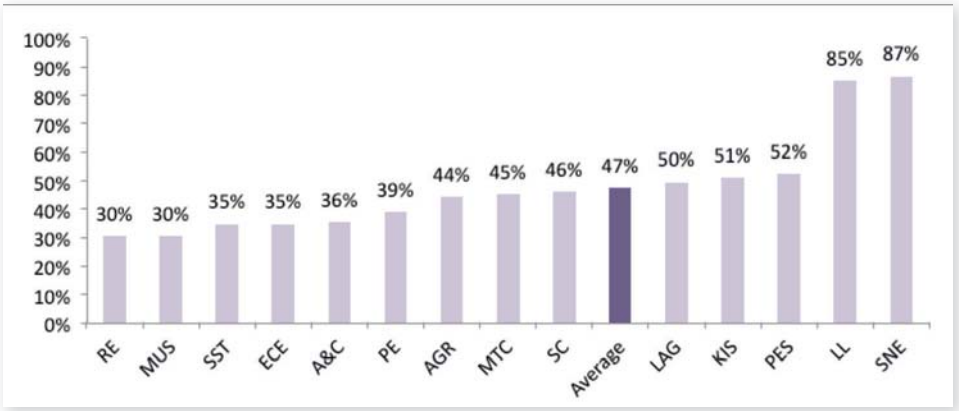
[48] It has been reported that schools with experienced teachers are not willing to take on teacher trainees. Therefore, teacher training colleges send their trainees to schools where there is a need for qualified teachers. Consequently, the trainees do not receive the professional coaching they need.

[49] Whereas practical assessments (school practice and child study) are scored by PTC teaching staff and moderated by KyU, written exam papers are scored by Kyambogo University. The six final exam papers are: math, English, social studies, professional education studies, science and cultural studies.

[50] Non-teaching staff shortages are also a concern.

Figure 3.1: Distribution of PTC Vacancies, by Subject, 2012

Percent



Source: TIET/MoES data, March 2012.

Note: RE - Religious Education; MUS - Music; SST - Social Studies; ECE - Early Childhood Education; A&C - Arts and Crafts; PE - Physical Education; AGR - Agriculture; MTC - Mathematics; SC - Science; LAG - English Language; KIS - Kiswahili; PES; Professional Education Studies; LL - Local language; SNE - Special Needs Education.

Tutor staff shortages can be explained by a combination of factors: (i) the failure to advertise vacant posts due to wage bill restrictions; (ii) the lack of trained personnel willing to work in certain PTCs due to poor staff accommodation or working conditions, in particular related to the lack of funds to support department activities; (iii) the lack of candidates with the required qualifications, particularly for languages and math; (iv) delays in the recruitment of staff; and (v) lengthy promotion mechanisms which can be demoralizing and further contribute to make the profession unattractive.

To overcome staff shortages, PTCs rely on various strategies such as the use of resource persons, the recruitment of part-time tutors when funds are available, spreading existing staff across the unstaffed subjects, or sharing the curriculum with trainees for them to read widely and discuss with their peers. Core PTCs also rely on coordinating center tutors.

4.3 PTC Effectiveness

This sub-section assesses PTC effectiveness through three angles: (i) Grade III Certificate exam outputs and results; (ii) primary teacher performance in school; and (iii) the effectiveness of PTCs in transforming inputs into quality outputs.

PTCs' Examination Results

The annual number of candidates sitting the Grade III Certificate exam has ranged from 9,100 to 11,700 over the 2006-11 period (See Table 3.8 below). The pass rate shows no stable trend, generally ranging from 70 percent to 85 percent, although it reached a high of 93 percent in 2011, equivalent to an output of 8,562 graduates. Over the years, increasingly more trainees have graduated with credits: from 41.5 percent in 2006, the share reached 88.9 percent in 2011. However, the number of those obtaining a distinction remains marginal, at barely one percent in 2011. Female participation is not an issue, accounting for half of the candidates on average. Women have also closed the gap with their male counterparts as far as graduation is concerned.[51] The gender parity index increased from 0.91 in 2009 to 0.98 in 2011, entailing that for every 100 men, 98 women obtained the certificate.

[51] The share of women passing the exam increased from 36 percent in 2008 to 51 percent in 2011.

Table 3.8: Grade III Certificate Examination Results, 2006-11

Number and Percent

	2006	2007	2008	2009a	2009b	2010	2011
Number of Candidates	9,411	10,947	11,063	11,658	9,172	11,193	9,167
Share of Female	—	—	—	—	48.7%	49.0%	52.0%
Number who Passed	7,860	7,805	7,461	8,768	6,793	8,976	8,562
Number who Failed (1)	1,551	3,142	3,602	2,890	2,379	2,217	605
Pass Rates							
Overall	83.5%	71.3%	67.4%	75.2%	74.1%	80.2%	93.4%
Pass with Distinction	0.0%	0.0%	0.0%	0.2%	0.0%	0.2%	1.0%
Pass with Credit	41.5%	55.9%	54.2%	65.3%	59.6%	73.7%	88.8%
Pass	42.0%	15.4%	13.3%	9.8%	14.4%	6.2%	3.6%
Fail	16.5%	28.7%	32.6%	24.8%	25.9%	19.8%	6.6%

Source: TIET/MoES reports, various years.

Note: (1) Includes the ungraded.

A more detailed review of examination data and pass rates by subject shows that the pass rates for all six major subjects are high, above 96 percent in 2011. Unavailability of disaggregated data by score prevents an assessment of the level of subject mastery for each however. This can, on the other hand, be appraised on the basis of teachers' performance in class, as below.

School Teachers' Performance

The National Assessment of Progress in Education (NAPE) 2011 report provides information on teachers' subject mastery according to certain teacher characteristics.[52] Among these, teachers' professional qualifications and teaching experience are of particular interest: while the former inform on how Grade III teachers perform vis-à-vis teachers with other qualifications, the latter offers a gross assessment of the quality of newly recruited teachers (those with five years or less of teaching experience), reflecting the quality of PTC teacher training in recent years.[53]

[52] The NAPE assessments have been carried out since 1996 at the primary level (and 2008 at the secondary level) by UNEB, to monitor the effectiveness of the teaching and learning process. They consist in nationally-representative sample-based evaluations, testing P3 and P6 students on numeracy and literacy in English and literacy in their local language for some P3 pupils. Teachers were administrated tests similar to those for P6 pupils in numeracy, literacy and oral reading.

[53] See Mulindwa and Marshall, 2013 for their recent in-depth analysis of NAPE 2011 results.

Table 3.9 consolidates the information on teachers' levels of proficiency in numeracy, literacy and oral reading according to the qualification held and the number of years of experience (Annex 3.5 provides similar information based on mean test scores). Teachers were rated as proficient if they attained the advanced level in each area.

Table 3.9 : Share of Proficient Primary P3 and P6 Teachers, by Qualification and Teaching Experience, 2011

Percent

	Numeracy	Literacy	Oral Reading
Teaching Qualification			
Grade III Certificate	69.2	72.2	37.0
Grade V Primary	64.5	81.1	45.1
Others *	65.5	75.9	37.9
Teaching Experience			
1-5 Years	72.1	73.9	36.4
6-10 Years	64.1	76.8	34.1
11-15 Years	64.0	69.6	40.2
16-20 Years	65.8	76.8	50.6
Over 20 Years	70.7	79.3	54.0
Total	**66.1**	**72.6**	**37.5**

Source: NAPE Report, 2011.

Note: * Others include DTE, UCE and UACE, teacher trainees and community development certificates.

Although more Grade V teachers were rated as proficient in literacy and oral reading (81 percent and 45 percent respectively) than Grade III teachers (72 percent and 37 percent respectively), the reverse is true in terms of numeracy, with relatively more Grade III teachers mastering the subject (69 percent) than Grade V teachers (64 percent). Nevertheless, these differences are not statistically significant according to the NAPE analysis, implying that they are explained by factors other than teachers' qualifications. Teachers' experience shows that newly recruited teachers (those with under five years of teaching experience) are the most proficient in numeracy (72 percent, compared to 66 percent on average), but fare poorly in literacy and oral reading. This trend might highlight some improvements in the teaching of math both in schools and PTCs, and a weakening of literacy teaching in recent years.

Notwithstanding those observations, the very low level of proficiency in oral reading is striking (37.5 percent overall) and of particular concern. It is potentially associated with an inadequate coverage of reading in PTCs and a general lack of books and of a reading culture. More specifically, the limited use of spoken English and interferences with mother tongues are thought to be counterproductive.[54]

[54] The PTC language issue is complex. The language of instruction is English but graduate teachers are expected to deliver the thematic curriculum in local languages in rural areas, and in English in urban areas where a multiplicity of local languages are often represented among pupils. The lack of textbooks and pedagogical material in local languages is a further limitation.

Proficiency levels in numeracy and literacy are better, although not fully satisfactory, respectively reaching 66 percent and 73 percent.[55] Inadequate PTC numeracy teaching methods, teacher trainees' initially poor math and science skills and the lack of math and science subject tutors could account for teachers' poor mastery of science subjects (NAPE/UNEB, 2011b).

In fact, although teachers' poor initial levels in certain subjects has been raised by many stakeholders as a major issue, the evidence does not support the idea. Firstly, as shown by Mulindwa Najjumba and Marshall (2013), the general level of teachers' knowledge is decent, although there is room for improvement. Secondly, the general idea that the teaching profession does not attract the most academically talented students is to be challenged.

Table 3.10: Distribution of UCE Scores, UCE and Grade III Candidates, by Division, 2009

Percent

	All Candidates	2011 Grade III PTC (1)
Division		
I (8-32points)	7.6	3.8
II (33-45 points)	18.5	40.3
III (46-58 points)	27.0	55.3
IV (59-69 points)	42.4	0.6
VII-IX (70 points and above)	4.4	-
X	1.8	-
Total	**100.0**	**100.0**

Source: UNEB database for UCE 2009 data.
Note: (1) Based on 704 Grade III trainees from 4 PTCs (Bwera, Canon Apolo, Gulu, and Kiyoora). Division I are the best performers, Division I to Division IV are passes and Division VII to Division X are fails.

[55] Major weaknesses in numeracy could be observed in rounding off numbers, dividing fractions by factions, applying fractions in novel situations, finding numbers' least common multiples and square roots, drawing bar charts, drawing parallel lines and accurately measuring angles. Among others, these highlight major shortcomings in PTC tuition, such as the absence of mental arithmetic practice, the failure to apply teaching and learning concepts to real-life situations, the use of inadequate geometrical instruments and so on (NAPE/UNEB, 2011a). In literacy, although more teachers are rated well, some displayed difficulties, especially in areas related to reading and answering questions on a poem, reading and interpreting a picture sequence, writing a well-sequenced narrative, using the correct format, naming objects with the correct spelling, or identifying opposites and giving plurals. Reasons related to PTC tuition are here again stressed. They concern some tutors' lack of skills in properly teaching reading, the limited exposure of trainees to reading, limited practice in writing essays and the lack of reading materials (NAPE/UNEB, 2011a). Mulindwa and Marshall (2013) evaluate overall performance in NAPE literacy and numeracy at roughly 85 percent in 2011, whereas ideally proficiency would reach 100 percent. Nevertheless, teachers systematically outperform their students: they scored twice as high in numeracy and 2.5 times higher in literacy, compared to their P6 students.

Table 3.10 compares the distribution of 2009 O' Level scores for all candidates with that obtained by those who went on to present the Grade III Certificate in 2011. The results indicate that Grade III candidates in the subsample of PTCs were not among the lower achievers. Although this result cannot be generalized given the sample size, it remains quite illustrative and contradicts the general view that trainees join PTCs as an alternative to the higher school certificate (HSC) programme.

Nevertheless, teacher quality remains an issue and tackling it is of major importance. Indeed, research into the issue confirms that the poor quality of pupils' learning outcomes is strongly correlated with the poor quality of teaching. It further acknowledges that effective pupil learning and achievements are hampered by weaknesses in teachers' pedagogical skills and classroom practices.[56] Mulindwa Najjumba and Marshall confirm this in their recent work on NAPE results (Mulindwa Najjumba and Marshall, 2013). They show that the achievements of pupils whose teachers have greater knowledge of pedagogical practices are consistently higher, albeit marginally. This appears to be confirmed by the fact that most teachers have greater knowledge than their students. These findings therefore point to flaws in teachers' pedagogical practices, calling for further attention on how pedagogy is handled in the PTC curriculum and by tutors. The new PTC curriculum to be introduced in 2013 and the greater use of continuous assessment tools are very encouraging in this respect.

PTC Effectiveness in Transforming Inputs into Quality Outputs

Ensuring that trainees acquire the relevant pedagogic skills and knowledge during their PTC course is all the more important that training teachers is costly. Every year, training colleges are ranked according to their global pass rates. The question raised is whether certain colleges outperform because they tend to be effective in bringing trainees to a certain academic level, or because they attract the best candidates in the first place. This issue is analyzed here through a simple multivariate analysis, conducted on a sample of PTCs for which trainees' scores at Grade III and O' Level were available, in addition to other PTC characteristics.[57] Given the limited number of colleges providing this information, the analysis is not meant to be representative, but just informative.

Table 3.11 below presents a summary of the main factors affecting Grade III Certificate scores, as well as their significance and respective impacts.[58] Trainee gender and age have no impact on final exam scores. All major college variables do have an effect on the other hand: higher trainee-tutor ratios are associated with higher scores (worse performance), whereas higher shares of tutors on the payroll tend to reduce scores (better performance). Higher trainee-support staff ratios and core PTCs are also associated with better performance (lower scores). Nevertheless, as shown by the determination coefficient (R2), the main impact on score variations is produced by trainees' initial level at college entry, proxied by their O' Level score. O' Level scores explain 87 percent of the variance in the distribution of Grade III scores and a one-point drop in the aggregate score is associated with Grade III scores that are 0.1 point lower. This result indicates that: (i) the best performing PTCs are good because their trainees had initially good skills; and (ii) the direct differentiated effect of PTCs on trainee performance is limited. Although this result cannot be generalized given the nature of the sample, it raises a fundamental question pertaining to PTC effectiveness, their ability to adequately train teachers and their capacity to raise the skills of their teacher trainees to desirable levels.

[56] Pontefract and Hardman, 2005 and Akyeampong et al., 2006.

[57] The sample only includes four PTCs: Bwera, Canon Apolo, Gulu and Kiyoora. The Grade III score computed refers to the average of the different subject scores obtained.

[58] Note that the higher the score, the poorer the trainee's performance (See Annex 3.6 for statistics on scores).

Table 3.11 : Grade III Certificate Examination Score Determinants, 2011

	Model 1	Model 2	Model 3
Variables			
Trainee is Female		0.074	0.074
Trainee's Age		0.025	0.025
Trainee O' Level Aggregate Score	0.111 ***	0.109 ***	0.109 ***
Trainee-Tutor Ratio		0.007 ***	0.012 ***
% of Tutors on the Payroll		-0.206 ***	
PTC is Core		-0.038 ***	-0.065 ***
Trainee-Support Staff Ratio			-0.011 ***
Constant	1.093 **	0.617 ***	0.524 ***
R2	86.9%	87.7%	87.7%
Number of Observations	704	704	704
Average Score at Grade III (1)		6,1	

Source: Bwera, Canon Apolo, Gulu and Kiyoora PTC Grade III Examination data, 2011.
Note: (1) Average scores were computed based on trainees' subject grades. *** Statistically significant at the 1% level; otherwise only significant at the 10% level and beyond.Reading note: The higher the value of the final Grade III score, the worse the performance, as for O' Level aggregates. Apart from the O' Level variable, those with a negative sign have a favorable impact on scores, which implies improved performance at Grade III exam, and vice-versa.

The various shortcomings in PTC trainings identified earlier certainly contribute to explain this disappointing result. Although the new curriculum, along with the institutionalization of continuous assessments, will certainly have a positive impact on the way future teachers are trained, other challenges that hamper adequate teaching and learning processes will need to be tackled to improve overall primary teacher training college performance (MoES, 2012; Kyeyune et al., 2011; and PTC questionnaires). These include:

- Insufficient instructional materials to support school curriculum delivery;
- Inadequate staffing;
- Inadequate trainee dormitories and staff accommodation;
- Dilapidated infrastructure;
- Ill-equipped training facilities, including laboratories, workshops and libraries;
- Limited ICT facilities, restricting research opportunities;
- Inadequate transportation to facilitate PTE activities;
- Lack of resources to induct newly appointed PTE staff;
- Minimal support and supervision by inspectors, limiting effective guidance;
- Overstretched capacities of coordinating center tutors; and
- Inadequate resources to facilitate the continuous professional development of PTE staff.

An issue often raised by PTC heads is the insufficient level of funding. The level of capitation grants (USh 1,800 per trainee per day) for both PTCs and NTCs is said to be too low to adequately run teacher colleges. To properly assess this statement, more in-depth analysis of teacher training college financing is needed. Indeed, scant available data show that the recurrent public cost of training a teacher is high for primary relative to lower secondary (in PTCs it is twice the level of that in NTCs – See earlier Table 1.6). Furthermore, disparities in PTC recurrent unit costs are stark, ranging from a factor of one to three.[59] Despite the fact that colleges' ability to raise additional funding impacts on the level of unit costs, so do how efficiently teachers are used and the existence of economies of scale. Disentangling the factors at stake will require collecting appropriate data on a sizeable number of PTCs (and NTCs).[60]

Measures to Improve the Quality of Teaching

Very much aware of the challenges facing primary teacher education, MoES must rely on a series of strategies to reverse the current situation (MoES, 2012). They include: (i) implementing the revised PTE curriculum; (ii) conducting a needs' assessment of PTC facilities and infrastructure, to plan necessary improvements; (iii) remapping coordinating centers' catchment areas; (iv) implementing a probation curriculum for newly qualified primary teachers; (v) enhancing the career prospects of all teachers to improve performance, through the rollout of the Certificate in Teacher Proficiency course; (vi) implement customized performance targets for PTC staff; and (vii) encourage diploma tutors to upgrade. These strategies cover both initial teacher education and continuous professional development measures that are believed to make a difference to teachers' pedagogic knowledge and skills, which in turn will be reflected in enhanced pupils' outcomes (Dembélé and Legoka, 2007).

The quality of teaching is an issue not only in PTCs but also in NTCs and ITCs. NTCs also suffer from a series of challenges that include understaffing, inadequate and dilapidated infrastructure, insufficient teaching and learning materials, a lack of institutionalized career development programmes and limited government funding (MoES, 2012). The poor results of S2 pupils at the NAPE assessment, particularly those taught by DES holders, further question the quality of the tuition provided by NTCs.[61] Improving the quality of training and learning in NTCs is a MoES priority, the following strategies having been designed: development of a teacher development management system (TDMS) for secondary; review of the secondary teacher education curriculum to harmonize it with the secondary education curriculum; rehabilitation and construction of new infrastructure; equipment of college facilities; rollout of the Certificate in Teacher Education Proficiency (C-TEP) course for secondary teachers and of NTC lectures in line with the science policy; strengthening of the communication strategy to better support supervision and visitation.

The BTVET sector is also engaged in a series of reforms to improve its quality. As shown earlier, many challenges still prevail. Many are related either to: (i) the lack of instructors, both in terms of quality and quantity; or (ii) the requirements of the ongoing BTVET reform and the rapidly changing technological and health environment, that affects both the take-up of technologies and the emergence of new diseases. Increasing intake capacities to accommodate more instructor trainees in more diversified trades is urgent. Future planned interventions consist in: (i) a review of curricula to match the BTVET reviews; (ii) the expansion

[59] Based on data for five PTCs. The cost per trainee varies between USh 0.7 million and USh 2.7 million. Table 1.6 indicates that public recurrent unit costs for PTC trainees average USh 1.2 million.

[60] The difficulty in obtaining accurate data on PTC and NTC functioning and finance issues has prevented an in-depth analysis of unit costs which could have helped to identify the key factors.

[61] See Annexes 3.7 and 3.78 for details. There are no significant differences in terms of the proficiency of S2 teachers in the various subjects. See Mulindwa and Marshall (2013) for further analysis of S2 pupils' and teachers' results in the 2011 NAPE.

of the fields of training; (iii) the rehabilitation and expansion of colleges; (iv) the upgrading of Nakawa and Jinja vocational training institutes to National Instructor College status; and (v) the strengthening of Kyambogo University and DIT's roles as awarding bodies (MoES, 2012).

Conclusion

The analysis conducted in this chapter has revealed a series of issues worth noting. The first pertains to the low share of underqualified teachers in government schools (three percent in primary and six percent in secondary schools). MoES' sustained effort to ensure that teacher candidates enroll in training colleges and that in-service training is made available to underqualified teachers to upgrade and certify merit much of the credit for this situation. However, as the system expands, more teachers will be needed and the intake capacity of training colleges (especially PTCs and ITCs) will need to grow. Adequate provision for such expansion must be properly planned.

In-service training provision must be strengthened both in terms of its quantity and quality, to offer upgrading and certifying opportunities to those teachers in need of enhanced skills, as well as for the great numbers of underqualified teachers operating in private schools and BTVET institutions. The system currently suffers from many challenges that prevent it from providing adequate support to teachers. This will require a global approach to ensure that in-service training plays its role of helping teachers acquire and improve their teaching skills and keep abreast of new teaching techniques.

A third issue relates to PTC functioning. Analyses have shown that PTCs do not provide teacher trainees with the required skills. PTCs have virtually no impact on final trainee performance (those PTCs that outperform do so because their trainees had initially good skills). Also, evidence suggests that tutors face great difficulty in transmitting their higher knowledge to their trainees in class, which is apparently not related to tutors' subject knowledge or mastery of content, generally believed to be decent. The fact that many teachers fall below standards in certain subjects (oral reading and, to a lesser extent, math), points more to weak training of tutors in terms of pedagogy.

Tackling PTC efficiency will require a comprehensive approach, starting with tutors' own practices. Additional analysis on how PTCs operate would be fruitful to better understand the factors that drive quality and to identify the levers that could have a positive impact on both training college performance, and ultimately on that of teachers.

Finally, PTC and NTC funding levels and mechanisms require further analysis. The level of capitation grants is said to be too low to adequately run teacher colleges. In-depth analysis of teacher training college financing is required to better assess this statement. Scant available data on PTCs show both relatively high public unit costs and wide disparities from college to college. Although colleges' ability to raise additional funding impacts on the level of unit costs, how efficiently teachers are used and potential economies of scale do also. Disentangling the factors at stake would require collecting appropriate data on a sizeable number of PTCs and NTCs.

CHAPTER 4

TEACHER MANAGEMENT

This chapter analyzes four aspects of teacher management: (i) the nature of recruitment procedures and their effectiveness and appropriateness in the light of national education objectives; (ii) teacher deployment issues; (iii) the causes and magnitude of absenteeism; and (iv) the nature and scale of teacher attrition.

Section 1: Teacher Recruitment Procedures

This section describes the process of teacher recruitment and analyses its sustainability in terms of its capacity to recruit enough teachers over time, with a focus on teachers in government schools.[62]

1.1 Teacher Recruitment Process

The process of teacher recruitment varies according to the level of education.

Primary Level

Vacancies are identified at the school level by the head teacher, using the recommended staff establishment formula. The formula is applied in two steps:

1. Step 1 : Each class or stream must have a teacher. Therefore, any class or stream without one points to a vacancy to be filled.

2. Step 2 : Schools are entitled to teachers in line with their level of enrollment. If a school's pupil-teacher ratio is greater than at the national average (53:1 in 2012), then every 53 pupils over and above 371 (53 x 7 primary grades) will justify the need for an extra teacher.[63]

The number of vacancies at the school level, identified by the head teacher, is sent to the district education officer, who compiles the total number of vacancies in their district and sends it to the chief administrative officer, who in turn sends the needs to the central Ministry of Public Service (MoPS) for clearance. The MoPS consolidates the total number of teachers needed nationwide and liaises with MoFPED to determine the availability of funds for the projected recruits.

The resources available at MoFPED determine the number of teachers that can be recruited at the national level. Generally, this number is lower than the total number of vacancies identified and the number of vacancies will need to be reduced. The Office of the Permanent Secretary of MoES is responsible for determining how many teachers each district may recruit. Such decisions should aim to reduce disparities between district-

[62] According to interviews conducted with education stakeholders, there is no clear or unique process of teacher recruitment in private schools. Interviewees reported that private schools recruit teachers freely, paying little heed to MoES guidelines.[61] See Annexes 3.7 and 3.78 for details. There are no significant differences in terms of the proficiency of S2 teachers in the various subjects. See Mulindwa and Marshall (2013) for further analysis of S2 pupils' and teachers' results in the 2011 NAPE.

[63] If the school has less than seven grades or if some grades are merged into a single class, the figure will need to be computed according to the school's configuration.

level PTRs. Using district-level EMIS data, a review of school staffing levels enables the identification of any teacher surpluses. Should any be identified, these teachers will first be redeployed to other schools in the same district that are comparatively under-staffed. This reduces the number of vacancies initially identified.

Once this has been done for all districts, a new list of vacancies per district is derived. The total number of teachers to be recruited, according to fund availability, is then allocated among districts by MoES in proportion to their effective needs and the chief administrative officers are notified of the number of new recruits approved for their district. District service commissions are then requested to proceed with the recruitments, administrative officers issue the letters of appointment and district education officers deploy the new teachers to schools.

Candidates eligible for primary teacher positions must meet the following criteria:

- Successful completion of a MoES-approved training course (Grade III Certificate or Diploma in Education - Primary), and

- Registration with the MoES.

The primary school teacher recruitment monitoring report of 2011 shows that in all districts, the number of applicants was higher than the number of effective vacancies.[64]

Given that the government budget does not generally allow for the recruitment of the full number of teachers needed, some government schools are obliged to recruit teachers off payroll and pay them using resources mobilized by the school. It is estimated that about two percent of teachers in government schools are off the payroll (EMIS, 2010). There is no clear process for this kind of recruitment; despite the fact that every teacher must be registered with MoES before taking charge of a classroom, there is no control of the profiles of teachers recruited directly at the school level.

Secondary Level

Staffing gaps are identified at the school level by head teachers, based on the recommended teaching load and the subjects offered by the school. For each subject, the head teacher compares the total number of hours of class to be received by pupils based on their level and subject specialization, with the total number of hours of teaching available based on the existing teaching staff and their appropriate workload.[65] The difference between the two determines the potential need for more staff. Head teachers then submit their needs, by subject, to the commissioner for secondary at MoES.

The commissioner for secondary aggregates all the needs at the national level, by subject, and sends the budget implication to the Permanent Secretary of MoES. MoES requests a budget allocation from MoFPED accordingly. Based on the availability of funds, MoES receives clearance from MoPS to recruit, and seizes the education service commission to effectively do so. The education service commission is responsible for the recruitment process (advertisements, short-listing, interviews, appointments), and MoES for the effective deployment of the new recruits, through secondary school commissioners, according to school-level needs.

Candidates eligible for secondary teacher positions must meet the following criteria:

[64] This is a signal that there are a large number of people who are ready to serve as teachers[63] If the school has less than seven grades or if some grades are merged into a single class, the figure will need to be computed according to the school's configuration.

[65] Each teacher is required to teach 24 periods of 40 minutes a week, equivalent to a 16-hour week. S1 and S2 streams should receive 50 periods of class per week, S3 and S4 should receive 36-38 periods and S5 and S6 should receive 26 periods per week.

- Successful completion of a MoES-approved training course (Grade V Certificate, Diploma in Education - Secondary or university degree in education), and

- Registration with the MoES.

Table 4.1, extracted from the Education Service Commission's annual report for the financial year 2011/12, provides some insight into the status of the recruitment of new teachers (also called assistant education officers – AEOs) in government-aided secondary schools.[66]

Table 4.1 : Appointment of New Teachers (AEOs) for Government-Aided Secondary Schools, 2011/12

Number

Subject	Vacancies	Number of Applicants	Number Shortlisted	Number Appointed	Share of Filled Vacancies
AEO (Mathematics)	70	67	54	39	56%
AEO (Chemistry)	60	38	34	15	25%
AEO (Physics)	38	36	33	14	37%
AEO (Biology)	110	47	43	22	20%
AEO (Agriculture)	9	300	60	9	100%
AEO (English)	58	82	66	50	86%
AEO (Kiswahili)	58	104	84	58	100%
Total	**403**	**674**	**374**	**207**	**51%**

Source: ESC, 2012.

During the 2011/12 financial year, 403 positions were identified as vacant in government-aided secondary schools. A total of 674 candidates expressed their interest in taking these positions. However, many of them did not meet the requirements. After analysis of their applications, only 374 candidates were determined to be eligible.[67] In science subjects (math, chemistry, physics and biology), the number of eligible candidates was lower than the number of vacancies. As a result, even when it was possible to recruit enough teachers in other subjects (agriculture, English, Kiswahili), the target number of science subject recruits could not be reached. Overall, only half of the positions advertised could be filled (207 out of 403), representing a major issue for government-aided secondary schools.

Summing up, budgetary constraints and the limited pool of eligible candidates for secondary teacher positions, especially in science subjects, are two major issues MoES faces in recruiting the adequate number of teachers.

[66] Government-aided schools include all government schools and a few private schools that receive government support.

[67] Further analysis is needed to identify the reasons for this shortage of adequate candidates.

1.2 The Education System's Recruitment Capacity

To assess the extent to which the education system has the capacity to recruit the expected number of teachers needed in the future, Table 4.2 compares past trends to projected future needs.

Table 4.2: Past Trends and Projected Future Needs in Teacher Recruitment, 2000-25

Number and Percent

	2000	2010	2025 (Low Scenario)	2025 (High Scenario)	Average Annual Growth Rate		
					2000-10	2010-25 (Low Scenario)	2010-2025 (High Scenario)
Primary							
Government Schools	82,148		216,580	263,186	4.4%	3.7%	5.0%
Private Schools	28,218	57,827	99,266	98,695	7.4%	3.7%	3.6%
Total	110,366		315,846	361,880	5.3%	3.7%	4.6%
Secondary							
Government Schools	12,541	25,970	70,555	141,483	7.6%	6.9%	12.0%
Private Schools	17,843	55,068	123,024	134,524	11.9%	5.5%	6.1%
Total	30,384	81,038	193,579	276,007	10.3%	6.0%	8.5%

Source: EMIS data and projections of the number of required teachers based on Chapter 2.
Note: Secondary includes lower and upper cycles.

Table 4.2 shows that in order to maintain current trends in the expansion of education coverage (low scenario), the current government recruitment rhythm is appropriate. Indeed, the projected average annual growth rate in teaching staff numbers is similar to average annual growth in the recent past. However, to achieve the set education sector objectives (EFA, USE/UPPET) according to the high scenario, recruitment efforts will have to be intensified. In government primary schools, the total number of teachers needed to meet the education objectives will have to increase at a rate of 5.0 percent per year, slightly higher than growth in the recent past (4.4 percent). At the secondary level, the average annual growth in government teaching staff will have to increase from 7.6 percent to 12.0 percent. Private schools will also have to increase their recruitment efforts in the future, both at primary and secondary levels, regardless of the scenario.

Section 2: Teacher Deployment

This section examines whether in practice, the teacher deployment process described previously is effective. This can be considered through two approaches, examining: (i) whether the theoretical teacher deployment model is effectively implemented; and (ii) whether the approach used to determine teacher needs is appropriate. If the answer to both of these questions is affirmative, then no great disparities should exist in terms of teaching staff coverage among districts or schools. The focus is on government schools.

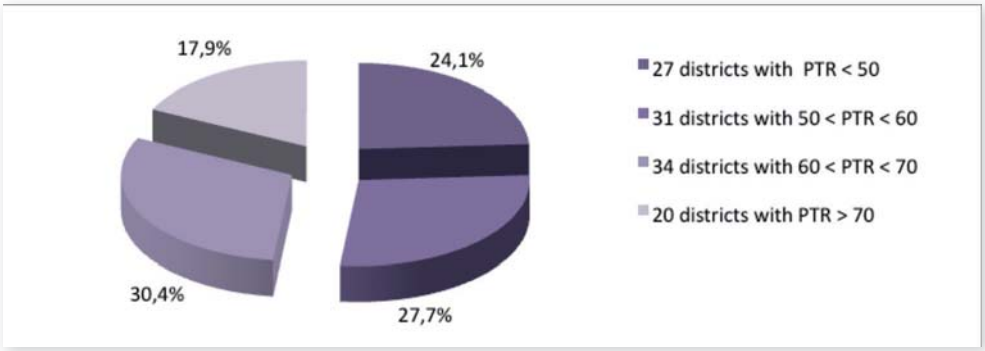
2.1 Teacher Deployment in Primary Schools

The first criterion for teacher allocations to primary schools is that each class must have a teacher. A simple way to assess if there are enough teachers in the primary cycle is therefore to compare the number of teachers in government primary schools with the number of classes. Using EMIS data for 2010, the ratio computed at the national level is equal to 1.1. The ratio being greater than 1 indicates that there are enough primary teachers at present.[68] Therefore, it is in principle possible for MoES to provide every government primary school class with a teacher without resorting to further recruitment.

However, a breakdown of this ratio by district shows wide disparities. Whereas some districts display teacher-class ratios greater than 1 (reaching 1.6 in Kampala, 1.7 in Kween and almost 2.0 in Maracha), in 28 of the 112 districts the ratio is lower than 1 (the most extreme cases being Oyam, Mubende and Kyankwanzi with ratios of 0.7 and Buyende with a ratio of 0.4). These 28 districts are clearly in short supply of teachers.

Figure 4.1: Distribution of Districts According to their PTR Level, 2010

Percent



Source: Authors' computations using EMIS data, 2010. (See Annex 4.1).

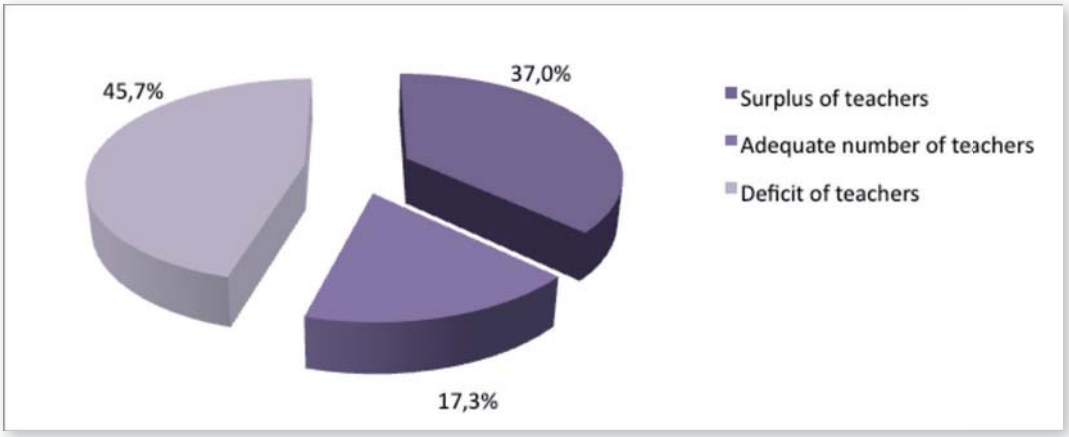
The second criterion for teacher allocation in government primary schools is the level of enrollment, based on the pupil-teacher ratio. EMIS data provide the basis to compute the PTR at the national level: in government schools it was equal to 57:1 in 2010. Teacher allocations to districts should therefore be conducted so that each district's PTR tends towards 57:1. Again, the comparison of district-level PTRs shows great disparities. Considering PTRs ranging between 50:1 and 60:1 to be acceptable, the data show that among the 112 districts, 31 have a suitable number of teachers, 27 districts have more teachers than the national average and 54 districts are understaffed (See Figure 4.1 above). Among these 54 districts the magnitude of the issue varies of course. In the most extreme cases, the PTR is greater than 70:1.

[68] Note that teachers in government schools that are not on the payroll are included in the computation. They represent two percent of the teaching staff in government schools. If the ratio was computed without taking them into account, it would be equal to 1.09, indicating that even the number of payroll teachers alone is sufficient at the national level for this criterion to be met.

Further analysis can help to specifically determine which schools and districts lack teachers. Using the national PTR of 57:1 in 2010, the number of classes per school and the level of enrollment in each school, the exact number of teachers a school is entitled to can be computed, based on the staff establishment formula. The result of this computation can then be compared to the current number of teachers in each school. This enables the identification of schools with a surplus of teachers (37 percent), schools with a deficit of teachers (45 percent) and schools with the adequate number of teachers (17 percent), as in Figure 4.2.

Figure 4.2: Distribution of Schools According to their Level of Teaching Staff, 2010

Percent



Source: Authors' computations using EMIS data, 2010.

For more detailed analysis still, it is possible to determine the share of schools in each district that are in each of the three situations outlined above (See Table 4.3 below). This table is very useful for planning purposes, identifying the districts that are in acutest need of teachers: those where the share of schools with teacher deficits is very high. In Kotido district for instance, every school is in deficit, and Amudat and Buyende barely fare better. The table also indicates which districts show potential for solving teaching staff supply issues by internal redeployment. Teachers could be withdrawn from schools with a surplus and posted in schools with deficits, such as in the districts of Bushenyi, Jinja, Kampala, Kapschorwa, Kiboga, Kween, Lyantonde, Mityana, Rakai, Rukungiri and Wakiso, where more than half of schools have more teachers than they are technically entitled to.

Table 4.3: Distribution of Schools According to their Level of Teaching Staff, by District, 2010

Percent

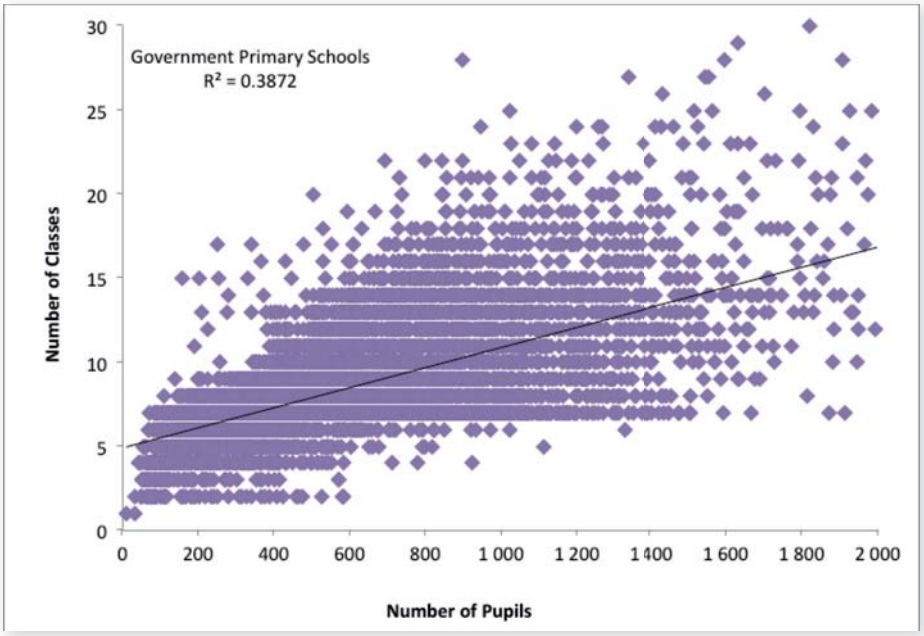
	% of Schools with Teacher Deficit	% of Schools with enough Teachers	% of Schools with Teacher Surplus
District (Selection)			
Agago	81	11	8
Amudat	91	9	0
Amuru	87	2	12
Apac	74	7	19
Budaka	80	11	9
Bushenyi	21	27	53
Butaleja	80	10	10
Buvuma	77	8	15
Buyende	89	7	4
Jinja	18	12	70
Kaabong	80	13	7
Kabale	13	16	70
Kaberamaido	76	15	9
Kampala	13	10	77
Kapchorwa	7	7	86
Kiboga	24	26	50
Kibuku	76	10	14
Kotido	100	0	0
Kumi	84	2	14
Kween	27	7	67
Kyegegwa	77	16	8
Lyantonde	20	11	69
Mityana	14	21	65
Moyo	14	12	74
Namayingo	74	6	20
Napak	76	7	17
Otuke	78	9	13
Rakai	7	13	80
Rukungiri	8	15	77
Tororo	83	7	10
Wakiso	23	13	64
Total	**45.7**	**17.3**	**37.0**

Source: Authors' computations using EMIS data, 2010 (See Annex 4.2 for the complete table).

These results show that the staff establishment formula is not adequately implemented. A better monitoring of teacher deployment in government primary schools is therefore needed.

In a broader analysis, even if the staff establishment formula could be implemented properly, the relevance of the criteria used for teacher deployment is still questionable. The first criterion used in school-level teacher allocations (the existence of a class) will only be equitable if schools of the same size have approximately the same number of classes. Figure 4.3 below examines whether this is the case.

Figure 4.3: School-Level Consistency in the Deployment of Government Primary Teachers, 2010



Source: Authors' computations using EMIS data, 2010.

Figure 4.3 shows wide disparities at the school level between pupil and class numbers. For instance, schools with about 800 pupils may have anything between 7 and 22 classes, whereas schools with 7 classes may cater for anything between 100 and 1,500 pupils. Consequently, on the single basis of the first criterion, teacher deployment is bound to be inequitable, bearing little relation to the number of pupils enrolled.

This result highlights issues related to the creation of classes in a school. Who decides whether a school needs an additional class? Under what conditions is a school entitled to create a new class? How are extra classes created? Providing answers to these questions is very important, not only for equity reasons, but also because they affect the quality of the teaching environment. Moreover, there are costs attached to the creation of additional classes. Indeed, a decision to create a new class entails a series of expenditures, to build a classroom, hire a teacher and so on.

If MoES is to continue using the existence of a class as the first condition for teacher allocations then it should at least make sure that the creation of classes is consistent: schools with about the same number of pupils should have about the same number of classes. The consistency of the system authorizing schools to create classes can be assessed on the basis of the determination coefficient (R^2) for the linear regression of Figure 4.3. The determination coefficient provides information on the proportion of classes in a school that are explained by the number of pupils in that school. Conversely, the degree of randomness (1-R2) measures the proportion of classes that are not explained by the number of pupils.

In the case of Uganda, the R2 determination coefficient is 0.387 and the 1-R2 degree of randomness is 0.613. This indicates that in about 61 percent of cases the creation of an extra class is not determined by the number of pupils in the school. In countries where the creation of new classes is handled properly, the value of the R2 coefficient is generally higher than 0.8, suggesting that in Uganda there is ample scope for improvement. For instance, the creation of double shifts (when there are many pupils) or multi-grade classes (when there are few) can help to improve overall consistency between schools in the creation of classes. Until this happens, the current teacher deployment strategy will lack relevance.

2.2 Teacher Deployment in Secondary Schools

In secondary schools, groups of students (streams) learn different subjects taught by various teachers. A teacher can teach more than one subject. This setting, which differs from primary, implies adopting a different approach to analyze teacher deployment. The method used here is to compare the number of hours of learning pupils should receive and the number of hours of class the teaching staff in a given school should provide.

In a simple example of a lower secondary school with one stream per grade, each stream should receive 10 periods of 40 minutes a day, or 33.3 hours per week. Considering all four grades, the schools' pupils should receive a total of 133.3 hours of teaching. As lower secondary teachers are expected to provide 16 hours of class per week, such a school would in theory require at least nine teachers (133.3/16=8.3).

In upper secondary, streams were supposed to take three principal subjects and one optional subject in 2010. Each principal subject should be allocated six periods per week of 40 minutes each and the optional subject should receive four periods per week. In total, a stream of upper secondary pupils should therefore receive 14.7 hours of class per week. Considering both grades and assuming the school has a single stream per grade, the school's pupils should receive a total of 29.4 hours of teaching. At this level, teachers are supposed to provide 12 hours of class per week, so the school would require at least three teachers (29.4/12=2.4).[69]

Comparing the number of hours of class to be received by secondary pupils and the number of hours the teaching staff should provide is helpful to analyze: (i) whether there are enough teachers at the secondary level; and (ii) whether the deployment of secondary school teachers is consistent with the number of hours of class to be dispensed.

Are there enough secondary teachers in the system?

According to available data, the total number of streams in 971 government secondary schools was equal to 10,024 in 2010, equivalent to a total theoretical learning time of 294,204 hours.[70] On the other hand, the total number of teachers was 25,585 in these 971 schools, with a theoretical workload of at least 307,488 hours.[71] Even with this underestimated figure, the number of hours of class the teaching force should provide is greater than the number of hours pupils should receive, indicating that secondary government schools have a plentiful supply of teachers nationwide.

At the school level however, the comparison highlights the fact that only 53 percent of government secondary schools had enough teachers in 2010. With the increase in the upper secondary teacher workload from 12 to 16 hours per week, and assuming all other factors were held constant, this figure would improve to 82 percent. This enables to conclude that the measure, if made effective, should help to considerably reduce the gap in terms of teaching staff in many secondary government schools.

[69] Note that in 2012 the organization of upper secondary changed. Teachers are now supposed to teach 16 hours per week and students now take four principal subjects and one subsidiary, corresponding to 17.3 hours per week. Given that available data are for 2010, the former pedagogical organization was used for the analysis. The results, although different in terms of figures, lead to the same conclusion.

[70] Of the 996 government secondary schools that were operating in 2010, EMIS collected complete information on the number of streams per grade (S1 to S6) for 971 schools.

[71] For the purpose of the computation, it is assumed that each teacher gives about 12 hours of class per week. In fact, most are lower secondary teachers and are supposed to give 16 hours of class per week.

The above results suggest two key findings :

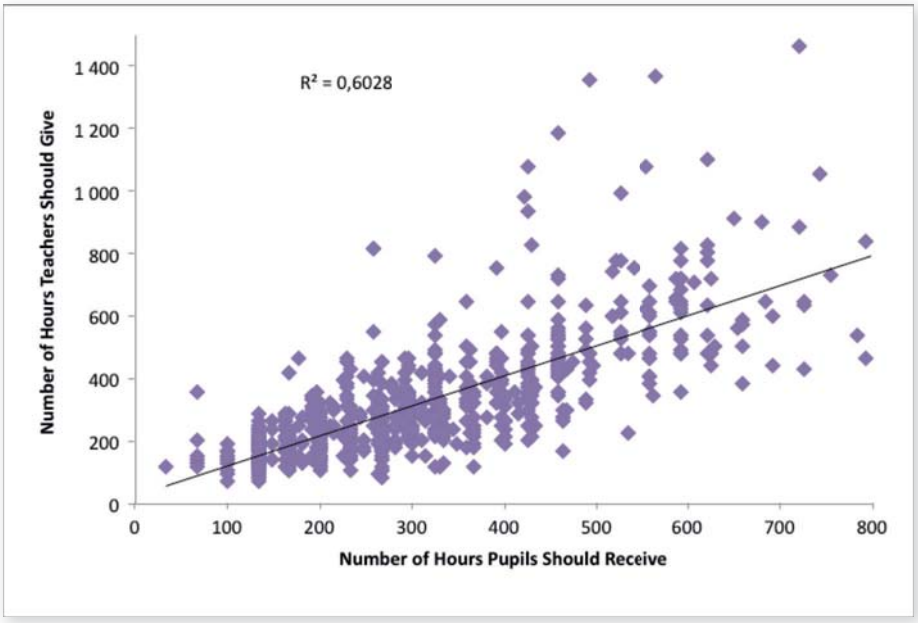
1. The resources currently available for teachers in secondary government schools (including both central and school-level resources) are sufficient to hire the adequate number overall. This may of course conceal a number of different scenarios where specific subjects are concerned. Indeed, partial evidence suggests that some subjects (especially science subjects) lack teachers. It is therefore advisable to replicate the above analysis on a subject by subject basis when the appropriate data can be obtained.

2. The facts that the number of teachers is sufficient at the national level and that many schools are nevertheless in short supply indicates that there are issues with respect to the effectiveness and consistency of teacher deployment.

Are available teachers posted where they are most needed ?

Good secondary-level teacher deployment would be characterized by a greater number of teaching hours being made available to schools where they are needed. Here, the level of consistency in terms of the allocation of teachers to secondary schools is assessed on the basis of the determination coefficient (R^2) of the linear regression of the number of teaching hours and the number of learning hours at the school level. The coefficient illustrates the proportion of teaching hours made available to a school that is explained by the number of learning hours students are supposed to receive. The degree of randomness (1-R2) thus measures the proportion of secondary teacher allocations that are not justified by pupils' expected timetables (See Figure 4.4 below).

Figure 4.4: School-Level Consistency in the Deployment of Government Secondary Teachers, 2010



Source: Authors' computations using EMIS data, 2010.

Overall, the figure shows a general tendency to allocate more teaching hours (more teachers) to schools with greater learning needs (more streams). However, the spread of schools also shows that considerable disparities exist. So for instance, schools needing to dispense approximately 450 hours of class may have the teaching staff required to provide anything between 200 and 1,000 hours. Conversely, schools staffed to provide 300 hours of class might have enrollment justifying anything between 300 and 600 hours of teaching. This general trend is confirmed by the high value of the degree of randomness 1-R2 (0.40), indicating that factors other than theoretical class time explain the deployment of secondary teachers in 40 percent of schools. As for primary, MoES should revise its teacher deployment mechanisms to ensure that greater equity is achieved.

Section 3: Teacher Absenteeism

Despite the fact that teacher absenteeism is a salient topic, little information is available. Even the definition of teacher absenteeism can create controversy. Just as it can refer to not reporting to work, it could include being idle at work, or devoting time to non-curricular activities in class. As a result, it is generally difficult to collect information on teacher absenteeism and to assess its scale.

MoES has tried to capture the magnitude of teacher absenteeism via repeated joint monitoring reviews, two of which have been conducted each year since 2008. The methodology adopted is simple. Teacher absenteeism is defined as including situations where teachers are supposed to report to work, but have not. Even if this definition can be considered as leading to an underestimation of the real magnitude of teacher absenteeism, it does provide some insight into the issue. MoES authorities visit a randomly selected sample of schools, unannounced. Each review has reached the same conclusion: teacher absenteeism is very high, sometimes reaching 30 percent. Moreover, not only are teachers absent, but head teacher absenteeism is also a crucial issue and is believed to encourage teacher absenteeism (See Annex 4.3 for figures).

Another source of information that can help to estimate teacher absenteeism is SACMEQ data (See Chapter 1). During the evaluation in 2010, head teachers were asked the following question: About how often does the school have to deal with the following behaviors of teachers? Three items on teachers' attendance at work were included in the response. The findings are summarized in Table 4.4.

Table 4.4: SACMEQ Findings on Issues Related to Teachers' Attendance at Work, 2007

Percent

	Answers		
	Never	**Sometimes**	**Often**
Prevalence of Different Types of Behavior			
Late Arrival at School	3.0	52.3	44.6
Absenteeism	6.0	53.2	40.5
Skipping Classes	25.1	45.1	29.8

Source: Computed by authors using SACMEQ data, 2007.

Teacher attendance is clearly a major issue in the Ugandan education system. Only 6 percent of schools reported not having an issue with teacher absenteeism, whereas in about 40 percent of schools this is a frequent occurrence. Other significant issues reported by head teachers are skipping classes, which is frequent in about 30 percent of schools, and late arrival at work, a regular occurrence in about 45 percent of schools.

The combined results from the SACMEQ and joint monitoring reviews lead to the same conclusion: teacher absenteeism, defined as cases where teachers are not at work, is frequent in the Ugandan education system. The factors explaining it are still unknown and further research on the question will need to be carried out to better understand the causes and identify levers on which MoES can act to reduce the phenomenon.

Section 4: Teacher Attrition

Teacher attrition refers to the loss of individuals from the profession. In order to assess its magnitude, EMIS inserted a specific question on the issue in the questionnaire used to collect school statistics in 2012. Head teachers were asked to provide the number of teachers who had left the school at the end of the 2011 school year and the reason for their departure. The analysis of their answers, combined with the school data collected in 2011, is summarized in Table 4.5 below.

Table 4.5: Teacher Attrition in Primary and Secondary Schools, 2011

Number and Percent

	Number of Teachers	Number of Teachers Leaving the Profession	Attrition Rate
Education Level			
Primary	169,503	6,616	4%
Secondary	47,194	2,185	5%

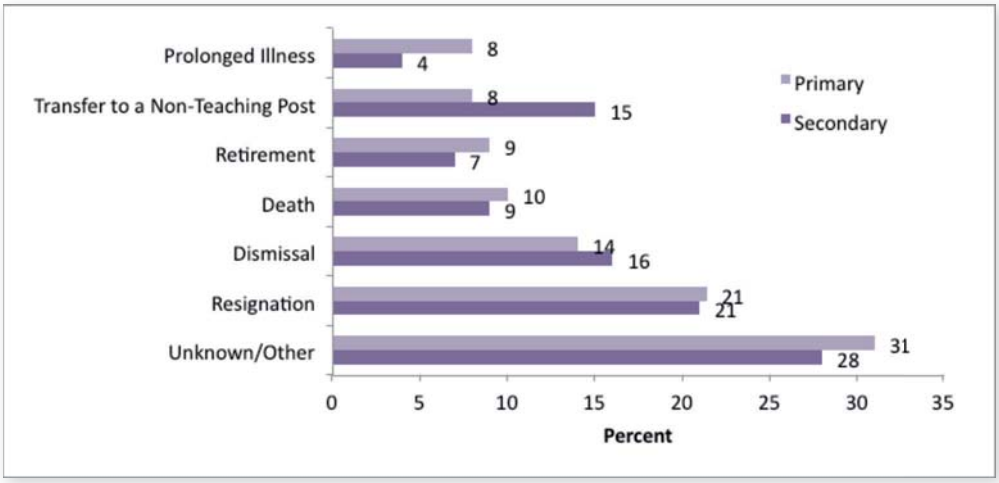
Source: Authors' computation using EMIS data, 2011.

The teacher attrition rate in Uganda is estimated at about four percent in primary and at about five percent in secondary schools. This level is in line with the African average.[72] When collecting the data on teacher attrition, EMIS identified six major causes: retirement, death, prolonged illness, transfers to non-teaching posts, dismissal and resignation. They are depicted in Figure 4.5 according to their respective weights in the overall rate.

[72] Teacher attrition is two percent in Eritrea, three percent in The Gambia, Kenya and Zanzibar, five percent in Zambia and Malawi, and six percent in South Africa, for instance (UNESCO/BREDA, 2009).

Figure 4.5: Causes of Teacher Attrition and their Respective Weights, Primary and Secondary, 2011

Percent



Source: EMIS, 2010.

The figure leads to the following conclusions:

1. The main cause for teacher attrition is resignation. In both primary and secondary, this explains about 21 percent of total attrition. Further investigation is needed to establish whether this is related to high levels of job dissatisfaction (see Chapter 6), or if it is the result of planned career choices, using teaching as a stepping stone to different positions.

2. A considerable share of attrition is due to dismissal (15 percent on average), signaling the importance of issues related to ethics and teacher behavior.

3. Transfers to non-teaching posts also contribute significantly to attrition, especially at the secondary level, where they account for 15 percent of attrition (against just 8 percent at the primary level). This implies that secondary teachers are more likely to be promoted than primary teachers. Chapter 5 will investigate career ladder inequities in greater depth and Chapter 6 will show how they impact on teachers' job satisfaction.

4. The comparative weights of death and prolonged illness are individually low (less than 10 percent), but together represent between 13 percent and 18 percent of the total phenomenon.

5. Retirement, which can be considered as the most natural cause of teacher attrition, explains only 7 percent to 9 percent.

Due to individual needs for professional mobility, attrition is a natural phenomenon that affects all types of jobs. In the case of the teaching profession in Uganda, the estimated level of attrition is not excessive. Now that the causes of attrition are known, education stakeholders should implement actions to keep its level under control.

Conclusion

This chapter has analyzed four key aspects of teacher management: recruitment, deployment, absenteeism and attrition. At the primary level, even though the government will have to step up its recruitment effort, the increase will be modest. Primary teacher numbers will have to grow at an annual average of 5.0 percent, compared to the current 4.4 percent. The greatest increase in the teaching force will however be required at the secondary level, where annual growth in numbers should increase from 7.6 percent to 12.0 percent. Chapter 3 demonstrated that the training system is producing more secondary teachers than the system needs, implying that where the resources are available, the government should face no difficulty in finding the extra candidates. The need for secondary teachers is particularly crucial in science-related subjects like biology, chemistry, math and physics.

Teacher deployment is potentially the greatest challenge. Although procedures for the identification of needs and the posting of teachers to schools are clearly defined, teacher allocations are apparently not conducted by the book. At both primary and secondary levels, despite there being a sufficient number of teachers to cover national needs, on the ground many schools lack teachers whereas others have a surplus. Further analysis is required to understand the difficulties education authorities face when trying to implement the teacher allocation process.

On the other hand, the processes used for the identification of teacher needs are questionable. Indeed, they strongly depend on the number of classes or streams in a given school. Yet, schools with similar enrollment may have vastly different numbers of streams, and schools with similar numbers of streams may cater for highly variable numbers of pupils. It is therefore necessary to complement the teacher allocation process with clear rules that set the conditions for the creation of extra streams.

Teacher absenteeism is a crucial issue. Repeated joint monitoring reviews have shown that 17 percent to 30 percent of teachers are absent from work. In addition, not all those who are present actually give lessons, which further increases the number of teaching hours lost by pupils. Education stakeholders need to conduct in-depth studies to understand the causes of absenteeism, propose remedial action and suggest ways to ensure that pupils do not lose effective learning time on a day-to-day basis.

Finally, a survey conducted by EMIS during the 2011 school year helped assess the magnitude of teacher attrition: it is estimated at four percent for primary teachers and five percent for secondary teachers. The main cause for teacher attrition is resignation (21 percent of the cases), followed by dismissal (16 percent). Retirement, the most natural cause of teacher attrition, only explains 9 percent of the phenomenon overall. The next chapter will further analyze issues related to teacher management by reviewing key aspects of teachers' career development.

CHAPTER 5 TEACHER CAREER DEVELOPMENT AND REMUNERATION

This chapter examines teacher management issues through a financial lens, by focusing on teachers' professional development and its impact on their remuneration and cost. As seen in Chapters 3 and 4, the education system relies on a variety of teacher profiles, with varying levels of qualification and types of status, which shape both remuneration patterns and career paths. Teachers' career development thus has a direct impact on education budgets on the one hand (teacher salaries represent a sizeable share of the total recurrent education budget – see Chapter 1). On the other, salaries and career opportunities impact the relative attractiveness of the profession, and the resulting ability of the system to attract and retain the required individuals (See Chapter 6 on job satisfaction).

This chapter deals with issues pertaining to government teachers' career development, and its impact on remuneration at both primary and postprimary education levels.[73] Two main data sources are used: (i) the civil service and teacher salary scales; and (ii) teaching staff payroll data. They enable to review issues pertaining to teachers' professional mobility (in Section 1); teacher salary levels and composition (in Section 2), and the appeal of the profession, at both national and regional levels (in Section 3).

Section 1: Teachers' Professional Mobility

Government teachers' career development prospects are defined by the scheme of public service, which provides a general comprehensive framework for the professional progression and development of civil servants. The scheme describes minimum entry requirements; training requirements at each level; career paths; job descriptions and specifications; required skills, qualities and work experience; and age requirements.

For teaching staff, the scheme provides clear information on the requirements to upgrade within the profession. Teachers can benefit from various promotion avenues within the education sector: (i) gradual promotion within the same level; (ii) promotion to a higher level, such as from primary to secondary or to a PTC; and (iii) transfer from teaching to administrative positions at the district or central levels. These requirements are based on a series of specific criteria that teachers must meet in terms of academic qualifications and experience:

1. Minimum level requirement: this consists in the possession of a teaching certificate from a recognized teacher education institution, a certificate of registration with TIET/MoES in the relevant grade and a medical fitness certificate. All newly appointed teachers are subject to a probation period of six months (reduced from two years to motivate candidates), after which they are eligible for teaching, subject to their supervisors' favorable appraisal. School head teachers and inspectors request written confirmation of employment three months before the end of the probation period from the education Permanent Secretary, copy to the education service commission for postprimary teachers, or from the chief education officer, copy to the district service commission for primary school teachers.

[73] Although the system also relies on contract-based teachers, this chapter deals with teachers hired by the government only, as they constitute the bulk of the teaching force and are those with access to formal career paths. University teaching staff are not included in this analysis due to a lack of comprehensive data.

2. Professional growth: According to the scheme of service, teachers are expected to develop their careers through various mechanisms, including upgrading their qualifications, undertaking refresher courses, conducting research, attending workshops and seminars and so on. For certain top positions, research in relevant fields and the development of a demonstrable workable project may be required. To date, continuous professional development has not been institutionalized, being based solely on each individual's initiative to use available in-service training programmes, including distance-based learning or evening classes.

Table 5.1: General Stream Positions in the Teaching Career Ladder, by Education Level, 2008

	Required Professional Qualification	Salary Grade
Preprimary		
Care Giver	ECD in Child Care	(1)
Nursery Teacher	ECD Teacher Certificate	
Primary		
Education Assistant	Grade III Certificate	U7
Senior Education Assistant		U6
Principal Education Assistant	Diploma in Education - Primary	U5
Deputy Head Teacher		U5
Head Teacher	Degree in Primary Education	U4
Secondary		
Assistant Education Officer	Diploma in Education - Secondary (Grade V Secondary)	U5
Education Officer	Bachelor Degree in/with Education	U4
Senior Education Officer		U3
Principal Education Officer	Masters in/with Education	U2
Deputy Head Teacher		U1
Head Teacher		U1
PTC		
Tutor	BA in a relevant field + - Diploma in Teacher Education (DTE)	U4
Senior Tutor		U3
Principal Tutor	Masters in a relevant field + DTE	U2
Deputy Principal		U1
Principal	Masters in a relevant field + Diploma in education planning	U1
Senior CCT	BA in a relevant field + DTE	U3
Principal CCT	Masters in a relevant field + DTE	U2
Deputy CCT		U1
NTC		
Lecturer	Higher diploma/BA in a relevant field + Diploma in Education (DE)	U4
Senior Lecturer		U3
Principal Lecturer	Masters in a relevant field + DE	U2
Deputy Principal		U1
Principal		U1

Source: Adapted from ESC, 2008 (See also Annex 5.1).

Note: (1) ECD staff are not on the payroll as they are all private sector. CCT – Coordinating center tutor.

3. Experience: Promotion to the next education level is based on seniority in certain positions, which may vary between six years for initial positions (assistant teacher and teacher posts) and three years in higher positions (senior teacher to deputy head). Jumping career steps is not usually allowed, although exceptions are occasionally made for candidates with the required skills when no candidate with the required seniority is available for a vacancy (accelerated promotion).

4. Competitive selection: Promotion to management positions (deputy head and head teacher) is based on a direct selection process whose nature is highly competitive.[74]

However, appointments remain above all subject to the availability of a vacancy and funds.

Table 5.2: BTVET Positions in the Teaching Career Ladder, by Education Level, 2008

	Required Professional Qualification	Salary Grade
BTVET (Technical schools/Farm Schools/Vocational and Technical Colleges - VTCs)		
Tech/Farm School Teacher	Advanced Craft Certificate + CTTE/CVTI or /DTTE/DVTI	U6
Senior Tech/FS Teacher		U5
Principal Tech/FS Teacher	Ordinary Technical Diploma with CTTE/CVTI or /DTTE/DVTI	U4
Tech/FS Deputy Head Teacher	Higher diploma/degree in a relevant field + CTTE/CVTI or DTTE/DVTI	U3
Tech/FS Head Teacher		U2
BTVET (Technical Institutions, Technical and Vocational Institutions, Community Polytechnics)		
Assistant Instructor	Advanced Craft Certificate + CTTE/CVTI or /DTTE/DVTI Ordinary Tech Diploma + CTTE/CVTI or /DTTE/DVTI	U5
Instructor		U4
Senior Instructor	Higher diploma/degree in a relevant field + CTTE/CVTI or /DTTE/DVTI	U3
Principal Instructor		U2
Deputy Principal		U1
Principal	Higher diploma/BA in a relevant field + CTTE/CVTI or DTTE/DVTI	U1
BTVET (Technical Colleges, College of Commerce, Specialized Technical Institutions) (1)		
Assistant Lecturer *	Ordinary diploma in a relevant field + CTTE/CVTI or /DTTE/DVTI or DE	U5
Lecturer		U4
Senior Lecturer	Higher diploma/BA in a relevant field + CTTE/CVTI, /DTTE/DVTI or DE	U3
Principal Lecturer		U2
Deputy Principal	Masters in a relevant field + CTTE/DTTE or DE	U1
Principal		U1
Health Technical Institute (2)		
Assistant Lecturer	Ordinary diploma in a relevant field + a CIC	U5
Lecturer	Higher diploma/BA in a relevant field + CHT/DHT or DE	U4
Senior Lecturer		U3
Principal Lecturer	Masters in a relevant field + CHT/DHT or DE	U2
Deputy Principal		U1
Principal		U1

Source: Adapted from ESC, 2008.
Note: * for UTC/AC/FTI only. (1) Specialized technical institutions consist in the Fisheries Training Institute, Cooperative College, community polytechnics, Instructors College, the Institute of Survey and Physical Planning, Wildlife Training Institute and the National Meteorological Training School (2) Includes instructors and tutors. DE – Diploma in Education. HE – Higher education

[74] Applicants for top positions are usually acting head teachers, acting deputies or very experienced teachers.

Tables 5.1 and 5.2 above provide an overview of the career ladder and related salary grades for teaching staff, extracted from the scheme of service, for the general stream and BTVET respectively. As shown, qualified primary teachers (Grade III Certificate holders) start their career at U7-upper level. Secondary teachers start at U5-upper (Grade V Certificate holders) or U4-lower (university graduates). U5-upper is also the grade at which assistant teaching staff in BTVET and PTCs is recruited, while U4-lower is the grade at which most PTC, NTC and BTVET institute tutors/lecturers and teachers start (some BTVET teaching staff may start at U4-upper). Top management positions (deputy and head teacher) are set at U1. Note that ECD teaching staff are not covered by the scheme, being recruited by private institutions.

Upward Mobility within Subsectors

While the scheme of service offers an interesting institutional framework to understand current career prospects, it is interesting to confront it with empirical evidence, to better assess teachers' effective professional development opportunities. The 2010/11 payroll provides the distribution of teachers according to their salary grades. Although not perfect, this provides some insight into promotion avenues within subsectors.[75] Table 5.3 illustrates a landscape of highly contrasted situations, according to the education level considered.

Table 5.3: Distribution of Teaching Staff and Promotion Opportunity Ratio, by Grade and Subsector, 2010/11
Percent

	Primary		Secondary		PTC		NTC		BTVET		
	Dist. (%)	Ratio (Base U7)	Dist. (%)	Ratio (Base U5)	Dist. (%)	Ratio (Base U5	Dist. (%)	Ratio (Base U4)	Dist. (%)	Ratio (Base U5)	
Grade											Grade
U1	—	—	1.2	2	8.5	22	4.3	6	9.1	33	U1
U2	—	—	3.2	5	0.6	1	1.4	2	17.3	63	U2
U3	—	—	1.5	2	4.7	12	17.7	25	20.0	73	U3
U4	4.7	6	31.6	51	46.2	121	71.3	100	23.8	87	U4
U5	5.4	7	61.5	100	38.0	100	3.0	—	27.4	100	U5
U6	7.4	9	0.1	—	0.2	—	0.9	—	2.4	—	U6
U7	82.1	100	0.9	—	1.8	—	1.4	—	—	—	U7

Source: Payroll, MoFPED, 2010/11.See Annexes 5.2 to 5.6.
Reading note: 82% of primary teachers hold a U7 position, while 7% of them are employed at the U6 level. So, for every 100 U7 positions there are 9 U6 positions.

The vast majority of primary teaching staff (82 percent) is employed at U7-upper level, whereas only about 10 percent hold either a U5 or a U4 position. This situation reflects both the predominance of education assistants within the primary teaching force and the limited career opportunities that are available to primary teachers. Indeed, for every hundred U7 positions there are just nine U6 positions, seven U5 positions and six U4 positions. At the secondary level, the top positions (U1 and U2) are held by just 4 percent of teaching staff, whereas the vast majority is found in U5 (62 percent) and U4 (32 percent) posts. Although initial promotion prospects are much better for most secondary teachers (U5 to U4 promotion ratio of 51 percent) than for most primary teachers (U7 to U6 promotion ratio of just 9 percent), there are virtually no upgrade opportunities beyond grade U4.

The more balanced distribution of grades in BTVET is certainly a reflection of the great variety of courses on offer, more than of a balanced distribution of staff grades. PTC teaching positions are mainly concentrated at grades U5 (38 percent) and U4 (46 percent), with few prospects to progress to higher levels. The situation is

[75] This analysis lacked longitudinal data (payroll data was available only for 2010/11), but assuming that the distribution of staff across grades/sectors remains grossly stable in the medium term, the conclusions hold.

somewhat different for NTCs, which offer a greater number of higher grade positions (18 percent are grade U3), although most tutors are employed at grade U4 (71 percent). This translates into a U4 to U3 promotion ratio of 25 percent.

Teaching staff promotion opportunities are particularly slack. The career ladder currently offers limited prospects for advancement, especially for primary teachers who represent the bulk of the force (80 percent). The new scheme of service has introduced some intermediate positions (based on experience and qualifications), such as the U6 senior teacher position, to favor teachers' career development. However, this seems to remain insufficient to provide primary teachers with truly improved prospects, and major financial constraints limit its proper implementation and impact.[76] Another promotional mechanism based on teachers' performance (as opposed to qualifications) is undergoing analysis; how individual performance could be included in the existing system is yet to be determined.

Section 2: Teacher Remuneration

This section examines teacher remuneration in greater detail. The issue is all the more important that wages are known to be a major factor of teacher motivation and job appeal (See Chapter 6). They also constitute the bulk of education spending (see Chapter 1), and as such require special attention. Both the pay structure and payroll data are used here to address specific remuneration issues. Whereas the pay structure provides insight into the official structure of teacher pay in Uganda and enables an assessment of salary progression, payroll data, offering a more comprehensive picture of remuneration, provide a breakdown of teacher remuneration.[77]

2.1 Teaching Staff Salary Progression

Teacher salary progression is analyzed using the pay structure, issued and reviewed annually by MoPS. Teaching personnel, as other civil servants, are included in the single-spine salary structure (See Box 5.1 for details). Related information for primary and postprimary teaching staff is gathered in Tables 5.4 and 5.5 below.

[76] The scheme is to be implemented according to a phased approach: it has started with the primary subsector; the secondary subsector was to be dealt with in 2011/12, but was delayed following funding constraints.

[77] Payroll data were available for only one fiscal year (2010/11), whereas pay structure data were available over many years, allowing for trend analyses (See Section 3 in this chapter).

Box 5.1: Civil Service Pay Reform in Uganda, 2002-17

The government of Uganda has undertaken a number of reform initiatives over the last 10 years to strengthen civil service efficiency and performance. The Public Service Pay Reform Strategy, adopted in April 2002 and approved by the cabinet in August 2006, rationalized public service pay into a single-spine structure with the aim of removing wage inequalities among similarly graded jobs. Two underlying factors were accounted for: (i) that semi-autonomous staff were paid more than civil servants; and (ii) the increasing cost of living. The strategy also targeted personnel with the requisite technical, professional and managerial skills, leading to significant pay increases for these categories, and recognized the need to enhance pay for scientists and researchers in 2006, introducing new salary grades. The relative pay increases varied between different salary scales, but overall nominal wages were to double by 2009/10. Some specific officers and high-level management were targeted for further increases, effectively tripling their total nominal wages. The strategy also set out long-term pay targets to be implemented over a ten-year period (to 2016/17). For most pay structures, these imply a further doubling of nominal wages over their 2009/10 level.

Overall progress was hampered by a number of developments:

- Rapid growth of public employment, driven by the expansion of service delivery;

- Wage provisions in the budget were insufficient to meet salary targets;

- Pay increases were selectively given to certain staff categories, particularly legal workers, health workers and U7 primary teachers (Grade III teachers' complaints about their low pay and high attrition rates justified raises of 5 percent in 2009/10, 30 percent in 2010/11 and 15 percent in 2012/13 following a USh 250 billion budget provision; the raises for higher grades were lower in 2012/13, at 8 percent for U6-U4 staff and 6 percent for U3-U1 staff); and

- Real compensation levels in the Uganda Public Service (teachers inclusive) have been blurred by the re-introduction of various non-salary allowances and benefits.

All government teachers are appointed according to the public service pay structure and paid by MoPS directly (primary teacher salaries are budgeted for at the district level, whereas secondary and tertiary teaching staff pay is budgeted for at the central level by MoES). Salaries are fixed at annual rates and paid in twelve equal monthly installments into individual bank accounts (as noted in the 2007 Teacher Report, although the introduction of bank wire transfers has eased the payment of teachers overall, it has also made it more difficult to suspend the payment of teachers who fail to report for duty or to adjust payments following promotions or relocation).

Circulars are issued every year providing the salary structure for the forthcoming fiscal year. Raises are based on the provision of resources and government priorities. Annual raises are one step on the salary segment, within the limit of the maximum salary on the scale for the post. Officers on probation are not paid salary increments until their appointment is confirmed and they are added to the payroll, which may take longer than the planned four weeks. Upon promotion, officers receive the minimum starting salary for the post, being entitled to a raise on the anniversary date of their appointment.

In-service training lasting for nine months or more and leading to a relevant qualification will lead to a pay raise of one step, except for staff on fixed salaries or those having reached the top of the scale.

Underqualified primary teachers are appointed at a fixed salary of USh 165,664 per month, whereas qualified primary teachers (Grade III Certificate holders) begin at USh 273,000 (U7-upper - spinal point 1). For the latter, 10 annual raises are planned, to eventually reach USh 312,833, a total increase of 15 percent or an average annual increase of USh 3,983 (See Table 5.3). Once teachers reach this point after 10 years in post, further promotion will depend on the generally limited available vacancies at grade U6.

Head teachers in the largest schools (Level I) earn double the salary of a qualified primary teacher on maximum pay (U7-upper), whereas those in small schools (Level VI) earn 10 percent more.[78] Average annual increments are also higher (three times, on average) among the top grades than among the lower grades.

Table 5.4: Primary Teacher Pay Structure, by Grade, 2010/11

Post	Grade	Monthly Salary		Raises		Starting Salary as % of Maximum U7 Pay
		Starting - Maximum ('000s USh)	No. of Steps	Total (%)	Annual Average (USh)	
Licensed Teachers *	U7-L	166 - 166	1 (Fixed)	0%	—	—
Education Assistants (Grade III)	U7-U	273 - 313	10	15%	3,983	100
Senior Education Assistants (Grade V)	U6-L	331 - 341	4	3%	2,559	106
Head Teachers (Grade IV)	U6-U	343 - 360	7	5%	2,340	110
Principal Education Assistants / Head Teachers (Level III), Deputy Heads / Teachers (Level II)	U5-U	372 - 472	15	27%	6,682	119
Head Teachers (Level II), Deputy Heads / Teachers (Level I)	U4-L	474 - 630	11	33%	14,181	151
Head Teachers (Level I)	U4-U	626 - 741	11	18%	10,422	200

Source: Pay Structure, Public Service Commission, 2010/11 (See also Annex 5.2).
Note: L - Lower, U - Upper. * Licensed Teacher is a status that is in the process of being phased out, as staff retire.

Qualified secondary and other postprimary teachers start with a monthly salary of USh 371,945 (U5-upper) and face the prospect of 15 annual raises, equivalent to a total pay increase of 27 percent for the grade, to reach a maximum of USh 471,805 (See Table 5.4 below). This consists in an annual average raise of USh 6,657, the lowest of all salary grades. By contrast, the top executive positions have a starting salary of USh 1.38 million and earn almost three times more than a qualified teacher on maximum pay (U5-upper).

Table 5.5: Postprimary Teacher Pay Structure, by Grade, 2010/11

Post	Grade	Monthly Salary		Raises		Starting Salary as % of Maximum U7 Pay
		Starting - Maximum ('000s USh)	No. of Steps	Total (%)	Annual Average (USh)	
Assistant Teachers (Diploma)	U5-U	372 - 472	15	27%	6,657	100
Teachers (University Degree)	U4-L *	552 - 629	6	14%	12,899	117
	U4-U	629 - 741	11	18%	10,149	133
Senior Teachers / Deputy Heads (O' Level-Day)	U3-L	744 - 817	7	10%	10,364	158
Principal Teachers / Deputy Heads (Boarding + A' Level-Day) / Head Teachers (O' Level-Day)	U2-L	991 - 1,065	6	8%	12,396	210
Senior Principal Teachers	U2-U	1,057 - 1,259	10	19%	20,198	224
Deputy Principals / Head Teachers (A' Level–Day + O' Level–Boarding)	U1 EXE-L	1,340 - 1,394	4	4%	13,575	284
Principals / Head Teachers (A' Level-Boarding)	U1 EXE-U	1,377 - 1,425	4	4%	12,037	292

Source: Pay Structure, PSC, 2010/11 (See also Annex 5.3).
Note: L - Lower, U - Upper. Teacher refers to officers, instructors, lecturers, tutors or technicians, depending on the institution considered. Posts in italics refer to secondary teachers. * Teachers with a university degree at U4-lower level start on step 5 of the scale.

[78] Before the implementation of the universal primary education policy, head teacher and deputy head teacher positions were divided among levels according to the size and category of their school (boarding/day school, O' Level/A' Level), from Level IV (smallest schools) to Level I (largest). The larger the school, the higher the salary. While this distinction by school size is not relevant today, the salary structure still reflects it.

Two major general observations can be derived from the above tables: (i) salary increments are small in size, especially for lower grade teaching staff compared to higher grades, and for primary teaching staff compared to postprimary staff; and (ii) the wage range is larger for postprimary teaching staff than for primary teachers, entailing more scope for salary progression.

The current career structure provides few upward mobility or salary increase options, other than through promotion to managerial posts, thus limiting effective opportunities for real career progress and evolution. Career structures are relatively flat, at both the primary and secondary/postprimary levels. For the majority of teachers, pay progression to the top of the scale is automatic, but once reached, the only avenues for further promotion are managerial vacancies or improving their academic qualifications. As determined earlier, even among teaching positions, opportunities for promotion are few, and managerial positions are not a realistic hope for most teachers.

2.2 Composition of Teaching Staff Remuneration

This subsection examines the composition of teacher pay, using 2010/11 payroll data. This provides the current gross wage for each teacher, taking their experience (grade and step) into account, as well as their allowances and benefits.[79] Gross wages are composed of basic pay (based on the pay structure grade and step) and allowances; some deductions are made before obtaining net wages. Allowances are almost non-existent, representing barely five percent of gross wages (See Table 5.6 below).[80] Indeed, since 1996/97, all civil servants receive a consolidated pay package and no housing or medical allowances per se are offered. Accommodation for teachers is however provided in some schools, particularly boarding schools, but is far from being the norm. Only primary teachers posted in hard-to-reach areas are entitled to a top-up allowance of 30 percent of their basic pay, although empirical evidence suggests that such allowances are not systematically paid and are usually at schools' discretion.

Deductions from the gross salary represent a quarter (24 percent) of gross wages on average, ranging from 20 percent in primary to 24 percent in NTC posts and a high 33 percent in higher education. At primary and postprimary levels, deductions consist in statutory taxes (PAYE –pay as you earn), local service taxes (LST), salary loans, any over- or unauthorized payments of public funds made, the cost or part of the cost of loss or damage to public property, any other outstanding debts to the government.[81]

[79] Note that most public primary teachers are on the payroll. According to the census, as of March 2010 there were 126,448 teachers working in public and government-aided schools, of which 116,707 were on the payroll (96.6 percent) and the remaining 4,350 (3.4 percent) paid from other sources (EMIS, 2010).

[80] This figure may be underestimated, as many allowances could not be tracked, especially those paid by schools. See the section below on public teaching staff benefits and allowances.

[81] Additional deductions such as the National Social Security Fund (NSSF) apply for higher education staff.

Table 5.6: Composition of Annual Teacher Remuneration, by Level, 2010/11

Thousands of USh and Percent

	Basic Wage	Allowances	Gross Wage	Deductions	Net Wage	Allowances as % of Gross Wage	Deductions as % of Gross Wage
Primary							
All	3,734	197	3,930	781	3,149	5.3%	19.9%
U7-U	3,437	192	3,630	669	2,960	5.6%	18.4%
Secondary							
All	6,024	317	6,341	1,390	4,951	5.3%	21.9%
U5-U	4,945	279	5,224	1,050	4,174	5.6%	20.1%
U4-L	7,006	350	7,356	1,656	5,700	5.0%	22.5%
PTC							
All	7,179	89	7,268	1,738	5,530	1.2%	23.9%
U5-U	5,254	34	5,288	1,131	4,157	0.6%	21.4%
U4-L	6,843	123	6,965	1,591	5,375	1.8%	22.8%
NTC							
All	8,096	137	8,233	1,987	6,246	1.7%	24.1%
U4-L	7,318	190	7,509	1,706	5,802	2.6%	22.7%
HE							
All	12,455	1,678	14,134	4,703	9,431	13.5%	33.3%
Average	**6,572**	**326**	**6,898**	**1,673**	**5,225**	**5.0%**	**24.3%**

Source: Authors' computations based on payroll data (MoFPED, 2010/11).

Public Teaching Staff Benefits and Allowances

All civil servants, including public teaching staff, are entitled to monetary and non-monetary benefits and allowances that complement their wage.

Although teachers are in theory entitled to various types of leave (annual leave, special leave of absence, study leave with and without pay, maternity and paternity leave, sick leave and sabbatical leave), many of them do not benefit (See Table 5.7). Often, either beneficiaries are unaware of their entitlement (such as for parental leave or sick leave recommended by a government medical officer), or they are unable to use it due to staff shortages (such as for leave without pay or sabbatical leave). The 2007 teacher survey also points to abuse of leave entitlements: many teachers are able to obtain study leave for courses not related to their work, and some teachers who are not granted study leave nevertheless enroll for further training, being absent from school without permission when the course demands. Anecdotal evidence suggests that some teachers are dismissed as a result.

Table 5.7: Public Teaching Staff Leave Entitlements, 2012

	Beneficiary	Benefit	Effectiveness
Type of Leave			
Annual Leave	All full-time payroll employees	School holidays with full pay	Teachers take holidays during regular school breaks
Special Leave of Absence	Granted by the head of institution	Up to 7 days per year	
Study Leave with Pay	Granted to effective payroll teachers	Up to 3 years with full pay	Course must be relevant and alternative teaching arranged. Cases of refusal or even dismissal are noted
Leave without Pay		Up to 5 years	Not easily granted due to the shortage of teachers
Maternity Leave	All pregnant women	60 days on full pay	
Paternity Leave		4 days on full pay	Seldom requested, due to lack of information
Sick Leave	If recommended by a govt medical officer	Up to 180 days in any year	Seldom requested, due to lack of information or fear of dismissal
Sabbatical Year	University staff	12 months with full pay in any 10–year period	Not effective

Source: Adapted from the Uganda Public Service Standing Orders, 2010.

Benefits consist mainly in retirement and medical benefits (See Table 5.8 below). All permanent teachers on the payroll are entitled to retirement benefits. They consist in a monthly pension commensurate with the teacher's rank, salary and length of service, and a gratuity paid at the beginning of retirement. Pensionable teachers may retire when: (i) they attain 60 years of age; or (ii) they have served for a continuous pensionable period of at least twenty years; or (iii) on medical grounds. The government provides free medical and dental care for permanent teachers, their spouses and children. Free medical care (including subsidized hospital treatment) and drugs are made available through government health facilities. However, very few teachers are aware of this benefit and drugs are often unavailable, meaning that this benefit is of limited effective use.

Table 5.8: Public Teaching Staff Benefits and Allowances, 2012

	Beneficiary	Benefit	Effectiveness
Benefits			
Retirement	Qualifying permanent teachers on the payroll	Variable monthly pension + a gratuity	Gratuities paid in installments, according to fund availability
Medical Care	Permanent teachers and their next of kin	Consultation + drugs + surgery in government health facilities	Not all are aware of it; drugs are often not available
Allowances			
Hardship Allowance	Staff working in hard-to-reach districts	Top-up allowance of 30% of the basic salary	Part of the wage package
Travel Allowance	All teachers	Safari day allowance/Per diems, transport	At schools' discretion
Extra-Duty Allowances	Appointed teachers		At schools' discretion; often paid late
National Exam Marking	National Examiners	Performance-related allowance (per copy marked)	Effective
Other compensations			
Injury Compensation	Appointed teachers	Medical bills	At schools' discretion
Death Gratuity	Permanent teachers	Formula based on job tenure and last grade held	
Burial Expenses	Civil servants, their spouses and children	Funeral expenses (coffin, transport, feeding)	At schools' discretion

Source: Adapted from the Uganda Public Service Standing Orders.
Note: Extra-duty allowances include all fees paid for staff replacement or overtime.

Of the allowances, the hardship allowance is the most appealing to teachers. It targets staff working in hard-to-reach districts, defined as areas that offer difficult living and working conditions, characterized by remoteness, insecurity and poor infrastructure, to attract and retain public officers in these areas.[82] Provision for hardship is effective since the July 2010, with two components: a top-up allowance of 30 percent of the basic salary and the use of teacher accommodation where available. Note that the scheme has not yet been fully implemented.[83]

Other types of compensation consist in extra-duty allowances, travel allowances, compensation for injuries, death gratuities and burial expenses, which are mostly paid at schools' discretion. The financial implications of all benefits and allowances (expect the hardship allowance) could not be assessed, as they could not be tracked in the national education budget.

[82] Such districts include: Kotido, Abim, Kaabong, Moroto, Nakapiripirit, Pader, Kitgum, Amuru, Gulu, Adjumani, Nwoya, Mukuno (Koome Island), Kalangala, Bundibugyo, Kisoro, Kanungu, Bukwo, Buvuma, Lamwo, Namayingo, Napak, Ntoroko, Mayuge (Makonge Island) and Bugiri (Sigulu Islands). Public officers working in the municipalities, town councils and headquarters of these local governments do not benefit.

[83] A further series of measures are to be implemented in due course, including: leave transportation concessions, a transportation allowance and preferential training and career development support, as well as targeted recruitment, the improved planning of public investments, pay reform strategies, the improvement of general infrastructure and sector-specific incentives.

Section 3: Teacher Pay in Labor Market Perspective

This section examines the relative level of Ugandan teacher remuneration, comparing it both to those professions requiring similar academic and professional qualifications nationally, and to teacher wages in countries with similar development levels. Analyzing the evolution of teacher wages over time is also instructive, providing an historic perspective.

Ugandan Teacher Remuneration in International Perspective

A helpful yardstick of teacher remuneration is the level of teachers' purchasing power compared to African countries with similar development levels. For the comparison, wages have been converted into US Dollars at purchasing power parity.[84] The analysis is conducted for both primary and secondary levels (See Table 5.9).

Table 5.9: Primary and Secondary Teachers' Annual Salaries, LICs, 2008-11

US$, Purchasing Power Parity

Primary		Lower Secondary		Upper Secondary	
Liberia	1,286	Liberia	1,320	Liberia	1,401
CAR	1,832	Sierra Leone	2,752	Sierra Leone	2,914
Sierra Leone	1,943	Guinea Bissau	3,697	Guinea Bissau	3,697
Madagascar	2,294	CAR	4,762	CAR	4,909
Guinea Bissau	2,501	Gambia, The	5,101	Gambia, The	5,465
Rwanda	2,861	Niger	5,473	Sudan	5,707
Togo	3,684	Sudan	5,707	Niger	6,361
Chad	3,798	Mali	5,841	Burundi	6,480
Guinea	3,819	Uganda	5,796	Average	6,732
Comoros	3,974	Average	5,970	Mali	6,884
Average	4,129	Burundi	6,480	Togo	7,728
Burundi	4,182	Comoros	6,804	Tanzania	7,920
Uganda	4,347	Rwanda	7,136	Uganda	8,167
Mali	4,381	Togo	7,279	Rwanda	8,202
Gambia, The	4,554	Benin	7,383	Comoros	8,478
Malawi	4,612	Tanzania	7,920	Malawi	8,493
Sudan	4,829	Malawi	8,493	Mauritania	9,791
Niger	4,882	Mauritania	9,374	Benin	13,289
Benin	7,232				
Mauritania	7,449				
Tanzania	8,188				

Source: Table 5.6 for Uganda, Pôle de Dakar database for other countries.
Note: For Uganda, primary teachers refer to Grade III Certificate holders, lower secondary teachers to Grade V Certificate holders and upper secondary teachers to university graduates.

[84] It is also common to compute wages as a share of GDP per capita. This allows the assessment of the sustainability of teacher costs, relating the cost of education to national resources (See Annex 5.7).

The analysis indicates that Ugandan primary teachers, with an annual wage valued at US$ 4,347 in 2010, fare slightly better than the average teacher in the region, whose wage is valued at US$ 4,129. Whereas primary teachers in Uganda are relatively better paid than their Rwandan and Burundi neighbors, they are slightly underpaid compared to their Malawian and Sudanese colleagues, and much worse off than their Tanzanian peers.

At lower secondary, teacher purchasing power varies according to the level taught, with Ugandan Grade V teachers faring slightly less well (US$ 5,796) than the regional average (US$ 5,970). At upper secondary, Ugandan teachers benefit from a comparatively favorable salary (US$ 8,167) when considered in regional context (US$ 6,732 on average). It is worthy of note however that the variations between neighboring countries in terms of teacher pay are significant, at both primary (ranging from a low US$ 1,286 in Liberia to a high US$ 8,188 in Tanzania) and secondary levels.

Teacher Remuneration in Ugandan Labor Market Perspective

Although it is insightful to establish how much Ugandan teachers earn in regional perspective, the teachers themselves, especially at the primary level, are much more interested in how their pay compares to other similarly qualified jobs, as their skills are mainly marketable locally.[85] To be able to assess the extent to which teacher wages are attractive, two sets of data are used: (i) the 2009 Uganda Labor Force Survey (ULFS), that helps to examine potential wage differentials between public and private workers; and (ii) the pay structure for civil servants belonging to different professional groups, that shows if teachers earn a salary premium or not.

Table 5.10: Median Monthly Wages, by Level of Qualification and Sector of Activity, 2009,

Thousands of USh

	Public/Govt. Sector	Private Sector	Ratio Public/Private
Qualification Level			
No Formal Schooling		90	--
Primary	70	100	0.7
Some Secondary	210	150	1.4
Upper Secondary	234	180	1.3
Postprimary Specialization	200	170	1.2
Postsecondary Specialization	350	200	1.8
Degree and Above	850	500	1.7
Total Population	**300**	**150**	**2.0**

Source: ULFS, 2009.

While the 2009 labor survey does not provide information on teacher remuneration as such, it does provide interesting data on wages by level of qualification. This can be used to assess the extent to which government teachers are better or worse off than private sector workers. Indeed, data gathered in Table 5.10 show that the public sector tends to offer better wages than the private sector, regardless of the level of qualification. For the academic qualifications held by teachers (postprimary, postsecondary and degree specializations), the public sector premium ranges from 20 percent to 80 percent.

The civil service pay structure is used to assess the relative attractiveness of government teacher pay compared to other civil servants. The annual pay structure issued by MoPS covers primary teachers, medical workers, police, prison staff and legal professionals. Table 5.11 consolidates this information for grades that are relevant to teachers in 2010/11.

[85] It is also common to compute wages as a share of GDP per capita. This allows the assessment of the sustainability of teacher costs, relating the cost of education to national resources (See Annex 5.7).

Table 5.11: Public Service Salary Structure, by Profession, 2010/11

Thousands of USh

	Primary Teachers		Other Civil Servants µ		Medical Workers		Police and Prison Staff		Legal Professionals	
	Start.	Max	Start.	Max	Start.	Max	Start.	Max	Start.	Max
Grade										
U7-L	166	166	190	205	320	335	260	282	—	—
U7-U	273	313	224	268					—	—
U6-L	331	341	278	305	370	388	—	—	645	645
U6-U	343	360	299	334			284	310		
U5-U	372	472	372	472	—	—	305	340	752	752
U4-L	474	630	474	629	—	—	—	—	752	1,100
U4-U	626	741	629	741	—	—	—	—		

Source: Public Service Salary Structure, MoPS, 2010/11.
Note: Other Civil Servants includes postprimary teachers.

As data show, primary teachers benefit from a specific wage scale, which tends to provide U7-upper and U6 teaching staff with better pay than regular civil servants: teachers earn a premium varying between 8 percent (U6-upper maximum salary) and 22 percent (U7-upper starting salary). U7-upper and U6 primary teachers are also better paid than prison and police personnel, but tend to fare less well than their medical peers and legal professionals. Beyond grade U6, primary and postprimary teachers follow the same wage structure as any other civil servant. Only legal professionals seem to benefit from higher wages at all grades.

Two major observations can be derived from this analysis: (i) the primary teacher starting salary generally remains above the average salary, but the comparative advantage disappears beyond a certain point (above grade U6); and (ii) the salaries of secondary and other postprimary teachers are in line with those of other civil servants and have evolved similarly over the years.[86]

[86] IWage trends analysis further shows that whereas the purchasing power of postprimary teachers has deteriorated over recent years (as for other civil servants with similar grades), for primary teachers it has followed important but erratic increases (See Annex 5.8). No major pay rise has been recorded since 2004/05 for postprimary teachers (as for most civil servants). Both Grade V and university graduate teacher wages have steadily decreased in real terms as a result, by about 25 percent over 2005-11, with a further decrease in 2012. Note that these evolutions have enabled the convergence of primary and secondary teacher pay, making the gap more reasonable and financially sustainable in a context of sector expansion.

Conclusion

This chapter has reviewed some major features pertaining to teachers' career progression and remuneration. A major striking feature of the current career structure is that it provides limited opportunities for real career development. Upward mobility within subsectors is indeed particularly slack, especially for primary teachers who represent the bulk of the teaching force (80 percent). For every 100 grade U7 positions, there are just 9 positions at U6 and 7 positions at U5 grades. The new scheme of service, although introducing intermediate positions, still appears to be insufficient to provide primary teachers with positive career development.

In addition, the pay structure is particularly flat: salary increments are small, especially among the lower grades and for primary teaching staff. Once the top of the scale has been reached (after just 10 years of teaching), the only avenues for career development are promotion to managerial posts (of which there are few) or qualification upgrading (which does not necessarily entail a raise, but can provide further promotion opportunities). Fully implementing the scheme of service seems critical; innovative ways to ensure its financing should be explored, given that funding is the main constraint to its implementation.

Empirical evidence tends to show that Ugandan teachers (especially primary teachers) are relatively well paid compared to both teachers in other LICs, and compared to other Ugandan workers (except medical and legal professionals). Indeed, in purchasing power of parity, primary teacher pay was valued at US$ 4,347 in 2011, against US$ 4,129 on average in other LICs. At the secondary level, disaggregated data show that while lower secondary teachers (Grade V) tend to earn relatively less than their peers in other LICs (US$ 5,796, against US$ 5,970), upper secondary teachers (university graduates) earn relatively more (US$ 8,167, against US$ 6,732). On the local market, it has been observed that: (i) the public sector globally offers individuals with similar qualifications better wages than the private sector; and (ii) within the public sector, the primary teacher entry salary is comparatively attractive, with U7-upper teachers earning a wage premium of 22 percent over other civil servants of similar grade, with the exception of medical and legal staff. This comparative advantage disappears beyond grade U6 however, as postprimary teacher salaries are in line with those of other civil servants.

Nevertheless, any discussion about wages should take place within a global framework that allows to assess all options and to discuss potential trade-offs in an objective way. Chapter 1 established that the teacher wage bill already occupies a sizeable share of public recurrent spending, which limits further increases.[87] Yet ensuring teachers receive salaries that allow them to sustain a decent living and maintain high levels of motivation is also important. Placing this discussion in a global education policy debate where trade-offs are analyzed on the basis of financially simulated options is necessary to reach sustainable and efficient solutions that favor both quality and equity.

[87] For a given budget, any increase in the wage bill translates into cuts in other spending (such as teaching and learning materials, or inspections) which can ultimately harm education quality.

CHAPTER 6 TEACHERS' JOB SATISFACTION AND SOCIAL DIALOGUE

Beyond the contextual factors and more traditional dimensions of teacher management discussed in previous chapters, two crucial, although more subjective and less quantifiable areas are yet to be examined in the analysis of teacher issues: teachers' job satisfaction and the social context. The development of a teacher policy cannot ignore the socioprofessional context, which is key in encouraging the social dialogue necessary for building consensus around education policy and reform. This chapter will review these final two dimensions within the framework of the major challenges identified in Chapter 5.

Section 1: Primary School Teachers' Job Satisfaction

Teachers are not only tasked with imparting knowledge, they often have the power to inspire or suppress intellectual curiosity. Primary teachers in particular help to lay the foundations upon which pupils' attitudes towards education are built. However, the full benefits of education are not reaped when teacher job satisfaction levels are low, or when they are plainly dissatisfied with their work or working conditions. Satisfaction affects employees' physical and mental well-being, as well as having an impact on job-related behaviors such as productivity, absenteeism, turnover and employee relations. Job satisfaction is therefore an organizational variable of major interest, which should be understood and constantly monitored for the welfare of any institution.

Despite the importance of job satisfaction, no national study has been conducted in Uganda to date to capture the level of teachers' career satisfaction. The present section begins to address this gap, for the primary level. It seeks to provide answers to the following questions:

- What does teachers' job satisfaction mean and how is it perceived in the Ugandan context?
- What is the overall level of primary teacher satisfaction?
- How is job satisfaction affected by teachers' backgrounds and demographic characteristics?
- What are the major factors determining teachers' job satisfaction in Uganda? and
- What is the impact of teachers' dissatisfaction on their performance in Uganda?

Definition and Measurement of Teacher Job Satisfaction

The concept of job satisfaction primarily points to an individual's overall feelings about their post, including their likes (satisfaction) and dislikes (dissatisfaction). Teachers' professional satisfaction could therefore be simply defined by the fact of whether teachers like their job or not. According to Locke (1969): "Job dissatisfaction is the un-pleasurable emotional state resulting from the appraisal of one's job as frustrating or blocking the attainment of one's job values or as entailing disvalues. Job satisfaction and dissatisfaction are a function of the perceived relationship between what one wants from one's job and what one perceives it as offering."

Despite the importance of teacher job satisfaction, the procedures to measure it appear to be complicated at first glance. Job satisfaction questionnaires are the most appropriate instrument (Smith et al., 1969). They are structured to measure specific areas of satisfaction; questions ask respondents to describe their work and the surveys are designed to guide respondents in answering the questions. Although it might seem straightforward to approach employees for their impressions and interpret their responses, experience has shown that careless procedures/methodologies can seriously limit the validity and usefulness of the data collected from the study. Keen attention should therefore be given to the formulation of questions, employee anonymity and sampling procedures.

The analysis presented in this section is based on the data collected during the National Survey on Primary Teacher Satisfaction in Uganda (NASPTSU), organized by MoES in 2012 with the support of UNESCO's Pôle de Dakar (See Annex 6.1 for the questionnaire). The sample size for this study was of 387 elementary teachers employed in government primary schools and randomly selected from all regions of the country. Table 6.1 indicates the three questions that were retained to capture teachers' levels of satisfaction/dissatisfaction.

Table 6.1: NASPTSU Survey Questions on Teachers' Professional Satisfaction, 2012

	Satisfied		Dissatisfied	
Question				
1. Generally speaking, how would you rate your overall satisfaction with your job as a teacher?	Very	Some-what	Very	Some-what
2. If you had the opportunity to start over in a new career, would you choose to become a teacher?	Yes		No	
3. Generally speaking, do you believe that the teachers with whom you work are satisfied with their job?	Yes		No	

Source: NASPTSU, 2012.

Question 1 captures teachers' point of view of their level of satisfaction. Their answers enable the computation of a dissatisfaction or satisfaction statement rate. Question 2 provides a second measure of how happy teachers feel with their job. Teachers who answer "Yes" are considered to be satisfied and the others are considered to be dissatisfied. The answers allow the computation of a dissatisfaction or satisfaction willingness rate. In the same vein, Question 3 captures teachers' perception of their colleagues' level of satisfaction, which is often tainted by their very own feelings. So again, teachers who answer "Yes" are considered to be satisfied, and vice-versa. It enables the computing of the dissatisfaction or satisfaction perception rate.

1.1 Ugandan Primary Teachers' Overall Level of Satisfaction

The computation of the respective rates derived from the answers to Questions 1, 2 and 3 is presented in Figure 6.1 below. Graphic 1, presenting the statement rate, indicates that 47 percent of teachers stated that they are dissatisfied with their job, overall. This is further accentuated in Graphic 2 by the high percentage of teachers (59 percent) who would change profession if given the opportunity. However, the dissatisfaction of primary teachers with their profession may in fact be more widespread still than these figures show. In Graphic 3, the perception rate of job dissatisfaction reaches 78 percent.

Figure 6.1: Overall Level of Ugandan Teachers' Job Satisfaction, Stated and Perceived, 2012

Percent

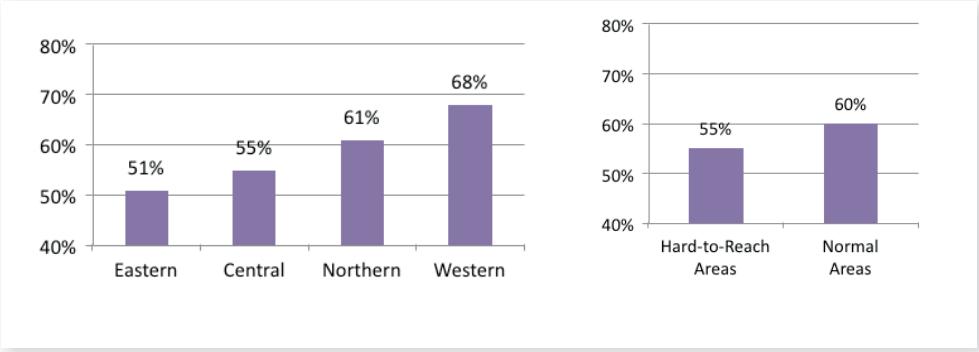
Source: NASPTSU, 2012.

Question 2, measuring the willingness rate, is generally accepted as the best proxy to capture job satisfaction and dissatisfaction rates.[88] Most studies show that direct questions to employees on their level of satisfaction, such as Question 1, yield biased results. Question 3 is subject to similar criticism, as respondents technically provide their perception of the satisfaction of their colleagues. The forthcoming analysis will therefore be primarily based on responses to the second question, relating to choosing the same profession again.

As illustrated in Figure 6.2, the Western region is where teachers are most dissatisfied (68 percent) and the Eastern region is where teachers are comparatively least dissatisfied (51 percent). The same figure shows that 55 percent of teachers in hard-to-reach areas are dissatisfied, compared to 60 percent in normal areas, although the difference between the two is not statistically significant.

Figure 6.2: Teacher Job Dissatisfaction Rates, by Region and Level of Hardship, 2012

Percent



Source: NASPTSU, 2012.

[88] See the TISSA methodological guidelines, for instance (Pôle de Dakar – UNESCO/BREDA, 2010).

Impact of Sociodemographic and Professional Characteristics on Job Satisfaction

It is important to explore the direct relationship between job satisfaction and sociodemographic and professional characteristics, including gender, age, marital status, academic qualification, professional grade, length of service, union membership and so on.

The analyses of data collected during the satisfaction survey reveal that there is no significant relationship between teachers' satisfaction and most of their sociodemographic characteristics, including gender and marital status. Only age is significantly related to the level of satisfaction. The study found that on average, with an increase in age, the overall level of satisfaction decreases. For instance, 45 percent of teachers below 35 years were satisfied with the teaching profession, compared to only 36 percent of teachers above 46 years.

Unlike sociodemographic characteristics, almost all of teachers' professional characteristics are related to their level of job satisfaction.

(i) Academic qualifications: Teachers holding O' Levels as their highest qualification are the most satisfied (over 58 percent), compared to teachers with primary, A' Level or higher education. Conversely, teachers with high job satisfaction are most likely to hold an O' Level Certificate (50 percent of satisfied teachers do, compared to 41 percent of dissatisfied teachers).

(ii) Professional qualifications: Satisfaction decreases as professional qualifications increase. Teachers with a Grade III Certificate are the most satisfied (45 percent) compared to teachers with a Grade V Certificate (36 percent) and university graduates (32 percent).

(iii) Work experience: Teachers with less than five years of experience are the most satisfied. When analyzing the relationship between satisfaction and length of service, the same pattern appears as for age. Less experienced teachers are the most satisfied (55 percent) compared to teachers with more than 20 years of experience (only 40 percent).

(iv) Union membership: Finally, in the same vein, teachers with low job satisfaction are more likely to be members of the Uganda National Teacher Union (UNATU). The survey shows that 61 percent of UNATU members are dissatisfied, compared to 54 percent of non-members.

1.2 Sources of Teacher Satisfaction

The factors that determine teachers' levels of satisfaction are multiple (Gesinde and Adejumo, 2012). Altering teachers' working conditions like compensation and their professional environment can generate diverse satisfaction levels. The survey examined eight major possible sources of primary teachers' career satisfaction, including: professional recognition, opportunities for professional growth, interpersonal relationships/social activities with colleagues, salary, benefits, working conditions, regular performance assessments and quality of head teacher leadership and supervision. Respondents were requested to rank the proposed eight factors according to the importance of their respective effects/impacts on job satisfaction. The analysis of the findings can follow two approaches, that respectively rank the factors according to: (i) the number of times each factor was chosen as the main source of satisfaction; or (ii) the mean mark received by each of the factors, considering the number of times each factor was mentioned in each position (the most influential factor would be the one with the lowest mean). The findings presented below are based on the first approach. Some further results obtained according to the second approach are presented in Annex 6.2. Interestingly, both approaches reach the same conclusion.

Table 6.2 presents the percentage distribution of teachers who choose a given factor as the main source of

satisfaction or dissatisfaction. Each of the eight factors is then ranked according to its importance.

Table 6.2: Ranking of Sources of Teacher Job Satisfaction or Dissatisfaction, 2012

Rank and Percent

	Ranking	Distribution of Teachers by Main Factor Identified		
		Dissatisfied	Satisfied	All
Factors				
Salary	1	55%	43%	50%
Opportunities for Professional Growth	2	10%	12%	11%
Professional Recognition	3	8%	13%	10%
Head Teacher Leadership and Supervision	4	7%	10%	9%
Benefits	5	7%	5%	6%
Interpersonal Relationships with Colleagues	6	6%	6%	6%
Working Conditions	7	3%	8%	4%
Regular Teacher Performance Assessments	8	3%	4%	3%
Total		**100%**	**100%**	**100%**

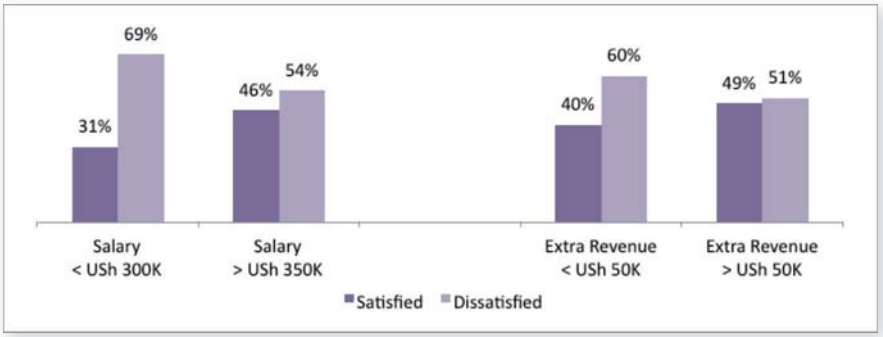
Source: NASPTSU, 2012.

The above analysis indicates that salary is the main factor affecting teachers' level of satisfaction, according to a consolidated 50 percent of respondents. It has greater weight in explaining dissatisfaction (55 percent response rate) than satisfaction (43 percent response rate). The importance of salary to job satisfaction is further highlighted through analyzing the linkage between revenues and satisfaction levels, as indicated in Figure 6.3 below.

From the findings, it appears that the rate of dissatisfaction decreases with greater salaries whereas the rate of satisfaction increases with higher salary levels. The figure shows a 69 percent dissatisfaction rate among teachers earning a salary below USh 300,000, which decreases to 54 percent for those earning a salary above USh 350,000. The satisfaction rates conversely increase from 31 percent to 46 percent for teachers earning the higher wage. The same pattern is apparent when analyzing additional revenue. The dissatisfaction rate drops from 60 percent for those with additional income under USh 50,000, to 51 percent among teachers whose extra revenue is above this amount. The reverse is again true for satisfaction rates, which increase among teachers with higher additional income, from 40 percent to 49 percent.

Figure 6.3: Link between Revenues and Job Satisfaction Levels, 2012

Percent

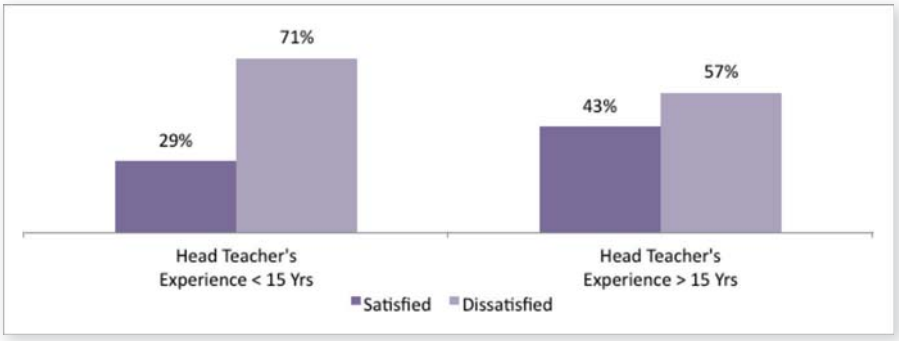


Source: NASPTSU, 2012.

After salary, the two other main factors considered by teachers as determining their job satisfaction are opportunities for professional growth and professional recognition. Findings in Table 6.2 above indicate that 12 percent and 13 percent of Ugandan teachers respectively believe these factors to be their main source of satisfaction, whereas 10 percent and 8 percent respectively believe them to be their main cause of dissatisfaction. Overall, these are the two most important sources of teachers' job satisfaction after salary, and are to be handled with maximum care to achieve the best outcomes for Uganda's teaching profession.

Figure 6.4: Teachers' Job Satisfaction, based on Head Teachers' Experience, 2012

Percent



Source: NASPTSU, 2012.

Finally, it is Important to mention the quality of head teacher leadership and supervision, which ranks fourth as a source of job satisfaction. Its relative significance is further highlighted by Figure 6.4, which shows that on average, 71 percent of teachers working in a school whose head teacher is less experienced (under 15 years of seniority) are dissatisfied, compared to only 57 percent for those whose head teachers have greater experience.

The findings displayed in Table 6.2 also include a surprise, in as much as the regular assessment of teachers and their working conditions were only selected by three percent and four percent of teachers respectively as their main source of satisfaction/dissatisfaction. Indeed, these are usually considered to be key factors impacting on the quality of education and the performance of teachers.

The preceding analysis provides some pointers to explore solutions to alleviate high levels of job dissatisfaction. Although salary is the key source of dissatisfaction/satisfaction, some of the other factors mentioned here also have a net impact and provide scope for the implementation of low cost measures to increase satisfaction levels.

Disparities

At the regional level, teachers' ranking of the key motivation factors varies considerably (See Table 6.3). Teachers in Central and Western regions attributed more importance to salary (67 percent and 57 percent respectively) than other regions' teachers (about 35 percent in Eastern and Northern regions), despite the latter also ranking salary in first place. Opportunities for professional growth are particularly significant for teachers in the Central (14 percent say this is the most important factor) and Northern (16 percent) regions, whereas professional recognition is the second most important factor in the Eastern and Northern regions (identified by 16 percent and 17 percent of teachers respectively as the most motivating factor).

Table 6.3: Share of Teachers by Main Cause of Job Satisfaction or Dissatisfaction, by Region, 2012

Percent

	Central	Eastern	Northern	Western	Uganda
Factors					
Salary	57%	36%	35%	67%	50%
Opportunities for Professional Growth	14%	9%	16%	5%	11%
Professional Recognition	4%	16%	17%	4%	10%
Head Teacher Leadership and Supervision	7%	14%	7%	7%	9%
Benefits	6%	7%	6%	6%	6%
Interpersonal Relationships with Colleagues	5%	8%	9%	3%	6%
Working Conditions	4%	7%	6%	4%	4%
Regular Teacher Performance Assessments	3%	3%	4%	4%	3%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

Source: NASPTSU, 2012.

Table 6.3 also highlights disparities between regions with respect to the other sources of motivation that teachers consider to be important. The quality of leadership and supervision by head teachers is a strong determinant of teachers' satisfaction in the Eastern region, with 14 percent of respondents prioritizing it as the major factor, and is the second most signaled factor in the Western region. In the Central and Northern regions on the other hand, being cited by 7 percent of teachers as the principal motivational factor, it is ranked in third and fifth positions, respectively.

In terms of gender, men and women share similar views in terms of the impact of salary on job satisfaction, as both consider it to be the main influencing factor, and in terms of the impact of opportunities for professional growth, which both genders place third. However, a significant difference is apparent in terms of the second most important factor: for men it is professional recognition, whereas for women it is the quality of supervision.

1.3 Effect of Job Satisfaction on Professional Commitment and Resignation

Table 6.4 presents the four questions asked of teachers during the survey on primary teacher satisfaction and summarizes the responses received, to appreciate the relationship between their levels of professional satisfaction and their commitment to their job.

Table 6.4: NASPTSU Survey Questions and Responses on Teachers' Professional Commitment, 2012

	Satisfied		Dissatisfied	
	Mean	Std.	Mean	Std.
Question				
1. How often do you give assignments/homework to your pupils each month?	12.0	7.7	13.0	7.7
2. How much time (hours) do you spend on teaching each week?	23.0	11.9	22.0	12.7
3. How much time do you spend on lesson preparation and marking assignments/ homework each week?	15.0	10.3	14.0	10.0
4. How many times have you been absent from school with permission this year?	3.3	2.7	3.1	2.7

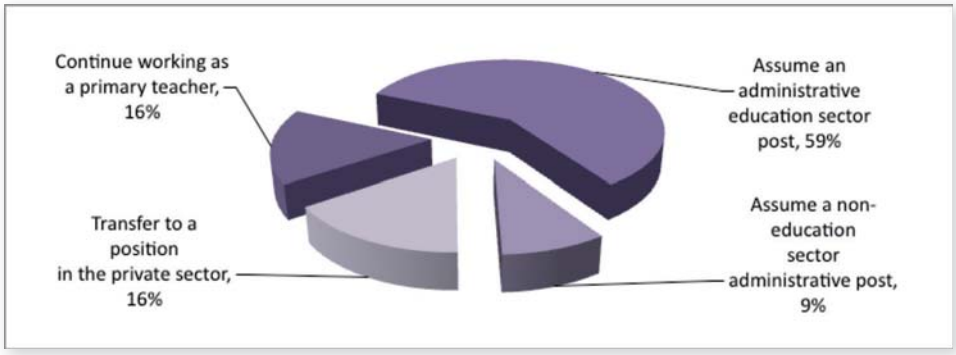
Source: NASPTSU, 2012.

The analysis of respondents' answers shows that the difference in terms of commitment between satisfied and dissatisfied teachers is close to insignificant, surprisingly suggesting that dissatisfied teachers do not noticeably underperform their satisfied peers, at least in terms of the chosen indicators.

The data collected also provide a sense of teachers' professional aspirations. The findings indicate that around 60 percent of teachers wanted to obtain an administrative position in the education sector. Figure 6.5 below presents more detail on the distribution of teachers according to their job expectations over the next two years.

Most teachers (84 percent) would like to resign from teaching within the next two years. Indeed, only 16 percent of primary teachers would like to remain in the teaching profession. Administrative functions seem to be most attractive to teachers, with about 68 percent of them aspiring to be promoted to such a post, mainly in the education sector. The analysis further shows that 37 percent of dissatisfied teachers would like to resign within a year, compared to just 6 percent of satisfied teachers. The propensity to abandon the teaching profession is therefore six times higher among dissatisfied teachers than among satisfied teachers.

Figure 6.5: Primary Teachers' Professional Aspirations over a Two-Year Period, 2012



Source: NASPTSU, 2012.

Beyond teachers' professional satisfaction and their perception of their profession, it is important to consider the broader social context in which teachers operate. Social dialogue is a key element in achieving decent and productive work for men and women, in conditions of freedom, equality, security and human dignity. The subsequent section focuses on these aspects.

Section 2: Social Dialogue in the Education Sector

Social dialogue is defined by the International Labor Office (ILO) as including all types of negotiation and consultation, as well as the exchange of information between, or among, representatives of governments, employers and workers, on issues of common interest relating to economic and social policy. The main goal of social dialogue is to promote consensus-building and the democratic involvement of the main stakeholders in the workplace.

Within the education sector, social dialogue is a vital component in achieving the objective of quality education for all. Scholars widely agree that teachers are key stakeholders in implementing good education reforms. Without their full involvement in key aspects of education objectives and policies, full attainment of education goals becomes a myth. In order to grasp the state of social dialogue in the Ugandan education sector, this section starts by describing the main stakeholders in the education sector. Then it assesses the effective involvement of teachers in the definition of education policies. Points of divergence and convergence between the government and teachers are then highlighted. An analysis of the way to improve social dialogue in education ends the section.

The analysis is based on a review of the literature on relevant education policies, interviews with the Secretary General of UNATU and the President of COUPSTA, semi-structured interviews with two focus groups, discussions with members of the TISSA national team and informal conversations with resource persons on education challenges.

Education Stakeholders: Roles, Responsibilities and Challenges

Parents and Students: Parents are the first stakeholders in the education sector. Their role is principally to send children to school, provide school supplies, support learning at home and so on. The lack of formal representation of parents at the national level is a major problem in Uganda. Despite their contribution to the financing of education (materials, meals, books and so on), there is no formal involvement of parents in the definition of the education policies. For instance, parents are not formally consulted during curriculum development and review.

Students, on the other hand, are formally represented at the national level: the Uganda National Students Association (UNSA) is responsible for organizing students in both secondary and tertiary institutions as well as ensuring in principle that all education institutions set up school councils or university guilds. However, several interviewees pointed out that in spite of this association, students have little voice in the education system.

Civil Society: There are many NGOs involved in the education sector in Uganda: Forum for African Women Educationalists (FAWE), Orphans' Community Based Organization, Gulu Development Agency, the Kitgum District NGO Forum (KINGFO) and others. The Forum for Education NGOs in Uganda (FENU) represents them at the national level. The NGOs do advocacy, represent the voiceless and complement government programmes and efforts through funding, technical guidance, policy engagement and professional development. The major challenge civil organizations in Uganda face is the misinterpretation of their advocacy work by the government. In addition, there is no efficient coordination of their interventions, with great duplication of programmes.

Foundations: Religious and community institutions are fully involved in the development of education policies. They recommend heads of institutions, influence guidelines for running institutions and provide institutions with infrastructure and funding. The main challenge they face is the harmonization of recommendations with ministry priorities.

Private Sector: Some financial institutions and firms are involved in the development of education policies. They have contributed towards the evaluation of the new curriculum and provided scholarships and instructional materials. The main challenge they face is the turbulent political environment, bureaucracy and corruption.

Development Partners: The most active are UNICEF, UNESCO, USAID, ADB, World Bank, UNDP, UNFPA, Irish Aid, Action Aid, OXFAM, Save the Children and WHO. They are fully involved in the development process of education policies. They also contribute to resource mobilization, infrastructure development, policy support, reform and policy implementation. In addition, they contribute to the coordination of implementation activities in relation to convention goals such as the MDGs and EFA. The major challenges development partners face are economic recession, the duplication of programmes, conflicting priorities with the government, political etc.

2.1 Teacher Involvement in the Development of Education Policies

Teachers have one main union: UNATU (Uganda National Teachers' Union), to which more than half of teachers are affiliated. COUPSTA (the Coalition of Uganda Private School Teachers' Associations) is an organization that brings together all private school teachers to contribute towards education policy interpretation and implementation at different levels.

UNATU

UNATU officially registered as a union in 2003. With more than 86,000 members in 2012, the union covers around half all Ugandan government teachers, from primary to tertiary levels. In November 2011 an official agreement was established between UNATU and the government to determine and regulate the relationship between them in the interests of mutual understanding and co-operation. Members pay a subscription of one percent of their salary, deducted at the source. Private sector teachers are admitted as associate members.

UNATU has a series of activities, including advocacy for teacher rights, policy development (such as a code of conduct for teachers) and training teachers through seminars on a variety of topics, including classroom management and conflict resolution.

According to UNATU, the two main challenges in the education sector are related to the “poor quality of education” and the “politicization of education.” They often organize campaigns to improve the quality of education, known under the banner of Citizens’ Action for Quality Public Education. Campaigns are run by a coalition of NGOs, that include the Uganda Joint Christian Council (UJCC), UNATU, Uganda Moslem Education Association (UMEA), Action Aid International Uganda and the Forum for Education NGOs in Uganda (FENU).

Their main results are: (i) public outcry and support to increase teacher wages; (ii) greater debate on the poor status of education and the plight of teachers; and (iii) the heightened interest of parliament in the issue. UNATU is involved in education policy development: it participated in the elaboration of the ESP, sits on the annual education review and is consulted during the preparation of the education budget. Nevertheless, the government seems to remain indifferent to its ideas and positions.

COUPSTA

COUPSTA is an organization that brings together all teachers in private schools (including early childhood education centers, primary and secondary schools, teacher training colleges and national teacher colleges) to contribute towards education policy interpretation and implementation at different levels. It was registered as an NGO in 2004. The association is presently represented in about 50 percent of districts. Although its status differs from that of a union, the issues it deals with are similar to those of UNATU.

COUPSTA did not feel sufficiently involved in the elaboration of EFA policies. They believe less than five percent of private school teachers are aware of EFA. According to them, the main challenges in the education sector are the "poor quality of education" and the "poor implementation of government policy within public and private schools."

In recent years, some of the association's concerns have been taken into account by the government. A case in point is the creation of the Department of Private Schools in MoES as well as the elaboration and implementation of a regulatory framework for the private education sector. There are still certain points of divergence between the association and the government, such as over the independence of the department and the level of financial support provided to the education sector.

The association believes that in order to improve the performance of private institutions, the government should have inclusive education policies, covering private and government institutions alike.[89] The major challenge facing the association is the resource constraint, limiting programme implementation and growth.

2.2 Points of Convergence/Divergence between the Government and Teachers

Points of convergence or divergence between teachers and the government are a good indicator of the social context in which teachers evolve. This section summarizes the main points.

Effectiveness of the Public Service Negotiation, Arbitration and Disputes Settlement Act 2008: The act has not yet been executed (this was planned for February 2012) so no formal bargaining has yet taken place between teachers and the government. This creates a gap between policy formulation and implementation. Teachers and the government have been involved in arbitrary negotiations and dialogue, without formalizing the agreements reached.

Improvement of teachers' remuneration: Both the government and UNATU agree that teachers' salaries are low and that teaching is increasingly unpopular. To improve the living conditions of teachers, the union requested a 100 percent salary raise, so that the lowest paid teachers would earn USh 546,000. The government has conceded a 50 percent raise, in three phases: 15 percent in 2012/13, 20 percent in 2013/14 and 15 percent in 2014/15.

Delayed transfer of capitation grants: The government and teachers agreed in 2011 that school capitation grants were often paid late. The delay in their release continues to be a subject of contention between the government and the management of education institutions.

Financial support by parents for schools: UNATU and public education institutions wish to be entitled to request financial contributions from parents for some school activities. Current UPE/UPPET government policy forbids this. UNATU and other stakeholders would encourage it, to compensate both the level and timing of capitation grant transfers.

Payment of allowances to secondary school science teachers: MoES committed to a 30 percent salary raise for all science teachers in secondary schools, effective 2012/13. The ministry has identified 9,903 beneficiary

[89] It was noted for instance that examination fees for students from private schools are higher than for government schools. The government agreed in principle to apply the same tariffs to all in 2011, but has still to make the decision effective.

science teachers in total. UNATU and other stakeholders believe that only upper secondary teachers will benefit.

Schemes of service for primary and secondary schools: schemes of service were established in 2008 to enhance the status, morale and professionalism of teachers, as a strategy to achieve EFA goals, as part of the ESSP 2004-15. MoFPED was instructed to make provision for the implementation of the scheme. UNATU and other stakeholders claim that it is currently implemented only at the primary level.

Automatic promotion: A systematic promotion policy was introduced by MoES in 2005, in which schools are compelled to promote pupils to the next grade irrespective of their performance. The government was convinced that this would improve completion rates (63 percent in 2010), contributing to universal primary education. Teachers protest that quality will suffer, due in part to larger class sizes.

Improving the Relationship between Teachers and the Government

The Pretoria Declaration on Teachers recommends that countries such as Uganda prioritize the development of permanent institutional structures for social dialogue, involving education employers and teachers in regular information sharing, consultation on policy issues and negotiation of employment conditions (ILO, 2005).

The effectiveness of such permanent platforms would help to consensually define how to develop specific measures to positively impact the main sources of teacher satisfaction (salary, opportunities for professional growth, professional recognition and quality of supervision – See Section 1 of this chapter). They may also contribute to build consensus on the points highlighted above.

In the meantime, stakeholders have identified a series of measures that could improve the relationship between teachers and the government:

1. The systematic and full involvement of teachers in policy formulation, from the initial stages, to ease understanding, ownership and implementation. The best way to involve teachers must be to invite more UNATU and COUPSTA members to share their opinions. Inspector and head teacher members are often involved in the process, but do not feel free to share their points of view due to their official rank.

2. The more results-oriented administration of teachers' performance contracts, to avoid unnecessary frustration and improve effective motivation. Indeed, the contracts are felt to be coercive, and unfair in as much as other necessary education inputs are not provided to ensure a favorable and conducive environment to achieve the expected results (inadequate capitation grants, released late and low salaries).

3. The development by the government of strategies to reduce the professional gap between teachers who have administrative functions and chalk-in-hand teachers, in terms of opportunities to travel, participation in workshops and seminars and so on. Indeed, about 60 percent of chalk-in-hand teachers aspire to administrative positions for these reasons.

4. The improved allocation of education sector resources, to direct a greater part to recurrent expenditure. Over the past 20 years, most of the aid and donor-funding received from development partners has been allocated to development and capital expenditure.

It is important to recall that all the analyses presented here are based on a series of interviews as mentioned above. Additional studies should be undertaken on the key points of divergence between teachers, the government and stakeholders to adequately appreciate the feasibility and sustainability of the propositions made.

Conclusion

A general feeling of dissatisfaction is present among Ugandan primary teachers. In a survey, 47 percent indicated that they were dissatisfied with their job and about 78 percent believe that their colleagues are dissatisfied with theirs. Most teachers (84 percent) would like to leave the profession within two years. Half of the respondents mentioned salary as the main cause of job dissatisfaction. Given that Chapter 5 demonstrated that teacher salaries were not low, relatively speaking, in-depth investigation is needed to understand why teachers think they are worse off. One possible reason is that the interviews focused on chalk-in-hand primary teachers, who are the bulk of the teaching force and whose pay is the lowest. Almost 70 percent of primary teachers would like to be promoted at an administrative position.

The teachers interviewed also mentioned two non-salary factors that could improve their level of satisfaction: opportunities for professional growth (already highlighted as an issue in Chapter 5) and professional recognition.

In terms of social dialogue, there is no permanent structure where education employers and teachers can meet to share their concerns, views and positions on education issues. Therefore, strikes are required to gain government attention. The few instances where teachers have the option of sharing their views are: the joint consultative committee on education, the annual education sector review and the education sector consultative committee. However, even there, they feel that their opinions have little weight.

Currently, seven key points of divergence exist between teachers and the government: the effectiveness of the Public Service Negotiation, Arbitration and Disputes Settlement Act of 2008; the improvement of teacher remuneration; the inadequate/delayed remittance of capitation grants and streamlining of allowances to teachers in hard-to-reach/hard-to-stay areas; the non-payment of allowances to all secondary school science teachers; the resumption of the schemes of service for both primary and secondary schools; the policy of automatic promotion introduced in 2005 by MoES; and the financial implication of parents in the management of primary schools.

The analysis identifies a series of measures that can help to improve the level of dialogue between teachers and the government. These include: (i) the institutionalization of a permanent structure for social dialogue between education employers and teachers, through regular information sharing, consultation on policy issues and the negotiation of employment and working conditions; (ii) the more frequent involvement of teachers in policy formulation from its initial stages, to promote the understanding, ownership and implementation of new policies and the development of government strategies; and (iii) to reduce the benefit gap between teachers who have administrative functions and chalk-in-hand teachers.

ANNEXES

Annex 1.1: Trends in Major Macroeconomic Indicators, 2000/01-2011/12

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	Growth Rate	
													2000-10	Annual
GDP (Billion USh, Current) (1)	10,296	10,907	12,438	13,972	16,026	18,172	21,212	24,497	30,101	34,908	39,051	49,087	279.3%	14.3%
GDP Deflator (Base 2011) (1)	55	53	57	60	65	66	72	76	87	95	100	122	82.8%	6.2%
Inflation (Annual Growth Rate, %)	4.5	-2.0	5.7	5.0	8.0	6.6	6.8	7.3	14.2	9.4	6.5	–	44.9%	3.8%
GDP (Billion USh, Constant 2011)	18,818	20,421	21,743	23,223	24,692	27,356	29,646	32,240	34,578	36,604	39,051	40,300	107.5%	7.6%
Real GDP Growth (Annual Growth Rate, %)	–	8.5	6.5	6.8	6.3	10.8	8.4	8.8	7.3	5.9	6.7	3.2	–	–
GDP Structure (%) (3)														
Agriculture	27.9	23.3	24.5	23.8	25.1	24.1	22.3	21.4	23.1	23.6	22.7	–	-15.2%	-1.8%
Industry	21.2	22.8	22.7	22.9	23.5	22.8	25.2	25.8	24.7	24.9	25.3	–	17.4%	1.8%
Services	44.8	47.5	46.6	47.4	45.4	47.2	47.0	46.9	46.4	45.5	46.2	–	1.6%	0.2%
Exchange Rate (USh/US$, Period average) (2)	1.763	1.755	1.883	1.935	1.738	1.825	1.778	1.696	1.905	2.030	2.323	2.569	31.8%	2.8%
Population (Millions) (1)	23,31	24,067	25,089	25,859	26,741	27,629	28,581	29,562	30,661	31,784	32,94	34,13	41.3%	3.5%
GDP per Capita (000' USh, Current)	442	453	496	540	599	658	742	829	982	1,098	1,186	1,438	168.4%	10.4%
GDP per Capita (000' USh, Constant 2011)	807	848	867	898	923	990	1,037	1,091	1,128	1,152	1,186	1,181	46.9%	3.9%
GDP per Capita (US$, Constant 2011)	458	483	460	464	531	542	583	643	592	567	510	460	11.4%	1.1%

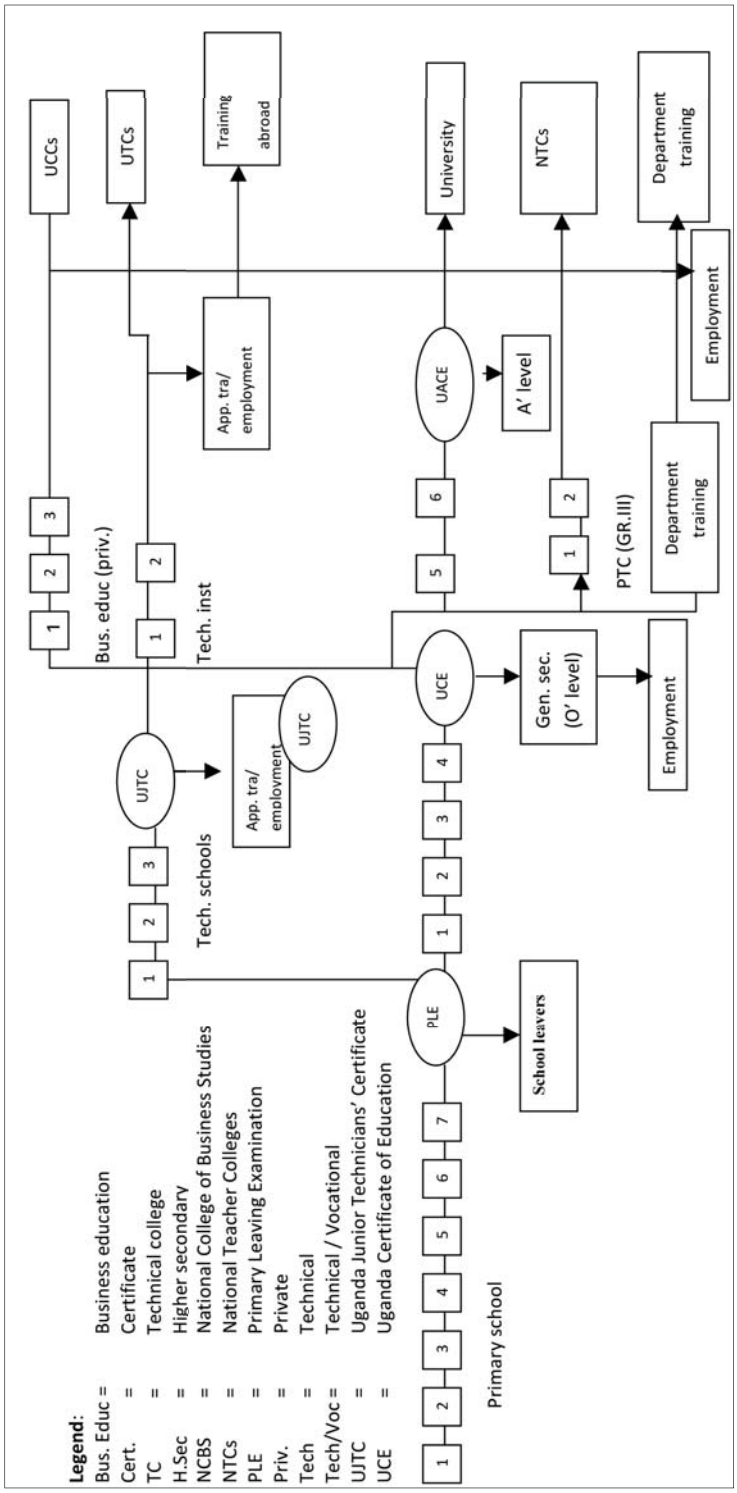
Source: (1) UBOS; (2) IMF; (3) World Bank database.

Annex 1.2: Evolution of Total Government Revenue, Expenditure and Deficit, 2000/01-2010/11 *

	2000 /01	2001 /02	2002 /03	2003 /04	2004 /05	2005 /06	2006 /07	2007 /08	2008 /09	2009 /10	2010 /11*
Revenue and Grants	1,868	1,968	2,190	2,817	3,092	3,211	3,810	3,985	4,671	5,183	7,292
Domestic Revenues	1,083	1,254	1,434	1,669	1,915	2,314	2,722	3,247	3,787	4,320	6,402
Grants	784	715	756	1,147	1,177	898	1,088	738	885	863	890
Programme	365	364	456	814	817	484	733	475	531	467	515
Project Grants	419	351	300	334	360	413	355	263	354	396	375
Government Expenditure (1)	2,097	2,515	2,658	3,033	3,275	3,549	4,208	4,439	5,175	6,831	8,972
Recurrent Expenditure	1,122	1,420	1,587	1,899	1,987	2,232	2,440	2,881	3,292	4,307	5,958
Wages and Salaries	434	541	612	683	774	867	986	1,106	1,184	1,308	1,659
Non-Salary, non-interest	574	735	800	954	975	1,117	1,220	1,466	1,750	2,614	3,875
Interest	113	143	174	262	238	248	234	309	358	385	424
Development Expenditure	872	975	1,030	1,116	1,229	1,256	1,516	1,437	1,657	2,478	2,851
External	537	520	570	676	735	737	802	690	450	887	1,042
Domestic	335	455	460	439	494	519	714	747	1,207	1,591	1,809
Net Lending	-26	5	-13	-28	-8	-29	101	-163	-57	-37	-30
Domestic Arrears	130	115	54	47	66	91	151	284	283	82	194
Deficit – Incl. Grants	-229	-547	-469	-217	-183	-337	-398	-454	-504	-1649	-1,680
Deficit – Excl. Grants	-1,014	-1,261	-1,225	-1,364	-1,360	-1,235	-1,486	-1,192	-1,388	-2,512	-2,570

Source: MoFPED, UBOS.
Note: * Projections. (1) Government expenditure includes net lending and domestic arrears.

Annex 1.3: The Structure of the Education System, 1992



Source: Government White Paper on Education, 1992.

Annex 1.4: Distribution of Recurrent Education Expenditure, by Level, 2003/04-2011/12

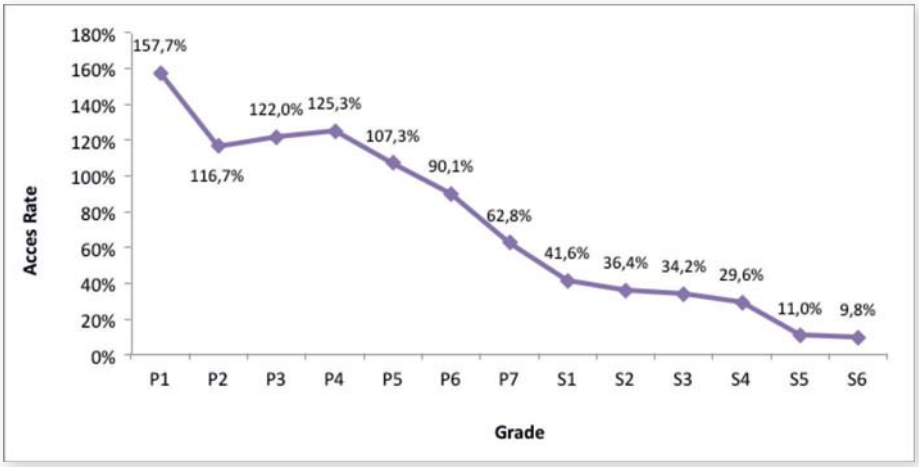
Billion, USh

	2003/04	2007/08	2008/09	2009/10	20010/11	2011/12
Current USh						
Primary	270.8	397.2	406.7	441.7	576.0	627.6
Secondary	79.1	146.3	209.3	287.7	319.5	331.8
Teacher Education	25.3	24.9	25.2	20.3	26.3	29.9
BTVET	15.6	23.7	24.7	27.5	36.5	60.1
Tertiary	50.5	83.8	84.7	106.0	107.3	136.1
Literacy	3.2	4.9	5.3	6.1	5.5	5.6
Total	**444.5**	**680.8**	**756.0**	**889.3**	**1,071.0**	**1,191.1**
Constant USh (2011)						
Primary	450.1	522.8	467.2	463.2	576.0	515.3
Secondary	131.5	192.6	240.4	301.7	319.5	272.4
Teacher Education	42.1	32.7	29.0	21.3	26.3	24.5
BTVET	26.0	31.3	28.4	28.8	36.5	49.3
Tertiary	83.9	110.2	97.3	111.1	107.3	111.7
Literacy	5.3	6.4	6.1	6.4	5.5	4.6
Total	**738.8**	**896.0**	**868.4**	**932.5**	**1,071.0**	**977.9**

Source: MoES financial database and authors' computations.

Annex 1.5: The Transversal Schooling Profile

An alternative way of analyzing school coverage to the use of the gross enrollment rate (GER) is to look at the transversal schooling profile. The profile is a series of ratios that shows, for each grade, the ratio between the number of new entrants in that grade and the total population of official school age for that grade, otherwise referred to as the access rates for each grade. The following figure presents the transversal schooling profile for Uganda in 2010.



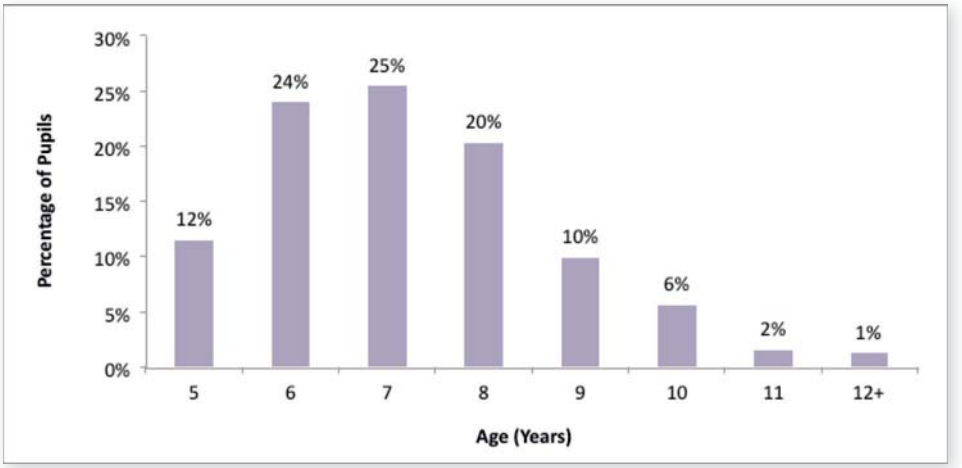
The transversal schooling profile shows that in Grade P1, the ratio of new entrants to the population of children aged six years (also called the gross intake ratio or GIR) is 158 percent. This means that the number of children who start primary education is greater than the number expected. This indicates that many new entrants are over-age. Indeed, some enter school after their 10th birthday.

The schooling profile also shows how dropout increases with each successive grade. At the end of primary, the ratio between the number of new entrants to Grade P7 and the population of children aged 12 years (also called the primary completion rate or PCR), is 63 percent.

The gross intake rate in lower secondary (Grade S1) is 42 percent, but the lower secondary completion rate (in Grade S4) is 30 percent. Very few students attend upper secondary. The gross intake rate in Grade S5 is 11 percent, whereas the completion rate for upper secondary is 10 percent.

Annex 1.6: Age Distribution of New Primary Entrants

The following graph shows that only 24 percent of a generation starts primary school on time, accessing Grade P1 at the official school age of six years. The proportion of those starting school late is high, at almost 64 percent. On the other hand, 12 percent start school early, before their 6th birthday.



Source: Computed by authors using UNHS 2009-10 data.

Annex 1.7: Internal Efficiency Coefficients

Without repetition, a leaver or graduate of a given education cycle should have spent the number of years completing the cycle equivalent to its theoretical duration. If a pupil-year is defined as one year spent by one student in one grade, then the number of pupil-years effectively consumed by those pupils who leave the cycle should be equal to the duration of the cycle times the number of leavers.

Thus an indicator can be created as the ratio of the theoretical number of pupil-years to the effective number of years of study completed by all pupils, including repeaters and dropouts. This ratio is called the internal efficiency coefficient (IEC) and it establishes the average investment in terms of years of education per education cycle graduate.

$$IEC = \frac{Theoretical\ Number\ of\ Pupil - Years}{Effective\ Average\ Number\ of\ Pupil - Years\ Invested}$$

The IEC is comprised between 0 and 1, each of which represent hypothetical extremes: 0 represents a situation where no pupil completes the cycle, regardless of enrollment, repetition and dropout; whereas 1 represents the ideal situation where all children complete the cycle in the set number of years (with no repetition or dropout).

A coefficient of 0.4 indicates that the theoretical duration of the cycle is just 40 percent of the effective average number of pupil-years required to complete the cycle. This indicates that 60 percent (1 - 0.4) of the pupil-years invested correspond to repetition or dropout related inefficiency.

The Internal Efficiency Coefficient (IEC) is the ratio between the theoretical number of pupil-years required to educate a pupil and the effective average number of pupil-years invested:

In practice, the IEC is calculated as:

$$IEC = \frac{Duration\ of\ the\ Cycle \times Final\ Grade\ Survival\ Rate}{\sum_{i=1}^{Final\ Grade} \frac{Survival\ Rate\ for\ Grade\ i}{1 - \%\ of\ Repeaters\ for\ Grade\ i}}$$

Annex 2.1: Formula for the Projection of Primary Teacher Needs

From PTRgov = Pgov / Tgov, the following equation is derived, where PTRgov is the pupil-teacher ratio, Pgov is the number of pupils in government schools and Tgov is the number of teachers in government schools:

$$PTR_{gov} = P_{gov} / T_{gov},$$

Yet, Pgov = (1-α) * ENR, where α is the share of pupils enrolled in private schools and ENR total enrollment. The equation therefore becomes:

$$T_{gov} = P_{gov} / PTR_{gov}$$

Furthermore, the gross enrollment rate formula indicates that: ENR = Pop6-12 * GERPrim, where Pop6-12 is the official primary school-aged population and GERPrim is the gross enrollment rate for primary. Substituting ENR in the above equation provides:

$$T_{gov} = (1-\alpha) * ENR / PTR_{gov}$$

On the other hand, the gross enrollment rate is related to the share of repeaters, the gross intake rate and the primary completion rate according to the following approximate formula: GER = (GIR + PCR) / (2 * (1-r)), where GIR is the gross intake rate in primary, PCR is the primary completion rate and r is the share of repeaters in primary. Replacing the GER in the previous formula provides:

$$T_{gov} = (1-\alpha) * Pop_{6-12} * GER / PTR_{gov}$$

This formula is applicable to data for a given school year and provides the number of teachers the system needs in government schools for that specific year. It can be rewritten as:

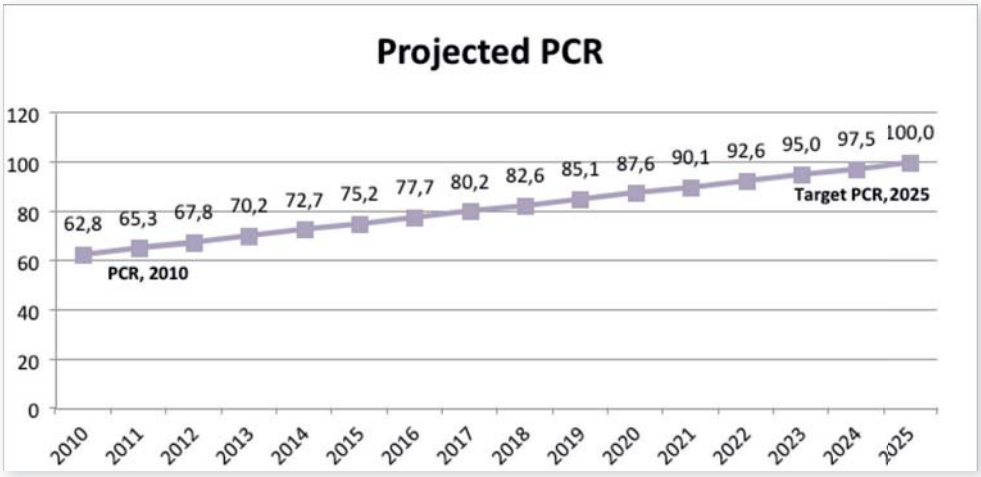
$$T_{gov} = (1-\alpha) * Pop_{6-12} * (GIR + PCR) / (2 * (1-r)) / PTR_{gov}$$

Annex 2.2: The Principle of Linear Projection

Before estimating the number of teachers the education system will need in the future, expected values were set for key indicators. An indicator's value is x in 2010 and is expected to be y in 2025; for years in between, its value is computed by linear projection. Linear projection assumes that the rate of change is constant over the period (See the following example and figure).

Linear Projection of the Primary Completion Rate

This example assumes that the primary completion rate (PCR) will increase from 62.8 percent in 2010 to 100 percent in 2025, representing an overall increase of 37.2 percentage points over 15 years. The annual increase for each year is 2.48 percentage points (37.2pp / 15yrs). This implies the PCR would be 65.3 percent in 2011, 67.8 percent in 2012, 70.2 percent in 2013 and so on until reaching 100 percent in 2025.



Annex 2.3: : Projection of Secondary Teacher Needs Formula

At the secondary level, the total number of hours of class due to students should be equal to the total teacher workload (here expressed in terms of hours per week), where T is the number of teachers, TH is the teacher workload expressed in hours per week, NbS is the number of streams in the cycle and SH is the due learning time, expressed in hours per week:

$$T * TH = NbS * SH$$

From this, the number of secondary teachers needed is:

$$T = NbS \times \frac{SH}{TH}$$

Given that the number of streams is NbS = ENR/SPS, where ENR is the total enrollment for the cycle and SPS is the average number of students per stream, the equation becomes:

$$T = \left(\frac{ENR}{SPS}\right) \times \frac{SH}{TH}$$

As in primary, ENR = GER * Popcycle = (IRcycle + CRcycle) * Popcycle / (2 * (1-r)), where: GER is the gross enrollment rate for the cycle, IRcycle is the intake rate in the cycle, CRcycle is the completion rate for the cycle and r is the share of repeaters. Therefore:

$$\mathrm{T} = \frac{\frac{(\mathrm{IR_{cycle}} + \mathrm{CR_{cycle}}) \times \mathrm{Pop_{cycle}}}{[2 \times (1-r)]}}{\mathrm{SPS}} \times \frac{\mathrm{SH}}{\mathrm{TH}}$$

Which can be rewritten as:

$$\mathrm{T} = \frac{(\mathrm{IR_{cycle}} + \mathrm{CR_{cycle}}) \times \mathrm{Pop_{cycle}} \times \mathrm{SH}}{[2 \times (1-r)] \times \mathrm{SPS} \times \mathrm{TH}}$$

At the lower secondary level, IRcycle = PCR * TrS1 and CRcycle = IRcycle * Surv, which can also be written as CRcycle = PCR * TrS1 * Surv. Therefore, (IRcycle + CRcycle) is equivalent to PCR * TrS1 + PCR * TrS1 * Surv, which in turn can be written as (1 + Surv) * PCR * TrS1, where PCR is the primary completion rate, TrS1 is the transition rate from P7 to S1 and Surv is the survival rate for the cycle. The formula for the number of lower secondary teachers required is therefore:

$$\mathrm{T} = \frac{(1 + \mathrm{Surv}) \times \mathrm{PCR} \times \mathrm{TrS1} \times \mathrm{Pop_{cycle}} \times \mathrm{SH}}{[2 \times (1-r)] \times \mathrm{SPS} \times \mathrm{TH}}$$

For upper secondary, the PCR should be replaced with the access rate to S4, used as a proxy for the lower secondary completion rate; TrS1 should be replaced with TrS5, the transition rate from S4 to upper secondary; and other indicator values (Surv, SH, SPS, TH) should be adjusted accordingly.

The formula can be applied to obtain the total number of government secondary school teachers required T_{gov}, and the number of new teachers to be recruited, for each cycle, accounting for the share of students in private schools α, as per Annex 2.1. Here the formula is written for lower secondary:

$$T_{gov} = (1-\alpha) \times \frac{(1+Surv) \times PCR \times TrS1 \times Pop_{cycle} \times SH_{gov}}{2 \times (1-r) \times SPS_{gov} \times TH_{gov}}$$

$$NT_{gov(t)} = T_{gov(t)} - (1-\lambda) \times T_{gov(t-1)}$$

Annex 3.1: Distribution of Estimated Primary and Secondary Teachers, by Qualification Status and School Type, 2006-10

Number and Percent

	2006	2007	2008	2009	2010
Primary					
Number of Teachers	187,382	164,573	160,248	196,904	184,326
Share Qualified	82.0%	86.7%	88.4%	85.7%	87.3%
Share Underqualified	18.0%	13.3%	11.6%	14.3%	12.7%
Number to be Trained	33,683	21,816	18,523	28,239	23,363
Government Schools					
Number of Teachers	133,981	130,998	126,785	127,540	126,448
Share Underqualified	11.2%	7.6%	5.7%	3.4%	2.7%
Number to be Trained	15,069	9,988	7,227	4,336	3,363
Private Schools					
Number of Teachers	53,401	33,575	33,463	69,364	57,878
Share Underqualified	34.9%	35.2%	33.8%	34.5%	34.6%
Number to be Trained	18,614	11,829	11,296	23,903	20,000
Secondary					
Number of Teachers	84,891	91,528	86,528	91,611	81,038
Share Qualified	81.0%	81.1%	81.9%	83.1%	83.9%
Share Underqualified	19.0%	18.9%	18.1%	16.9%	16.1%
Number to be Trained	16,136	17,307	15,661	15,445	13,021
Government Schools					
Number of Teachers	20,577	22,808	23,545	26,814	25,970
Share Underqualified	9.4%	8.6%	7.9%	6.4%	6.2%
Number to be Trained	1,941	1,962	1,863	1,712	1,614
Private Schools					
Number of Teachers	64,314	68,720	62,983	64,797	55,068
Share Underqualified	22.1%	22.3%	21.9%	21.2%	20.7%
Number to be Trained	14,195	15,344	13,798	13,732	11,407

Source: EMIS, various years.
Note: Teacher numbers are estimated based on EMIS figures and schools' under-reporting levels.

Annex 3.2: : Distribution of Primary Teachers, by Qualification and School Type, 2006-10

Percent

	2006	2007	2008	2009	2010
Government					
Undertrained	11.2	7.6	5.7	3.4	2.7
Trained	88.8	92.4	94.3	96.6	97.3
Grade III	66.9	67.9	68.1	67.5	67.0
DEP	14.5	16.8	18.2	20.4	21.2
Grade IV	2.7	3.1	3.5	4.1	4.2
Grade V	4.6	4.6	4.6	4.6	4.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Private					
Undertrained	34.9	35.2	33.8	34.5	34.6
Trained	65.1	64.8	66.2	65.5	65.4
Grade III	52.2	51.6	52.8	52.7	53.2
DEP	4.3	4.7	4.6	4.5	4.3
Grade IV	3.2	3.4	4.0	3.9	3.9
Grade V	5.5	5.1	4.8	4.4	4.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: EMIS, various years.

Annex 3.3: Distribution of Secondary Teachers, by Qualification and School Type, 2006-10

Percent

Total	2006	2007	2008	2009	2010
Government					
Undertrained	9.4	8.6	7.9	6.4	6.2
Trained	90.6	91.4	92.1	93.6	93.8
Grade V	7.7	8.0	27.3	31.4	36.6
DES	39.7	39.5	19.6	13.1	8.0
Graduate	43.1	43.9	45.1	49.1	49.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Private					
Undertrained	22.1	22.3	21.9	21.2	20.7
Trained	77.9	77.7	78.1	78.8	79.3
Grade V	7.0	6.7	17.3	23.6	27.0
DES	43.5	42.2	30.4	22.5	18.8
Graduate	27.4	28.7	30.4	32.7	33.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: EMIS, various years.

Teacher educators are required to integrate their teaching/tutoring during the curriculum implementation because most of the content has been "housed" in a certain discipline to avoid repetitions. The previous PTE curriculum and resources should be utilized for reference purposes.

For every Theme/Unit/Topic some instructional strategies are suggested. Tutors are advised to be creative and apply and adapt the strategies to their unique context and local circumstances. It is necessary to use various practical approaches (participatory and experimental) to impact on trainee learning and skills.

The local environment should be exploited and the Whole School/College approach used in the implementation of the revised curriculum. Internet and other relevant media can contribute to enrich it. With the ICT support provided by PTCs, the use of new technologies in teaching and learning should be beneficial.

Year 1

During the first year, all candidates take all 13 subjects. The programme covers:

Subject Code	Subject Name	Contact Hours	Contact Hours per Week	Time Allocation
P101	Professional Education Studies (PES). Foundations of Education (FED). Special Needs Education (SNE). General Methods	161	4	12%
P102	English Language Education (ELE)	130	3	9%
P103	Social Studies Education (SSE)	99	2	7%
P104	Integrated Science Education (ISE)	132	3	10%
P105	Mathematics Education (MTE)	130	3	9%
P106	Religious Education (IRE and CRE)	76	2	6%
P107	Kiswahili Education (KSE)	84	2	6%
P108	Local Language Education (LLE)	132	2	10%
P109	Music Education (Performing Arts) (MSE)	60	2	4%
P110	Physical Education (PHE)	66	4	5%
P111	Early Childhood Education (ECD)	140	2	10%
P112	Integrated Production (IPS) Home Economics. Arts and Crafts. Technical Education	99	2	7%
P113	Agriculture Education (AE)	66	2	5%
	Total Contact Hours (excl. Exam Time)	**1,375**	**33**	**100%**

Year 2

During the second year, students specialize in either in lower primary (P1 – P3) or upper primary (P4 – P7), and choose any two of the specified electives. Year 2 subjects include:

Subject Code	Subject Name	Hours	Contact Hours per Week	Time Allocation
P201 *	Professional Education Studies (PES). Foundations of Education (FED). Special Needs Education (SNE). General Methods	102	5	7%
P202 *	English Language Education (ELE)	90	4	6%
P203 *	Social Studies Education (SSE)	60	3	4%
P204 *	Integrated Science Education (ISE)	80	4	6%
P205 *	Mathematics Education (MTE)	90	4	6%
P206 *	Religious Education (IRE and CRE)	28	3	2%
P207 *	Kiswahili Education (KSE)	57	3	4%
P208	Local Language Education (LLE)	53	3	4%
P209	Music Education (Performing Arts) (MSE)	42	2	3%
P210	Physical Education (PHE)	48	2	3%
P211	Early Childhood Education (ECD)	90	3	6%
P212	Integrated Production (IPS) Home Economics. Arts and Crafts. Technical Education	48	2	3%
P213	Agriculture Education (AE)	40	2	3%
P214 *	School Practice I	280		20%
P215 *	School Practice II	280		20%
	Total Contact hours excluding examination time	**1,388**	**40**	**100%**

Electives

Student select two subjects in either upper or lower primary, as per their specialization.

Lower Primary: Candidates must take course P211: Early Childhood Development as well as any one of the following: P208: Local Language Education, P209: Music Education, P210: Physical Education and P212: Integrated Production Skills.

Upper Primary: Candidates select one subject from Block A and one from Block B as shown below:

- Block A Subjects:P209: Music Education and P210: Physical Education

- Block B Subjects:P212: Integrated Production Skills and P213: Agriculture Education

School Practice (560 Hours)

Two blocks of supervised school practice are to be carried out in primary schools, namely P214 and P215, in Term I and Term III of the second year. Each block lasts six weeks. The first contributes to 30 percent and the second to 70 percent of the final result. Candidates sit 13 theory examination papers in the first year and 10 in the second year.

Annex 3.5: Mean Scores of Primary P3 and P6 Teachers in Numeracy, Literacy and Oral Reading, by Highest Teaching Qualification held and Teacher Experience, 2011
Percent

	Numeracy		Literacy		Oral Reading		Total Number of Obs.
	Mean	SE	Mean	SE	Mean	SE	
Teaching Qualification							
Grade III	79.7	0.61	79.2	0.60	75.8	0.68	1,176
Grade V Primary	79.1	1.10	80.4	1.08	79.6	1.08	397
Grade V Sec	76.5	3.70	84.1	1.86	83.8	2.53	19
Bachelor in Ed	82.7	3.54	77.9	5.18	76.8	5.27	28
Others	82.2	1.91	81.0	3.06	81.1	2.15	29
Years of Experience							
1-5	81.3	0.93	79.3	0.20	75.8	1.04	475
6-10	78.3	0.97	81.3	0.02	74.8	1.08	494
11-15	79.0	1.06	69.6	0.03	77.5	1.25	335
16-20	78.9	1.67	76.8	0.03	81.7	1.43	164
Over 20	79.8	1.71	79.3	0.03	80.1	1.88	150

Source: NAPE/UNEB, 2011a.

Annex 3.6: O' Level Score and 2011 Grade III Examination Final Score, Various PTCs, 2011
Score

	O' Level Aggregated Mark			Grade III Final Exam Mean Score (1)			Number of Students
	Mean	Min	Max	Mean	Min	Max	
PTC							
Bishop Willis	—	—	—	6.2	3.3	8.1	204
Bwera	46.4	16	55	6.3	4.1	7.4	124
Canon Apolo	45.8	21	59	6.2	3.7	7.7	231
Gulu	47.0	29	58	6.3	3.9	7.6	142
Kiyoora	43.7	22	59	5.9	3.0	7.6	210
Total	**45.5**	**16**	**59**	**6.2**	**3.0**	**8.1**	**911**

Source: Grade III Examination data, 2011.
Note: (1) Average scores are computed based on students' subject grades.

Annex 3.7: Share of Secondary S2 Teachers Rated Proficient in English, Math and Biology, by Highest Teaching Qualification and Teaching Experience, 2011.
Percent

	English	Math	Biology
Teaching Qualification			
Grade V Secondary	68.0	80.1	15.2
Degree in Education	75.9	68.9	18.6
Others *	69.5	60.7	15.9
Teaching Experience (Years) [1]			
1-5	75.9	67.6	16.5
6-10	59.9	78.3	13.2
11-15	70.4	86.9	18.1
16-20	79.2	63.3	2.9
Over 20	76.3 *	64.9 *	49.3 *
Total	**69.4**	**70.3**	**16.6**

Source: NAPE/UNEB, 2011b.
*Note: * Results are to be used with caution given the low number of observations. [1] Differences are not statistically significant.*

Annex 3.8: Share of Secondary S2 Students Rated Proficient in English, Math and Biology, by Highest Teaching Qualification and Teaching Experience, 2011
Percent

	English	Math	Biology
Teaching Qualification [1]			
Grade V Secondary	63.0	35.0	17.7
Degree in Education	72.9	44.6	25.1
Others *	59.5	30.6	10.7
Teaching Experience (Years) [2]			
1-5	67.1	38.6	18.2
6-10	64.8	32.6	21.9
11-20	66.2	39.8	19.7
Over 20	64.3	40.5	19.5
Total	**66.4**	**38.2**	**19.6**

Source: NAPE/UNEB, 2011b.
*Note: * Results are to be used with caution given the low number of observations. [1] Differences between Grade V and Degree holders are not statistically significant. [2] Differences are not statistically significant.*

Annex 4.1: District-Level Pupil-Teacher Ratio, Government Schools, 2010

PTR < 50 27 districts: 24.1%		50 < PTR < 60 31 districts: 27.7%		60 < PTR < 70 34 districts: 30.4%		PTR > 70 20 districts: 17.9%	
Kalangala	34.8	Isingiro	50.5	Bulambuli	60.1	**Budaka**	**70.4**
Mbarara	38.1	Yumbe	51.1	Adjumani	60.1	**Kumi**	**71.8**
Wakiso	38.4	Kasese	51.1	Soroti	60.8	**Tororo**	**71.9**
Kabale	38.9	Ntoroko	51.3	Katakwi	61.2	**Otuke**	**71.9**
Rukungiri	38.9	Kiruhura	51.7	Sironko	62.7	**Pader**	**73.0**
Bushenyi	39.6	Luwero	51.8	Abim	63.0	**Zombo**	**73.1**
Sheema	40.0	Kalungu	52.3	Ngora	63.7	**Nwoya**	**73.5**
Kiboga	40.5	Kween	52.4	Arua	64.2	**Buvuma**	**73.7**
Mityana	42.0	Iganga	52.6	Bugiri	64.3	**Alebtong**	**73.8**
Kampala	42.5	Butambala	52.7	Maracha	64.5	**Butaleja**	**74.3**
Mitooma	43.4	Masindi	53.1	Kibaale	64.5	**Kyegegwa**	**74.4**
Ibanda	43.5	Nakaseke	53.8	Amolatar	64.9	**Kaberamaido**	**75.1**
Nakasongola	43.7	Gomba	54.3	Busia	65.0	**Lamwo**	**75.7**
Rakai	44.1	Bududa	54.9	Mayuge	65.2	**Kibuku**	**76.0**
Moyo	44.5	Buikwe	55.2	Amuria	65.3	**Amuru**	**78.5**
Lyantonde	45.0	Gulu	55.6	Moroto	65.5	**Agago**	**79.8**
Kapchorwa	45.3	Kisoro	55.8	Nebbi	65.6	**Kaabong**	**80.6**
Buhweju	46.1	Bundibugyo	55.9	Namutumba	66.0	**Buyende**	**91.4**
Mukono	46.1	Lwengo	56.1	Pallisa	66.4	**Kotido**	**96.5**
Masaka	46.2	Manafwa	56.3	Kitgum	67.6	**Amudat**	**102.6**
Sembabule	46.3	Lira	56.5	Kiryandongo	67.6		
Ntungamo	47.5	Bukwo	56.7	Kyenjojo	67.9		
Jinja	47.6	Hoima	57.1	Bulisa	68.4		
Mpigi	49.6	Mbale	57.9	Koboko	68.7		
Kyankwanzi	49.6	Kamwenge	58.5	Dokolo	68.8		
Rubirizi	49.8	Kabarole	58.6	Oyam	68.9		
Kanungu	49.8	Kayunga	59.8	Kaliro	69.2		
		Bukomansimbi	59.8	Serere	69.2		
		Kamuli	60.0	Napak	69.2		
		Mubende	60.0	Apac	69.3		
		Luuka	60.0	Kole	69.3		
				Nakapiripirit	69.3		
				Namayingo	69.7		
				Bukedea	69.7		

Source: Authors' computations using EMIS/MoES data, 2010.

Most of the districts with high PTRs (above 70:1) are newly created districts, located in rural or hard-to-reach/hard-to-stay areas. Moreover, the process of teacher recruitment for these districts is very slow, especially due to the fact that few applications for such positions are received. The recent joint monitoring reviews suggest that building accommodation for teachers can be an effective strategy to attract teachers to these areas.

Annex 4.2: District-Level Pupil-Teacher Ratio, Government Schools, 2010,

Percentage of Schools

District	Teacher Deficit	enough Teachers	Teacher Surplus	District	Teacher Deficit	enough Teachers	Teacher Surplus
Abim	56%	15%	29%	Kitgum	70%	12%	18%
Adjumani	61%	21%	18%	Koboko	60%	10%	31%
Agago	81%	11%	8%	Kole	72%	10%	18%
Alebtong	72%	12%	16%	Kotido	100%	0%	0%
Amolatar	61%	12%	27%	Kumi	84%	2%	14%
Amudat	91%	9%	0%	Kween	27%	7%	67%
Amuria	59%	15%	25%	Kyankwanzi	58%	17%	25%
Amuru	87%	2%	12%	Kyegegwa	77%	16%	8%
Apac	74%	7%	19%	Kyenjojo	62%	21%	18%
Arua	59%	9%	32%	Lamwo	71%	14%	15%
Budaka	80%	11%	9%	Lira	39%	10%	50%
Bududa	36%	19%	45%	Luuka	47%	24%	29%
Bugiri	65%	15%	21%	Luwero	29%	20%	51%
Buhweju	40%	21%	40%	Lwengo	39%	22%	38%
Buikwe	50%	21%	29%	Lyantonde	20%	11%	69%
Bukedea	63%	23%	13%	Manafwa	30%	19%	51%
Bukomansimbi	39%	28%	33%	Maracha	64%	14%	22%
Bukwo	44%	12%	44%	Masaka	21%	24%	55%
Bulambuli	37%	23%	40%	Masindi	26%	17%	57%
Bulisa	70%	7%	23%	Mayuge	62%	15%	23%
Bundibugyo	45%	17%	38%	Mbale	41%	11%	48%
Bushenyi	21%	27%	53%	Mbarara	21%	31%	48%
Busia	59%	14%	27%	Mitooma	18%	34%	49%
Butaleja	80%	10%	10%	Mityana	14%	21%	65%
Butambala	21%	42%	37%	Moroto	65%	19%	15%
Buvuma	77%	8%	15%	Moyo	14%	12%	74%
Buyende	89%	7%	4%	Mpigi	24%	30%	46%
Dokolo	70%	14%	16%	Mubende	53%	21%	27%
Gomba	32%	31%	37%	Mukono	40%	11%	49%
Gulu	41%	16%	43%	Nakapiripirit	65%	8%	28%
Hoima	33%	19%	48%	Nakaseke	45%	27%	28%
Ibanda	20%	32%	48%	Nakasongola	30%	21%	49%
Iganga	27%	19%	54%	Namayingo	74%	6%	20%
Isingiro	56%	20%	24%	Namutumba	49%	16%	35%
Jinja	18%	12%	70%	Napak	76%	7%	17%
Kaabong	80%	13%	7%	Nebbi	58%	20%	22%
Kabale	13%	16%	70%	Ngora	64%	18%	18%
Kabarole	50%	11%	39%	Ntoroko	50%	17%	33%
Kaberamaido	76%	15%	9%	Ntungamo	38%	26%	37%
Kalangala	63%	25%	13%	Nwoya	70%	12%	19%
Kaliro	71%	14%	15%	Otuke	78%	9%	13%
Kalungu	22%	31%	47%	Oyam	66%	9%	25%
Kampala	13%	10%	77%	Pader	71%	19%	10%
Kamuli	50%	9%	41%	Pallisa	65%	12%	23%
Kamwenge	50%	26%	24%	Rakai	7%	13%	80%
Kanungu	44%	18%	38%	Rubirizi	43%	22%	35%
Kapchorwa	7%	7%	86%	Rukungiri	8%	15%	77%
Kasese	25%	20%	55%	Sembabule	42%	17%	40%
Katakwi	46%	22%	32%	Serere	72%	10%	17%
Kayunga	50%	18%	33%	Sheema	24%	25%	52%
Kibaale	66%	18%	16%	Sironko	59%	18%	24%
Kiboga	24%	26%	50%	Soroti	59%	11%	30%
Kibuku	76%	10%	14%	Tororo	83%	7%	10%
Kiruhura	66%	20%	14%	Wakiso	23%	13%	64%
Kiryandongo	63%	18%	19%	Yumbe	25%	17%	58%
Kisoro	42%	23%	35%	Zombo	70%	15%	16%
TOTAL	**45.7%**	**17.3%**	**37.0%**	**TOTAL**	**45.7%**	**17.3%**	**37.0%**

Source: Authors' computations based on EMIS data, 2010.

Annex 4.3: District-Level Pupil-Teacher Ratio, Government Schools, 2010

Citations from various joint monitoring reviews

Joint Monitoring Report, 2008

"The monitoring exercise confirmed widespread evidence of high head teacher and pupil absenteeism in schools. Finding an absent Head teacher has now become a norm in the majority of schools. During the joint visit for instance, 60 percent of the head teachers of the eighty (80) schools sampled, were found out-of station. This obviously has implications for not only teacher management but also teacher and pupil attendance and accountability."

"The monitoring team also noted an increase in the number of indiscipline cases amongst teachers due to alcoholism which is a common occurrence in the districts of Kasese, Pader, Kitgum, Busia and Luwero. This has led to increased absenteeism of teachers in schools."

"In the majority of the schools visited, the teachers were not in station at the time of the visit."

Joint Monitoring Report 2009

"While findings from the monitoring exercise indicate that a total of 296 instructors are in post, only 208 or 70% of the instructors were present in their respective institutions on the day of the monitoring visit. That means a total 88 instructors (i.e. 30%) were absent on the day of the monitoring visit."

Joint Monitoring Report 2011

"According to the recently concluded Quality Enhancement Initiative follow-up study, head teacher attendance was about 62% in the 12 poor performing districts. Low head teacher attendance is one of the attributed causes of the declining quality of performance at the primary level."

"Unlike other monitoring exercises, this exercise ascertained the teachers' presence in school as well as their being on task. It found that 64% of teachers were present, out of which 73% were on task."

Joint Monitoring Report 2012

"Findings reveal that out of 765 teachers in primary schools visited, 634 (83%) were present. 17 percent were absent, of which 61 had authorized leave while 57 did not. Extreme cases of teacher absenteeism without authorized leave were observed in the districts of Alebatong, Kiryandongo and Kalungu."

"Findings indicate that head teachers' absenteeism rate stands at 19.4 percent in the schools visited."

Annex 5.1: Official Teacher Category Nomenclature

Post Title	Institution
Education Assistant	Primary schools
Education Officer	Secondary schools
Technical Teacher	Technical and farm schools, vocational training centers
Tutor	PTCs, HTIs
Lecturer	NTCs, technical colleges, colleges of commerce, community polytechnics, instructors colleges, fisheries training institutes, cooperative colleges, Institute of Survey and Physical Planning, Wildlife Training Institute, National Meteorological Training School
Instructor	Vocational training institutes, technical institutes, community polytechnics

Source: ESC, 2008.

Annex 5.2: Primary Teaching Staff Distribution and Pay, by Grade, FY 2010/11

Position	Grade	Teachers		Teacher Pay	
		Number	%	Annual Gross Wage	Units of GGP p.c.
Licensed Teachers *	U7-L	1,059	0.8	2,445,763	2.1
Education Assistants (Grade III)	U7-U	102,425	81.3	3,629,574	3.1
Senior Education Assistants (Grade V)	U6-L	6,703	5.3	4,144,141	3.5
Head Teachers (Grade IV)	U6-U	2,677	2.1	4,478,956	3.8
Principal Education Assistants / Head Teachers (Level III), Deputy Heads / Teachers (Level II)	U5-U	6,845	5.4	5,241,055	4.4
Head Teachers (Level II), Deputy Heads / Teachers (Level I)	U4-L	4,458	3.5	7,195,564	6.1
Head Teachers (Level I)	U4-U	1,450	1.2	8,599,717	7.3
Total		**125,617**	**100**	**3,936,873**	**3.3**

Source: Payroll (MoFPED) and authors' computations.

Annex 5.3: Secondary Teaching Staff Distribution and Pay, by Grade, FY 2010/11

Position	Grade	Teachers		Teacher Pay	
		Number	%	Annual Gross Wage	Units of GGP p.c.
	U8-U7	204	1.0	3,204,897	2.7
Grade V Teachers (Lower Secondary)	U5-U	12,673	61.5	5,224,107	4.4
Education Officers (Upper Secondary)	U4-L (Spine 5)	6,476	31.4	7,356,377	6.2
	U4-U	31	0.1	8,009,932	6.8
Senior Education Officers	U3-L	306	1.5	9,930,809	8.4
Principal Education Officers	U2-L	662	3.2	13,033,400	11.0
	U2-U	3	0.0	17,961,582	15.2
Deputy Head Teachers	U1 EXE - L	135	0.7	16,950,215	14.3
Head Teachers	U1 EXE - U	107	0.5	17,354,068	14.6
Total		**20,597**	**100**	**6,309,628**	**5.3**

Source: Payroll (MoFPED) and authors' computations.

Annex 5.4: PTC Teaching Staff Distribution and Pay, by Grade, FY 2010/11

Position	Grade	Teachers		Teacher Pay	
		Number	%	Annual Gross Wage	Units of GGP p.c.
	U7-U	19	1.7	2,885,046	2.4
	U5-U	424	37.8	5,287,864	4.5
Tutor	U4-L	505	45.0	6,965,433	5.9
	U4-U	14	1.2	7,809,054	6.6
Senior Tutor	U3-L	53	4.7	9,829,039	8.3
Principal Tutor	U2-L	2	0.2	13,090,194	11.0
	U2-U	4	0.4	14,273,106	12.0
Deputy Principal	U1 EXE --L	58	5.2	16,613,247	14.0
Principal	U1 EXE - U	37	3.3	17,244,445	14.5
Total		**1,116**	**99.4 ***	**7,360,407**	**6.2**

Source: Payroll (MoFPED) and authors' computations.

Annex 5.5: NTC Teaching Staff Distribution and Pay, by Grade, FY 2010/11

Position	Grade	Teachers		Teacher Pay	
		Number	%	Annual Gross Wage	Units of GGP p.c.
	U7-U5	12	5.3	3,987,594	3.4
Lecturer	U4-L	165	70.8	7,508,555	6.3
	U4-U	1	0.4	7,552,671	6.4
Senior Lecturer	U3-L	41	17.7	9,764,508	8.2
Principal Lecturer	U2-L	3	1.4	12,684,971	10.7
Deputy Principal	U1 EXE - U	5	2.1	17,731,572	15.0
Principal	U1 EXE - Senior	5	2.1	17,516,880	14.8
Total		**233**	**100**	**8,232,971**	**6.9**

Source: Payroll (MoFPED) and authors' computations.

Annex 5.6: BTVET Teaching Staff Distribution and Pay, by Grade, FY 2010/11

Position	Grade	Teachers		Teacher Pay	
		Number	%	Annual Gross Wage	Units of GGP p.c.
	U6-L	9	2.4	3,408,777	2.9
Assistant Teacher	U5-L	3	0.8	4,338,652	3.7
	U5-U	95	26.6	4,954,333	4.2
Teacher	U4-L	30	8.4	6,422,079	5.4
	U4-U	55	15.4	8,081,551	6.8
Senior Teacher	U3-L	29	8.0	9,345,415	7.9
	U3-U	41	11.5	11,331,779	9.6
	U3 (SC)	2	0.6	11,972,976	10.1
Principal Teacher	U2-L	20	5.6	12,088,716	10.2
	U2-U	26	7.2	15,623,248	13.2
	U2 (SC)	16	4.5	12,102,960	10.2
Deputy Principal	U1 EXE. – L	9	2.5	16,557,509	14.0
Principal	U1 EXE – U	23	6.3	17,048,474	14.4
	U1 EXE - Senior	1	0.3	15,765,768	13.3
Total		**358**	**100**	**9,061,041**	**7.6**

Source: Payroll (MoFPED) and authors' computations.
Note: Teachers refer to either instructors, lecturers, tutors, or technicians.

Annex 5.7: Sustainability of Teacher Pay

The sustainability of teacher pay can be assessed by expressing wages as a share or multiple of GDP per capita. This approach allows to consider teacher wages in term of cost and ultimately sustainability, as it relates the cost of education service delivery to the available domestic resources.

The following table gathers information on teacher pay for FY 2010/11 using the payroll (which provides total remuneration), by grade and level of teaching. Gross salaries range from 3.3 times GDP per capita at primary, to 5.3 times GDP per capita at secondary and reaches 6.1 and 6.9 times GDP per capita for PTCs and NTCs, respectively. The average salary in BTVET is amongst the highest, at 7.6 times GDP per capita. Higher education staff (including non-teaching staff) are paid 11.9 times GDP per capita.

Teaching Staff Gross Pay, by Grade and Subsector, FY 2010/11

	Payroll			Multiple of Grade III Pay	LIC Average Pay (Multiple of GDP pc) [1]
	Number of Staff	Annual Gross Wage Per Staff (USh)	Annual Wage (Multiple of GDP pc)		
Primary					
All	126,053	3,930,299	3.3		3.8
U7 U	102,425	3,629,574	3.1	1	
Secondary					
All	20,597	6,341,410	5.3		
U5U	12,673	5,224,107	4.4	1.4	5.8
U4L	6,476	7,356,377	6.2	2.0	6.5
PTC					
All	1,122	7,267,981	6.1		
U5U	424	5,287,864	4.5	1.5	
U4L	505	6,965,433	5.9	1.9	
NTC					
All	233	8,232,971	6.9		
U4L	165	7,508,555	6.3	2.0	
BTVET					
All	358	9,061,041	7.6		
U5U	95	4,954,333	4.2	1.4	
U4L	30	6,422,079	5.4	1.7	
U4U	55	8,081,551	6.8	2.2	
HE *	6,617	14,133,726	11.9	3.8	
Total	**148,363**	**4,309,417**	**3.6**		

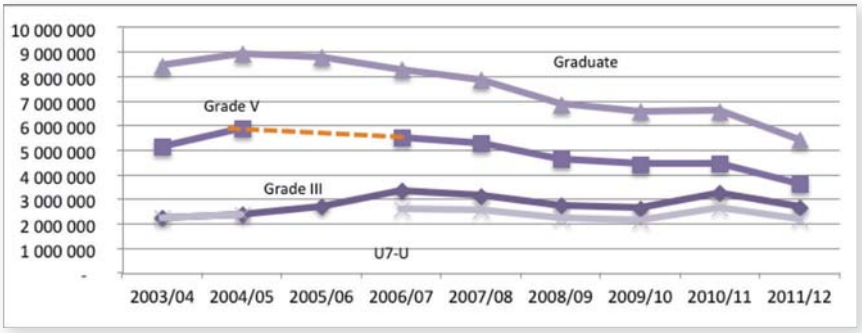
Source: Payroll (MoFPED) and authors' computations. [1] Pole de Dakar database.
*Note: Head teacher and deputy head teachers are included in the teaching staff category. * Includes non-teaching staff only.*

Available regional data shows that Ugandan primary teacher costs are systematically lower than those in other countries in the region when computed as a multiple of GDP per capita. This implies that Ugandan primary teachers are relatively cheaper, providing the ministry with some relative leeway for further recruitment or wage increases. Primary wages stand at 3.3 times GDP per capita in Uganda, compared to 3.8 times on average for the subsample of LICs. At the secondary level, disaggregated data show that while upper secondary teacher (graduate) costs tend to be aligned with the average country in the sample (6.5 times GDP per capita), lower secondary teachers (Grade V) cost relatively less (4.4 times GDP per capita in Uganda against 5.8 times for the LIC average). Keeping in mind that secondary teacher basic wages have dropped significantly over the period, this evolution seems to have allowed teacher costs to converge to somewhat more reasonable and sustainable levels.

Annex 5.8: Sustainability of Teacher Pay

Partial data on basic pay for civil servants in general show that Grade III teachers have benefited from a wage premium since 2006/07. The figure below displays the real wages for Grade III teachers and U7-upper staff in non-teaching professions. Indeed, since 2006/07, the wage curve for Grade III teachers' wages has stood above the U7-upper staff wage curve. Over the last decade, primary teachers, as other civil servants, have seen their basic wages increase many times, sometimes sizably, by up to 33 percent in FY 2006/07 and 30 percent in 2010/11. Although these raises have compensated for inflation and improved in real terms however, they have been erratic and have sometimes led to a loss in teachers' effective purchasing power, such as over the 2007/08-2009/10 period. In 2010/11, a Grade III primary teachers' real starting annual wage was estimated at around USh 3.3 million, a level above the one recorded for previous years. However, it decreased in 2011/12 following high inflation levels. Note that non-teaching staff wages evolved similarly.

Real Annual Basic Starting Wage Trend, by Salary Grade, Teaching and Non–Teaching Staff, FY 2003/04 - 2011/12 * *USh, 2011 Prices*



Sources: Payroll Scale, MoFPED; UBOS (GDP deflator).
Note: * Estimates for 2011/12.

No major pay increase has been recorded since 2004/05 among secondary teachers, leaving both Grade V and graduate teachers' real wages to steadily decrease, by around 25 percent over the 2004/05 to 2010/11 period, with a further decrease in 2011/12. Some evidence highlighted in the 2007 Teacher Report indicates that secondary teacher pay is topped up with additional payments from parent-teacher associations in non-USE schools, which in some cases could represent USh 50,000 to USh 75,000 per month, an extra 15 percent of their basic salary (Shinyekwa, 2006).

In FY 2012/13, primary teachers were granted a 15 percent raise in their basic wages, to avoid strikes like those of 2011. A provision of USh 40 billion was also granted to science teachers at secondary and tertiary levels to improve their wage conditions (via the introduction of new salary grades, to be made effective in FY 2009/10 for tertiary and in 2012/13 for secondary). The implementation of this policy remains a concern among stakeholders given that secondary non-science teachers, as well as BTVET lecturers, are not included. How this situation will be handled is still not clear.

Note that the significant drop observed in secondary teacher wages has entailed a reduction of the gap between primary and secondary teacher pay, effectively making secondary teachers relatively less costly than before. This in itself can help to sustain the expansion of the secondary subsector. As of 2010/11, Grade V teachers earned 1.4 times the wage of a Grade III teacher, whereas in 2004/05 they earned the double. Compared with graduate teachers, Grade III teachers earned 3.7 times less and twice less in 2004/05 and 2010/11 respectively. Over this period the differential between graduate and Grade V teachers was stable at a factor of 1.5. The premium earned by Grade V secondary teachers vis-à-vis primary teachers and by graduates vis-à-vis Grade V teachers seems reasonable, considering a 10 percent premium per additional year of study.

Annex 6.1: Questionnaire of the Teacher Job Satisfaction Survey

Pôle de Dakar
ANALYSE SECTORIELLE EN EDUCATION

NB: Dear Teacher, this questionnaire seeks to solicit information to contribute to a Diagnostic Study of Teacher Issues in Uganda. For each item, please indicate your response in front of the question, rank or circle the appropriate number where applicable.

Please do not write your name, telephone number or contact on this questionnaire. Thank you

1.1. Age: .....1.2. Sex: .....
1.3. District origin: .....
1.4. Marital status (single, married, separated, divorced, widowed): .....
1.5. Number of children (if applicable).....
1.6. Highest academics level of education (Primary, OL; AL; Tertiary, University): .....
1.7. Highest professional level of education (Grade III, Grade V, Graduate): .....
1.8.Number of years of teaching experience: .....
1.9. Teaching deployment (Lower, Upper): .....
1.10. Teaching area (for P1 to P4 teacher) ..... Or teaching subjects (for P5 to P7 teacher): .....
1.11. Member of UNATU (yes or no): .....
1.12. Total monthly income: (a) Salary :.....(b) Estimation of other incomes:.....

QUESTION NO.		VERY SATISFIED	SOMEWHAT SATISFIED	SOMEWHAT DISSATISFIED	VERY DISSATISFIED
1.	Generally speaking, how would you rate your overall satisfaction with your job as a teacher?	1	2	3	4
				YES	NO
2.	If you had the opportunity to start over in a new career, would you choose to become a teacher?			1	2
3.	Generally speaking, do you believe that the teachers with whom you work are satisfied with their job?			1	2

4.1. How often do you give assignments/homework to your pupils per month? .....
4.2. How much time (hours) do you spend in teaching in a week? .....
4.3. How much time per week do you spend in lesson preparation and marking assignments/homework? .....
4.4. How many times have you been absent from school with permission this year? .....
4.5. What is your job expectation in the next two years? (Circle one option in the table): .....

Stay in the education sector as a teacher	Be promoted to an administrative position in the education sector	Be promoted to an administrative position out of the education sector	Find a position in the private sector
1	2	3	4

Note that: 1 is the most important and 8 is the least important and that no figure from 1to 8 can be repeated.

FACTORS	1 is the most important and 8 is the least important, do not repeat any figure
Recognition (e.g., receiving praise from authorities, parents, students, or others)	
Potential/opportunities for professional growth (e.g., possibility of improving one's own professional skills, additional responsibilities)	
Interpersonal relationships/social activities with colleagues	
Salary	
Benefits (health security, housing, transport, specific status for teachers, etc.)	
Working conditions (e.g., infrastructure, class size, workload, facilities and equipment at work)	
Regular assessment of teacher performance	
Quality of leadership and supervision of head teacher	

According to you, what is the main (one) measure the government can take to significantly improve your level of satisfaction? (Please write below, not more than two lines)

Annex 6.2: Main source of Teacher Satisfaction According to the Mean of the Marks Given by Respondents to Each Factor

Factors	Mean	Ranking
Pay	2.9	1
Opportunities for Professional Growth	4.0	2
Benefits	4.3	3
Working Conditions	4.3	4
Professional Recognition	4.3	5
Relationships with Colleagues	5.0	6
Quality of Supervision	5.2	7
Regular Assessment of Performance	5.3	8

Source: NASPTSU, 2012.

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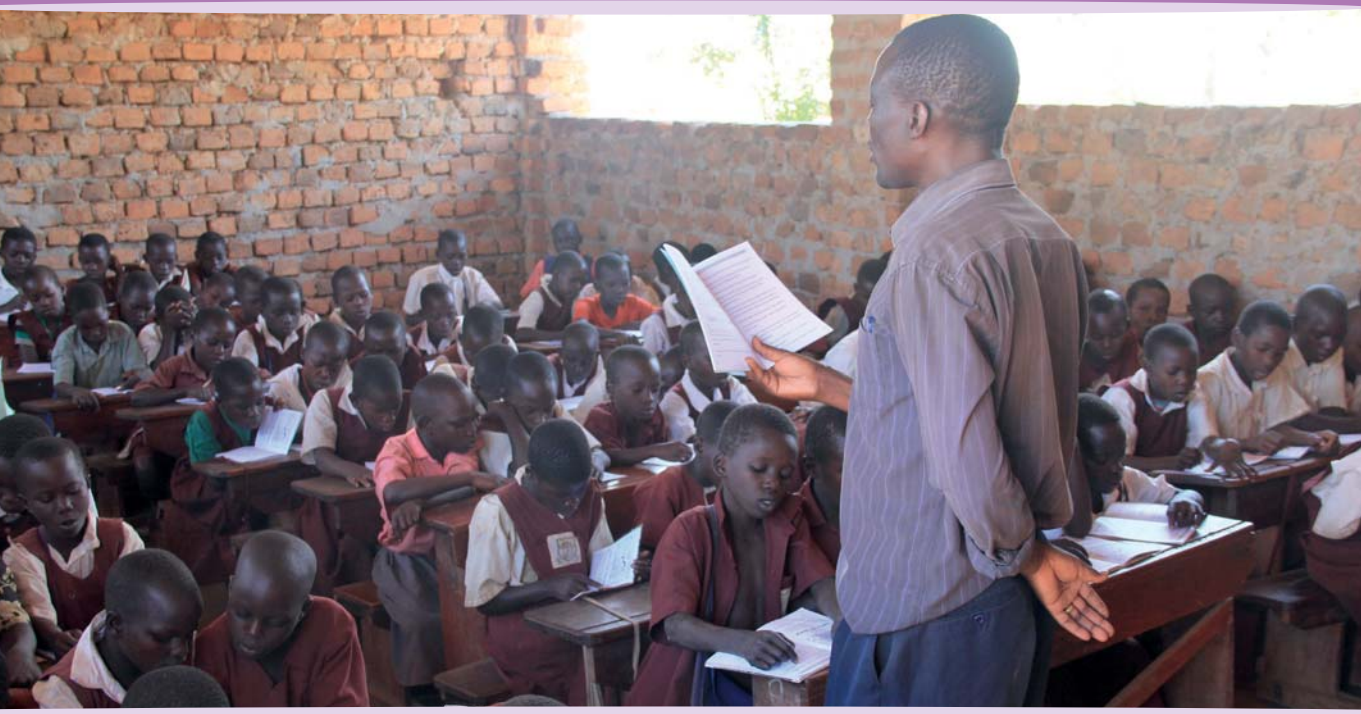

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