TECHNICAL & FINANCIAL FILE

IMPROVING THE TRAINING OF BTVET TECHNICAL TEACHERS/INSTRUCTORS AND HEALTH TUTORS, AND SECONDARY TEACHERS IN UGANDA

UGANDA

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TABLE OF CONTENTS

Abbreviations

ACD	Academic Course Development
AfDB	African Development Bank
ATP	Assessment and Training Package (BTVET)
BTC	Belgian Technical Cooperation
BTVET	Business, Technical and Vocational Education and Training
CBET	Competency Based Education and Training
CBO	Community Based Organisation
CDC	Centers for Disease Control and Prevention
CIB	Concrete Interlocking Blocks
CMT	College Management Team
CMU	Construction Management Unit
CP	Community Polytechnic
CPD	Continuous Professional Development
CPIC	Community Polytechnics Instructors College
CVTI	Certificate in Vocational Training Instruction
DANIDA	Danish International Development Agency
DES	Directorate of Educational Standards
DGD	Directorate General of Development Cooperation
DP	Development Partner
DSE	Diploma in Secondary Education
DTTE	Diploma in Technical Teacher Education
DVTI	Diploma in Vocational Training Instruction
ECE	Early Childhood Education
EDP	Education Development Partner
EFA	Education for All
EPPAD	Education Planning and Policy Analysis Department
ESSP	Education Sector Strategic Plan
EU	European Union
FR	Formulation Report
FY	Financial Year
GoU	Government of Uganda
HC	Health Centre
HR	Human Resource
HRM	Human Resource Management
HSSP	Health Sector Strategic Plan
HTI	Health Training Institution
HTS	Health Training Schools
HTC	Health Tutors Training College
IC	Institutional Capacity
IDAY	International Day of African childhood and its Youth
IDP	Islamic Development Bank
ISA	International Sector Advisor
ISE	International Sector Expert
JICA	Japan International Cooperation Agency
JRM	Joint Review Mission
KYU	Kyambogo University
MDGs	Millennium Development Goals

M&E	Monitoring and Evaluation
MoES	Ministry of Education and Sports
MoH	Ministry of Health
MoU	Memorandum of Understanding
MUST	Mbarara University of Science and Technology
NAS	Need Assessment Survey
NCDC	National Curriculum Development Centre
NCHE	National Council for Higher Education
NDP	National Development Plan
NFE	Non-Formal Education
NGO	Non-Governmental Organisation
NSE	National Sector Expert
NTC	National Teachers College
NTS	Nurse Training School
O&M	Operation and maintenance
PDCA	Plan Do Check Act
PDU	Procurement and Disposal Unit
PEAP	Poverty Eradication Action Plan
PHP	Private care health practitioner
PIM	Project Implementation Manuel
PCT	Project Coordination Team
PNFP	Private-not-for-profit organization
PRSP	Poverty Reduction Strategy Paper
PTA	Parent Teacher Association
PV	Photovoltaic
SC	Steering Committee
SESEMAT	Secondary Science and Mathematics Teachers Programme
SIDA	Swedish International Development Cooperation Agency
SNN	Slum NGO Network
STDMS	Secondary Teacher Development Management System
SWAp	Sector-wide approach
TE	Teacher Education
TIET	Teacher and Instructor Education and Training Department
TFF	Technical & Financial File
ToR	Terms of Reference
TQM	Total Quality Management
UCC	Uganda Children's Centre
UHSSP	Uganda Health Systems Strengthening Project
UNATCOM	Ugandan National Commission on UNESCO
UNEB	Uganda National Education Board
UOTIA	Universities and Other Tertiary Institutions Act
UPE	Universal Primary Education
UPPET	Universal Post-Primary Education and Training (= ~USE)
USAID	United States Agency for International Development
USE	Universal Secondary Education (= ~UPPET)
UVQF	Uganda Vocational Qualifications Framework
VTC	Vocational Training Centre
WB	World Bank

Executive summary

Uganda has shown itself to be a leader on the African continent in terms of its promotion of universal access to education. Starting first in 1997 with its policy on Universal Primary Education (UPE), this was followed in 2007 with a similar policy for secondary education – UPPET (Universal Post-Primary Education and Training). These policies have led to very considerable increases in enrolment over the ensuing years.

Whilst increasing access was a logical and appropriate starting point in trying to improve education, and in keeping with Education for All (EFA) and the Millennium Development Goals (MDGs) for education, the other side of the same coin is the importance of ensuring the quality and relevance of the education that those children receive. Providing teachers capable of delivering education of high quality is the single most important input in ensuring the successful delivery of the UPPET programme.

Recognising the importance of secondary teacher training, the Government of Uganda, in collaboration with the Belgian Government, has agreed to support interventions geared towards the improvement of teacher training provided by the National Teachers' Colleges (NTCs), as well as other Colleges responsible for training tutors and lecturers for Business, Technical and Vocational Education and Training (BTVET), including the training of key health tutors.

The specific objective of the intervention (which is focused for the most part on four selected colleges) is to provide an improved teaching and practice-oriented learning environment, supported by a strengthened support supervision and visitation (inspection) service. To reach this objective, the project has defined a strategy that addresses four areas:

- Strengthening the teacher education system in relation to the colleges in the areas of communication, support supervision and visitation, strategic management and lecturers' qualifications (Result 1);
- Strengthening the management capacity of the supported colleges (Result 2);
- Improving the quality of teaching and learning in the supported colleges (Result 3);
- Rehabilitating, extending and equipping the college facilities (Result 4).

These results will be achieved through capacity building at system (central) level, organisational (college) level and individual level (managers and teachers).

At present, the colleges receive little pedagogical support from their awarding institution and have little influence on such key aspects as the way the examinations are prepared and the students are assessed. The project will work closely with the Ministry of Education and Sports (MoES) to address these issues and strengthen the links between the central level institutions and the colleges in order to improve communication, decision-making processes and support supervision.

At organisational (college) level, the four colleges face similar challenges: a strong pressure to increase the number of students, limitations in their infrastructure and equipment, and important changes in the academic area that will have an impact on their core activity. The colleges have to be prepared to respond to these challenges. Their organisational structure has to be adapted, their staff need to be trained and their management capacity needs to be strengthened.

At individual level, the intervention seeks to bring about change and improvement in the

way education and training programmes are delivered, equipping newly qualified teachers with the skills and tools to teach in a more effective and efficient way. Also by the way individual capacities combine to strengthen the overall institutional capacity of the colleges and the wider team of college staff.

The management strengthening activities will be structured along a mutually-reinforcing three-pronged approach. This first component will include a number of training modules focused on topical issues for those with formal leadership or management roles or duties. The second approach is to provide specific specialist support for those working in HR, Finance and Infrastructure and Maintenance. The third approach seeks to mobilise the college campus to view the improvement of quality as the hallmark of college life. This component will be implemented using the broad principles of the Total Quality Management (TQM) approach and an on-site coaching methodology adapted to each college.

In addition, the colleges' physical infrastructures are dilapidated (with Mulago HTC being an exception in this regard) and they lack the space to host the increasing numbers of students they are being called upon to admit. Prior to any major infrastructure works being implemented by the project, a series of studies will be conducted, including a long-term spatial master plan for each college, feasibility studies on the use of renewable energy and the establishment of a maintenance programme. Rehabilitation/ extension works will be based on these studies and will follow a set of priorities, with the main focus on the learning facilities.

The project will be implemented in co-management, with the Permanent Secretary of the MoES being the Project Director and authorising officer, while the BTC Resident Representative in Uganda will be the co-Director and co-authorising officer of the project.

The Belgian contribution to the project will be EUR 17.504.636, while the Ugandan contribution is 10% of this amount, which is approximately EUR 1.750.000.

The project duration will be 5 years.

Analytical record of the intervention

Intervention Number	NN 3010161
Navision Code BTC	UGA 09 020 11
Partner Institution	Ministry of Education and Sports (MoES)
Duration of the intervention	5 years (+ 1 year for the Specific Agreement)
Date of the intervention	2011
Contribution of the Partner Country	10% of Belgian contribution (Euro ~1.750.000)
Belgian Contribution	EUR 17.504.636
Sector (CAD codes)	Education (DAC 11120)
Brief description of the intervention	The intervention improves the quality, efficiency and effectiveness of the education and training provided by Kaliro and Muni NTCs, Abilonino CPIC and Mulago HTC. It does this by improving the relation between the central level and the colleges; improving management; making the teaching and learning process much more active and effective; and attending to material and infrastructural needs.
Global Objective	To contribute to the increase of quality of and equity in access, to post-primary education and training level, as part of Universal Post-Primary Education and Training (UPPET)
Specific Objective	The supported institutions provide an improved teaching and practice-oriented learning environment, supported by a strengthened support supervision and visitation service
Results	**Result 1:** The teacher education system for secondary and BTVET is strengthened in relation to the colleges in the areas of communication, support supervision and visitation, strategic management and lecturers' qualifications **Result 2:** The management performance of the supported colleges is strengthened **Result 3** : The quality of teaching and learning in the supported colleges is improved **Result 4 :** Colleges facilities are rehabilitated, extended and equipped.

1 Situation analysis

1.1 Overall (policy) context

The education section of the National Development Plan (NDP)[1] is operationalised through the Education Sector Strategic Plan (ESSP). The education sector plan was initially conceived for the period 2003-2015, but has subsequently been reviewed and adapted to cover the period 2010-2015. The plan focuses on consolidating enrolment gains as a result of Universal Primary Education (UPE), continuing expansion beyond primary, improving equity, improving overall governance, driving up standards and reducing wastage. Next to the sector plan, the Ministry of Education and Sports (MoES) has developed sound strategies for the sub-sectors[2].

Universal Primary and Secondary Education
The inception of the Sector Wide Approach (SWAp) in 1997 provided the basis for the Universal Primary Education (UPE) policy that was introduced in 1997. The UPE policy saw total enrolments in primary education increase from just over 3 million pupils in 1998 to about 8.6 million pupils (government, community and private schools) by 2010. Behind these commendable figures lie less impressive results. The focus on improving access has been to the detriment of the overall quality of primary education.

To ensure sustainability of the gains realised from the UPE programme, in February 2007 GoU launched the Universal Post Primary Education and Training (UPPET) strategy, as a national programme to reform post primary education. UPPET aims to provide quality options for the increasing numbers of pupils completing primary education and seeking a secondary education. The introduction of Universal Secondary Education (USE) in 2007 led to an instant increase of 17.2% in enrolment figures in secondary education[3] [4].

The secondary sub-sector has three types of schools (i.e. Government-owned, private sector-owned and community-owned). In 2009 there were 914 government-owned secondary schools (31%); 1602 private schools (57%) and 504 community schools (11%). However, although the majority of existing schools are either privately or community-owned, they cater for less than 50% of students. Much as the private sector plays a significant role in the provision of secondary education, its participation in rural areas is limited. The inequality of access to secondary education would therefore be much higher than it currently is, if the public sector was not to adequately target the poor.

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[1] Uganda's Poverty Reduction Strategy Paper (PRSP), covering 2010/11 to 2014/15.

[2] Universal Secondary Education (USE) strategic Plan, Secondary Teacher Development Management Plan – STDMP, and the Plan for development of technical teachers, instructors and health tutors for the BTVET system in Uganda. Currently, Uganda is in the final stages of the development of a Strategic Plan for Skills Development in Uganda.

[3] Between 2006/2007 and 2007/2008 secondary schools students enrolment rose by 17.2% from 814.087 to 954.328.

[4] Uganda's education system comprises: (a) non-compulsory preschool for 3-5 year olds managed by the private sector; (b) seven years of compulsory primary education for 6-12 year olds (P1-7); (c) four years of lower secondary education for 13-16 year olds (O-level) (S1-4); (d) and two years of upper secondary (A-Level) education (S5-6). A-level graduates may go on to university, a range of other tertiary institutions, or enter the labour market. The education system also provides for two-year vocational and technical colleges, including teaching and nursing. Primary school graduates have an option to enrol in technical schools or community polytechnics.

With increased enrolments, measures to improve efficiency are needed and significant additional resources are also required if the desired outcomes are to be achieved. The level of existing constraints has necessitated the introduction of a number of policy reforms in secondary education that the MoES is in the process of implementing in order to improve efficiency and quality. These include:

- introduction of double-shifts in schools,
- curriculum review to reduce subjects offered by schools,
- introduction of a set minimum weekly teaching load for secondary teachers of 24 instructional periods out of a total maximum of 35,
- school based construction norms and low cost school infrastructure designs,
- introduction of multi-science rooms and public-private partnerships.
- In addition, management and governance of secondary schools are being enhanced at school level through provision of basic training in core functions for head teachers and other key personnel at the school level.

BTVET

A second pillar of the UPPET strategy relates to the development and expansion of Business, Technical and Vocational Education and Training (BTVET), the legal basis for which was established in 2008 by the BTVET Act. Starting around mid-2010, the MoES, supported by the World Bank and the Kingdom of Belgium, began a process to formulate a strategic plan for BTVET development for the coming 10 years. It represents a paradigm shift and a reform process of which the main features are in brief:

- all BTVET provision should be based on the upcoming Uganda Vocational Qualification Framework (UVQF);
- all BTVET will be made competency-based (CBET-Competency-based Education and Training), which implies that training programmes will be shorter, modular and more flexible in terms of entry and exit points;
- a national Skills Development Authority with the role of coordinating, approving, supervising and quality assuring all BTVET providers and programmes in the country will be established, likewise a stronger partnership with the private sector, and diversified funding mechanisms for BTVET.

The BTVET system is thus seen as an integral part of a flexible post primary education system.

The BTVET system comprises public -, private-, and firm based training. There are a total of 737 registered and licensed BTVET institutions, of which are 600 private training service providers. In addition there is an estimated 1000 private training providers registered with the Uganda Association of Private Vocational Providers (UGAPRIV) the majority of which operate in the informal sector and are not registered by MoES. Over the last five years, all BTVET institutions have experienced increases in students' enrolment and the demand is continuing to rise.

Legislation

The overall legislative basis governing education provision in Uganda is the Education Act 2008, which covers Pre- Primary, Primary and Post-Primary education. Tertiary education is guided by the Universities and Other Tertiary Institutions Act (UOTIA).

Education Finance

Notwithstanding a considerable increase in the education budget between 2006/07 and 2009/10, and further increase planned from 2010/11 onwards, the financing gap for the education sector remains important, in particular for secondary education and BTVET. Even after the planned introduction of several efficiency measures (including double shift schools, revision of curriculum, and revision of unit prices) the financing gap for secondary education has been estimated at USD 45 million per year (until 2015).

1.2 An overview of the education and sports sector

1.2.1 National vision, mission and policies

Uganda's education system comprises of pre-primary school education; secondary education; teacher education; business, technical and vocational education and training (BTVET); tertiary education including university education; and non-formal education.

The national vision is to use education as a basic tool for the transformation of society, and for national integration and development. The vision of the Ministry of Education and Sports' is *"Quality Education and Sports for All"* and its mission is to "provide technical support, guide, coordinate, regulate and promote quality education and training for all persons in Uganda for national integration, development and individual enhancement".

The current major education policy thrusts continue to prioritise access, equity, quality, relevance and efficiency of education service delivery in Uganda. As a result, the following have been incorporated into the updated ESSP:

- Ensuring universal access to primary and secondary education through sustained and continuing support to Universal Primary Education (UPE) and Universal Secondary Education (USE) with an emphasis on reducing repetition and drop out.
- Improving the quality of education and developing an education system that is relevant to Uganda's development goals by enhancing the capacity of the Directorate of Education Standards, National Council for Higher Education, and other specialized Examinations Board; together with local governments and schools to deliver better quality education.
- Enhancing the effective and efficient management of education service delivery at all levels through institutional capacity building and performance management;
- Strengthening the public-private partnership in the education and sports service delivery.
- Accelerating the Education Sector response to HIV/AIDS at all levels.
- Improving the delivery of education services in disadvantaged areas of Uganda and to vulnerable groups including the disabled.

1.2.2 Ministry of Education and Sports

The Ministry of Education and Sports comprises three main directorates (Directorate of Higher Technical and Vocational Training; Directorate of Basic and Secondary Education; and the Directorate of Education Standards), as well as a number of additional departments and affiliated institutions. There are Commissioners heading units covering: Education Planning and Policy Analysis; Inclusive and Special Education; Guidance and Counselling; Physical Education and Sports, as well as an Under/Secretary in charge of

such areas as Human Resources Management; Finance and Accounts; Communication and Information Management.

The affiliated bodies include: the Uganda National Examinations Board (UNEB); the Directorate of Industrial Training (DIT); the National Curriculum Development Centre (NCDC); the National Council of Higher Education (NCHE); the National Council of Sports (NCS); and the Ugandan National Commission on UNESCO (UNATCOM).

Management of post primary education is delegated to Boards of Governors (BOGs) operating at the school level, and governing councils. The Ministry of Education and Sports (MoES) has responsibility for policy, quality control and standard setting. Traditionally, the responsibility for financing and provision of post primary education and training has been shared between the Government, parents and private providers.

Success in achieving the objectives of both access and quality depend to a large extent on the capacity of the system. Such issues as corruption, lack of accountability, teacher absenteeism and failures in various points in the delivery chain persist in the system in spite of efforts to eradicate them. The MoES possesses strong leadership and management in many of its senior level positions. However, the UPS and UPPET policies, and the revision and revitalisation of BTVET, stretch and challenge quite considerably the available leadership and management capacity. According to the latest audit report on the education sector, about 38% of the positions are vacant at the level of MoES (130 vacant posts out of 351 approved posts)."

1.2.5 Teacher and Instructor Education and Training Department (TIET)

Teacher education and training is a cross-cutting function that serves the needs of all technical departments of the Ministry of Education and Sports and is situated in the Teacher and Instructor Education and Training Department (TIET). The department is responsible for the training of: teachers for primary schools and secondary schools; tutors for primary teachers colleges; tutors for health training institutions; technical teachers/ instructors for technical training institutions; and lecturers for the specialised training institutions including the National Teachers Colleges, College of Commerce, Technical Colleges, Agriculture Colleges etc.

Its mission is "To provide for, support, guide, coordinate, regulate and promote quality Teacher and Instructor Education for the production of adequate, competent and ethical teachers, tutors and technical teachers/ instructors"

The specific objectives of the TIET department are to:
- Make teacher / instructor / tutor education responsive to the needs of the Education Sector by ensuring that teachers and instructors are available in adequate numbers and of the right calibre and quality
- Make the teacher / instructor / tutor preparation environment conducive to promote quality, efficiency and effectiveness
- Develop in the teachers / instructors the attitudes and qualities needed for participation in a techno-cultural environment; ability to teach, instruct, and educate others; an awareness of the principles that govern orderly human relations within and across national boundaries; a sense of responsibility to contribute both by teaching and by example to social, cultural and economic progress and by acquiring through training, skills relevant to the provision of an

enabling environment for pupils / students / trainees.

- Improve on the quality and training of staff for the teacher / instructor / tutor Education Sub-Sector.
- Strengthen the Teachers' / Instructors' / Tutors' Colleges staff; Primary School teachers and head-teachers; Secondary teachers and head-teachers; Technical teachers and head-teachers; Instructors and Head-Instructors; Health Tutors and Principals of Health Training schools, Governing Councils, School Management Committees, and Boards of Governors support systems.

The department has three divisions, namely: Pre-primary and Primary Teacher Education Division; Secondary Teacher Education Division; and Instructor and Tutor Education Division. Its structure can be seen in Figure 1 below.
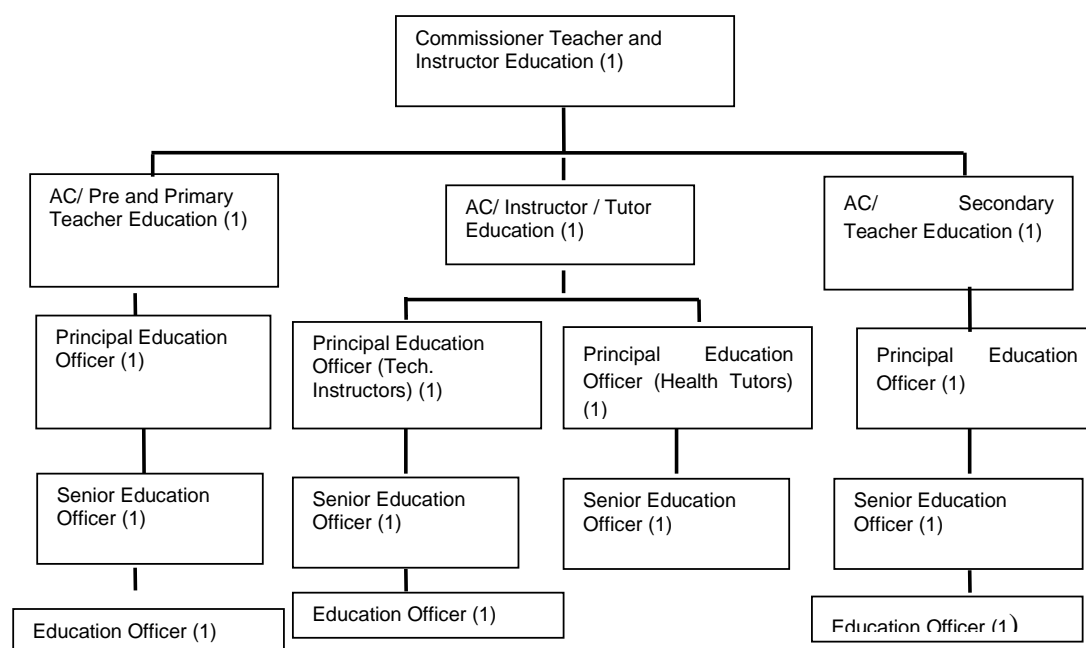
Figure 1:The structure of the TIET Department in the Ministry of Education and Sports

1.3 Training of secondary school teachers technical teachers/instructors and health college tutors

The MoES recognises that "No Education system can be better than the quality of its teachers/instructors, nor can a country be better than the quality of its education". Provision of teachers capable of, and motivated to, delivering education of high quality, and thereby ensuring holistic learning on the part of their students, is considered the single most important input in ensuring quality delivery of the UPPET programme.

1.3.1 Secondary school teachers

In accordance with the Secondary Teacher Education and Training Policy, secondary school teachers in Uganda are trained in two levels of institutions., The two levels of institutions are the public National Teachers' Colleges (NTCs) and the public/private universities. Student teachers at NTCs study for two full-time years to obtain a Diploma in

Education Secondary (DES) and are registered as Grade V teachers (teaching at lower secondary) by the Ministry of Education and Sports. Completing DES students receive the Diploma in Education of Kyambogo University. University students take a three-year Degree programme, graduating with a Bachelor's degree in Education (BEd), and are registered as graduate teachers qualified to teach at upper secondary level.

The NTC-students are S6 leavers with at least two principal passes in Arts subjects or at least one principal pass in science subjects and two subsidiary passes obtained at the same sitting. Universities with Faculties of Education admit students in Arts, Science and Vocational subjects for a Bachelor's degree in Education. Minimum qualifications are two principal passes in any of the Arts, Science and Vocational subjects.

The ESSP 2010 – 2015 makes clear, amongst others, that there is a need to strengthen pre-service training and in-service support for teachers in order to improve the quality of teaching and learning in Uganda. Revitalising the NTCs, paying particular attention to improving the effectiveness and efficiency of the teaching-learning process at this level, will enhance the quality and efficiency of secondary teacher education in Uganda. The MoES is designing a programme for secondary school teachers, the Secondary Teacher Development Management System (STDMS) within the existing Secondary Teacher Development Management Plan (STDMP). To ensure provision of adequate teachers for lower secondary, the sector considers (i) rehabilitation and/or expansion of the infrastructure, (ii) increased enrolment levels in USE core subjects, and (iii) teacher continuous professional support in NTCs as the most cost effective way to proceed.

The increase in the demand for teachers is putting all of the NTCs under pressure, as the estimations included in the STDMP (2008-2018) represent a doubling of the enrolment of students at NTCs from 5,000 newly qualified teachers per annum to 10.000. Thus, in spite of the fact that the NTCs are currently fully occupied or even over-occupied the present enrolment it can be expected that the average enrolment at each NTC will rise quite considerably over the coming years.

Currently, there are five government-owned NTCs in Uganda. The present facilities of Muni, Kaliro, Unyama, Kabale and Mubende Colleges are only adequate to meet about 40% (3.800 students) of the required training needs. The existing intake capacity of the public universities is about 1000 students annually. The 2 private NTC's (Masindi and Nkosi) have a capacity of 1700 students annually; though there are fewer students enrolled. In addition, there is also one private University offering a Diploma Education Secondary (Kabale).

An important point to make here is that the shortage of teachers is not uniform across all subject areas. Uganda is currently actually over-supplied with secondary school teachers in some areas of the curriculum (e.g. Arts) although under-supplied in others, particularly the sciences and mathematics. At the same time, secondary teachers are expected to be able to teach two subjects. In order to promote more effective learning and to address in a better and more flexible way the social, economic and students needs, the MoES intends to slim down the existing curriculum. To this end it is currently revising the secondary education curriculum with the support of the World Bank. Clearly, the training of future teachers will have to be adapted to the new curriculum and support for the NTC lecturers in introducing the new curriculum will also be required.

At present, teacher education programmes are 'front-end-loaded' with a relatively small (by international standards) school practice and the post-training probationary period. The current reality is that teacher training is treated as a once-off process with only minimal

support being provided for continuous professional development (CPD).

Teaching methods are almost exclusively based on *rote learning* (i.e. memorization) and to what is often referred to as *chalk-and-talk* with little meaningful teacher-student interaction or other student activity. Whilst the chalk-board still has a valid and important role to play, in many cases it tends to be over-used. This is very often put down to poor and inadequate facilities or other similar reasons. However, the roots of the problem normally go deeper, resting in generations of teacher-centred education, which ultimately becomes a habit very difficult to break.

According to a study on teacher education, commissioned by MoES and the World Bank[5], "Teacher quality is hampered by the poor quality of student teachers entering Teacher Education (TE) programs, weak pedagogical training in TE institutions, poor motivation, and lack of professional development. It results in poor planning, under-utilization of instructional time, dominant teachers, use of inappropriate methodology, lack of focus on active learning and practical work". Furthermore, the authors state, "the country will need to develop teacher education standards against which the effectiveness of teachers and professional development programs can be evaluated. A sound foundation for quality in teaching and learning should be used".

The study concludes: "the above issues provide impetus for the vicious circle of sub-standard teaching, poor quality of students from Secondary Schools, and poor intake in TE programs, shortage of qualified teachers, and poor teaching. Measures need to be put in place to break this vicious circle. Strengthening TE programs, providing professional development opportunities for teachers (e.g. through Teacher Professional Councils) and strengthening school management to include management (e.g. to address absenteeism of teachers), support and appraisal mechanisms for teachers seem priorities in this respect".

1.3.2 Training of technical teachers/instructors and health tutors (BTVET)

Training of technical teachers/instructors
In recent years, qualifications for BTVET *technical teachers/ instructors* have been developed at Certificate and Diploma levels. Whereas the *job title* 'Instructor' has existed for quite some years, the development of a specific instructor *qualification* is a relatively new initiative. The distinction between *technical teachers* and *instructors* reflects the traditional difference between what is considered formal education, which is taught by teachers in technical schools on the one hand, and vocational training, which is facilitated by instructors on the other. The latter is normally less formalised, shorter, more practically oriented and offered in community polytechnics, VTIs and elsewhere. As part of the on-going reform of the BTVET sector, it has been proposed that all the lower level BTVET institutions should become 'Skills Development Centres' staffed with instructors. However the MoES wants to maintain the technical teacher profession and qualification, at least for the time being.

Whereas the scope of training in dedicated Instructor qualification programmes may increase in the years to come, the 'core' qualification for all BTVET teaching personnel remains the two-year Diploma in Technical Teacher Education (DTTE). The minimum entry requirement for the DTTE is an Advanced Craft Certificate (Craft II). The

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[5] Uganda Secondary Education & Training – Curriculum, Assessment & Examination (CURASSE), a Roadmap for Reform. (2007), Andrew Clegg, Jacob Bregman, Wout Ottevanger (consultancy for MoES & World Bank)

programme focuses on 'how to teach' and is not intended to provide technical up-skilling *per se.*

The principal provider of the DTTE is Abilonino College (CPIC), which has currently 212 students enrolled, i.e. slightly more than the official capacity of 200 (100 per annual intake). The programme is accredited by Kyambogo University, which also delivers this programme at its own campus in Kampala with 29 students enrolled. A private provider in Kampala, Kaliotte Institute of Technical Teacher Education, has also been offering the DTTE programme with accreditation from Kyambogo, however only 11 students are enrolled at the moment. Both Kyambogo and the KAL Institute of Technical Teachers Education are also offering the one year Certificate in Technical Teacher Education (CTTE) with slightly higher enrollment, whereas Abilonino has officially stopped offering the certificate.

Concerning degree programmes, Kyambogo has also been offering a Bachelor's programme (BTTE), though this has temporarily ceased. It also has plans to offer a one year post-graduate programme and a 'Master in Vocational Pedagogy'. However these programmes are intended for graduates who want to join the teaching profession at higher education level, not at technical school level.

It is estimated that there are around 4,000 BTVET teachers/instructors in the system at the moment. The future needs have not been subject to systematic research and forecast, but it is estimated that at least 400 to 500 new entrants to the profession will be needed each year for the foreseeable future.

The core theoretical subjects of the DTTE curriculum are academic subjects such as education history, education psychology, etc. Together with the lack of modern teaching skills on the part of the lecturers and assessment methods that appear inappropriate, the implemented programme is far less practical than originally intended and in effect therefore not so different from the training provided by the NTCs for general schoolteachers.

Students and other stakeholders find the current curriculum repetitive and partly irrelevant, and would like to see it be much more practical. This is also the intention of the MoES, which emphasizes that all curricula should be reviewed and based more on industrial-related and field-based training and less on classroom training approaches. A new curriculum for the DTTE has recently been accredited by the NCHE.

All subjects are assessed each trimester and the current pass rate is around 90%. On the surface, the programme efficiency therefore seems to be very high, but the validity of relying entirely on pen and paper testing is questionable in such a highly practical field – with even computer skills being assessed using pen and paper.

According to the MoES' *"Plan for Development of Technical Teachers, Instructors, and Health Tutors for the BTVET System in Uganda: Draft Training Strategy* (March 2011)", the dual system of technical teachers and instructors will continue in parallel, with the following arrangement: (1) Abilonino continues to offer the DTTE and probably also a CTTE, accredited by Kyambogo University, and (2) Jinja VTI would offer Diplomas and Certificates in Vocational Training Instruction (DVTI and CVTI), accredited by the Directorate of Industrial Training (DIT) under the MoES. Nakawa VTI is already offering the DVTI and CVTI, (albeit for a limited number of students). However its future role will be to primarily provide in-service training to instructors and perhaps also to technical teachers.

Training of health tutors

In relation to the training of health tutors[6], the course described in the Health Tutor Education and Training Policy is called the Health Tutors Diploma. The training is carried out at the Health Tutors College, Mulago. The programmes for training health tutors consist of four semesters and one recess term of 10 weeks (for the Diploma programme). It offers both core and specialized (elective) courses. The Diploma accommodates multi-disciplinary cadres of health professionals who, on qualifying, will be able to teach in their respective disciplines in health training institutions. The programme is of two-year duration, although the introduction of a 3-year has started.

1.3.3 Continuous professional development of college and management staff

Continuous Professional Development (CPD) is missing in the colleges affiliated to Kyambogo University. Any CPD that does take place is mainly undertaken by individual staff who are particularly interested and motivated to search for their own opportunities. Most seminars that are offered are organized outside the Colleges, and these tend to be mainly *ad hoc.* Those who attend such events are dependent on college funding to support their attendance. Aside from these occasional events, the most commonly observed form of CPD is academic upgrading by way of pursuing a higher degree (Master's or PhD).

Notwithstanding the above, the MoES, through support provided by JICA (Japan International Cooperation Agency) and Ireland under the SESEMAT Program, is helping in the in-service upgrading of the knowledge and skills of those science and maths teachers in secondary schools who have graduated from NTCs. There are also plans underway to write modules and train secondary school teachers and administrators in teacher development and management skills.

1.4 Inspecting and supporting the colleges

Generally, within education systems, the concept of inspection tends to include elements of checking-up, policing, discipline and ensuring adherence to rules and standards. Educational support, on the other hand, is more concerned with providing supportive professional advice and guidance in relation to a wide variety of aspects of college life, but usually has a strong bias towards the educational side of the organisation.

In relation to inspection, in Uganda the term *inspection* is used for the lower levels of education only, such as primary and secondary, whilst the term *'visitation'* is used for this type of activity when it is carried out in relation to universities and other tertiary-level institutions. In relation to providing more general educational support to the colleges, the term "support supervision" is used.

Whilst the intellectual distinction between the two concepts is clear, common practice tends to somewhat blur the boundary between them. A visitation mission to a college or university is just as likely to offer elements of "support supervision" as it is to inspect the college. This blurring of the definitions is further increased by the fact that not all central institutions (e.g. MoES; Kyambogo University, Makerere University, are fully clear on the exact nature and extent of the role and duties expected of them when it comes to

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[6]The Scheme of Service for Teaching Personnel in the Uganda Education of Service, refers to "Tutor" as a person who has successfully completed a Diploma Programme at a recognised Health Training Institute.

supporting the colleges.

Support supervision can be provided either by external experts visiting an institution (external support supervision), or by some of the more able staff of a particular institution or college providing a similar form of support to their colleagues internal support supervision.

1.4.1. Support supervision provided by Kyambogo and Makerere Universities

Kyambogo University
According to the Other Tertiary Institutions Act, which is the Act by which Kyambogo University (KYU) was established, the University is called upon to play a key role in relation to three supported colleges[7] affiliated to it – particularly in terms of contributing to, and overseeing, the overall examination and assessment process. This role extends also certifying the programme and issuing the final certificates in its own name.

In terms of the actual needs of the colleges for support supervision, this would include such areas as (by way of example): governance; financial health; curriculum; staff and student enrolment; qualifications; infrastructure; education facilities and pedagogical support materials; strategic planning; research and publications; cross-cutting issues such as gender and HIV/AIDS; and other similar areas of college life.

The Faculty of Education acknowledges that a gap exists between the needs of the colleges and the level of support provided to them. According to the Faculty of Education itself, such additional assistance should include supporting and guiding college lecturers in preparing to teach and in actual teaching.

Part of the reason why support supervision is not being carried out to the level at which it is needed appears to relate to a lack of proper understanding of this role on the part the university management and the Faculty of Education. Another contributing cause relates to the effect of the transition of the institution from ITEK to KYU which has allowed the horizons of the institute to stretch much further and wider than hitherto. This wider horizon leaves little spare capacity available to attend fully and properly to a small number of far distant colleges.

Makarere University
Makerere University is called upon to provide a similar mentoring, supporting and certifying function for Mulago HTC, as KYU is for the other three colleges. However, with the physical distance between Makerere University and Mulago HTC being much shorter (both are located in Kampala), it appears to be able to cope much better in providing such support supervision. Amongst others, this occurs through support for the College Council and its Committees, with the present Chairperson of the Governing Council being a prominent member of the academic staff of Makerere University. This alone brings the university very closely into the heart of the strategic planning of the college and all other aspects of its implementation. Sizeable numbers of Makerere University academic staff (from the main campus) also contribute quite considerably in such areas as curriculum development; pedagogical training; and (more particular) in teaching and assessment at the Tutors' College.

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[7] NTC Kaliro and Muni, Abilonino CPIC

1.4.2. External visitation by the NCHE

The National Council for Higher Education (NCHE) was established by the UOTIA Act with the main function to: process and disseminate information: provide an advisory service to the MOES; register and accredit Higher Education Institutions; accredit academic programmes; monitor, evaluate and regulate institutions of Higher Education; set and ensure minimum standards for courses of study and the equating of degrees, diplomas and certificates awarded by the different public and private institutions of Higher Education; and set and co-ordinate national standards for admission of students to the different institutions of Higher Education. The overriding goal of NCHE is to ensure quality higher education through visitation missions and to check whether colleges are complying with the standards set by the NCHE.

The NCHE selects and inducts inspectors and programme assessors to conduct this type of activity with a frequency of around once in every 5 years for each university or college with problem institutions receiving more frequent visits. NCHE has already visited Kyambogo and Makerere Universities, but so far none of the four supported colleges.

Some practical issues affecting the current scope and reach of the NCHE relate to its being understaffed, being a comparatively young entity and accorded only a limited budget. In relation to the supported colleges, NCHE expects Kyambogo and Makerere Universities to maintain standards in these colleges. It does not see its own role to undertake that task directly.

1.4.3 External Support Supervision by MoES

As the role of the MoES is to provide for, support, guide, coordinate, regulate and promote quality education, it also has an important role in both visitation and in support supervision for the colleges. It is not entirely clear which aspects of support supervision are the formal responsibility for KYU and which the formal responsibility of the ministry.

The TIET Department is mandated by law to be a member on the Governing Councils of the Colleges. Its major role there is to guide the individual colleges on government policy. Other indirect forms of support supervision provided by MoES are the determination of intake capacity and registration, tracking of transition rates, dropout rates and coming up with corrective measures to any problems identified. The main reasons why the support provided is limited are lack of funding and shortage of staffing.

1.4.4 Support supervision provided by the administrators/managers and academic staff in the respective Colleges

A very important part of support supervision forms part of the regular duties of the management and senior academic staff of the colleges. They are called upon to focus on such aspects as the state of the land, infrastructure, sanitation, facilities, staff and student attendance, and mode of instruction (ESSR, 2004). However, in practice, such internal support supervision tends to be *ad hoc* and rare.

For the greater part, there are no mentoring or coaching programmes provided for academic staff. What is given is mostly very general guidance and advice during staff meetings.

1.5 An overview of the four selected colleges

The present intervention is focused primarily on improving the quality of education and training provided in four selected national colleges of education. These are:
- Kaliro NTC
- Muni NTC
- Abilonino Community Polytechnics Instructors Training College
- Mulago Health Tutors Training College

Abilonino and Mulago colleges are very different from each other, and also different again from the NTCs – in terms of the end-products they are preparing and also in terms of at least some of the issues and needs that affect them

1.5.1 Kaliro National Teachers' College

Kaliro National Teachers' College, is located near Kaliro town, about 40 kilometres to the north of Iganga town and 153 kilometres to the east of Kampala (see also the geographical map in annex 7.5).

The college offers both DES (Diploma in Education Secondary – full-time) and DEP (Diploma in Education Primary – part-time) teachers' training programmes. The college has four academic departments (Arts, Sciences, Vocational Training, and Professional Studies), teaching a total of 16 subjects. All students are required to take professional studies.

The DES Programme enrolment for the 2010-2011 academic year was 986 students, 671 male (68%) and 315 female (32%). with a particularly strong gender imbalance in the sciences (less than 12% female) and vocational studies (less than 23% female).

Student enrolment for the last 10 years has shown a progressive increment over the first five years followed by a levelling-off during the last five years during which the enrolment on the DES Program has stayed rather stable. Still, at this level, the enrolment stands at around three times the capacity limit initially set for the present buildings and facilities (300 students).

The college has 89 staff in total (academic + non-academic). The academic staff establishment stands at 66 (including the principal, deputy principal and senior registrar), with 48 filled positions and 18 vacancies (27%). The most understaffed department is Vocational Studies with 11 vacant positions, representing 46% of this department's establishment of 24.

1.5.2 Muni National Teachers' College

Muni National Teachers' College is located in Arua district in the West Nile region of Uganda, at around 7 km from Arua town. It is around 520 kilometres to the north-west of Kampala.

The college started as a Primary Teachers' College in 1974. In 1985, National Teachers' College Muni took over the premises. Between 1985 and 1992, three residence halls were constructed and the student enrolment increased to over 800 students on the DES and DEP programmes combined.

The numbers of both students and lecturers have been steadily increasing over the last

ten year (459 DES students in 2001, 633 in 2006, 893 in 2010) creating a need for more facilities such as lecture rooms, furniture, equipment, tools and books and staff accommodation.

For the 2010-2011 academic year, the college's enrolment was 893 students (639 male and 244 female) in the DES programme, of which 803 students are government sponsored (440 in first year and 363 in the second year) and 90 are privately sponsored, mainly by NGOs. The gender ratio is 72% male and 28% female, with a similarly strong imbalance in science as in Kaliro NTC (less than 14% female) and vocational studies (less than 20% female).

The college has four departments; Arts, Science, Vocational Studies and Professional Studies, teaching a total of 18 subjects.

In April 2011, the college had 59 academic staff in post, including the Principal, Deputy Principal and Academic Registrar, against a formal establishment of 74. The College Secretary position was also vacant. The college has over time experienced wide gaps in academic staffing levels, but more recently the vacancies have been steadily reducing. The most affected departments are Computer Studies and Political Studies, which have 3 established positions each, all of them vacant. The short-fall in teaching staff has clear and obvious adverse implications for the delivery of effective teaching and learning.

Muni NTC is located close to a private secondary school for girls, called Muni Girls Secondary School. Although there is no formal link between the two institutions, they have established an informal collegial partnership: the Muni Girls' principal is the Chairperson of the Muni NTC Governing Council and Muni NTC teachers and students use the Muni Girls school for teaching practice.

1.5.3 Abilonino Community Polytechnics Instructors' Training College

Abilonino Community Polytechnic Instructor's College is the only provider of pre-service training for technical teachers and instructors in the BTVET system. The college is situated near Lira in northern Uganda, approximately 200 km north of Kampala and 15 kilometres away from the Kampala-Lira highway. Established in 2002, the college was originally intended to train technical teachers/instructors for the many new Community Polytechnics that the Government proposed to open at the time. With most of the planned CPs not being built and commissioned, many of the Abilonino graduates now find employment in other BTVET institutions, both government and private, including Technical Schools, Farm Schools, Technical Institutes, Vocational Training Centres and others.

The programme offered is a two-year Diploma in Technical Teacher Education (DTTE) that turns out around 100 graduates every year. Despite its many inadequacies there are many more applicants for entrance to Abilonino than can be enrolled, e.g. 256 applicants in 2010. The remaining students (approximately 50 in total) are private and pay a higher tuition fee.

The entry requirement is Advanced Craft Certificate (Craft 2) and students can select from 11 different specialisations according to their craft. However students' technical skills are often minimal.

Most of the 16 academic staff hold a Bachelor degree (e.g. a Bachelor of Education) and/or a Diploma in general subjects, and are therefore not actually properly qualified in

technical or science subjects. It is not quite clear whether lecturers with simply a general BEd degree actually meet the formal requirements for teaching specialisations in addition to pedagogy, e.g. 'how to teach Carpentry & Joinery'. The formal establishment for the college is 39 academic staff members.

According to the recent *"Plan for Development of Technical Teachers, Instructors, and Health Tutors for the BTVET System in Uganda, Draft Training Strategy (March 2011)"*, the future role of the CPIC college at Abilonino will be to train technical teachers/ instructors for technical schools and farm schools, whereas Jinja VTI will be capacitated to train instructors for the Community Polytechnics and the VTCs.

In the future Abilonino will offer specialisations within agriculture and other trades needed in rural areas. If so, it is possible to envisage a technical school offering agricultural related trades being developed nearby as a demonstration school since, at present, no suitable school exists nearby.

1.5.4 Mulago Health Tutors' (Training) College

Mulago Health Tutors' College began in 1967 with the launch of the country's first midwifery training programme. Currently, Mulago HTC trains tutors in midwifery, nursing and allied health professions. It is the only college of its kind in the country.

The college is located within the Mulago national referral hospital complex, at Mulago Hill in Kampala. This location within the city makes it easy for the college to network with other institutions and organisations in and outside the country which provides a source of support for both service provision and teaching.

Until 1998, Mulago HTC fell under auspices of the Ministry of Health (MoH). Then, in an effort to streamline and rationalise functions, structures, and staff establishments of various government ministries, departments and offices, all training institutions (in health) were then transferred to the Ministry of Education and Sports (MoES). The departmental institutions transferred included all Health Training Institutions (HTIs) of the Ministry of Health, such as Nurse Training Schools (NTS), Paramedical Training Schools (PMTS) and the Health Tutors' Training College.

Mulago HTC is currently training students for a 2-year Diploma in Tutoring awarded by Makerere University. As described earlier, the college has also been developing a curriculum for a new 3-year Bachelor Degree programme in tutoring in Health Education. This has already been approved by Makerere University and is awaiting final approval from the National Council for Higher Education (NCHE). The new degree is expected to receive its first intake of students during the 2011-2012 academic year, beginning in September 2011.

The college also plans to develop a nine-month post-graduate programme in Health Tutors Education (HTE) that will address the needs of graduate nurses and allied professionals who may wish to take up the tutorship programme. In addition, it is planning to start a three-month certificate programme to address the training needs of the existing Clinical Instructors/ Preceptors for classroom instruction and clinical practice for nurses, midwives and allied health professionals attached to HTIs.

Requisites for admission at Mulago HTC include a diploma in the health profession (midwifery, nursing or allied health professions) and a minimum of two years of professional experience. The college graduates normally proceed to become tutors at one of the country's health training institutes (HTI).

Total enrolment during the 2010-2011 academic year was 71 students, 40 in first year and 31 in second year. The majority of students – 44 out of 71 – are female (62%) and 27 are male (38%). 23 were preparing for tutorship in nursing; 20 in midwifery; and 28 in allied health professions. A reliable estimation of student enrolment in the future is currently not available. However, it can be noted that, if all of the future intakes would be into the Degree rather than the Diploma programme, then the introduction of the 3-year BME will increase the total student enrolment by 50%, thus bringing the total to around 100 .

For the 2010-2011 academic year, Mulago HTC had only 5 permanent staff (including only 1 academic (teaching) member of staff) on the MoES establishment. These were: the director, the deputy director, the registrar, the bursar and one principal tutor in midwifery. One earlier planning document includes an establishment figure of 21 teaching staff. Neither the original nor the current the status of that document is clear. All other teaching staff are appointed by the college, either full-time (1 lecturer) or part-time. This means that there are no permanent core pedagogical staff at the college, and thus few opportunities for pedagogical discussions and innovation to take place. The building-up of an experienced core of teaching staff is considered a crucial step to support for the improvement of the quality of teaching at Mulago HTC. A first step has been taken in this direction with the college requesting 11 new lecturer positions to be included in the MoES establishment for the 2011-2012 academic year.

There is inadequate emphasis currently being given to practical training in the programmes of the college, be it in the professional field or for teaching skills. The clinical mentoring of students, and the clinical and teaching practice supervision, also need to be strengthened.

1.5.5 Main challenges for the colleges

Leadership and management: The four main supported colleges, have leaders and managers of varying degrees of experience and expertise. All are overseen by a governing council with government policies encouraging local initiatives to be taken under the guidance and supervision of the council. At the same time, the colleges also fall under the auspices of the MoES and must conform to certain agreed norms and standards set by the ministry.
All four of the colleges lack basic management tools and an up-to-date institutional development plan that sets out a strategy on how to address the issues facing the college for the medium and long-term future. In order for the leaders and managers to fulfil their role fully, they need to be further capacitated in the form of guidance, training and coaching in the fundamental principles, skills and techniques of effective management.

With the major reforms taking place in the BTVET sector, the organisational development plan of Mulago HTC needs – at one and the same time – to be embedded in the overall context of BTVET and also to take full account of its position in the overall 'training framework' of the health sector. Abilonino CPIC is facing a number of challenges of its own, with the rapidly changing landscape of BTVET, and likewise needs to develop appropriate strategies on how to address these challenges.

Need for a comprehensive HRD Plan: Many of the academic staff in the supported colleges hold only a Bachelor degree and/or a Diploma in general subjects, whilst a Master's degree is required in the NTCs. In the BTVET area, it is not clear if having a general degree is sufficient to meet the formal requirements for the role of member of the academic staff of Abilonino College, neither how practical skills in the college programmes will be uplifted given its heavy focus on basic classroom-taught education

courses. These issues need to be clarified, and a comprehensive HRD plan needs to be prepared and followed-up with active implementation.

HIV/AIDS : The HIV/AIDS epidemic in Uganda is increasingly threatening the right to access to education, and thereby also to the attainment of "Education for All" goal by 2015, by affecting the supply, demand and quality of education. A recent study by the Infectious Diseases Centre (IDC, 2008) HIV/AIDS was noted, amongst others, to cause an increase in teacher morbidity and mortality, absenteeism and poor quality of teaching and increased demand for treatment.

Coping simultaneously with rapid expansion and change: As a consequence of the UPPET, the increase in the demand for teachers and instructors is putting the colleges under severe pressure. In the NTCs the training of future teachers will have to be adapted to the new priorities on Mathematics, Science and English, but also to the new curriculum, which will be revised in the near future. In the BTVET sub-sector there is the need to cope with the complexity of this sub-sector and – in line with the UVQF Policy – all of BTVET is set to become competency-based. This will require a major restructuring of many of the programmes offered. More generally, a major overhaul of the BTVET sector is currently being undertaken and this will take much time and effort to implement and assimilate.

Gender: Uganda has formulated a Gender Policy (2007) to promote gender equity in society, and a comprehensive Gender in Education Policy (2007 – 2015), which specifies the role of the education sector in this endeavour and the contributions to be made at each level of the system. The policy also mentions that - despite achieving virtually equal enrolment for boys and girls in primary education and remarkable progress in this respect also at secondary and tertiary levels - there are still a number of challenges to be faced. These include the imbalance in completion rates, which are still higher for boys than girls, the uneven gender pattern across the country, where rural and poor districts are less successful in obtaining gender equity than urban/ central areas, and the persistency of traditional patterns in choice of fields of study and specializations, which reinforce stereotypes about roles and abilities of men and women.

Funding: NTCs receive a capitation grant of UGX 1,800 (approximately EUR 0.5) per student per school day (255 days a year) to cover their operating costs, with staff on government establishment paid directly by the MoES. The government subvention is insufficient for the NTCs to operate, and their main revenues actually come from other sources[8].

Education and training programmes in BTVET are several times more expensive than regular formal education. The MoES provides Abilonino funding for 75 students per intake (150 students in total) and for the funding of 24 students in Mulago HTC, which is based on a UGX 3,750 per student per day capitation grant. Other supplementary sources of college income are marginal. Privately sponsored students pay UGX 1,2 million per semester.

The main areas of cost are domestic costs (notably alimentation) and salaries for locally recruited staff. The funds available to the colleges are insufficient to cover food for students, wages for the part-time lecturers, general operation, support pedagogical activities and infrastructure development and maintenance costs.

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[8] These include student contributions (i.e. various fees paid by government sponsored students), and (above all) from the (private) tuition paid by DEP programme students.

Equipment: The two NTC colleges have very little suitable equipment and the laboratory equipment stock comprises of mainly smaller items. There are few items available for illustrative and/or experimental use. More generally, the teaching aids are either insufficient or non-existent. The libraries have a designated facility but the stock of textbooks is irrelevant for the current syllabi with much of it now outdated.

Abilonino CPIC has virtually no instructional equipment apart from a few hand tools, an old vehicle and two sewing machines. The 20 computers that were donated recently are not used optimally due to lack of a reliable power supply and other problems. There is no internet connection, and the range of handbooks and reference materials is also limited. Although it enjoys being located in a major city, Mulago HTC finds also finds itself in a similar situation in many respects – in particular shortage of resources.

Infrastructure: The facilities of both NTCs have a lot of similarities both in terms of design and condition. Generally, the structure of the buildings is in reasonable shape, justifying a rehabilitation of all the finishing (electricity, plumbing, drop ceiling, plastering, painting…), including the replacement of the asbestos roof sheets. Such work requires considerable caution during dismantlement and storage in order to avoid any environmental and/or health problems for the workers and/or the college staff and students. Neither of the college facilities has been adjusted to cater for the present (around 900 students) or future teaching needs (2.000 to 4.000 students). Their expansion is therefore essential, with a priority focus on learning facilities and also dormitories in the case of Kaliro.

Beside the administrative building, which, although too small, is in an acceptable condition, all the buildings of the Abilonino CPIC are dilapidated. With the exception of one or two buildings, much of their remaining structure is in too bad a shape to be rehabilitated.

In spite of being located in a large city, Mulago HTC has developed a tradition of providing accommodation for its students. The initial capacity at the college was for 14 students. Accommodation was provided on-site (14 individual rooms, now occupied as double rooms). Additional students are also currently accommodated in the two houses initially intended for staff members. Academic facilities comprise only 2 classrooms and a small library. There is no workshop or laboratory. The existing facilities are in good condition, thanks to recent rehabilitation work carried out in 2010-2011 with European Union funding. Improving the learning conditions would require the improvement/ expansion of the library and the creation of additional classrooms, a computer room, a laboratory and a multipurpose hall. However, the scale of the expansion will also depend on a reliable estimation of student enrolment in the future. No clear data is currently available in this respect.

Water and power utilities: Drainage, sewerage and solid waste management are generally inadequate or non-existent. Kaliro NTC and Mulago HTC are connected to city running-water networks. Muni and Abilonino are supplied by deep or shallow wells. Rainwater harvesting is rarely considered, and when available, the size of the storage capacity is not defined based on the collection capacity of all the impermeable built surfaces. Irrigation of the green spaces is not yet systematised.

Kaliro NTC and Mulago HTC are connected to the national grid in contrast to Muni and Abilonino where power is sourced from a generator, and is in very limited supply. However, the MoES has committed to fund the costs of connecting Abilonino to the national power grid (8.4 km away). Electricity is in general perceived as expensive. Therefore college principals welcome any initiative that will reduce this component of

recurrent running cost.

As the four colleges are currently all boarding institutions, each college has a kitchen where food is prepared for all the students. In all four supported colleges, firewood is used as cooking energy, which is expensive and contributes to deforestation.

Maintenance : In theory each college gets an annual budget from the MoES to conduct minor maintenance activities. This small fund is in fact mainly used to pay running costs. Nevertheless, some rehabilitation works have been observed in some colleges, for example in Kaliro.

Land: Considering the availability of land, except for Mulago where the vacant land leaves little space for additional construction, the colleges are rather well spread out across a large surface area. The overall layout could, however, be more optimised in order to make the best use of the remaining open space for future extensions, recreational activities and production purposes.
Although colleges are usually built on public land, in the case of Mulago this is owned not by the college itself but by Mulago Hospital. The legal processes to change the status of ownership is sometimes complicated with the public authorities not always having official land title. This is particularly an issue for Abilonino, where the neighbouring community has reclaimed part of the land originally allocated to the college.

The quality of educational provision: All of the colleges are called upon to provide education and training of high quality and relevance whilst operating in poorly resourced environments. Ways have to be found to raise the quality and relevance of the teaching and learning process in spite of the many challenges that the colleges face.

1.6 Other relevant development partner interventions

The present intervention covers several quite distinct areas of teacher education and training, namely secondary school teacher education; BTVET technical teacher education and the training of health tutors for the health sector. In each of these areas, there are also other relevant interventions whereas synergies can be developed. The following are the more important of these other related interventions.

1.6.1 Secondary education

BELGIAN DEVELOPMENT COOPERATION
Although the Belgian Government has supported the rehabilitation and expansion of the Sir Samuel Baker Senior Secondary School located in Gulu district (IDCP 2005-2008)[9], in 2008 education became a new priority sector for the Belgo-Ugandan development cooperation, with the overall objective of supporting expansion of the post-primary education and training. Under the current Indicative Development Cooperation Programme (2009-2012), the Belgian education portfolio in Uganda includes a mix of modalities.
The Education Sector Budget Support contributes to the implementation of the sector plan in 3 annual instalments of € 4 million (through the Poverty Action Fund – PAF) over the period 2010 – 2012. Although it is non-earmarked budget support, Belgium focuses in the policy dialogue and monitoring on post-primary education and training (mainly on skills development and quality of education). With budget support and sector dialogue Belgium pursues sustainable improvements of the education system with utilisation of the

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[9] Total cost for the rehabilitation works was estimated at 4 million € out of which the project contributes 1.5 Million €. The official handing over was celebrated on 15th April 2011.

existing SWAp structures. In 2012, Belgium will take over the chair of the EDP group.
Another modality is the study and consultancy fund, which is a flexible tool for financing critical studies in support of the education sector. In 2010, GoU with support from its development partners, commissioned a consultancy team of national and international experts to develop a BTVET Strategic Plan and also financed, though the study fund, the development of leadership and management training modules for head teachers and education managers.
Finally, in the context of the Belgian Scholarship Program, one of the largest scholarship programmes in Uganda, considerable additional support to the education sector is provided.
In March 2011 the negotiations on the new Indicative Development Cooperation Programme (2013-2016) started with the organisation of sector workshops, and this resulted in the drafting of the assessment report on the on-going programme by BTC Kampala.

IRISH AID and JICA :
Irish Aid targets mainly the Karamojo region through project support (6 million USD) and supports together with JICA, science and math teaching in secondary education – through the SESEMAT[10] programme (2010-2012).

ISLAMIC DEVELOPMENT BANK :
The Islamic Development Bank (IDB) is financing the rehabilitation and expansion of two technical colleges and the National Teachers College of Unyama. The project will (i) renovate the existing buildings and construct new facilities at the three colleges, (ii) provide furniture, textbooks, equipment and tools for the three colleges, and (iii) enhance the quality of education and training through training of lecturers. The total project value is 14,927,000 USD.

WORLDBANK :
The World Bank support to the UPPET is in the form of a USD 150 million International (first phase only) Development Association (IDA)-financed adjustable loan (APL) to be implemented in three phases over a 10-year period. The goal of this intervention is to improve the quality of education and support in the country as it seeks to attain the 2015 MDGs, including funding the goal of achieving Universal Education. This project includes the construction of over 700 secondary schools and a major curriculum revision exercise for secondary education and teacher training as well as the rehabilitation of Kabele and Mubende NTCs.

UNESCO
UNESCO has supported ICT training for technical teachers/instructors/health tutors. Also the development of a manual for entrepreneurship training.

1.6.2 BTVET – Technical (of relevance for Abilonino CPIC)

WORLD BANK
As part of the UPPET, the World Bank is also supporting the development of the BTVET strategic plan, together with Belgian Development Cooperation.
Some of the sub-components of the 'Private Sector Competitiveness Project' (2005-10) have supported BTVET though an Enterprise Skills and Linkages programme. The

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[10] Secondary Science and Mathematics Teachers (SESEMAT).

strengthening of linkages has also included working with the Katwe Small Scales Industries development Association and upgrading the quality of traditional apprenticeships.

ISLAMIC DEVELOPMENT BANK (IDB) PROJECT
IDB is also funding the Jinja VTI-based in-service training programme (commencing FY 2011/2012).

KOREA
Korea International Corporation Agency (KOICA) is supporting the establishment and equipping of two vocational training institutes in Uganda. It is also expected to provide substantial support for the development of skills training in ICT and new trades.

JICA
The Government of Japan has supported the development of BTVET in Uganda for over 30 years now through JICA. Previously, Lugogo Vocational Training Centre was supported, while the most recent support has been for Nakawa Vocational Training Institute. This has included participation of Nakawa staff members in JICA training programmes in Japan and a long period of interface with Japanese TA experts who were seconded to Uganda to support the project on "rehabilitation and expansion of Nakawa Vocational Training Institute". The support has also comprised Training of Trainers programmes for Instructors and Master Craftsmen, i.e. the Certificate and Diploma for Vocational Training Instructors (CVTI and DVTI), which has combined practical skills training and pedagogical/ instructional training. The technical skills part of the CVTI curriculum has focused on (i) Electricity, (ii) Electronics, (iii) Motor Vehicle Mechanics, and (iv) Welding and Fabrication. The total number of trainers trained is limited to 156, which includes participants in a short Diploma in Training Institution Management (DTIM) that has also been developed.
JICA is also expected to support a new project that will include in-service training in four new occupational groups and TA to assist the MoES in the planning of instructor training.

1.6.3 BTVET-Health (of relevance for Mulago HTC)

BELGIAN DEVELOPMENT COOPERATION

In addition to the present intervention, the Government of Belgium is currently supporting a capacity building intervention in the health sector focused on Human Resources Planning. In addition, Belgium is a partner in the provision of budgetary support to the education sector, which is responsible for the education and training side of the health sector.

UNITED NATIONS POPULATION FUND (UNFPA)
UNFPA is supporting midwifery training in Health Training Institutions, including scholarships for training of midwives, and provision of equipment for midwifery training.

1.7 A SWOT analysis

The following SWOT analysis of the teacher education system – with particular reference to the work of the supported colleges – provides a brief overview of some of the main strengths and weaknesses of the system.

Strengths	Opportunities
• Education is the government's first priority • The UPPET strategy exists and is being implemented • The sector receives substantial support from donors • Most education institutions are under the MoES • Large size of land to facilitate expansion or reconstruction (Kaliro, Muni, Abilonino) • High percentage qualified to Master's degree level in some colleges (80%) (Kaliro) • Strong commitment to transform the college to greater heights and initiative of management to explore other funding sources (Kaliro) • Recognised referral status in the area (Mulago) • Centralised and wide catchment area for students and handling facilities (Mulago) • Located within the National Referral Hospital Complex and close-by its learning opportunities (Mulago)	• A new BTVET strategy has been designed and is discussed • General secondary education curriculum is to be revised, and likewise the DTTE curriculum • New technologies may help promote new teaching and learning practices • USE expansion creates a potential demand, and also provides a potential supply, of students • Expanding Secondary Education sub-sector and rising demand for BTVET technical teachers/instructors • Curriculum expansion to take on Luganda, French and Swahili (Kaliro) • Close proximity to the site of a proposed new public university and practice school (Muni) • Potential demand for its services internally and from neighbouring countries (Mulago) • Expansion of numbers, especially in consolidating the increasing demand for Allied Health practitioners (Mulago)

Weaknesses	Threats
• The institutions are not sufficiently involved in the education reform process at central level • Traditional teaching methods with little teacher-student interaction • Weak support supervision and visitation • General infrastructure insufficient to cope with the number of students and in poor shape • Colleges receive insufficient financial support • Full and proper use not being made of specialised laboratories • Under-resourced workshops and classrooms • Lecturers receive little in-service training • No basic management tools available (institutional development plan, HR plan, maintenance plan, …) • High number of part-time lecturers (Mulago) • Governing Council composition not sufficiently relevant for strategic orientation of the college (Mulago)	• Financial allocations are insufficient for to meet aspiration of ESSP • The system is not equipped to cope with rapid change and increase in student numbers • College establishments are incomplete • Important impact of HIV/AIDS on demand, supply and quality of teachers and technical teachers/instructors • Limited learning materials and infrastructure i.e. learning rooms, library, ICT facilities and computers • Insufficient students at A-level pursuing sciences, which is the main focus of the NTC • Remote location making access to the college difficult (Abilonino) • There is limited orientation of the staff in terms of training towards emerging disciplines (Abilonino) • Limited space for physical expansion (Mulago) • Perceived marginalisation on the part of the students of the Allied Health professionals (Mulago) • Limited responsiveness to budgetary challenges (Mulago) • Insufficient connection with the needs of the health sector (Mulago)

2 Strategic orientations

Improving the quality of teaching and learning (result 3) is at the heart of what the intervention is most seeking to achieve. The activities of the other three results – which strengthen the teacher education system in the areas of management, support supervision and visitation; strengthen management performance at the level of the colleges; and support the rehabilitation, construction and equipment of school facilities – work in synergy with, and in support of, this result.

The resources allocated to the different results have been selected to ensure that success will be achieved in bringing about not only change and improvement in teaching and learning, but _lasting_ change and improvement. This is referring to sustainable improvement in the quality and effectiveness of the learning of the trainee teachers, tutors and instructors of the supported colleges year in and year out. Furthermore, that the benefits of this will carry over to the college students' own students and/or pupils once they join the teaching profession. For this to happen, there needs to be major change and improvement in how the college lecturers approach the teaching-learning process. This is a very challenging process – with many different factors tending to conspire together to impede improvement.

The project has been developed according to the concepts and ideas of the portfolio and programme approaches, the insights of capacity development and system strengthening and with an emphasis on improving quality. In addition, several important intervention principles will be respected.

2.1 The intervention principles

The intervention will:
- be implemented in full conformation with the long-term strategic vision for the education sector as laid out in the National Development Plan and the National Education Policy and the Revised Education Sector Strategic Plan (2010-2015);
- be implemented according to the principles as laid down in the Memorandum of Understanding (MoU) signed by the GoU and development partners in 2005;
- build synergies with other initiatives in the field of capacity-building in leadership, management and planning, and pedagogy in secondary education and the BTVET sector;
- draw on existing capacities, initiatives and structures as much as possible, as well as learning from best practices elsewhere, regionally and internationally;
- support the implementation of policies regarding HIV/AIDS and gender and will raise awareness on issues related to environment protection;
- adhere to the principles and tenets of the Paris Declaration.

2.2 A programme and portfolio approach (at the Belgian level)

The Belgian cooperation has opted for a portfolio approach to education in order to achieve a high degree of coherence and to facilitate complementarity between the different interventions. The Belgian education portfolio is characterized by one common objective, a high degree of alignment, and a mix of modalities. The Belgian focus in education in Uganda is on post-primary education and training (secondary education,

technical and vocational education and training) with a main emphasis on the quality of education.

The education portfolio is composed of (i) sector budget support, (ii) project support, (iii) sector monitoring and dialogue, (iv) activities funded under the study and consultancy fund, and finally, (v) a scholarships programme (see figure 2). By providing this mix of aid modalities aiming at one common objective, Belgium is in a position to add value to the sector dialogue as linkages with operations at service delivery level can be made. On the other hand, lessons learned from project or interventions at service delivery level, feed into the policy dialogue at national level.
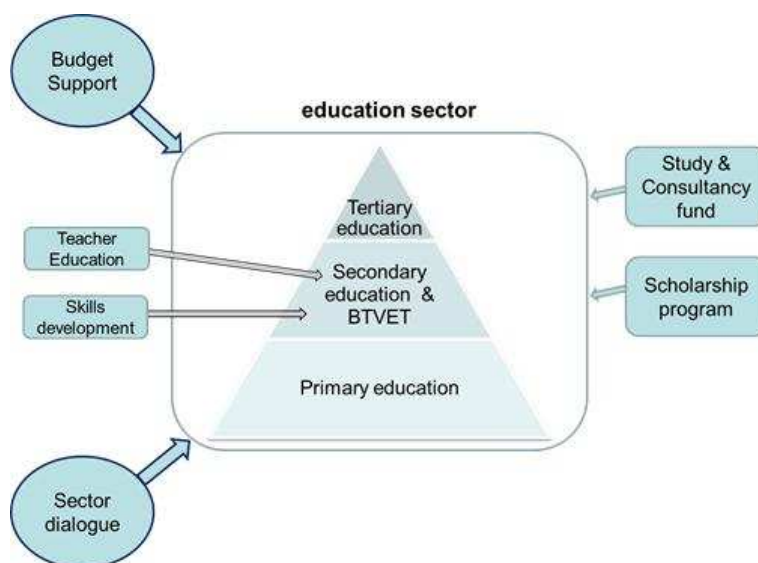
Figure 2: Belgian education portfolio in Uganda

According to the program approach the intervention, some general indicators, proceeding from the Joint Assessment Framework, are included in the logical framework of this intervention, which will be follow-up by the Budget Support Intervention.

Along the same lines, and to ensure the proper coordination of the capacity-building efforts with other donor partners, the intervention will subscribe to the program-based approach at sector level, widely known as SWAp by participating in working-groups related to the scope of the project.

2.3 Capacity-development and system-strengthening

Capacity-development can be defined at different levels. The most relevant of these are
- the individual level referring to competencies and performance of individuals
- the organisational level standing for resources (human, intellectual, financial, physical, infrastructural, etc) and other characteristics (structure, mandate, management, leadership, etc.) within an individual institution or organisation
- the level of the system referring to the broader system within which individuals and organisations function. This includes formal institutions (laws, policies, membership rules) and informal institutions (customs, norms).

All these levels tend to be interlinked with the overall performance at higher (i.e. system) level being highly dependent not only on the performance at the higher level but also on the performance of the lower levels.

Education in Uganda, with its many bodies, institutions, organisations and connections is an excellent example of what we are referring to here as a *system*. In this regard, assessing the education system's capacity and performance involves an examination into how the system defines the roles and responsibilities of its lower levels, and how well these work out in practice.

Capacity-development at system level
Related to this project, the main actors at the system level include the following:
- MoES (Teacher and Instructor Education Department)
- MoES (Educational Standards and Inspection) NB: This body is not officially responsible for education and training at college levels, but it is a potentially valuable partner in that it is well positioned to provide valuable information on the strengths and weaknesses of the quality of education and training provided at the secondary level, which is where the products of the colleges are placed.
- MoES (Construction Unit)
- Kyambogo University
- Makerere University
- The National Council for Higher Education (NCHE)

The lack of clarity of their present roles in the teacher education system and the lack of effectiveness of present practices will form a point of departure for the intervention and will be examined in close cooperation with MoES and the colleges.

Capacity-development at the level of organizations
The second level of intervention is college-based with a focus on *individual capacity-development* and *organisation-development.* At the heart of this, is the desire to bring about major change and improvement in the teaching and learning process in the selected colleges, with this and other college developments being supported by a stronger and better-capacitated management team. The intervention focuses in particular on the four supported colleges. However, the three remaining NTCs will also participate in, and benefit from, a restricted number of project activities.

More concrete at the level of organisations, the project will support capacity-development in the areas of:
- college management
- the transformation and improvement of the teaching and learning process to incorporate the best of national, regional and international practices in education and training
- material (refurbishment of buildings and the provision of equipment to support the teaching-learning process)

Capacity-development at individual level
Although organisational capacity depends to a high degree on the individual capacity of those working within it, the sum of all the individual capacity is not automatically equal to the capacity of an organisation. Individual capacity gaps can exist at various levels and in different aspects of the functioning of an individual and/or an organisation. These include:
- Poor basic training
- Poor practical skills to put theoretical knowledge into practice
- Poor management skills matching with poor technical skills
- Poor attitudes
- Poor working environment

Therefore, is it important that *capacity-development* at the level of the individual should not be confused as being simply one and the same thing as *training*. For this reason the project will identify the individual capacity-needs through the process of organisational/institutional capacity assessment (see Figure 3), which should naturally lead to identifying measures that need to be taken simultaneously e.g. in relation to the working environment and the training needs for the existing personnel and those who will be recruited during the course of the project.

2.4 An emphasis on improving quality

The quality and efficiency of the learning taking place in Uganda will be very difficult to improve if the training given by college staff to BTVET technical teachers/instructors/lecturers, health tutors and secondary school teachers fails to equip them properly. The intervention seeks to address this issue by strengthening the overall organisational capacity of the colleges and the wider team of college staff. This is illustrated schematically in Figure 3 below.
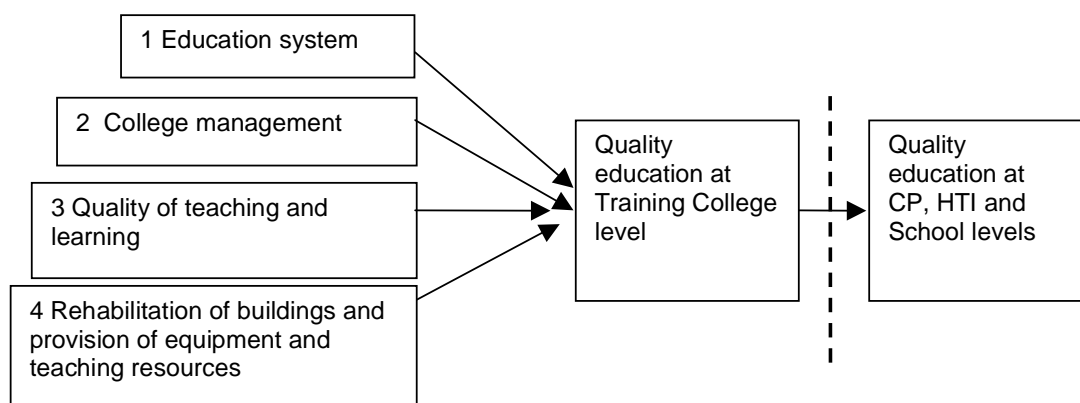
Figure 3: A schematic representation of the 4 result areas combining to improve quality

2.3.1 Quality in management and the Total Quality Management (TQM) approach

The capacity development activities will be implemented using several complementary approaches including the broad principles of the Total Quality Management (TQM) approach supported by a coaching methodology adapted to each college. TQM is a comprehensive and structured approach to organisational management that seeks to improve the quality of products and services through making regular small refinements in response to continuous analysis and feedback.

TQM processes are divided into four sequential steps: *Plan, Do, Check*, and *Act* (the PDCA cycle):
- In the planning phase, those involved define the problem to be addressed, collect relevant data, and ascertain the problem's root cause.
- In the doing phase, a solution is developed and implemented, and a measure (or indicator) to gauge the effectiveness of the solution is decided upon.
- In the checking phase, the results are confirmed through before-and-after data comparison where that is available.

- In the acting phase, people document their results, inform others about process changes, and make recommendations for the problem to be addressed in the next PDCA cycle.

The 8 principles, which form the basis for the total quality management approach, are presented in annex 7.7.

2.3.2 Quality in the teaching and learning process

With a view to improving in particular the quality of education provided by the colleges, the intervention foresees the changing of the paradigm from teacher-centred to learner-centred, first in the college academic staff, then in the college students and then ultimately in their students/pupils as the college students enter the teaching profession proper. Learner-centred education and training (also referred to as student-centred learning) is an approach to education that focuses first and foremost on the needs of the students, rather than those of others involved in the educational process, such as teachers and administrators.

Learner-centred approaches are focused on the student's needs, abilities, interests, and learning styles with the lecturer (or tutor or teacher) acting more as a facilitator of learning. This classroom teaching method acknowledges the student voice as central to the learning experience and allows students to actively participate in discovery learning-processes from a personal and individual viewpoint. Successful learning occurs when learners are fully engaged in the active learning process. Students consume much of the class time constructing a new understanding of the material being learned in an active and proactive way rather than passively. A variety of hands-on activities are administered to help students achieve life-long learning goals. When handled well, this approach invariably enhances student motivation in the classroom.

Some of the benefits of student-centred learning are:

- Strengthens student motivation
- Promotes peer communication
- Reduces disruptive behaviour
- Builds student-teacher relationships
- Promotes discovery/active learning, and

Responsibility for one's own learning

Capturing learner-centred strategies on paper by developing "course manuals"
Although learner-centred approaches place much more focus and attention on the learner, course design and lesson development for learner-centred approaches can often be more demanding than for more passive traditional approaches. Whilst the lecturer may change his (or her) role from the deliverer of all knowledge to being a facilitator of the students' own learning, lessons, courses and programmes still need very careful and detailed planning, preparation and design. This process of planning, preparation and design leads to the development of a Course Manual.

The course manual contains all the information that a lecturer and a student will need in order to understand the learning objectives of the course and of each individual lesson. This includes a description of what the student will be able to do on completing the lesson or course; the conditions under which the student will perform the task; the criteria for evaluating student performance; what reference materials should be studied in advance of a lesson and other relevant information. In carrying out this planning and development

work, the lecturer is forced to give very careful thought in advance to the overall course structure and to the content and activities of each session. The development and use of Course Manuals also makes it easier for educational specialists to provide feedback to individual staff on the design of their lessons, courses and programmes – even in circumstances where classroom observation and feedback may not be feasible.

Action Learning Management

During the project implementation, elements of *Action Learning*, a related approach, will also be incorporated where appropriate. Action Learning is based on individuals working on real problems that are capable of having action taken on them. The individual (or group) needs to be able to identify the problem, own it and identify steps necessary to resolve it.

Individuals learn primarily by questioning their own and others' proposed actions, identifying a course of further action and a time scale. At the next meeting of the group, individuals report and discuss their progress and reflect on what they have learned. During the process individuals learn real skills and share insights with their colleagues. Action learning, which also resonates well with the TQM approach, will be woven into other similar practical approaches.

2.3.3 Quality in infrastructure works

The construction activities within the project will seek to develop 4 centres of excellence. The rehabilitation/ extension of any particular building will not be carried out simply on an *ad hoc* basis, as a way to answer to immediate and urgent needs; it will rather be integrated within a long-term vision/perspective. For this reason, particular attention will be given to awareness raising and capacity development of MoES and the related colleges with a special focus on the following issues:

- *Gender and environmental protection:*
  The project will seek to raise the level of awareness of the public servants, teachers and students in relation to the following issues: the position of women, disabled and specific groups in the society in general, and within the education sector in particular; the promotion of renewable resources that are particularly scarce; the preservation of the local biodiversity; the identification of mitigation measures against climate change in the activities of the Ministry;

- *'State of the art' design:*
  Efforts will be made at ministry level to develop and improve existing 'state of the art' construction standards and norms for the education sector. Such an initiative will be supported, while exploring alternative designs, studying solutions that are developed in other countries, and then, defining a methodology to assess them and develop clear guidelines for future design.

- *Maintenance and school management:*
  Maintenance, rehabilitation and space recycling are essential to guarantee the sustainability of college constructions. Waiting for the development of a comprehensive strategy on maintenance at the ministry and college levels, the project will give the opportunity to the Construction Management Unit (CMU) and college levels to explore different maintenance strategies that have been developed in other parts of the world with in-depth analysis of their advantages and inconveniences. In the meantime, awareness raising of the both teaching staff and students will be developed in relation to the importance of developing correct behaviour including the cleaning and maintenance of facilities, furniture and

equipment, in order to keep them in good condition, and to repair them whenever that is required.

The project will support the development of comprehensive spatial master plans for the four colleges that will define their future in terms of function and needs. Once these plans are in place, the design of the rehabilitation of the facilities and their extension will be conducted, taking into consideration a series of important principles:

- Respect for the site constraints (topography, existing trees and facilities, orientation – appropriate exposure to the main wind direction, limitation of the negative effects of the sun, …);
- Integration of the pedagogic requirements defined by the project (e.g. avoiding frontal teaching, provision of integrated storage spaces and exhibition panels…);
- Cost efficiency and durability;
- Selection of long-lasting materials;
- Official construction norms, guidelines and standards approved by MoES;
- Integration of the best practices and international norms;
- Consideration of the aesthetics, including respect of the local culture and the typology of the existing buildings;
- Special attention to users' comfort, security, gender and environment preservation;
- Innovation with regards to the green building concept, renewable energy, as well as alternative technologies and materials.

Considering the extent and the importance of the many needs underlined by the Needs Assessment Study (NAS), carried out as a supporting study for the development of the present intervention, it is clear that the project will not be able to cover all the demands but rather it will focus on a series of priority issues. In this respect, a focus will be given on the following interventions:

1. Learning activities and their furniture and equipment;
2. Access to water and electricity facilities, and to internet connection while ensuring a healthy environment by addressing the issues of drainage, solid and liquid waste collection and management, as well as sanitation (toilets and cleaning facilities);
3. The boarding facilities for the students;
4. Teachers' accommodation.

Through following this list, the project will effectively level-up the general conditions of the learning facilities of the four colleges, making sure that the minimum quality standards necessary to guarantee an optimum teaching level will be met, before addressing the second priority item. This notwithstanding, a case-by-case approach will also be applied in order to tackle all the specific issues of each college in the appropriate manner.

The activities will be phased in order to address the urgent issues of each college at the first stage but in a planned way and not on an *ad hoc* basis. The most urgent activities should be implemented in parallel with the development of some local contribution activities, while the major investment works will be under their design phase. In order to consolidate the existing assets, priority will go to the rehabilitation works before new construction starts.

3 Intervention framework

3.1 General objective

To contribute to the increase of quality of and equity in access, to post-primary education and training level, as part of Universal Post-Primary Education and Training (UPPET).

3.2 Specific Objective

The supported colleges[11] provide an improved teaching and practice-oriented learning environment, supported by a strengthened support supervision and visitation service

3.3 Expected results

Result 1:
The teacher education system for secondary and BTVET is strengthened in relation to the colleges in the areas of communication, support supervision and visitation, strategic management and lecturers' qualifications

Result 2
The management performance of the supported colleges is strengthened.

Result 3
The quality of teaching and learning in the supported colleges is improved.

Result 4
Colleges facilities are rehabilitated, extended and equipped.

Result 1: The teacher education system for secondary and BTVET is strengthened in relation to the colleges in the areas of communication, support supervision and visitation, strategic management and lecturers' qualifications.

Result 1 relates to the importance of supporting not just individual units within the overall teacher education system, but also paying careful attention to the system level itself. With much development and expansion having taken place, the burden placed on those working at all levels within the system has inevitably increased. Under such circumstances, it is not always easy to monitor and evaluate current performance and practices on a regular basis and to address any shortcomings that might be found. In this regard, the intervention is timely since it provides just such an opportunity to reflect, plan and act in relation to improvements that need to be brought about.

In seeking to help the key institutions at the central level (e.g. MoES, Kyambogo University, Makerere University, NCHE and others) strengthen their linkage with the colleges, the intervention is concerned with re-energising all of the main players and arriving at creative solutions to resolve any prevailing difficulties or shortcomings. The activities to be carried out in relation to result 1 include the following main areas:

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[11] Kaliro and Muni NTCs, Abilonino CPIC and Mulago HTC

- Strengthening pedagogical support and supervision at central level (A 1.2)
- Strengthening visitation by the central level (A 1.3)
- Strengthening communication/strategic management at the central level related to the colleges (A 1.4)
- Enhancing the sustainability of the change and improvement process (A1.5)
- Addressing the gap between the existing and required qualifications level of the college academic staff (A 1.6)

Activity 1.1: Baseline study on support in the areas of communication, strategic management and support supervision/visitation
In order to capture a detailed picture of both the legal model and the prevailing reality, at the beginning of the project – as stated in the implementation calendar – in terms of the linkage between the central level and the colleges, a baseline study will be carried out. This will seek to collate all relevant pieces of legislation (and other rules, guideline documents and legal instruments) in relation to the central level-to-colleges linkage and compare these with the current reality of what is taking place. This exercise will also include an assessment of the capacity of the overall system in relation to the areas of strategic management, support supervision and visitation.

Activity 1.2: Strengthen the pedagogical support supervision at central level
A well-functioning network of colleges across the nation will not be achieved unless these colleges receive appropriate levels of support in several areas, with teaching and learning (pedagogy) being the priority. For this to happen, it must be clear which organisations at central level are mandated to provide this support, the level of support they are expected to provide, and the content of this support.

In order to help the defined pedagogical support supervision entities, the intervention will provide support as follows:

- Assistance in policy development, namely in reviewing and improving the legislation and guidelines regarding support supervision and adapting these according to the new practices tested and approved during the course of the project
- Providing training, including a series of workshops focused on the identification of the kind of support supervision required, the provision of specialist training and the exchange of experiences amongst key stakeholders.
- Develop, implement, and adapt tools to improve practices (using, where appropriate, action research methods and modern technology) and implement new insights

The intervention will work in close partnership with the defined pedagogical support supervision entities with a view to a) increasing the support supervision and b) to provide on-the-job practical experience for the academic staff in order to improve the service the pedagogical support supervision entities are already expected to give to their affiliated colleges. However, it will *not* seek to take over the regular responsibility or costs associated with this already established link between entity and college.

Activity 1.3: Strengthen visitation and support supervision of the colleges' general management by the central level
The intervention will also help to strengthen and increase the level of activity carried out to support and oversee the general management of the colleges through:
- Assistance in policy development related to visitation, ensuring that this task is clearly defined and reflect adaptations/refinements based on improved and tested practices.
- Providing occasional information sharing and exchange workshops.

- Supporting a number of field-visits by central institutions charged with the role of visitation, as a form of on-the-job training in visitation.
- Develop, implement, adapt tools to improve practices (using, where appropriate, action research methods and modern technologies) and implement new insights

This support will lead to the role of visitation being strengthened, renewed and rejuvenated and will allow those responsible for carrying it out to build up and strengthen their field experience and expertise. Regular meetings and periodic workshops will be organised to ensure that developing and improving visitation is considered as a continuous process.

Activity 1.4: Strengthen the communication and strategic management at the central level related to the colleges

The central level of an education system makes clear what it expects from the college level through a series of legal instruments and policies. Such formal communication defines the backbone of the interaction between the central level and the college level.

Activity 1.4 relates to the need for the MoES and the colleges to take a fresh look at the strengths and weaknesses of the current policies, andother relevant documents and instruments related to strategic management and to adjust and refine these in order to ensure their relevancy for the present time and the foreseeable future.

The leading role in strengthening and improving strategic management clearly belongs with the MoES. However, notwithstanding the special role and authority of the MoES in final decision-taking, it is essential that in such exercises the colleges have the opportunity to share their experiences and present their recommendations. This type of consultative approach should be implemented in all major revisions initiated at central level that contain repercussions for the functioning of the colleges. A relevant example here is the forthcoming revision of the secondary education curriculum and the overall reform of the BTVET sub-sector. The intention here is that the MoES will find itself in a better position to make more informed strategic decisions through a consultative approach.

Regarding strategic management, specific attention will be given to the effectiveness and efficiency of the procurement and construction process within the project. In this respect, the intervention will hire internal auditors who will assist the internal audit department of the MoES. The audits' areas and scope will be based on a comprehensive risk analysis. The aim here is to detect, as a preventive measure, any weaknesses in the internal controls and to come up with options for improvement and risk-mitigating measures. The scope of the audits will also encompass the schools that receive funds from the project.

Activity 1.5: Enhance the sustainability of the change process

It will be important for the intervention to make the improvements made in relation to management, teacher education, construction/rehabilitation and maintenance, available in a useable form also to other parts of the education system. This will be a longer-term process, but important first steps will be taken during the intervention in order to establish this process on a firm footing. The first of these steps will be for the project partners to define a programme geared for disseminating the practices and tools developed to the three remaining NTCs.

It is also well known that promoting change and improvement tends to bring about a level of resistance. Acknowledging this, the intervention will also devise a work plan whereby the new pedagogical approach will be introduced in secondary schools, technical schools, farm schools, technical institutes and vocational training centres. This will

include information campaigns, dissemination of a range of promotional material, the incorporation of information dissemination into in-service training exercises, development of support to the introduction of these methods in schools where new teachers are joining a school for the first time. (Induction)

It will not be realistic to expect that all of the knowledge, skills and experience gained through project implementation can be transferred in its entirety to other colleges within the scope of the project. However, it *is* realistic to expect that the knowledge, skills and experience transferred will allow others to at least see and understand the essence of the new approaches. Satisfactory achievement of this activity will be when significant numbers of others are inspired to manage, teach and rehabilitate in a more active, interactive and effective way, and when sizeable numbers develop a commitment to apply these improved practices in their own work.

Activity 1.6: Address the professional gap between the existing and the required level of teacher educators

According to government regulations, teacher educators are expected to hold a minimum of a Master's degree or equivalent qualification. At the same time, staff establishments in the colleges are typically below strength, making it difficult for college management to allow sizeable numbers of staff to go on study leave at the same time to upgrade their qualifications. This is a dilemma for both the lecturers and the education system as a whole, and one that needs to be addressed.

The intervention will do this in three main ways:
- By helping to analyse the exact nature and magnitude of the problem;
- By coming up with creative ways to ensure that standards are maintained at a high level;
- The provision of a modest fund to support activities intended to resolve this problem and/or to support the formal upgrading of the qualifications of a number of candidates

The project will also explore the possibility of having the training and capacity development provided by the present intervention certified – whether as fully equivalent to, or part-completion of – a Master's degree for career purposes. Such an approach would provide a strong driving force to encourage the lecturers to show elevated levels of commitment to the capacity-building efforts of the project.

The training and capacity development component on teaching practices and the provision of adequate facilities has little meaning or value without the availability of the requisite number of qualified teacher-educators in post. As the recruitment of teacher-educators remains an issue for the four colleges, it is crucial that the Ministry and the recruitment commission guarantee that all the vacant posts will be filled within the first year of the project implementation.

RESULT 2 : The management capacity of the supported colleges is strengthened

In addition to checking and improving all relevant policies and guidelines governing the colleges, a three-pronged approach to the capacity development of college management will be taken. Together these interlinked approaches will make a potentially powerful combination in bringing about (a) much better and deeper understanding of what brings about successful management (b) updated strategic planning and guideline documents, and (c) mobilising college-based actions geared towards grass-roots improvement where

"quality" becomes the college watchword. The three prongs of this combined approach are as follows:

1) **Strategic management: Effective management – what is it, what lies behind it, and how do we achieve it?**

The first part of the training will be organised in a series of short management training sessions focused mainly on the key strategic management staff of the four participating colleges. The purpose of these sessions is to give participants greater knowledge of some of the most important aspects of management, equip them with tools that they can apply in their jobs, and prepare them for overseeing the implementation of the Total Quality Management concept. An important output expected here is the preparation of a comprehensive, revised, and updated Institutional Development Plan for each of the supported colleges.

2) **Strengthening capacity in the core management units of HR, Finance and Infrastructure & Maintenance**

The second part relates to support being provided to the core management units of HR, Finance and Infrastructure and Maintenance, by way of additional training and coaching. Such support will include specialist training and support provided on-site during the support visits and through a number of field-specific workshops where those working in the same field in the different colleges can come together to exchange experiences and receive further specialist training and coaching. Each working group will be required to work on the preparation of thematic plans for the college in their own particular area.

3) **Using a practical approach to bringing about real change and improvement across all aspects of college life**

The third line of approach will strive to empower and enrol the whole college community, with a view to everyone contributing towards improving quality across all aspects of college life, from strategic management through services and teaching-and-learning to maintenance and the tidiness of college grounds. The aim here is to create a positive dynamic within each college, where all staff members (and also students) become involved in a team effort, and where all feel a sense of personal responsibility. This approach encourages participants to see the college as a whole, and calls for creative *"outside the box"* thinking as part of what is essentially self-help improvement.

An external service provider will provide the training, the backstopping and the support for this component through coaching and continuing guidance on Total Quality Management in each college. The support will be provided on campus and it will be custom-designed in order to put in place specific college-based systems.

In carrying out its tasks and duties, the supporting management organisation will also work closely with each of the colleges to help them develop, strengthen and incorporate the following cross-cutting strategies that characterise the mode of operation of the intervention:

- Establish one or more active links with suitable national / international college management expertise centres that will provide added-value through the sharing of knowledge, experience and expertise and the provision of mentoring and advice
- The steadily increasing incorporation of ICT into campus life, as a multi-purpose tool for strengthening and improving such areas as accessing information, improving the efficiency and effectiveness of management functions, lesson preparation and delivery and communication.

- A strong emphasis on bringing about important improvements not simply in knowledge and understanding but in the practical side of management. Whilst the intervention also seeks to improve knowledge and understanding, it is fundamentally an activity and action-based approach to improvement.

The intervention will disseminate the experiences gained in the supported colleges to other colleges that face similar challenges (in particular to the other three NTCs), to the Ministry of Education and Sports and to the parent universities. Lessons learned and good practices will be identified and a communication strategy will be defined, which will include (amongst others): awareness-raising activities, networking and information sharing, dissemination of research outcomes through a variety of channels, such as publication, CD, website….. The necessary arrangements will be undertaken to integrate these practices into the existing legal framework of the sector.

Activity 2.1: Conduct Baseline study
A baseline study and capacity needs assessment will need to be devised and implemented prior to the provision of the training and coaching. This exercise will make it possible for the intervention to fine-tune its support, and in this way provide a programme that is geared to the specific identified needs of the colleges. It will also act as a reference point for the monitoring and evaluation of any improvements brought about during implementation.

Activity 2.2: Strengthen the strategic management of the colleges including awareness raising activities related to the transversal themes (environment protection, gender, HIV/AIDS)
Taken overall, an integrated team approach to management will be taken by the intervention, allowing much closer cooperation amongst key actors and much easier communication and sharing at all levels. This will be most evident in relation to the third prong of the three-pronged strategy approach being adopted – where a campus-wide approach to improving quality will be implemented (using TQM).

Activity 2.2 focuses primarily on increasing the capacity of those who hold a specific role in the strategic management of the college. Activities will involve a blend of: workshop-based training off-campus (together with representatives from the other colleges); further workshop-based training on-campus; and further specific job-related coaching on-site. The final selection of participants will be made during implementation, within the context of Activity 2.1. It will include: all college senior managers (e.g. Principal, Deputy Principal, HR Officer, Financial Officer, Infrastructure and Maintenance manager; representative(s) of the governing council; and perhaps also representatives of the teaching staff, the non-academic staff, Librarian, and other key persons).

Activity 2.3: Strengthen the management of the colleges regarding human resources, including the implementation of the HIV/AIDS workplace policy and the gender policy
The gender policy of 2007 includes a strategy to recruit more female teachers, particularly in areas where the numbers of female teachers are low, as girls' enrolment tends to increase as the number of female teachers increases. Besides, there is continuing need to make counselling available to all girls at risk of dropping out, by strengthening systems for prevention and management of sexual abuse in schools as many girl drop outs are caused by negative attitudes towards girls in school, early marriages and pregnancies, sexual abuse and violence within school settings.

In 2004, the MoES decided to develop an HIV and AIDS Policy for the whole education sector and a workplace policy to ensure a consequent and equitable approach to the prevention of HIV and AIDS, including care and support for employees living with HIV and AIDS.

The strengthening of the handling of human resources in the colleges, including the implementation of the HIV/AIDS workplace policy and the gender policy, will be addressed through the following activities:

- The participation of the HR manager, and other senior college managers, in the strategic management workshop series during which matters related to HR will be dealt with
- Training and coaching provided to the HR team during the site visits of the management specialists to each of the colleges
- HR specialist workshops where HR specialists from the four colleges, together with relevant persons from the MoES, including focal points for gender and HIV/AIDS, come together to share experiences and receive training in relation to modern advances in HR provision
- The formation of a broader HR thematic group within the TQM approach focused on bringing about improvements in the service provided by the HR Unit, and the coaching provided to support this initiative

Activity 2.4: Strengthen the financial and procurement management of the colleges
The strengthening of the financial management, including procurement, in the colleges will be addressed in a similar was as for HR, through the following activities:

- The participation of the Financial Manager, and other senior college managers, in the strategic management workshop series during which matters related to financial management & procurement will be dealt with
- Training and coaching provided to the Finance team during the site visits of the management specialists to each of the colleges
- Specialist workshops in the area of financial management and procurement where financial experts from the four colleges, together with MoES staff come together to share experiences and receive training in relation to modern advances in the management of college financial resources.
- The formation of a financial management thematic group within the TQM approach, building upon the coaching provided to support this initiative, and tasked with bringing about improvements in the service provided by the Finance Unit.

This activity will also be supported by the input of the internal auditors, described in activity 1.4.

Activity 2.5: Strengthen the academic management of the colleges, including the collaboration with practice schools
Strengthening the teaching and learning process is supported in result 3, but there is also a need for the management side of the academic programmes to be supported. This will be carried out in a similar way as for the other key areas. The target group here will be made up of all college staff with a clearly defined management role in relation to the delivery of the academic programmes. Thus, principally those with leading responsibility over broad subject fields such as Arts, Sciences, Vocational Training, and Professional Studies in the NTCs, or their equivalent in the other two colleges.

For those colleges that have practice schools, the management training will extend to the provision of guidance and advice in relation to how both sides of such partnerships can maximise the mutual benefit of the relationship.

Activity 2.6: Strengthen the management of the colleges in relation to the infrastructure and its maintenance

Improvement in management of infrastructure and maintenance will be supported through a short series of occasional workshops involving relevant persons from all four colleges, and specialists from the MoES.

The main priority here will be to define for each college a proper maintenance strategy, defining:

- The operation modalities to keep the infrastructure in good condition (e.g. annual cleaning of gutters, drainage pipes…) and the compound and buildings clean;
- The routine checks and regular preservation measures to be conducted (e.g. painting of all steel works every 5 years);
- Procedures for carrying out small repairs;
- Procedures for important repairs;
- The human, technical (including tools and spare parts) and financial means to make this strategy effective;
- The required training and awareness-raising campaigns needed in order to make the attitudes and activities towards operation and maintenance effective.

Activity 2.7 Support leadership and management at Mulago HTC, focusing on:

- Strengthening the collaboration with major stakeholders (MoES, MoH, teaching hospital, HTIs, awarding bodies)
- Clarifying the position of the various curricula programmes in the overall 'training framework'

Before Mulago HTC can be supported in relation to the way forward in the short-to-medium term it will first need to have a clear and up-to-date organisational development plan that describes this. For this reason, the intervention will assist the College in the preparation of a thorough study on the training in Uganda of health tutors for now and the future, including a discussion on issues and options in relation to the vision for the future, leading up to the preparation of a medium-to-long-term plan for the training of health tutors. In order to support this activity, a full-time specialist ISE will be provided to work for 30 months together with the management of the college and the MoES (and in consultation with the Ministry of Health).

Activity 2.8 Support leadership and management at Abilonino CPIC, focusing on:

- Strengthening the collaboration with major stakeholders (MoES, Technical Schools, Farms Schools, Technical Institutes, Vocational Training Centres, demonstration schools, awarding bodies, Nakawa Vocational Training Institute, Bakasale, etc.) and private training providers (UGAPRIVI, groups, enterprises, individuals)
- Clarify the position of the programmes in the overall 'training framework' and the new BTVET sector strategy,
- Clarify the concept of the 'Centre of Excellence' and possible implications for Abilonino CPIC

Abilonino CPIC finds itself in an interesting position in relation to the surge of interest taking place within the BTVET sub-sector, and the opportunities this is likely to bring. In order to help the college to take stock of its present situation, to review current policy in relation to the programmes it offers and the fields of study that it will concentrate on, the intervention will support the college in the form of specialist assistance and guidance.

This will come in two forms. The first of these is through the services of the full-time specialist ISE at Mulago being made available for 20% of his/her time to support the strategic management of the college in relation to capacity-development in the area of strategic management.

The second is through a consultative study to be undertaken in which a full analysis of all aspects of the college will be made and important issues explored. Strengths and weaknesses of the present structure and range of programmes will be highlighted and a number of issues and options discussed and recommendations made for the near and middle-distance future of the college.

Result 3: The quality of teaching and learning in the supported colleges is improved.

Even when young newly qualified teachers possess the knowledge and skills to teach in a better and more effective way, all too often they find themselves under heavy peer pressure from an ageing teaching force to conform to old methods and approaches. Only by winning-over the next generation of teachers in terms of their appreciating, believing-in and consistently practicing improved and more effective teaching and learning approaches, will the quality of education begin to rise. As such, the driving force for change and improvement must come from the teacher education and training colleges. The most powerful way of achieving this is through empowering the teacher educators in the education and training institutes not only to offer instruction on good and effective approaches to teaching and learning, but to actually lead by example themselves. As such, strong emphasis will be placed on helping the teacher educators to *lead by example,* on constant and consistent practice of effective methods, and showing best practice examples in various situations.

The approach of improving the quality of teaching and learning in the four colleges is essentially a *college-based* one leading, when combined with the other three results, to *organisation-wide* improvement. It involves bringing about change and improvement in the teaching and learning process with *on-site* support provided in all four colleges.

The support for this result will be provided in the following main forms:
- Placing a national teaching-learning specialist (National Sector Specialist-pedagogy) in each college for 4 years
- Advisory, coaching, mentoring, training and backstopping support to be provided on an occasional basis by a leading teacher-education organisation (or consortium) of international repute

This particular occasional support is intended to ensure that all aspects of the capacity-building programme in teaching and learning are well-designed, sound, effective and implemented well.

The role of the combined international / national consortium

The supporting organization will include a mix of both international and Ugandan pedagogical experts in teacher-education and training. Under the guidance and supervision of the PCT, the PSC and the MoES, the consortium or organization will play a

leading role in designing and overseeing the detailed implementation of the activities of result 3. In this regard, they will take a lead in conceptualizing, designing and implementing the college-based pedagogical improvement programme, including providing regular advising and coaching, and generally backstopping the on-going work at college level. The more detailed ToR are provided in annex 7.9.

The role of the full-time National Sector Specialists-pedagogy to be placed in each of the selected colleges

The full-time national teaching-learning specialists to be placed for 4 years on site at college-level will be recruited and funded by the project. They will provide the continuous support necessary to ensure that change and improvement will take place in teaching and learning within their respective colleges. They are key to the overall project strategy and approach. As such, their presence is an *additional* resource fully dedicated to improving teaching and learning at the college. Amongst others, they will introduce, strengthen and develop activities that will support the transformation process in teaching and learning; develop a support framework for all academic staff in relation to change and improvement including continuous mentoring, guidance and support. The more detailed ToR are provided in annex 7.3.

The international supporting specialist teaching and learning organisation (or consultancy group) will also, together with the support of the national pedagogical specialists appointed to each of the colleges, work closely with each of the colleges to help them develop, strengthen and incorporate the following important cross-cutting strategies:

- Establish one or more active links with suitable national / international pedagogical expertise centres
- The increasing incorporation of ICT into all aspects of campus life
- A strong emphasis on bringing about important improvements not simply in textbook knowledge but also (in particular) in the practical side of teaching and learning through the adoption of action-learning and activity-based teaching and learning. This applies across all subject categories, although with even greater emphasis placed on such areas as science, mathematics and other related fields. Whilst the intervention seeks to improve knowledge and understanding, it is fundamentally an activity and action-based approach to improvement that is most called for.

As the intervention seeks to encourage and support Kyambogo and Makarere Universities, MoES and the management staff of the colleges to play a more active and prominent role in providing support supervision to its affiliated colleges, those stakeholders will also be involved in the process. In order to ensure sustainability, the intervention will take care not to take over the regular running costs that are part of the long-term support that forms part of the duties of existing institutions. However, any additional costs associated with capacity-building will be borne by the project.

This is represented schematically in Figure 4 below:
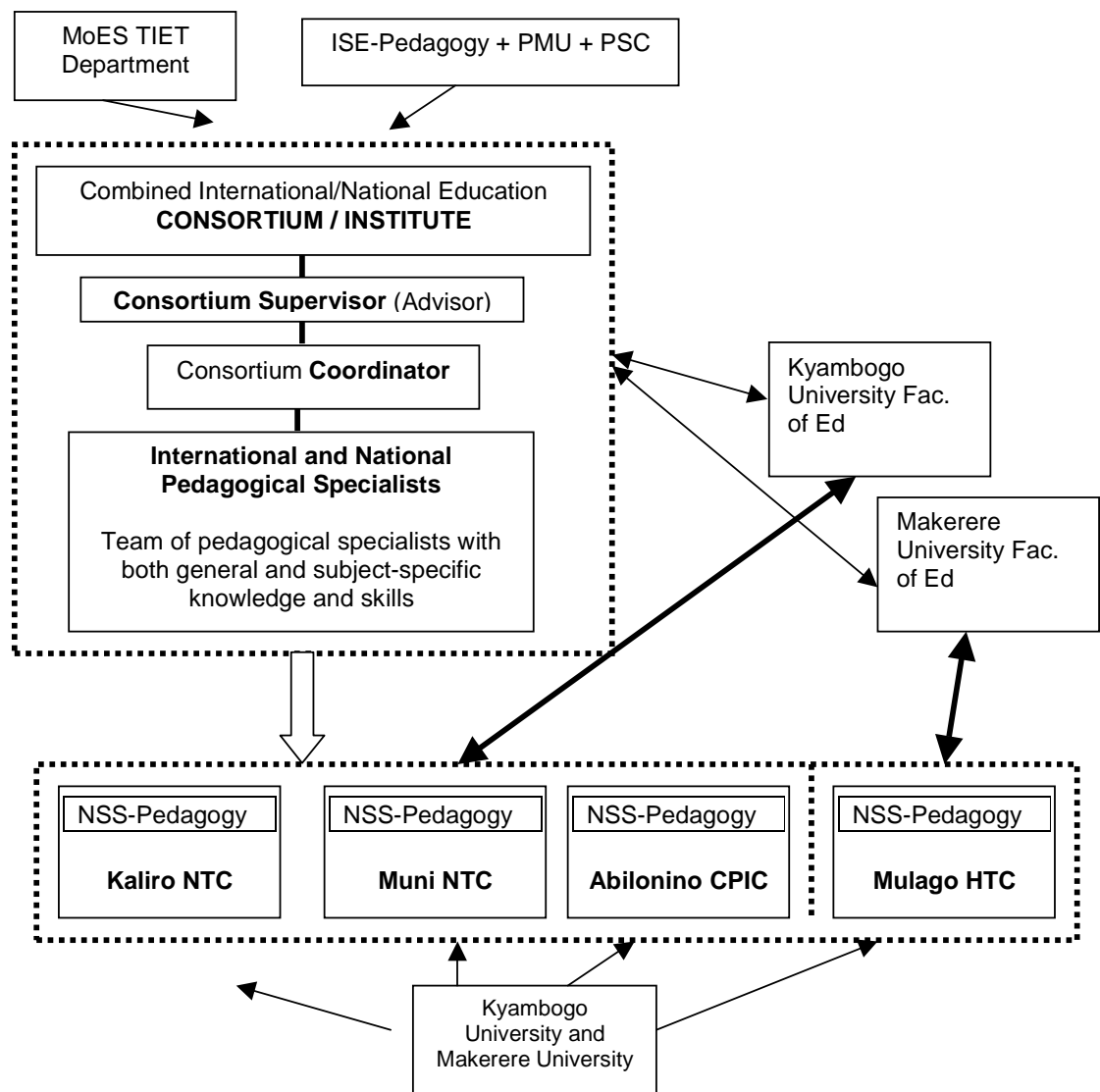
Figure 4: A schematic representation of the structure of the support being provided in relation to teaching and learning in the four colleges

Activity 3.1 : Baseline study and capacity assessment exercise in relation to the teaching and learning in each of the four selected colleges

A comprehensive baseline study will need to devised and carried out prior to the implementation of the coaching and training included within Result 3. Only in this way will it be possible for the intervention to achieve any level of accurate measure of the improvements brought about in teaching and learning during implementation.

For the greater part, the baseline study will be based on a random and representative sample of classroom observations (including a number of filmed observations) guided by a suitable observation/assessment instrument developed or adapted through the intervention.

Activity 3.2 : Design a college improvement programme for NTCs

With the fundamental pillars of support for Result 3 established, it will be necessary during implementation to design in more operational detail college improvement programmes to fit appropriately and well with the specific and individual needs of the different colleges

Annex 4 provides an overview of the kind of competencies that are generally expected in teacher educators. These, in addition to developing significantly increased and improved knowledge, techniques, skills and expertise in the areas of: active teaching and learning; learner-centred education; and in bringing about learning with understanding, represent the desired outcomes.

A number of key factors need to be considered in developing a detailed programme design. These include:

- Establishing a link between primary education (thematic curriculum) and secondary education

For many children, the transfer from one level of education to another can be a daunting and intimidating process. Therefore, a well-designed programme to improve teaching and learning at secondary level will (amongst others) need to look carefully at the approaches adopted at primary level and devise ways to ensure that the transition for the child is as seamless as possible.

- Prioritising needs with major stakeholders

In order to ensure that improvements in teaching and learning start with a clear understanding of what the major stakeholders view as current weaknesses, it will be necessary for the intervention, to consult with these stakeholders. Included in this regard are the MoES, those bodies and units responsible for visitation and/or support supervision; and the awarding bodies

- Developing structure and strategy and programming in stages the attention given to the different tasks and subject areas

From the outset, the programme needs to be designed and delivered in such a way that it leads to *lasting* change and improvement, rather than simply being implemented as a once-off injection of enthusiasm that steadily decays when the intervention is over. The programme design should also include provision to handle different groups of academic staff in stages, in order to avoid an overwhelming overload at the beginning of the intervention. The sequencing should be in line with the subject priorities as set by the MoES (i.e. mathematics, science and English).

- Selecting and training a number of Mentor Teachers

In almost all educational institutions one finds a number of very able and gifted teachers. A key programme design strategy will therefore be to identify a number of these gifted teachers who are willing to volunteer for the role of *Mentor Teacher*. Ideally, this group will cover the spread of the major subject-groupings. No fixed number of Mentor Teachers is prescribed, but this will typically be somewhere in the range of ~5-15 per college depending on the size of the college and the number of teachers willing to take on this role. Those who are accepted for this key role will receive special, concentrated training. They will essentially work as an extension of the resident NSS-pedagogy specialist.

The Mentor Teachers in the different colleges require essentially the same, or very similar, skills. Therefore, their basic training will be carried out jointly. The international consortium will take responsibility for delivering this specialist programme with some of it involving regrouping all the concerned teachers by subject interest. As well as providing

additional reinforcing training for the NSEs, joint participation in training in these workshops will help the NSEs to get to know better the team of Mentors they will be working with. This approach will also provide an excellent opportunity for this larger group to work together in joint activities and to cross-fertilise ideas, experiences, and strategies for delivering their respective programmes.

In this model, an important component of the work of the NSE-pedagogy specialists will consist of assisting Mentors with some further on-the-job training as well as other forms of additional coaching and feedback until they reach the level where they are capable of coaching and training their own colleagues to an acceptable standard without close supervision.

- Identifying appropriate training programmes for the laboratory technicians
With science being a high priority field of study, it will be essential that every support is given to improving the delivery of the science subjects in the colleges. One important aspect in this respect is the need for the laboratory sciences to have competent and able technicians and laboratory attendants in place to look after all aspects of the running of the laboratories and lab-based teaching and learning. It is usually necessary to provide training for this cadre.

- Material preparation
As part of the college improvement programme design, it will be necessary to prepare and/or otherwise procure appropriate training materials for both academic staff and also for students. Materials will need to be prepared that fit the specific needs and purposes of the following categories:
- Management and academic staff of the NTCs
- Management and academic staff of Abilonino CPIC
- Management and academic staff of Mulago HTC
- Students of the NTCs
- Students of Abilonino CPIC
- Students of Mulago HTC

Different categories of materials will also be required. These will include:
- Personal, custom-designed, guidelines suitable for each target group– with a copy being provided to each individual.
- Background support materials made up of a collection of the very best national and international articles, supporting materials, references, internet sources etc for every person participating (both staff and students).
- Multiple copies of a selection of the best national and international books and similar (e.g. CD-ROMs, DVDs etc.) for storage in the college libraries as reference and resource materials for both staff and students.

The preparation and selection of materials will be a task to be undertaken by a team made up from within the following groups:
- The international consortium/institute (international and national specialists)
- The National Sector Specialists-pedagogy
- MoES
- Kyambogo University
- Makerere University, and/or
- Other groups or sources in the event this proves necessary and/or appropriate to achieve the right quality and relevance of the final materials

The ultimate success of the intervention will be achieved when those working in Uganda come to see that active teaching and learning comes more from an attitude and a state of mind, rather than from the level of resources available. The supporting materials to be prepared should make clear that learner-centred teaching and learning can be practiced in even the most trying of situations, and should provide some clear and relevant examples of this.

Activity 3.3: Design a college improvement programme for Mulago HTC and Abilonino CPIC

The approach and activities in relation to preparing college improvement programme for each of the BTVET Colleges, Mulago HTC and Abilonino CPIC, will follow the same approach as taken for the NTCs. However in the BTVET colleges more importance will need to be given to the organization of the practice courses and technical workshop sessions. As for the other colleges, the sequencing should be in line with the subject priorities as set by the MoES (e.g. agriculture for Abilonino).

Activity 3.4: Implement the college improvement programme in the 4 colleges

Following the completion of all of the preparatory work, the college improvement programmes in the four supported colleges will be ready to begin. The implementation phase will be overseen by the project coordination team, and supported by the joint international / national consortium / institute.

As well as ensuring that all aspects of the college improvement programme are well-designed and effective, the supporting international consortium/ institution will provide occasional coaching and backstopping support throughout the implementation phase. They will use these visits in order to: provide the complementary field-of-study-specific expertise necessary; monitor the level of progress being made; and strengthen the change processes taking place in the colleges they visit.

In addition, a modest fund will be established at each of the main participating colleges, with a view to providing incentives for those keen to undertake small-scale activities intended to help improve their teaching and learning skills, or other aspects of the teaching and learning side of the college.

During the implementation of the college improvement programmes, and in keeping with the MoES decision to support the concept of practice schools for all colleges where this is feasible, the intervention will provide assistance and support to ensure the success and effectiveness of such synergistic relations between college and practice school.

In order to ensure that maximum benefit is derived from the school practice phases, the college-based specialists will also support - by way of advising, guiding and monitoring – the implementation of the school practice (practicum) phases of the teacher education programmes. Amongst others, this will provide the specialists with valuable insight into the performance of the student teachers and will give a measure of how much they have learned from their education and training in relation to the use of modern learner-centred methods.

RESULT 4: Colleges facilities are rehabilitated, extended and equipped

Priorities and phasing

Considering the extent and the importance of the needs underlined by the Needs Assessment Study (NAS), the project will not be able to cover all the demands but will be able to tackle a number of priority issues. In this regard, the main focus will be on the following interventions:

- Learning activities and their furniture and equipment (1);
- Access to water and electricity facilities, while insuring a healthy environment by addressing the issues of drainage, solid and liquid waste collection and management as well as sanitation (toilets and cleaning facilities) (2);
- The boarding facilities for the students (3);
- Teachers' accommodation (4).

In following this list, the project will effectively level-up the general conditions of the learning facilities of the four colleges, making sure that the minimum quality standards required to guarantee an optimum teaching and learning level will be provided, before addressing the second priority item. This notwithstanding, a case-by-case approach will also be applied in order to tackle all of the selected issues of each college in the appropriate manner.

The activities will be phased in order to address the urgent issues of each college at the first stage – with this being carried out in a planned way and not simply on an ad hoc basis. The various activities will be integrated within a comprehensive long-term strategy for each college that will be translated into a long-term vision master plan described below. The most urgent of activities should be implemented in parallel with the development of some local contribution activities, while the major investment works will be in their design phase. In order to consolidate the existing assets, priority will go to the rehabilitation works before new constructions are started.

Local contribution

In order to increase the local ownership, and to reduce the scope of the investments needed, local contribution will be encouraged.

Once the space required to cover the present and future needs of the four colleges, as defined through the master plan exercises, fencing of the compound will be carried out. Such fencing is required to clearly set the limit of the college property, and thereby to avoid any future conflict with the neighbouring community, and also to control access to the compound. Considering the size of three of the four college compounds, it will be too expensive to build good security fencing around the whole outer boundary. Instead, different levels of security will be defined for different areas of the compound, while using quality fencing, such as steel fences or brick walls, or green plantation fences only around the most valuable assets (e.g. around workshops, ICT laboratories, energy production facilities…). In some cases, these different types of fences can be erected by technical students and be funded by local means.

Clearly limiting the outer edge of each of the college compounds is necessary, but – related to this and even more important – land belonging to (or allocated to) will be officially legalized. Although the legalization process might prove to be long and complex, it is a prerequisite before any new construction within the four colleges, funded by the present project, can be started.

A third area in which the users' active participation will be involved is the general

environment upgrading of the college compounds. Tree plantations, curbs, bushes and grass cutting, cleaning, solid waste collection and treatment, and other activities of a similar nature, do not require high investment. At the same time they are labour intensive – meaning that they could be conducted by the students under the guidance of the college authorities – with such efforts significantly contributing to the general improvement of the local conditions.

Another way to increase local ownership is to establish a technical committee in charge of daily site supervision during construction and rehabilitation. This body will receive a mandate from the college authorities to this end. Such close control will increase significantly the quality of the works as well as the sense of ownership on the part of the beneficiary. To be effective, this committee will need to receive proper training by the project on basic construction techniques and site supervision control.

Once the new facilities are in place, proper management and maintenance measures will need to be set-up by the college authorities with the assistance of the project; both of these will require training and means, as described below.

Activity 4.1 : Conduct baseline survey
As the NAS is comprehensive, addressing all the physical conditions of the four colleges, it can be considered as a reference source for a baseline survey in terms of infrastructure as it provides the starting points against which the achievements of the project can be compared. The project will, nevertheless, still need to structure the information accordingly, and to complete any missing information, by rapid on-site assessment and questionnaires.

Activity 4.2 : Conduct studies and set up of a maintenance plans
Beside the studies described below, the project can consider to request support for any further studies and consultancies related to civil works design, construction, O & M, that might be relevant and necessary, based on the needs assessments carried out.

a) Long-term spatial master plans
Both the college principals and MoES are hoping that, thanks to the project support, the four colleges will be able to integrate a larger number of students annually into the supported colleges. However, a balance will need to be found in this respect between quantity and quality. Once the optimum size of the four colleges is defined, it is important to assess the steps and the means required to reach the ultimate capacity in each college, whilst also defining clearly the expansion phases.

These Spatial Master Plans will be carried out during the early phase of the project, as all the infrastructure investments are directly related to it. As this approach is not common in Uganda, it will require the support of international expertise to set the methodology of the planning process and to guide it.

This process will be participatory, integrating the voice of the different stakeholders – including the college authority, district authority, MoES departments, and also the neighbouring communities, neighbouring industry and students' representatives. This process will lead to the integration, for each college, of their point of view, perception and perspective in order to be able to define a long-term vision for the future of each college, its present and future needs, required means and the concrete steps to realise this vision, based on agreed priorities and objective criteria. Secondly, it will integrate detailed data collection and analysis of the current situation (topography, hydrography, topology,

meteorology…), while assessing, based on objective criteria, the assets to be preserved (including trees) and those that should be demolished. Finally, it will cover all the services and equipment without which the college can not function. This includes the following:

- Resource provision such as energy and water supply, and also including agricultural production. This dimension will also consider the ways to preserve and eventually recycle the available resources (e.g. use of biogas for cooking, water harvesting…);
- The facilities provided will also take into consideration the aspect of income generation. This is not a set objective *per se*, but it is nevertheless a matter to be considered.
- The management and possible treatment of both solid and liquid waste, including the chemical waste of the laboratories, will be considered (e.g. lagoon technology based on the 'living machine' concept). Whenever possible, cost-effective local treatment will be favoured, with the perspective of recycling and possible production. Drainage and sewerage networks will form part of the comprehensive study.
- The issue of security will be equally part of the study. This includes preservation of the assets and people from external intrusion and also from accidents, disasters and fire. Concrete measures will be proposed and integrated into both the design and the O & M modalities.

b) Study on renewable energy

In complementary way to the energy efficiency measures for the buildings, the use of renewable energy could contribute to the greening of buildings, and also reduce the energy bills for public facilities, such as the colleges.

The price of electricity has been stable in Uganda for the past six years. Nevertheless, it is predictable that the cost of energy will significantly increase in the coming years. Any facility capable of providing free energy to the colleges, while requiring only a minimum of maintenance, should therefore be favoured. Such results could be achieved by solar energy, or possibly by using windmills.

The development of mitigation measures against climate change includes introducing a variety of renewable sources of energy capable of providing significant levels of power. This is a long process, which requires the transfer of technology and know-how. The public administrations have a key role to play in this field, as promoters of positive change for the society of Uganda.

Within the scope of the present project, the possibility of developing renewable energy in the four colleges will therefore be considered in coordination with any available related research centers and legal authorities. The availability of local expertise, and its potential needs for capacity development, will be assessed in detail. A strategy for the development of renewable energy for the education sector will then be explored, which will consider the needs, the location of the college facilities as well as the cost-effectiveness, and the operation and maintenance requirements, of the systems under consideration. Based on the results of the analysis, a pilot project for each college will be designed and installed.

A monitoring system will be added to the installation in order to be able to measure and record the output of the system. With modern technology, the results of the measurements can then be shown automatically at a central location, combined with other data on the environment or other relevant themes (gender, staff data, internal communication, projects of the college…). Any installations trialled will be monitored from

a technical and financial point of view, in order to be able to capitalise on the experience of the experiment.

Considering the rapid evolution in the renewable energy sector and the growing involvement of the public and private sector, it is in the interest of the project to keep abreast of the progress being made internationally in this field by e.g. participating in an appropriate stakeholder network.

Ultimately, the studies undertaken, and the information gathered, will be used to select the most appropriate alternative sources of energy that show most promise for developing for each college, both for producing electricity and for cooking.

Photovoltaic panels
The potential for solar energy in Uganda is high. Some small-scale photovoltaic (PV) projects already exist in the country - all currently being stand-alone systems with battery backup, with an average payback of seven years. This means that both the technology and expertise are available in the country as well as the skills to both install and maintain such equipment. Using such systems within a technical college is that the installation of PV has the added advantage of providing an opportunity for the students to get familiarised with such equipment and to train them in its installation and use.

Biogas and pellets
Firewood is the most common energy production source for cooking in Africa. But is has dramatic negative impact on the environment, accelerating deforestation. Here again, there is a pedagogical interest in developing alternative systems within teacher training colleges. The project will therefore study the feasibility for each college of developing alternative energy production sources, such as biogas production systems – whenever organic waste, including human excreta, are easily accessible – or by using pellets made of organic waste and clay.

c) Set-up of a maintenance program
Maintenance is of prime concern for the MoES. At the scale of a project, as explained above, this issue should be considered right at the design stage of any construction. The studies to be undertaken will define in particular the short-term and long-term financial means required to conduct such strategies for each college as well as the way each of the colleges can develop some income generation activities. The promotion of income generation activities will also be included in the training, and development of procedures, designed to guarantee the transparency of management procedures (e.g. accountancy and the use of any locally derived income).

Activity 4.3 : Design of the colleges facilities based on pedagogical requirements, and green architecture, including sanitation facilities
The design of the rehabilitation/ extension of the four colleges should integrate a series of relevant concepts such as the ones of the *ten assessment criteria of successful school design* set by the UK government's advisor on architecture (CABE – see annex section). Also others, including some pedagogical requirements, the principles of users' comfort and cost-effectiveness principles, while minimizing the needs of maintenance through the use of long-lasting materials, and cross-cutting themes of the Belgian Cooperation such as gender and environmental concerns. Guidance by the project will be required in order to ensure that the consultant offices in charge of the design of the facilities will properly address these issues.

Pedagogical requirements

The intended (i.e. desired) approach is to develop a stimulating teaching and learning environment which will allow for the integration of new pedagogical teaching methods (flexible space, exhibition panels, rear blackboards…), and a more lively and colourful atmosphere, while also being gender friendly and gender sensitive. The latter requires an analysis of the spatial organisation considering specific needs of the women (e.g. for the dormitories and the toilets). Accessibility for disabled users (inclusion of ramps), or any particular demand of a specific group should also be incorporated into thinking and planning at the design stage.

Conventional teaching from the front of the class remains the most common teaching method in Uganda. However, more dynamic and participative teaching methods will also be explored. The more exciting and successful of these alternative methods have some implications for the furniture, classroom setting and its size that need to be considered.

The acoustics of the learning spaces is another important element to be considered carefully, and included in the design stage as this can significantly influence the concentration of the students.

The aesthetics of the school buildings is not always considered as a means to enhance students' attention and consideration to their working environment, but it is actually an important factor to be considered. A pleasing environment is conducive to good learning. This is not a call for any kind of flashy and expensive formalism, but rather for the development of a simple but pleasant architecture that plays with appropriate proportions, materials contrast, opening, natural lighting…

Green architecture

The purpose of green architecture is to encourage energy efficiency and enhance users' comfort during both dry and rainy seasons using different means.

The high level of precipitation during the rainy season calls for large overhanging roofs, optimal orientation of the buildings with respect to the main wind orientation, while also protecting them from overheating from the sun. Improving natural lighting penetration into the classrooms by (studying the possibility of) reviewing the height of the classroom, the position and size of the windows and/or use of reflectors together with sun protection will also be considered. Cooling by natural ventilation will be favoured, using different techniques as appropriate, such as solar chimneys or ground-coupled heat exchangers.

The ground-coupled heat exchanger

Depending on the latitude, the upper 3 metres of Earth's surface maintains a nearly constant temperature between 10 and 16 ℃. Systems can benefit from the thermal difference between the ground temperature and the outside air, cooling inside air during the hot season, and warming the air during cold season.

The use of what is known as a geothermal heat pump, or ground source heat pump, is a central heating and/or cooling system that pumps heat to or from the ground. It is currently a rather expensive technology, which at the moment is not feasible (i.e. not affordable) for use in a public facility in Uganda. However, as with all such technologies, costs may change with time.

A more basic system, called a ground-coupled heat exchanger, has been used for centuries. It is an underground heat exchanger loop that captures or dissipates heat to or from the ground through air. External air is blown through the heat exchanger for heat recovery ventilation. Earth tubes are often a viable and economical alternative (or supplement) to conventional central heating or air conditioning systems since there are

no compressors, chemicals or burners involved and only blowers are required to move the air. These are used for either partial or full cooling and/or heating of facility ventilation air.

Solar chimney
In order to increase the natural ventilation mechanism of the ground-coupled heat exchanger, a system of solar chimneys could be provided. Also called *thermal chimney*, this system is a way of improving the natural ventilation of buildings by using convection of air heated by passive solar energy. It is basically a vertical shaft utilizing solar energy to enhance the natural stack ventilation through the building.
The solar chimney has also been used for centuries, particularly in the Middle East. Nowadays, the system has been improved by placing a glazing section on the top of the chimney (the opposite wall being painted in black), as well as by the inclusion of a specifically designed wind inducer.

While the inlet of the ground-heat exchanger is located close to the ground floor at a corner of the classroom, the outlet of the solar chimney should be located at the opposite corner close to the ceiling. A control gate should be provided.

As for the ground-heat exchanger, although being simple in principle, the characteristics of each element of the solar chimney will be properly calculated, considering a large set of parameters. This requires the support of a qualified international consultant to calculate the dimension of each element of both the ground-couple heat exchanger and the solar chimney.

Lighting
Natural lighting will be favoured within the classrooms. In order to favour reverberation (sound characteristics), external windows will be located as close as possible to the ceiling, while the windowsills will be large and made of a clear finishing. Ideally, these windows will be oriented toward the North, an orientation that provides constant lighting, while avoiding direct sunlight.

Roof insulation and shading
In order to prevent direct sunlight and overheating on the roof, the best option is the double-roof principle: the waterproofing layer being separated by the roof structure from the drop ceiling, promoting increased ventilation in order to limit heat transmission.

Alternative construction materials
The use of alternative construction materials will be explored in order to increase the lifespan of the buildings, limit the need for maintenance work, mitigate the impact on the environment and favour thermal and acoustic comfort within the building:

Concrete Interlocking Blocks
The use of Concrete Interlocking Blocks (CIB), or Compressed Earth Block (CEB), could also be explored. This technology presents several advantages. The traditional technique used in Africa to cook bricks requires around 50m³ of wood for cooking approximately 5.000 bricks, which increases deforestation. In this respect, the use of CIB for remote areas, where clay is available, is more environmental friendly. This technology, requiring hand press or hydraulic press, promotes local production of un-cooked compressed bricks made of clay and, depending on the quality of clay, a percentage of lime or cement. Walls built with CIB do not require cement and plastering but should be protected from humidity coming from the ground and from the rain by using high concrete plinths and large overhanging roofs. Furthermore, the dimensions of the rooms should consider the

modulation (size) of the bricks. For this type of technology, expertise is required at the early stage of the project in order to analyse the clay, define the appropriate mix of cement and train the users on the production and building processes.

Cement or clay roof tiles
Steel roof sheet is commonly used in many countries of the South mainly because of its low cost. However, it causes overheating, and is noisy during rain, which can often be highly problematic in a classroom. The use of material with better thermal and acoustic characteristics is therefore required, such as clay or cement tiles.

Sanitation facilities
With regards to the toilets, a study should carefully assess the optimum solution for each college – from classical flush toilets, double dry pits, to 'ecosan' systems – considering different aspects, such as the availability of running water, the local habits and culture, the potential for recycling both urine and excreta either for fertilizing purposes or for contribution to methane production through biogas digesters.

Activity 4.4: Rehabilitation and construction of the colleges facilities, including experimentation and innovation in green building
Site supervision of the construction/rehabilitation works will be carried out in a coordinated way by a series of actors:
- A qualified engineer recruited by the architect's office for regular inspection;
- Daily inspection by a college representative who will directly report to the project engineer;
- A project engineer who will make weekly inspections;
- MoES representative (CMU) for punctuality control;
- Random checks by the international expert recruited by the project.

The project will carefully define the roles and responsibilities for these different levels of inspection as well as the methodology for quality control, including the related tools.

The construction and rehabilitation activities of the infrastructure facilities of the four colleges will be conducted following the priorities and phasing described in the previous chapter, on a case-by-case basis. The detailed selection of the facilities to be rehabilitated/ extended will be made following a participatory process together with selected departments of MoES (including EPPAD and PCT), the college authorities and student representatives, while also keeping in line with the following approaches for each college:

Abilonino
The project will build a complete new college, designed for 300 students as a short-term target, following the prescriptions of the master plan. Priority will go to the teaching facilities (classrooms, workshops, laboratories, library, ICT center, internet connection…), sanitation and cooking facilities, then to the students dormitories, and finally, if funds remain available, to the teachers' accommodation.

As the central authorities have guaranteed that the college will be connected to the national electricity grid, the project will not consider this activity but will support provision of renewable energy facilities as described below, while providing access to drinking water.

The project will explore the possibility of involving students in parts of the construction process as a means to introduce them to new technologies without slowing down the construction process. Students could take on part of the production, and the use of,

stabilised bricks (SIB) for one or two building blocks, the metal construction or the installation and maintenance of the renewable energy system, while taking advantage of the rehabilitation of one of the less dilapidated building as a means of teaching them classical construction techniques.

Muni/Kaliro
Due to the good quality of their structure, most of the existing buildings of Muni and Kaliro will be rehabilitated rather than re-built. The removal and the treatment of the asbestos roofs shall follow 'state of the art' procedures, respecting both environmental and public health norms. The rehabilitation works will include appropriate access to electricity, drinking water, drainage, sewerage and solid waste management, as included in both college master plans.
Extension of the facilities will also follow the prescription of the master plans that will be conceived in order to achieve a short-term enrolment target of 1.000 students for both colleges. In Muni, priority in terms of extension will go to the construction of new teaching facilities, such as laboratories, while in Kaliro student accommodation will be addressed as a first priority.

Mulago
In Mulago the intervention will consist mainly in providing new teaching facilities in the form of a 3-storey building of around 1.300m² sitting along the parking area on the only remaining vacant land of the college. The construction will take advantage of the existing slope along the parking area in order to realise, on the level of the parking, an administrative area which will be placed under a large overhang supported by columns. This solution requires a guarantee that the college activities will remain on the same site for a minimum of 30 years.

Experimentation and innovation in green building
The most promising solutions, adapted to fit the specific conditions of each college in terms of renewable energy for both electricity production and for cooking, will be tested on the four sites. Similarly, some complementary funds will be allocated to the construction of the extension facilities to integrate passive measures that will improve the temperature comfort of the users within these buildings (see above).

Activity 4.5 Equip and furnish the 4 colleges and their practice schools, including transport means
Once built, the colleges will be furnished and equipped, taking into consideration pedagogical requirements, users' comfort and environmental concerns.
In order to improve the teaching environment within the practice schools of both national teaching colleges, priority interventions, either in the form of rehabilitation or provision of equipment to the NTC's practice schools, depending on actual needs, will be provided.

An in-depth analysis of each college, which needs to be undertaken in order to ensure their good operation in terms of transportation of goods and people, will be conducted for Muni and Kaliro, and also (importantly) for Abilonino which presently has no such facilities. These studies will define the most appropriate investment for each college e.g. a light truck, a mini van or a pick-up vehicle. A financial comparison between the O & M costs of the purchase option and a rental option for a period of ten years will then be made..

3.4 Indicators and means of verification

3.4.1 General objective

Indicators:

- Increase in secondary students passing lower secondary exams with grades I-III at pure UPPET schools by gender and district
- Survival to S4 by sex and district
- Pupil to teacher ratio (PTR)

3.4.2 Specific objective

Indicators[12] :

Outcome indicators:
The average performance levels of teachers / trainers / instructors / tutors prepared at the selected colleges, as measured by the final assessment, have improved at the end of the project, as compared to the performance levels prior to the launch of the project

Impact indicators:
- More than 50% of the academic staff of the selected colleges use learner-centred methods of teaching for more than 50% of lesson-time.
- More than 50% of the trainee teachers / trainers / instructors / tutors prepared at the selected colleges use modern, learner-centred teaching methods for at least 50% of lesson-time during teaching practice (practicum)

Means of verification :

Outcome indicators:
Yearly transcripts of students' assessments at the selected colleges

Impact indicators:
- Class-room observation and inspection of Academic Course Development (ACD) designs
- Classroom/lecture-room observations
- Inspection of lesson plans prepared and used by newly trained teachers / trainers / instructors / tutors
- Teaching and learning observation of newly trained teachers / trainers / technical teachers/instructors / tutors in their working environment

3.4.3 Result 1 : The teacher education system for secondary and BTVET is strengthened in relation to the colleges in the areas of communication, support supervision and visitation, strategic management and lectureres'qualifications

Indicators :

Process/output indicators:
- National strategic orientations related to secondary school teachers, BTVET trainers / technical teachers/instructors and health tutors reflect the changed approach on

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[12]The current ratio of females of 39 % in the sector of tertiary education will be increased.

management and pedagogy and are approved
- The inspection and supervision staff (on pedagogy and management) take up their tasks according to the approved policy
- Learner centred learning is a concept that is being discussed in the secondary schools, Technical Schools, Farms Schools, Technical Institutes, Vocational Training Centres

Outcome indicators:
- National strategic orientations are reflected in the colleges' institutional development plans
- The 3 other NTCs implement the tools on management and pedagogical training in their college

Means of verification :

Process/output indicators:
Approved updated versions of national strategic orientations/guidelines/regulations

Outcome indicators:
- Supervision and inspection reports by MoES, Kyambogo and Makerere Universities, NCHE reflecting the new management and pedagogical approach.
- Interviews with trainers, management, pupils of the three NTCs
- Interviews with trainers, management of secondary schools, Technical Schools, Farms Schools, Technical Institutes, Vocational Training Centres

3.4.4 Result 2 : The management performance of the supported colleges is strengthened

Indicators :

Process/output indicators:
- Each college has an updated institutional management and development plan, including awareness raising activities related to the transversal themes, reflecting the quality assurance approach,
- Each college has a financial plan, reflecting the quality assurance approach, including procurement and accounting
- Each college has a human resources development plan, including the implementation of the HIV/AIDS and gender policy, reflecting the quality assurance approach,
- Each college implements a maintenance plan, reflecting the quality assurance approach, including environmental issues
- Each college has developed the major partnerships with other institutions / organisation, stipulated in its institutional development plan, including an active partnership with a practice school
- All above cited plans are applied and implemented

Outcome indicators:
- The decision-making process is based on the institutional plans developed by each college
- The pedagogical process is strengthened through continuous support supervision, monitoring and evaluation by the colleges' academic management

Means of verification :

Process/output indicators:
- Institutional development plans available, including awareness raising activities related to the transversal themes, reflecting the quality assurance approach
- Annual financial work plans and reports available, including procurement and accounting
- 3-year human resources development plans available, including the implementation of the HIV/AIDS and gender policies,
- Annual maintenance plans and reports available + on site technical visits including environmental issues

Outcome indicators:
- MoUs and related activity plans
- Exchange reports
- Minutes from governing council and departments within the colleges
- Minutes of supervisory meetings
- M&E reports

3.5.5 Result 3 :The quality of teaching and learning in the supported colleges is improved

Indicators :

Progress/output indicators:
- Pedagogical skills of staff reflect a learner-centred approach
- More than 50% of the academic staff of the selected colleges use learner-centred methods of teaching, for more than 50% of lesson-time.
- Increased time dedicated to practical work
- In all disciplines, the lecturers apply learner-centred, and skills-based, teaching/learning approaches in at least 50% of their lessons
- Action research, pedagogical projects, quality workgroups, etc. feature as regular activities in the training programmes

Outcome indicators:
- The students know how to select from available instructional materials and also how to prepare their own lesson-support materials from readily available materials
- Students engage in subject specific learning projects
- Students use learner-centred and skills based teaching and learning approaches in their own teaching practice (practicum)
- Students' knowledge on cross-cutting issues (gender, environment, HIV) has been raised and they integrate these issues into their professional practice

Means of verification :

Progress/output indicators:
- Students' appraisal of lecturers
- Reports of lesson observations
- Interviews with lecturers and students
- Timetable allocation to practical sessions
- Individual/departmental action plans
- Examination papers (question items) analysis of the questions and answers

Outcome indicators:
- Students' teaching files, portfolios
- Lesson observation
- Student' interviews
- Students' project reports
- Students' reflective journals
- Classroom observation during practice teaching
- School practice assessment reports

3.5.6 Result 4 : Colleges facilities are rehabilitated, extended and equipped

Indicators :

Progress/output indicators:
- Technical specifications of the required equipment are related to the revised pedagogical approach
- Awarding of contracts to suppliers
- Architectural design is approved by MoES, NTC and project management
- Awarding of contract to building company
- Provisional handing over of buildings
- Final handing over of buildings
- Pedagogical equipment is available on a full-time basis and used daily by trainers and trainees

Outcome indicators
- Access to NTCs: increase in the number of students in line with MoES projections
- Effective utilisation of the facilities: e.g.: use of library, computer and science labs (frequency of use)
- Staff and student levels of satisfaction with respect to facilities

Means of verification :

Progress/output indicators:
- Memorandum of Understanding
- Supplies contracts
- Handover reports
- Construction contracts
- Monthly technical and financial progress reports

Outcome indicators
- Student enrolment and retention by gender and by subject
- Attendance registers/ library cards
- Room allocation on the timetable
- Satisfaction questionnaire / interviews / focus groups

3.5 Description of beneficiaries

Direct beneficiaries:

- Ministry of Education and Sports
- College management of the NTCs, Mulago HTC, Abilonino CPIC
- Lecturers/tutors/technical teachers/ instructors of the NTC's, Mulago HTC, Abilonino CPIC

- Students at the four supported colleges of the NTC's, Mulago HTC, Abilonino CPIC
- Support and supervision staff (Makerere and Kyambogo Universities, National Council for Higher Education)

Practice schools related to the collegesIndirect beneficiaries:

- Students at the secondary and technical schools and health training institutes
- Lecturers/tutors/techical teachers/instructors of the practice schools related to the colleges
- Students of the practice schools related to the colleges
- Ministry of Health

4 Resources

4.1 Financial resources

The program will be implemented over a five year period within the budget framework provided by Belgium. The detailed budget is provided under at point 4.4 below.

It is foreseen that the Ugandan contribution will mainly be in kind, more specifically, MoES will contribute for a total amount of EUR 1,7 million to the intervention, through among others:
- office space for the project coordination team unit, including electricity and water
- project coordinator and national staff (for accounting, procurement and construction) at the level of MoES for the full duration of the project
- taxes.

The total amount represents 10% of the Belgian contribution.

4.2 Human resources

BTC will recruit:
- one international Education Expert (co-coordinator)
- one international Contracting and Financial Coordinator
- one national administrative and accounts assistant
- one international Advisor for Mulago Health Tutors College and Abilonino Instructors College (limited duration of 3 years)
- four national experts
- one international Sector Expert in Infrastructure (limited duration of 2,5 years)
- one national infrastructure facility coordinator (engineer)
- one secretary
- three drivers

The terms of reference (ToR) for the international and national experts are included in the annex section of this document. Several junior assistants can also be recruited by BTC, without additional salary costs during the implementation of the project. The focus of their ToR will mainly be to give additional support to the development of green architecture and to develop (additional) initiatives regarding the implementation of the HIV/AIDS and gender workplace policy in the colleges and the institutions at central level.

MoES and school staff, paid by the Ugandan Government, constitute also an important human resource input for implementation of project activities (see chapter 4.3.1 below).

The MoES will put at the disposal of the project:
- one project coordinator;
- one senior accountant;
- one procurement officer;
- one office attendant;
- two engineering assistants.

BTC will recruit the three International Sector Experts (Co-Coordinator, Mulago and Infrastructure) and the International Contracting and Financial Coordinator as per Belgian rules and regulations through BTC headquarters in Brussels. The short listed candidates will be presented to the Resident Representative and to the MoES for advice.

The Administrative and Accounts Assistant, the 4 national experts and the national infrastructure facilities coordinator, the secretary and the drivers will be recruited through the BTC Representation in Kampala as per Belgian rules and regulations. The selected persons will be presented to MoES for its advice.

In order to ensure continuity during the whole project period, MoES ensure detailed hand-over to and training of the financial staff to prevent from losing knowledge.

4.2.1 Technical responsibilities

The intervention will operate within the management structure of the MoES In this respect, the Permanent Secretary is fully responsible for the overall implementation of the whole exercise while the respective Directors, Commissioner and assistant commissioners will also assume their own delegated responsibilities within the context of the implementation of the project, and will be supported in this respect by the project coordination team.. With regards to substantial and strategic approach, the project falls under TIET.

4.2.1.1 Project Coordinator
The project coordinator, on behalf of MoES, will be responsible for the overall coordination of project activities according to the planning and instruction of the Steering Committee in collaboration with the ISE. He will validate the Project Implementation Manual (PIM) together with the Co-coordinator.

4.2.1.2 International Education Expert (Co-coordinator)
The International Sector Expert Pedagogy (ISE) will be in charge of all the strategic aspects of the project, the planning and the reporting of the activities as well as all the commitments. He will validate the PIM together with the Project Coordinator.

4.2.1.3 International Sector Advisor Mulago and Abilonino
The ISE for Mulago and Abilonino colleges will support these colleges at the initial period of the project implementation to prepare a full study of all aspects of each college, with an additional paper being prepared including issues and options to enable the MoES to develop a new, revised strategy for Mulago HTC. In a similar way, some of the time of the advisor will also be dedicated to supporting the development of a new and revised strategy for Abilonino CPIC.

4.2.1.4 National experts
The National Experts in the 4 colleges of the project location will be responsible for day-to-day activities and overall monitoring of project progress according agreed plan and procedures.

4.2.1.5 International Sector Expert Infrastructure
The ISE in infrastructure facilities (ISE-I) will work on a full-time basis for a period of 2,5 years. Further follow-up and monitoring will be done at an ad hoc basis and when needed. He/She shall be recruited during the second year of the project, after completion of the preparatory phase. The expert will be responsible for the implementation of the civil works investment of the project, including supervision of the procurement of works, supplies and services as well as capacity building, awareness raising, and collection and dissemination of lessons learned.

4.2.1.6 National Infrastructure Facilities Coordinator
The national Infrastructure Facility Coordinator (NIFC) will be recruited for the whole duration of the project. He/she will operate within the MoES at the CMU department and

will work under the supervision of the Project Coordinator and the ISE. He/she will be responsible for the preliminary studies, architectural and engineering plans and the TOR with support from BTC Headquarters (Est-infrastructure).

The International Contracting and Financial Coordinator will be an important member of the Project Coordination Team (PCT) and will support the project in relation to the processing of all expenditures and the related follow-up. In this respect, he/she will also be responsible for the tendering and follow-up of public procurements in close consultation with the procurement department of MoES. The MoES Public Procurement Officer will support him/her in his task.

He/She will be responsible for the tendering and follow-up of the public procurements. The MoES Public Procurement Officer will support him in his task.
He/she will be in charge of the budget consolidation, the accounting, the financial planning, the treasury as well as the financial reporting to the Steering Committee. The MoES Senior Accountant and the Administrative and Accounts Assistant will second him in these tasks.

Additionally, the International Contracting and Financial Coordinator will be in charge of all payments signature, according BTC procedures related to mandates. This will enhance the level of internal control in terms of segregation of duties. He /she will be in charge of the drafting and follow-up of the PIM in consultation with the project coordination team.

He will take care of the capacity development activities to improve financial and procurement management within MoES and the colleges.

4.2.2.2 Accountants

A. MoES Senior Accountant (numbering)
The MoES senior Accountant will be part of the Project Coordination Team. He/she will be in charge of ensuring the reliability; timeliness and accuracy of the financial information regarding the activities undertaken and accounted for in the accounting tool. She/He will be responsible for the efficient transfer of financial information to the concerned departments in relation to MoES reporting.

B. Administrative and Accounts Assistant
The Administrative and Accounts Assistant will be responsible for the booking of financial transactions in FIT, the follow-up of the petty cash and the preparation of the first draft of financial reporting.

Both accountants will work closely together to ensure smooth exchange of information and high quality and accuracy of work.

4.3 Material resources

Equipment needed for the Project Coordination Team will be allocated by the project budget within its own-management. The MoES will provide the office space for the team.

4.4 Anchorage of the intervention

Given the nature and focus of the intervention, it will be anchored within the Teachers, Instructors and Education Training Department of MoES.

			TOTAL BUDGET	Execution modalities	TOTAL BUDGET	%	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
A			Specific objective		14.544.900	83%	696.950	4.639.000	5.492.000	2.984.750	738.200
A	01		Result 1: The education system is strengthened		556.500	3%	42.750	132.500	156.000	145.250	80.000
A	01	01	Conduct baseline study	Own-Management	40.000		20.000	5.000	5.000	5.000	5.000
A	01	02	Strengthen pedagogical support and supervision	Co-Management	134.500		3.750	36.500	50.000	25.750	18.500
A	01	03	Strengthen visitation of the colleges general management	Co-Management	68.500		1.500	24.500	23.000	13.000	6.500
A	01	04	Strengthen strategic management at central level	Co-Management	118.500		7.500	39.000	30.500	29.000	12.500
A	01	05	Enhance sustainability of change process	Co-Management	130.000			10.000	30.000	62.500	27.500
A	01	06	Address lecturers' qualifications	Own-Management	65.000		10.000	17.500	17.500	10.000	10.000
A	02		Result 2: Management capacity of the colleges has been strenghtened		1.477.000	8%	152.000	512.500	482.000	247.500	83.000
A	02	01	Conduct baseline study	Own-management	65.000		25.000	10.000	10.000	10.000	10.000
A	02	02	Strenghten the strategic management of the colleges	Co-Management	207.000		5.000	74.000	69.000	38.000	21.000
A	02	03	Strenghten the HR management of the colleges	Co-Management	97.000		3.000	33.000	32.000	18.000	11.000
A	02	04	Strenghten the financial management of the colleges	Co-Management	102.000	0	4.000	36.000	33.000	18.000	11.000
A	02	05	Strenghten academic management, including practice schools	Co-Management	136.000	0	4.000	45.000	46.000	26.000	15.000
A	02	06	Strenghten management - infrastructure and maintenance	Co-Management	250.000		10.000	90.000	90.000	45.000	15.000
A	02	07	Support the leadership and management at Mulago HTTC	Own-Management	495.000		98.500	199.500	197.000		
A	02	08	Support the leadership and management at Abilonino CPIC	Own-Management	125.000		2.500	25.000	5.000	92.500	
A	03		Result 3: Quality of teaching and learning		1.529.400	9%	142.800	404.600	454.600	371.600	155.800
A	03	01	Capacity assessment of teaching and learning	Own-management	75.000		25.000	10.000	10.000	15.000	15.000
A	03	02	Support to teaching and learning	Co-Management	450.000		25.000	85.000	175.000	135.000	30.000
A	03	03	Personnel	Own-mananagement	1.004.400		92.800	309.600	269.600	221.600	110.800
A	04		Result 4: Construction, teaching aids, tools and equipment		10.982.000	63%	359.400	3.589.400	4.399.400	2.220.400	419.400
A	04	01	Base line survey	Own-management	5.000		5.000				
A	04	02	Studies	Co-Management	350.000		250.000	10.000	30.000	30.000	30.000
A	04	03	Design of the colleges facilities	Co-Management	625.000			285.000	170.000	170.000	
A	04	04	Rehabilitation/construction colleges facilities	Co-Management	7.850.000			2.835.000	3.125.000	1.515.000	375.000
A	04	05	Equip and furnish 4 colleges and practice schools	Co-Management	1.540.000			265.000	880.000	395.000	
A	04	06	Personnel	Own-management	612.000		104.400	194.400	194.400	110.400	14.400
X			Réserve budgétaire (max 5% * total activities)		501.336	3%	0	0	0	0	501.336
X	01		Réserve budgétaire		501.336	3%	0	0	0	0	501.336
X	01	01	Réserve budgétaire COGESTION	Co-Management	285.336		0				285.336
X	01	02	Réserve budgétaire OWN-MANAGEMENT	Own-management	216.000						216.000

Z			General means		2.458.400	14%	609.980	467.880	450.880	467.880	461.780
Z	01		*Human resources*		*1.938.000*	*11%*	*399.600*	*384.600*	*384.600*	*384.600*	*384.600*
Z	01	01	International sector expert pedagogy	Own-management	900.000		180.000	180.000	180.000	180.000	180.000
Z	01	04	International Contracting and Financial Officer	Own-management	900.000		180.000	180.000	180.000	180.000	180.000
Z	01	05	Administrative and accounting officer	Own-management	48.000		9.600	9.600	9.600	9.600	9.600
Z	01	06	Secretary	Own-management	30.000		6.000	6.000	6.000	6.000	6.000
Z	01	07	Drivers (3)	Own-management	45.000		9.000	9.000	9.000	9.000	9.000
Z	01	08	Recruiting Costs	Own-management	12.000		12.000				
Z	01	09	Inception Consultancy national	Own-management	3.000		3.000				
Z	02		*Investments*		*153.200*	*1%*	*153.200*				
Z	02	01	Vehicles	Own-management	90.000		90.000				
Z	02	02	Office equipment	own-management	15.000		15.000				
Z	02	03	IT equipment	Own-management	42.200		42.200				
Z	02	04	Office rehabilitation	own-management	6.000		6.000				
Z	03		*Operating costs*		*178.200*	*1%*	*34.680*	*36.280*	*36.280*	*36.280*	*34.680*
Z	03	01	Offices supplies	own-management	30.000		6.000	6.000	6.000	6.000	6.000
Z	03	02	Vehicle running costs, maintenance and insurance	own-management	60.000		12.000	12.000	12.000	12.000	12.000
Z	03	03	Communications incl. internet	own-management	18.000		3.600	3.600	3.600	3.600	3.600
Z	03	04	IT maintenance	own-management	16.500		3.300	3.300	3.300	3.300	3.300
Z	03	05	Project Travels & Missions costs	own-management	30.000		6.000	6.000	6.000	6.000	6.000
Z	03	06	Bank Costs	own-management	900		180	180	180	180	180
Z	03	07	Training	own-management	4.800			1.600	1.600	1.600	
Z	03	08	Other operating costs	own-management	18.000		3.600	3.600	3.600	3.600	3.600
Z	04		*Audit Monitoring and Evaluation*		*189.000*	*1%*	*22.500*	*47.000*	*30.000*	*47.000*	*42.500*
Z	04	01	Monitoring and evaluation costs	own-management	60.000			20.000		20.000	20.000
Z	04	02	Financial Audit	own-management	90.000		18.000	18.000	18.000	18.000	18.000
Z	04	03	Backstopping (4 infr, 4 admin, 4 ped, 1 HIV/AIDS)	own-management	39.000		4.500	9.000	12.000	9.000	4.500
TOTAL					**17.504.636**	**100%**	**1.306.930**	**5.106.880**	**5.942.880**	**3.452.630**	**1.701.316**

OWN-MANAGEMENT	**4.813.800**		838.780	1.104.480	1.114.980	926.980	828.580
COGESTION	**12.690.836**		468.150	4.002.400	4.827.900	2.525.650	872.736

5 Implementation modalities

The project will be implemented in co-management i.e. the Permanent Secretary of the MoES will be the project director or authorising officer while the BTC Resident Representative in Uganda will be the co-director or co-authorising officer of the project. An official designated from TIET will take the role of project coordinator and the International Sector Expert appointed by BTC will be the project co-coordinator.

5.1 Legal framework and administrative responsibilities

The present TFF is part of the Specific Agreement between Uganda and Belgium – it determines the legal framework of the intervention.

5.2 Implementation and follow-up structures

The implementation modalities will be more detailed in a project implementation manual (PIM). The PIM will we elaborated during the inception phase of the project by the Project Management Coordination team. It will be validated by the Steering Committee and the project coordination team will be bound to it.

5.2.1 Project Coordination Team

A **Project Coordination Team** (PCT) consistent with the MoES structure will be established to facilitate and manage the implementation of the intervention.
The PCT will be responsible for the overall coordination and follow-up of the intervention operating in close coordination with the MoES. It will be located in Kampala and composed of the:

- Project Coordinator;
- International Education Expert (co-coordinator),
- International Sector Expert in Infrastructure
- International Contracting and Financial Coordinator
- Infrastructure Facility Coordinator/ national engineer
- Administrative and Accounts Assistant
- International Sector Advisor Mulago and Abilonino
- Experts (4)
- MoES Senior Accountant;
- MoES Contract Officer;
- 2 MoES Engineering Assistants
- MoES Office Attendant;
- Secretary
- 3 Drivers

Organisational Chart Project Coordination Team

International Education Expert	MoES Project Coordinator
Co-coordinator	**Coordinator**

International Sector Advisor Mulago/Abilonino	National experts 4	International Contracting and Financial Coordinator	International Sector Expert Infrastructure

Administrative and Accounting Assistant	MoES Senior Accountant	National Infrastructure Facilities Coordinator

MoES Engineer Assistant 2	MoES Contract Officer

+ Drivers, Secretary and MoES Office Attendant to support the project coordination team

Coordination by the Project Coordination Team regarding the different activities of the intervention and its overall coherence will comprise the following activities:

- Overall planning of the project activities and adjustments on a quarterly basis;
- Organising, coordinating and supervising the implementation of project activities in accordance with the approved project work plans;
- Providing timely compilation of progress reports and budgeted work plans for the following period for consideration by the Steering Committee;
- Ensuring the secretariat of the Steering Committee carries out its assigned duties (dissemination of reports, proposal of agenda, drafting of minutes of Steering Committee meetings etc);
- Compilation of the project final report at the end of the project.

The MoES Project Coordinator and the ISE will be in charge of all the strategic aspects of the project and the planning of the activities. The ISE will sign for the commitments.

The International Contracting and Financial Coordinator will be in charge of the daily administration of the unit and signing the payments. This segregation of duties will ensure a high level of internal control.

The PCT will encompass the designated staff involved in the project within the MoES and as a whole will be responsible for the day-to-day management as well as the gathering and consolidating of information covering progress on all aspects of the full project. This will enable the PCT to establish the planning and reporting of the whole intervention and ensure the coherence of the results framework.

5.2.2 The Steering Committee

A steering committee will be established to guide the project and to ensure the follow-up of the project. It will be mainstreamed/aligned with the existing structures in MoES.

The principal role of the Steering Committee is to ensure that the project follows the procedures and principles contained in the technical and financial file, to become aware of any internal or external bottlenecks that might jeopardize the project and prevent it from achieving its results – and to take decisions accordingly. The Steering Committee should not involve itself unnecessarily in day-to-day operational decisions within the project because this goes against national planning procedures and reduces beneficiary control over resource management. It also makes it more difficult to generalize lessons learnt to other local authorities in Uganda where no such Steering Committee exists. The detailed functions of the Steering Committee will therefore be:

- Ensure that the roles and responsibilities of the different agencies and entities involved in the project are clearly defined;
- Ensure approval of the Project Inception Report and action plans;
- Provide implementation and policy guidance to all project stakeholders;
- Ensure appraisal of the state of progress of the project and the achievement of its specific objectives;
- Ensure the control of all aspects of project resource allocation;
- Ensure approval of the budgeted work plans and collated project financial and progress reports prepared by the PCT from individual reports prepared by PCT;
- Based on the financial and progress reports including audit reports, follow the effective implementation and advice on corrective actions to ensure the achievement of the project's objectives;

- Ensure approval of the reports related to the disbursement and use of project funds based on the quarterly budget and planning follow-up submitted by the PCT;
- If necessary, ensure the approval of the modifications of Project Results, Activities, Modalities and budget realignments provided that such modifications do not alter the project's general and specific objectives, duration nor its overall budge (NB: budget realignments which do not differ more then 15% from the originally estimated amounts, at the level of the results, can be changed by the PCT without prior approval of the steering committee);
- Ensure approval of any proposals related to necessary modifications to the specific objective indicators and result indicators;
- Decide on the fielding of, and ensure approval of the Terms of Reference of monitoring and evaluation missions, as well as appraise their recommendations;
- Ensure that annual External Audits are carried out by an accredited accounting firm and appraise any findings;
- Ensure approval of the final report and the final closure of the project.

The Steering Committee will meet at least twice a year at the different project locations, preferably during June/July and December/January, corresponding to the six-monthly reporting period.

It is proposed that the Steering Committee membership should include:
- A representative from the MoES (Permanent Secretary; Project Director and chair);
- A representative of the Ministry of Finance, Planning and Economic Development;
- A representative of the Ministry of Health (Mulago)
- One representative from each of the four colleges (Mulago, Kaliro, Muni and Abilonino)
- Commissioner, Education Planning and Policy
- Commissioner TIET
- Commissioner BTVET
- Director Higher Education and BTVET
- Assistant Commissioner, PDU
- Assistant Commissioner, CMU
- The BTC resident representative (Co-director)
- Other appropriate persons can also be invited to attend selected meetings depending on the agenda of the meeting.

The Steering Committee will decide by consensus. The PCT will act as the Secretariat for the Steering Committee and will provide the necessary information to its members in advance of each meeting. Each Steering Committee meeting shall have minutes signed by MoES (Chairperson), BTC Resident Representative and the representative of the Ministry of Finance Planning and Economic Development.

5.2.3 Filing systems

The project filing system will allow quick and easy retrieval of original supporting documents. The filing system will be described in more detail in the PIM, and these guidelines will be strictly adhered to. The location within the PCT offices of the filing system will be secured and a proper back-up of all IT information will be put in place.

The archiving process will be as determined in the PIM and the final archiving location will be decided on completion of the project.

5.3 Financial modalities

5.3.1 Bank accounts and signing authorities

5.3.1.1 Co-management

The funds under co-management will be disbursed via BTC-Brussels to the main account in EURO at a Commercial Bank in Uganda or at the Bank of Uganda. The signatories of this account will be the MoES Permanent Secretary as the Ugandan authorising officer/director and the BTC Resident Representative in Kampala as co-authorizing officer/co-director,

BTC together with MoES will open an operational UGX account for the co-management funds. This account will be named "BTC project – co-management -EDUC" and shall operate by double signature.

The Contracting and Financial Coordinator will sign for payments. The International Sector Advisor will be in charge of the commitments.

Signature 1	Signature 2	Ceiling
Person mandated by Authorising Officer	1.Contracting and Financial Coordinator 2. Co-Coordinator (as second signature in case of unavailability of the Contracting and Financial Coordinator)	25.000€
Director (Authorising Officer)	Co-director (Co-Authorising Officer)	Depends on the MoES rules and regulations - representation

Transfers from the main euro account will replenish this bank account. The activities, and the amount deposited on this account, should be kept limited in order to avoid exchange rate losses.

5.3.1.2 Direct-management

With regards to the directly administered funds, BTC will open a specific account named "BTC project – Own-management – EDUC in EURO at a commercial bank.

Those funds will follow the internal rules and procedures of BTC. If necessary, an additional account in local currency can also be opened.

5.3.2 Flow of funds

5.3.2.1 First transfer

After the signing of the implementation convention between the Belgian State and BTC, a first request for funds can be made, and presented to the BTC local representative, based on the action plans and the financial needs (financial planning). The requested amount should correspond to the financial needs for the first three months of activities and will follow the BTC internal procedures.

5.3.2.2 Subsequent transfers

To receive the following requests, the International Contracting and Financial Coordinator must introduce a cash call (by financial mode) to the BTC Representative at the beginning of the month before the next quarter. This cash call must be signed by the Project Coordinators.

The amount of the transfer equals the estimated needs of funds for the following three months with a reserve. The transfer of funds by BTC is carried out at the beginning of the quarter. The subsequent transfer of funds is effected only if:

- The accounting for the previous period has been closed and has been transmitted to the BTC Representative.
- An updated financial planning of the current quarter has been transmitted to the BTC Representative.
- The amount of the request does not exceed the budget balance.
- The quarterly budget and planning follow-up is timely, complete and reliable.

It is possible to submit an urgent cash call with a written explanation of the unforeseen circumstances.

5.3.2.3 Accounting

The accounting of the project must be elaborated using the BTC accounting tool and respecting BTC internal procedures. Based on the information extracted by the Administrative and Accounts Assistant, following the local dimensions from the BTC accounting tool, the monthly reports of the MoES will be completed by the MoES Senior Accountant. The accounting must be signed by the Project Coordinator and Co-coordinator and sent to the Director (Authorising Officer), the Permanent Secretary and Co-Director (Co-authorising Officer), and the BTC Resident Representative

The following must be forwarded by the project to the BTC Resident Representative:

- Electronic account files.
- Bank statements and signed cash statements.
- All supporting documents

Particular attention will be paid to the advances and cheques; the PCT will carry-out a close follow-up on these.

Strict thresholds for petty cash use and payments will be set in the project manual.

5.3.4 Financial Planning

Every quarter, the International Contracting and Financial Coordinator will prepare financial planning for the current quarter and upcoming quarters of the current year and the future years. The quality of the planning will be assessed and reviewed; the transfers of subsequent funds will be subject to the quality of such planning.

The financial planning must be carried out in accordance with the BTC internal procedures and must be sent to the BTC Representation. The financial planning will be closely linked to the operational activities and will constitute best estimates for disbursements for the coming periods.

5.3.5 Reporting to the Steering Committee

At the Project Steering Committee meeting, the PCT will present the following financial information:

- Budget monitoring reports
- Updated financial planning
- List of the main commitments
- Bank accounts statements
- List of received funds
- Budget change proposals (when the ceiling of 15% is reached: see 5.3.6 budget management below)
- Action plan related to audit recommendations and updated follow-up of implemented corrective actions.

5.3.6 Budget management

The total budget amount cannot be exceeded. If a budgetary increase is necessary, a supported request for increase must be submitted to at the Belgian State after having received the agreement of the Steering Committee. If Belgium accepts the request, an exchange of letters between the two parties must follow.

The budget of the project includes the budgetary constraints in which the project must be carried out. The Steering Committee, on the basis of proposals worked out by the project management, must approve changes of budget when a result exceeds its allocate amounts as formulated in the latest budget version – by more than 15% and this excess equates to more than 1% of the total budget per financial mode.

In every case, the Project Coordination Team must document the budget modifications according to BTC rules even if these are not presented to the Steering Committee. The possible budgetary changes are:

- Change of the budget structure;
- Transfer of resources between existing budget lines:
- Use of the reserve allocation. The budgetary reserve can only be used for project activities and after approval of the SC. Its use must always be accompanied by a change of the budget.

The management of a budget change must be made according to BTC procedures.

The practical details will be part of the Project Implementation Manual.

In order to facilitate the start-up of the intervention, commitments and expenses may be made before the signature of the Implementation Agreement between Belgian Government and BTC. These shall concern logistics and human resources for a maximum amount of 165.500 EUR

Z			General means	165.500
Z	01		*Human resources*	*66.500*
Z	01	01	International sector expert pedagogy	16.000
Z	01	02	International sector expert infrastructure	16.000
Z	01	03	National engineer	1.200
Z	01	04	International contracting & financial officer	16.000
Z	01	05	Administrative and accounting officer	800
Z	01	06	Secretary	500
Z	01	07	Drivers (3)	1.000
Z	01	08	Recruiting Costs	12.000
Z	01	09	Inception Consultancy National	3.000
Z	02		*Investments*	*99.000*
Z	02	01	Vehicles	60.000
Z	02	02	Office equipment	15.000
Z	02	03	IT equipment	18.000
Z	02	04	Office rehabilitation	6.000

5.3.7 Auditing

The project and its accounts, as well as every entity that has received funds from the project, are subject to an annual external audit. The external audit is required to evaluate:

- whether the accounts of the project reflect reality
- the existence and respect of procedures
- the economic and efficient use of funds (value for money)
- the compliance with PPDA regulations

BTC and the Office of the Auditor General jointly elaborate the terms of reference for the audits. For convenience, the BTC auditing framework contract will be used with the prior approval of the Auditor General. The external auditor must be a certified independent company either national or international.

Those annual audits can be included in the Auditor General Planning.

The audit report must be presented to the Steering Committee. The PCT will then draft an action plan based on the recommendations of the audit. The Steering Committee can also require additional audits if necessary.

5.4 Execution agreements

At school level, execution agreements will be signed for the execution of certain activities. The execution agreements will take into account the following aspects:

- description of activities and related budget;
- description of roles and responsibilities;
- quarterly transfer of funds to a specific account based on justification, probative supporting documents and financial planning;
- quarterly progress reports;
- quarterly financial planning and budget follow-up;
- monthly justification of financial transactions (bank statements, supporting documents);
- annual audit (financial and internal control system);

- commitments and payments above 5.500 EUR are handled centrally (double signature BTC and Uganda);
- stipulations about eligibility of funds.

5.5 Reporting

The quality (reliability, timeliness, completeness) of the reporting will determine the future disbursements for the project. Unsatisfactorily documented explanations could lead to the suspension of the transfer of funds until further notice. The Authorising and Co-authorising officers will lead any additional enquiries or actions necessary to obtain the quality level required and assurance that the activities are correctly followed and the funds properly handled. All aspects of this process must be properly documented.

5.5.1 Financial Reporting

5.5.1.1 Budget and planning follow-up

The International Contracting and Financial Coordinator, working closely with the Project Managers, will provide the Authorising and Co-Authorising Officers with a budget and planning follow-up on a quarterly basis. This should be submitted no later than 45 days from the end of the previous quarter. It will include among others:

- A statement showing for the period and cumulatively (program life or year to date) inflows and outflows by main expenditure classifications;
- Opening and closing cash balances of the co-management bank accounts;
- A narrative highlighting the discrepancies with the previous periods;
- Supporting schedules comparing actual and planned expenditures with detailed deviation analysis between actual figures and budgeted ones;
- Cash forecast for the following six months.
- A comprehensive risk analysis on operational and financial grounds;

This report will clearly identify the difference between what has been planned (on operational and financial grounds) what has been implemented, the reasons for not respecting the planning, clear action plan with corrective measures, responsibilities and deadlines. The template will be defined in the project manual. It will be coordinated with the operational reporting.

5.5.1.2 Annual Financial Report

At year-end (July) and no later then 45 days after the end of the month, the PCT will present a consolidated report of the budget and planning follow-up.

This report will put in perspective all strengths and weaknesses of the project, including a section on lessons learned. It will detail the actions that will need to be put in place in order to allow the achievement of the objectives within the set timeframe and economic and efficient use of funds.

5.5.2 Operational Reporting

The PCT will be responsible for the coordination of the planning and the establishment of the work plans and budgets. In this perspective the planning and reporting of the activities will be included in an overall reporting format following the agreed deadlines. The PCT will:

- update work plans based on BTC procedures and templates (compiling information regarding operations, procurement and financial planning).

- compile the information for the six-monthly implementation reports (semi-annual review of the planning), which will be presented to the Steering Committee.

The progress report includes narrative information, and output indicators linking financial information with physical progress, and also highlights issues that require attention.

It will also include:

- A Contract listing which will reflect all signed contacts, their value and how much has been disbursed under each, as at the report date.
- A Commitment listing which will reflect all committed amounts for the next six months.

It is presented on a quarterly basis and forms an integral part of the Budget and Planning Follow-up. A results-oriented annual report will be produced according to the BTC templates and endorsed by the Steering Committee.

The table below presents the synthesis of the various types of operational and financial reports required. This table is not exhaustive and the parties can agree on additional reports.

Report	Responsible	Content	Destination
3-montlhy budget and planning follow-up	PCT	Technical and Financial report	BTC/MoES
6-monthly activity/progress report	PCT	Progress reporting and activity planning	Steering Committee, attaché
3-montlhy financial planning	PCT	Financial planning	Steering Committee, BTC HQ
Annual report	PCT	Result oriented progress report + annual financial report	BTC/Steering Committee, attaché, DGD
External annual audit	Auditing firm	Financial audit + value for money	BTC/Steering Committee, attaché
Internal audit reports	Internal auditors MoES	Achievement of objectives; risk assessment; policies and procedures; information and communication; monitoring.	BTC/Steering Committee
MTR report	PCT / External consultant	External Mid term review	BTC/Steering Committee, attaché
Final report	PCT	Provisional acceptance of program activities	Steering Committee, BTC and DGD

5.6 Procurement

The procurement of goods and services for the budget under co-management lines will be carried out in conformity with the Public Procurement and Disposal of Assets (PPDA) Act 2003, which provides the legal framework for procurement activities by all public institutions.

Tenders under co-management above €25.000 must have the approval ('no-objection') of the BTC Resident Representative in relation to the tender plan (including bid document), and on the tender evaluation report, with the positive evaluation of a legal advisor.

Yearly, a procurement plan for the Belgian programme is required to be made according to the instructions of MoES. This annual plan must be approved by the Steering Committee, together with the work plan and the budget. The annual procurement plan must be updated quarterly. These quarterly plans must be communicated to the BTC office in Uganda. The procurement plans will be elaborated by the procurement officers with the assistance of the Contracting and Financial Coordinator and validated by the Coordinator and Co-Coordinator. The Contracting and Financial Coordinator will ensure the consolidation.

The procurement officers, with the necessary input of the technical experts, will prepare the invitation to tender. The Contracting and Financial Coordinator will assist the procurement officers of the different levels where needed. Before publication, the invitation to tender must be approved by the Contracting and Financial Coordinator if the estimated value is greater than EUR 5.000. If the estimated value is greater than EUR 25.000 a "no-objection" approval of the BTC Resident Representative is required. The procurement officers will publish the tenders. The opening and analysis of the offers will be organised according the to national procedures. BTC must participate in the analysis of the offers if the value is greater than EUR 5.000. The attribution proposal has to be approved by MoES according to their normal internal procedures.

For amounts less than 25.000 EUR the no-objection approval will be given by the Contracting and Financial Coordinator and for amounts greater than EUR 25.000 the BTC Resident Representative will co-sign with the Authorising Officer.

For tenders in Own-management, the Belgian rules will apply.

5.7 Modification of the TFF

The formal agreement of the Belgian State and the Ugandan Government is needed to change the duration of the Specific Agreement, the total financial contribution or the specific objective of the project. The request of the above modifications has to be motivated by the PCT and approved by the Steering Committee. The exchange of letters requesting these modifications shall be initiated by the Ugandan Government and shall be addressed to the Belgian Embassy.

The following changes need to be approved by the Steering Committee:

- The mode of operation of the Project Fund;

- The financial modalities: changes in budget line from co-management to management under Belgian laws and regulations or vice versa;

- Project results and their respective budgets;

- Indicators at the level of specific objective and of results;
- Composition and responsibilities of the Steering Committee;
- The mechanism for approving changes to the TFF.

5.8 Monitoring and evaluation

5.8.1 Baseline study

A baseline survey is carried out at the start of the project to document the starting scenario in the project area.

Complementary to the study of these aspects, the baseline will review and/or complement the existing set of indicators with a specific focus on gender. Finally the study will define the permanent monitoring scheme of the project. The indicators will be evaluated at least once a year to provide reliable information for the annual report.

5.8.2 Mid-term Review

An independent mid-term evaluation, following BTC regulations, will be undertaken after completion of half the duration of the project. The Terms of Reference will be prepared by the PCT, BTC and MoES and forwarded to the Steering Committee for approval. External short-term consultants will be recruited for this exercise.

The main objective of the Mid-term Review is to assess the progress of all the project activities against planning (efficiency) and the extent to which the project results and specific objective are going to be achieved during the course of the intervention (effectiveness). The Mid-term Review will also examine the financial, institutional and managerial setting of the intervention. The mission will also formulate recommendations for the second half of the project implementation period. It will insist in particular on the mechanisms that have been / or should be put in place to ensure sustainability of project results. Its findings and recommendations will be presented to the Steering Committee.

The Steering Committee will take appropriate decisions on the proposed recommendations. The mid-term evaluation can suggest revisions of the program TFF, including the logical framework or implementation modalities. These proposed changes are then appraised by the Steering Committee.

5.8.3 Final Evaluation

A final external evaluation will be conducted at the end of the project implementation. The evaluation mission will gather the required information through direct contact with implementers and program beneficiaries, through a review of program documents and in depth analysis through questionnaires. The PCT will facilitate the evaluation missions.

5.9 Closure of the project

The program will have a non-expandable lifespan of five years. The Steering Committee decides on the closure process six months before the end of the program. The PCT will submit a final narrative, and a technical and financial, report to the Steering Committee. The report will comprise among others; an overview of the realized activities and will include a survey of the status and opinion of a representative sample of beneficiaries related to the impact of the Project. All the required reports, including the financial statement, will be prepared by the PCT in collaboration with the Representation according to BTC closing guideline and procedures. BTC must check the financial statement before

it is presented to the closing Steering Committee. The Steering Committee will meet not later than three months before the end of the program in order to examine and approve the final draft report of the program according to BTC regulations.

At the end of the project, unused funds in the project bank accounts, and the balance in the budget not yet transferred, will not be made available for project use. These amounts can only be re-allocated during the meeting of the Partner Committee or the joint commission (new IDCP). After having fulfilled the requirements to end the project, the signatories to the two accounts will officially close the accounts. Equipment under 'BTC management' remains BTC property and will be handed over to MoES at the end of the program.

After the end of the Specific Agreement, no expenditure will be authorised except expenditure linked to commitments (public procurements) taken before the end of the Specific Agreement and detailed in the Minutes of the last Steering Committee. In no case will operational expenditures be paid after the Specific Agreement expires.

6 Cross cutting themes

6.1 Environment

As previously stated in chapter 3, environmental issues will be integrated into the present education project at 2 levels: environment as a management issue (school eco-construction, consumption of energy, water, waste management on site, etc.) and as a subject of education (through the curriculum, the training of teachers, or integrated in the vocational training system).

Eco-design & construction
Firstly, in constructing and equipping the new, improved facilities, the project will apply environmentally friendly technologies. Environmental concerns will be considered during the design phase of the spatial master plans for the four colleges and the rehabilitation and extension of the buildings. The approach will include passive measures: the maximisation of greening in the college compound, the orientation of the facilities with regards to sun and wind direction, the maximal use of daylight, rainwater harvesting and natural ventilation. Due attention will be given also to ensuring the selection of materials for construction that will have the minimum negative environmental impact, and likewise when selecting furniture and equipment. During demolition, special care will be given to the removal of asbestos roofs and their proper treatment. All of these fundamental guiding principles should be included in terms of references, tender documents, etc.

Use of renewable energy
Furthermore, as an active measure, pilot scale grid non-connected photovoltaic systems will be installed in the four colleges. This system will decrease the fossil-based electricity consumption and contribute to a more eco-friendly building. Other alternative solutions will also be explored, and experimented with, with a view to replacing wood for cooking and thereby to reduce deforestation.

Waste management
Proper attention will also be given to wastewater and solid waste collection and treatment.

Preserving biodiversity
Excavation works will be reduced as much as possible, while valuable plant species present on the college premises will be safeguarded as much as possible. Any tree cutting for the purpose of construction will compensated by planting at least the same number of new trees. Planting of endemic plant species by the college committees will be actively encouraged.

Awareness raising
The implementation of these pilot activities are part of awareness activities targeting Ministry, college level and also students. They will be organised in such a way that maximises the raising of awareness on environment preservation, including through the construction of ecological buildings.

In addition to this, teachers and trainers are role models for their students, so it is important that the colleges and their staff adhere to environmentally friendly practices in their own day-to-day work. Ultimately, the aim is to mainstream environmental considerations as a natural part of all learning programmes. This can be either as part of the formal curriculum and/or as extra-curricular activities undertaken at the colleges, where students can replicate what they have learned into their own teaching practice

during their college phase and once they join the teaching profession proper. The impact of such programmes will be considerably enhanced if entrenched in normal college practice.

Thirdly, for BTVET in particular, occupational health and safety, waste minimisation, recycling, handling of hazardous substances etc. are particularly important. Moreover there will be issues and concerns that are relevant for specific occupations. An electrician, for example, should not only know the dangers and hazards associated with the profession, but should ideally also be able to choose and advise customers on the most energy-efficient solutions.

Fourthly, for many of the health professions there are specific environmental concerns that tutors must address, for example the handling of bio-medical waste. The project will ensure that students are trained and addressed appropriately on such issues, i.e. the handling of hazardous material and other potentially dangerous situations,

6.2 Gender

In the Ugandan Constitution, men and women are considered equal before the law in all aspects of political, social and cultural life. However, in reality, opportunities for men and women are not equal. On average, women in Uganda only earn between 40% and 50% of a man's income. Promoting gender equality and women's empowerment, (as also emphasized in MDG no. 3) is necessary for a number of good reasons, not least because it is key to economic development and poverty eradication.

The overall strategy outlined in the *Gender in Education* Policy is 'gender mainstreaming', i.e. a conscious approach to take into account gender equality concerns in all policy, planning, programme, administrative and financial activities as well as organizational structures and procedures. At the lower level of implementation, this entails amongst others that each institution in the system providing education and training must:

- Ensure gender equality and participation
- Mainstream gender in the curricula
- Ensure that gender responsive methods of teaching, learning and assessment of learners are applied
- Collect and maintain gender disaggregated data
- Ensure that the school environment is gender sensitive and conducive to the learning of both sexes.

With a view to the training of teachers, trainers and tutors, the following points are particularly relevant:

- For secondary school teachers: Promote in-service training of teachers in science and mathematics … to increase the performance of girls in these subjects, (and) initiate capacity building for teachers in gender responsive pedagogy;
- For BTVET: Build the capacity of trainers and managers of BTVET institutions in being able to address gender issues.

The benefitting colleges all provide equal access for men and women, and in the case of Abilonino a policy to promote female students in traditionally male-dominated specializations (and vice versa) even been adopted. However the identified challenges summarized in the policy in terms of enrolment, staffing and choice of specialisations are also recognized at the colleges. This notwithstanding, implementation of the *Gender in Education Policy* is both necessary and possible.

At the system level, the project will ensure that gender issues are brought to the fore in the planned capacity development activities – in terms of reviewing and strengthening current procedures and performance, and also not least of all, in sharing of innovative ideas and best practices amongst decision makers and managers. At college level, practices will also be reviewed and new approaches to mainstreaming gender issues will be encouraged. The funds earmarked for small projects can be used proactively to promote new ideas, methodologies and gender sensitive materials.

6.3 HIV / AIDS

Uganda has been a global leader in reducing the prevalence of HIV/AIDS, with figures down from 25-30% in the early 90s to the current 6.4 %. These achievements are attributed mainly to successful behaviour change campaigns like the ABC concept (Abstain, Be faithful, use Condom) rather than technology. Recently, the decline in infections has however stagnated and new infections are now rising, especially among women and populations from the conflict affected North. More than one million Ugandans are living with HIV/AIDS and over 130,000 new infections occur each year, so HIV/AIDS causes tremendous suffering and places an enormous burden on government and civil society. Right now the HIV epidemic is at a crossroads for critical change – for better or worse. It is considered that part of the problem is due to 'normalisation' of this scourge, i.e. it has become to a large extent perceived to be just part of regular life, making the maintaining of critical focus on HIV/AIDS, with the same dedication on a continuing basis as before, an increasing challenge.

In the National HIV/AIDS Strategic Plan 2008 – 2012, young people have remained in focus, and subsequent plans can be expected to maintain this focus. For the education sector, an HIV/AIDS policy has also been formulated. This includes a sub-component, 'Workplace Policy for Education Institutions' (2004), which serves as a guideline for all institutions. The policy mainly focuses on rights, rules and procedures, but also mentions that *'teachers' education curriculum shall be revised to include HIV and AIDS issues'* (section 4.1.1.8)', and Appendix 2 outlines '*Recommended content for employee and students education programmes'* (p. 17-18)

The project will assist in the national fight against HIV/AIDS. At system level the efforts will be integrated in the planned capacity development activities in terms of reviewing current guidelines and sharing best practices and innovative ideas. At college level, current practices will also be reviewed, using the above-mentioned guidelines as a starting point, and activities will be revised and strengthened as needed. The funds earmarked for small projects can be used as encouragement as appropriate. As educators of teachers and tutors of children and adolescents, it is particularly important that the colleges are at the forefront of the battle, linking to relevant national initiatives.

6.4 Social economy

The following depicts the relationship between the project and the social economy of the country. It examines the existing policies and considers what the project can do to help reinforce these policy initiatives.

The North
Under the Plan for the Rehabilitation and Development of the North (PRDP), the Government of Uganda is committed to addressing the glaring poverty and inequality deficits manifest in Northern Uganda arising from the effects of the 20-year Lords Resistance Army (LRA) conflict in that region of the country. The location of Abilonino in

this region (Kolo district, formerly Apach) lends credence to the intervention supporting PRDP goals and objectives in the Northern region.

Agricultural orientation

Agriculture is an NDP priority sector. 80% of Ugandans depend on agriculture while employment in agriculture accounts for 70% of the entire employment in Uganda. The rural and agricultural setting of Abilonino allows it to play a role in reinforcing Government policy to reverse rural- urban migration and improve the skills / agriculture-education and training of agriculture and rural trades technical teachers / instructors. The intervention is also in line with the proposed expansion in the number of agriculture training institutions in the country proposed by the BTVET Strategic Plan 2011/2012-2019/2020. It is noteworthy that of the 4 public Farm Schools currently training farm hands in the country, 3 are based in Western Uganda, one in central Uganda, while there is none in Northern or Eastern Uganda.

The study to be carried out in relation to the present and future roles of Abilonino CPIC, will (amongst others) look into the appropriateness and feasibility of establishing a practice school attached to Abilonino with an orientation to agriculture and related rural-economy based trades.

Youth employment

The 2011/12 national budget provides for strong investment in human resource development particularly in skills development for employment. Substantial resources have also been earmarked to provide funding for the youth to enable them to start useful projects or businesses. It is estimated that the informal sector constitutes 58% of non-agricultural employment in Uganda. Improving the skills of technical teachers / instructors to be deployed in the over 800 private and public BTVET institutions involved in skills training in Uganda will assist in reversing unemployment trends in Uganda.

Finally, the project will contribute to the social development of the concerned communities by giving the opportunity to local skilled and unskilled construction workers to be recruited for the construction of the facilities.

In addition to this, the project will strengthen the local construction companies and thus stimulate economic growth.

6.5 Children's rights

In 1989 the United Nations General Assembly adopted the 'Convention of the Rights of the Child', which is the most widely ratified human rights treaty in history so far. The Convention sets out these rights in 54 articles. It spells out the basic human rights that children everywhere have: the right to survival; to develop to the fullest; to protection from harmful influences, abuse and exploitation; and to participate fully in family, cultural and social life. Uganda has ratified the Convention, and a Children's Act, based on the Convention, was passed in 1996.

According to the Convention everyone under the age of 18 is a child and has the right to receive an education. Primary education must be free and secondary education must be available. The intended immediate beneficiaries of the project (i.e. the teacher/health tutor trainees) will be older than 18 and therefore not children in the definition of the Convention. However by deploying their skills, graduates will be enhancing the capacity and quality of secondary education and health services that will benefit children. So in that sense, the project is expected to make a substantial contribution to children's rights in the spirit of the Convention.

7 Annexes

7.1 ANNEX 1: Logical framework

	Logic of the intervention	Indicators	Means of verification	Assumptions
GO	General Objective To contribute to the increase of quality of and equity in access, to post-primary education and training level, as part of Universal Post-Primary Education and Training (UPPET)	Increase in secondary students passing lower secondary exams with grades I-III at pure UPPET schools by gender and district Survival to S4 by sex and district Pupil to teacher ratio (PTR)	(not applicable)	(not applicable)
SO	Specific objective The supported colleges provide an improved teaching and practice-oriented learning environment, supported by a strengthened support supervision and visitation service	Outcome indicators: The average performance levels of teachers / trainers / technical teachers/instructors / tutors prepared at the selected colleges, as measured by the final assessment, have improved at the end of the project, as compared to the performance levels prior to the launch of the project Impact indicators: More than 50% of the academic staff of the selected colleges use learner-centred methods of teaching for more than 50% of lesson-time. More than 50% of the trainee teachers / trainers / technical teachers/instructors / tutors prepared at the selected colleges use modern, learner-centred teaching methods for at least 50% of lesson-time during teaching practice (practicum)	Yearly transcripts of students' assessments at the selected colleges Class-room observation and inspection of Academic Course Development (ACD) designs Classroom/lecture-room observations Inspection of lesson plans prepared and used by newly trained teachers / trainers / techical teachers/instructors / tutors	Good collaboration with the large number of stakeholders will ensure harmonisation No major changes in the orientations in one or more of the selected colleges will occur

	Logic of the intervention	Indicators	Means of verification	Assumptions
		teaching practice (practicum)	Teaching and learning observation of newly trained teachers / trainers / technical teachers/instructors / tutors in their working environment	
R 1	Result 1: The teacher education system for secondary and BTVET is strengthened in relation to the colleges in the areas of communication, support supervision and visitation, strategic management and lecturers' qualifications	Process/output indicators: National strategic orientations related to secondary school teachers, BTVET trainers / technical teachers/instructors and health tutors reflect the changed approach on management and pedagogy and are approved The inspection and supervision staff (on pedagogy and management) take up their tasks according to the approved policy Learner centred learning is a concept that is being discussed in the secondary schools, Technical Schools, Farms Schools, Technical Institutes, Vocational Training Centres Outcome indicators: National strategic orientations are reflected in the colleges' institutional development plans The 3 other NTCs implement the tools on management and pedagogical	Approved updated versions of national strategic orientations/guidelines/regulations Supervision and inspection reports by MoES, Kyambogo and Makerere Universities, NCHE reflecting the new management and pedagogical approach. Interviews with trainers, management, pupils of the three NTCs Interviews with trainers, management of secondary schools, Technical Schools, Farms Schools, Technical Institutes, Vocational Training Centres	

	Logic of the intervention	Indicators	Means of verification	Assumptions
		training in their college		
R 2	Result 2: The management performance of the supported colleges is strengthened.	Process/output indicators: Each college has an updated institutional management and development plan, including awareness raising activities related to the transversal themes, reflecting the quality assurance approach, Each college has a financial plan, reflecting the quality assurance approach, including procurement and accounting Each college has a human resources development plan, including the implementation of the HIV/AIDS and gender policies, reflecting the quality assurance approach, Each college implements a maintenance plan, reflecting the quality assurance approach, including environmental issues Each college has developed the mayor partnerships with other institutions / organisation, stipulated in its institutional development plan, including an active partnership with a practice school All above cited plans are applied and implemented	Institutional development plan available, including awareness raising activities related to the transversal themes, reflecting the quality assurance approach Annual financial work plans and plans available, including procurement and accounting 3-year human resources development available, including the implementation of the HIV/AIDS and gender policies, Annual maintenance plans and reports available + on site technical visits including environmental issues MoUs and related activity plans Exchange reports Minutes from governing council and departments within the colleges Minutes of supervisory meetings M&E reports	Acceptance of a quality approach to management by the leadership and management of the colleges and MoES

	Logic of the intervention	Indicators	Means of verification	Assumptions
		Outcome indicators: The decision-making process is based on the institutional plans developed by each college The pedagogical process is strengthened through continuous support, supervision, monitoring and evaluation by the colleges' academic management		
R 3	Result 3: The quality of teaching and learning in the supported colleges is improved.	Progress/output indicators: Pedagogical skills of staff reflect a learner-centred approach More than 50% of the academic staff of the selected colleges use learner-centred methods of teaching, for more than 50% of lesson-time. Increased time dedicated to practical work In all disciplines, the lecturers apply learner-centred, and skills-based, teaching/learning approaches in at least 50% of their lessons Action research, pedagogical projects, quality workgroups, etc. feature as regular activities in the training programmes Outcome indicators: The students know how to select from available instructional materials and also how to prepare their own lesson-support materials from readily available materials	Students' appraisal of lecturers Reports of lesson observations Interviews with lecturers and students Timetable allocation to practical sessions Individual/departmental action plans Examination papers (question items) analysis of the questions and answers Students' teaching files, portfolios Lesson observation Student' interviews Students' project reports Students' reflective journals Classroom observation during	Acceptance by college lecturers of a focus on learner – centred learning as the preferred approach towards change and improvement The MoES maintains the student / lecturer ratio recommended by the NCHE guidelines The MoES recruits the necessary qualified teaching and non-teaching staff and only a minority of the trained staff will be transferred to other positions

	Logic of the intervention	Indicators	Means of verification	Assumptions
		Students engage in subject specific learning projects Students use learner-centred and skills based teaching and learning approaches in their own teaching practice (practicum) Students' knowledge on cross-cutting issues (gender, environment, HIV) has been raised and they integrate these issues into their professional practice	practice teaching School practice assessment reports	
R 4	Result 4: Colleges facilities are rehabilitated, extended and equipped	Progress/output indicators: Technical specifications of the required equipment are related to the revised pedagogical approach Awarding of contracts to suppliers Architectural design is approved by MoES, NTC and project management Awarding of contract to building company Provisional handing over of buildings Final handing over of buildings Pedagogical equipment is available on a full-time basis and used daily by trainers and trainees Outcome indicators Access to NTCs: increase in the number of students in line with MoES projections Effective utilisation of the facilities: e.g.: use of library, computer and science labs (frequency of use) Staff and student levels of satisfaction with respect to facilities	Memorandum of Understanding Supplies contracts Handover reports Memorandum of Understanding Construction contracts Monthly technical and financial progress reports Handover reports Student enrolment and retention by gender and by subject Attendance registers/ library cards Room allocation on the timetable Satisfaction questionnaires / interviews / focus groups	Consumables are in constant supply (college responsibility) Buildings are used for the purpose they were intended for MoES has sufficient funds to pay for capitation Students enrolment will not exceed the infrastructural capacity of the institutions

	Activities to reach Result 1
R 1	Result 1: The teacher education system for secondary and BTVET is strengthened in relation to the colleges in the areas of communication, support supervision and visitation, strategic management and lecturers' qualifications
A.1.1	A.1.1 Baseline study on support in the areas of communication, strategic management, support supervision/visitation
A 1.2	A 1.2 Strengthen the pedagogical support supervision at central level • Define role and tasks of the pedagogical support and supervision • Assess legal framework, capacities and current practices on the academic support and supervision • Define measures/work plan to close the gap between expectations and current situation • Implement measures/programme and adapt/elaborate tools • Evaluation of programme and tools, and adapt if necessary • Validate revised legal documents and reoriented practices
A.1.3	A 1.3 Strengthen visitation and the support of the colleges' general management by the central level • Define role and tasks of the support and supervision • Assess legal framework, capacities and current practices on the support and supervision • Define measures/work plan to close the gap between expectations and current situation • Implement measures/programme and adapt/elaborate tools • Evaluation of programme and tools, and adapt if necessary • Validate revised legal documents and reoriented practices
A 1.4	A 1.4 Strengthen the communication and strategic management at the central level related to the colleges • Assess current practices and prioritise needs at central level and at the level of the colleges • Assess legal framework, capacities and current practices on the academic support and supervision • Define measures/programme to address the needs • Implement measures/programme and elaborate tools to address needs • Evaluation of programme and tools, and adapt if necessary • Validate revised legal documents and practices
A 1.5	A 1.5. Enhance the sustainability of the change process • Define programme to disseminate the practices and tools regarding management and teacher training to the three remaining NTCs in collaboration with the 4 colleges • Implement work plan to introduce the new pedagogical approach in the secondary schools, Technical Schools, Farms Schools, Technical Institutes, Vocational Training Centres (information campaign, introduction in in-service training, measures to promote introduction of new teachers in existing schools)
A 1.6	A 1.6 Address the professional gap between the existing and the required level of teacher educators

	• Assess needs at the level of colleges • Define measures/programme to address the needs • Implement measures/programme and elaborate tools to address needs • Validate revised practices
	Activities to reach Result 2
R 2	Result 2: The management performance of the supported colleges is strengthened
A.2.1	A.2.1. Conduct baseline study
A 2.2	A 2.2 Strengthen the strategic management of the colleges, including awareness raising activities related to the transversal themes (environment protection, gender, HIV/AIDS) • Identify needs/weaknesses/gaps in the implementation of existing acts/policies/guidelines and current practices on strategic management of the colleges • Define role and tasks of the stakeholders involved according the quality assurance strategy • Assess the capacities at the level of the colleges and related institutions • Prioritise needs and define work plan to address the gaps with all stakeholders involved (MoES, management of colleges, National Council for Higher Education and awarding bodies) (using existing material on training and tools) • Implement work plan (using working groups and peer review at national and institutional levels) and adjust when needed • Elaborate new and fine-tune existing guidelines/working instruments/tools reflecting the quality assurance strategy • Review the improved instruments and adapt further if necessary • Validate the guidelines/working-instruments and practices
A 2.3	A 2.3 Strengthen the management of the colleges related to human resources, including the implementation of the HIV/AIDS workplace policy and the gender policy • Identify needs/weaknesses/gaps in the implementation of existing acts/policies/guidelines and current practices on human and financial management of the colleges, including procurement and accounting • Define role and tasks of the stakeholders involved according the quality assurance strategy • Assess the capacities at the level of the colleges and related institutions • Prioritise needs and define work plan to address the gaps with all stakeholders involved (MoES, management of colleges, National Council for Higher Education and awarding bodies) (using existing material on training and tools), including awareness raising activities related to gender and HIV/AIDS • Implement work plan (using working groups and peer review at national and institutional levels) and adjust when needed • Elaborate new and fine-tune existing guidelines/working instruments/tools reflecting the quality assurance strategy • Review the improved instruments and adapt further if necessary • Validate the guidelines/working-instruments and practices
A 2.4	A 2.4 Strengthen the management of the colleges related to financial resources • Identify needs/weaknesses/gaps in the implementation of existing acts/policies/guidelines and current practices on human and financial management of the colleges, including procurement and accounting • Define role and tasks of the stakeholders involved according the quality assurance strategy • Assess the capacities at the level of the colleges and related institutions • Prioritise needs and define work plan to address the gaps with all stakeholders involved (MoES, management of colleges, National Council for Higher Education and awarding bodies) (using existing material on training and tools), including awareness raising activities related to fiduciary risks • Implement work plan (using working groups and peer review at national and institutional levels) and adjust when needed • Elaborate new and fine-tune existing guidelines/working instruments/tools reflecting the quality assurance strategy

	• Review the improved instruments and adapt further if necessary • Validate the guidelines/working-instruments and practices
A 2.5	A 2.5 Strengthen the academic management of the colleges, including the collaboration with practice schools • Identify needs/weaknesses/gaps in the implementation of existing acts/policies/guidelines and current practices on academic management of the colleges • Define role and tasks of the stakeholders involved according the quality assurance strategy • Assess the capacities at the level of the colleges and related institutions • Prioritise needs and define work plan to address the gaps with all stakeholders involved (MoES, management of the colleges, National Council for Higher Education, practice schools and awarding bodies) (using existing material on training and tools) • Implement work plan (using working groups and peer review at national and institutional levels) and adjust when needed • Elaborate new and fine-tune existing guidelines/working instruments/tools reflecting the quality assurance strategy • Review the improved instruments and adapt further if necessary • Validate the guidelines/working-instruments and practices
A 2.6	A 2.6 Strengthen the management of the colleges related to the infrastructure and its maintenance • Identify needs/weaknesses/gaps in the implementation of existing acts/policies/guidelines and current practices of the management of infrastructure and maintenance of the colleges • Assess the capacities at the level of the colleges and related institutions • Prioritise needs and define work plan to address the gaps with all stakeholders involved (MoES, management of the colleges, National Council for Higher Education and awarding bodies) (using existing material on training and tools), including awareness raising activities related to environmental protection • Implement work plan (using working groups and peer review at national and institutional levels) and adjust when needed • Elaborate new and fine-tune existing guidelines/working instruments/tools reflecting the quality assurance strategy • Review the improved instruments and adapt further if necessary • Validate the guidelines/working-instruments and practices
A 2.7	A 2.7 Support leadership and management at Mulago HTC, focusing on: • Strengthening the collaboration with mayor stakeholders (MoES, MoH, teaching hospital, HTIs, awarding bodies) • Clarify the position of the curricula programmes in the overall 'training framework'
A 2.8	A 2.8 Support leadership and management at Abilonino CPIC, focusing on: • Strengthening the collaboration with mayor stakeholders (MoES, Technical Schools, Farms Schools, Technical Institutes, Vocational Training Centres, demonstrations schools, awarding bodies, Nakawa Vocational Training Institute, Bakasale, etc.) and the world of work • Clarify the position of the programmes in the overall 'training framework' and the new BTVET sector strategy, when in function • Clarify the concept of the 'Centre of Excellence' and possible implications for Abilonino CPIC
	Activities to reach Result 3
R 3	Result 3: The quality of teaching and learning in the supported colleges has improved
A 3.1	A 3.1. Baseline study and capacity assessment exercise of the teaching and learning in each of the four selected colleges
A 3.2	A 3.2. Design a college improvement programme for NTCs • Create link with the approach in primary education (the thematic curriculum) • Prioritise needs with mayor stakeholders (MoES, awarding bodies, inspection and supervision staff)

	• Define work plan to address the different departments and subjects (with the academic staff and the management of the 2 colleges) and to incorporate mayor stakeholders (inspections and supervision, MoES, awarding bodies in the programme) • Elaborate training materials for academic staff and student teachers
A 3.3	A 3.3. Design a college improvement programme for Mulago HTC and Abilonino CPIC • Prioritise needs with mayor stakeholders (MoES, MoH, awarding bodies, inspection and supervision staff) • Define work plan to address the different departments and subjects (with the academic staff and the management of the 2 colleges) and to incorporate mayor stakeholders (inspections and supervision, MoES, awarding bodies, demonstration schools in the programme) • Elaborate training materials for academic staff and student teachers
A. 3.4	A.3.4. Implement the college improvement programme in the 4 colleges • Implementation of the programme • Revision of work plan, pedagogic material and tools when needed • Promote innovative small-scale activities at improving teaching and learning or increasing quality by the establishment of a small-project fund • Integration of student-centred learning approach in the demonstration schools and during practicum • Elaboration of final pedagogic material integrating 'lessons- learned'

	Activities to reach Result 4
R 4	Result 4: Colleges facilities are rehabilitated, extended and equipped
A 4.1	A 4.1 Conduct baseline study
A 4.2	A 4.2 Conduct studies and set-up of a maintenance plan • Conduct study to support the development of a long-term master plan for Kaliro, Muni, Abilonino • Conduct study on renewable energy • Set-up of a maintenance plan
A 4.3	A 4.3 Design of the colleges facilities based on pedagogical requirements, green architecture, including sanitation facilities
A 4.4	A 4.4 Rehabilitation and construction of the colleges facilities, including experimentation and innovation in green building
A 4.5.	A.4.5 Equip and furnish the 4 colleges and their practice schools, including transport means

7.2 Annex 2: Implementation calendar

Code	Results / Activities	Year 1 S1	Year 1 S2	Year 2 S3	Year 2 S4	Year 3 S5	Year 3 S6	Year 4 S7	Year 4 S8	Year 5 S9	Year 5 S10
A_01 The teacher education system is strengthened											
A_01_01	**Conduct a baseline study on support in the areas of communication, strategic management, supervision/inspection**										
	Baseline study	x	x								
A_01_02	**Strengthen the pedagogical support supervision at central level**										
	Define role and tasks of the pedagogical support and supervision	x	x								
	Assess legal framework, capacities and current practices on the academic support and supervision	x	x								
	Define measures/work plan to close the gap between expectations and current situation		x	x							
	Implement measures/programme and adapt/elaborate tools			x	x	x	x				
	Evaluation of programme and tools, and adapt if necessary							x	x		
	Validate revised legal documents and reoriented practices								x	x	
A_01_03	**Strengthen visitation and the support of the colleges' general management by the central level**										
	Define role and tasks of the support and supervision	x	x								
	Assess legal framework, capacities and current practices on the support and supervision	x	x								
	Define measures/work plan to close the gap between expectations and current situation		x	x							
	Implement measures/programme and adapt/elaborate tools			x	x	x	x				
	Evaluation of programme and tools, and adapt if necessary							x	x		
	Validate revised legal documents and reoriented practices								x	x	

A_01_04	**Strengthen the communication and strategic management at the central level related to the institutions**										
	Assess current practices and prioritise needs at central level and at the level of the colleges	x	x								
	Assess legal framework, capacities and current practices on the academic support and supervision	x	x								
	Define measures/programme to address the needs		x	x							
	Implement measures/programme and elaborate tools to address needs			x	x	x	x				
	Evaluation of programme and tools, and adapt if necessary								x	x	
	Validate revised legal documents and practices									x	x
A_01_05	**Enhance the sustainability of the change process**										
	Define programme to disseminate the practices and tools regarding management and teacher training to the three remaining NTCs in collaboration with the 4 colleges								x	x	
	Implement work plan to introduce the new pedagogical approach in the secondary schools, Technical Schools, Farms Schools, Technical Institutes, Vocational Training Centres								x	x	x
A_01_06	**Address the professional gap between the existing and the required level of teachers educators**										
	Assess needs at the level of colleges		x	x							
	Define measures/programme to address the needs		x	x							
	Implement measures/programme and elaborate tools to address needs				x	x	x	x	x		
	Validate revised practices									x	x
A_02 Management capacity of the colleges is strengthened											
A_02_01	**Conduct baseline study**										
	Base line study	x	x								
A_02_02	**Strengthen the strategic management of the colleges**										
	Identify needs/weaknesses/gaps in the implementation of existing acts/policies/guidelines and current practices on strategic management of the		x	x							

	colleges										
	Define role and tasks of the stakeholders involved according the quality assurance strategy	x	x								
	Assess the capacities at the level of the colleges and related institutions	x	x								
	Prioritise needs and define work plan to address the gaps with all stakeholders involved	x	x	x							
	Implement work plan and adjust when needed		x	x	x	x	x	x			
	Elaborate new and fine-tune existing guidelines/working instruments/tools reflecting the quality assurance strategy						x	x			
	Review the improved instruments and adapt further if necessary							x	x		
	Validate the guidelines/working-instruments and practices							x	x		
A_02_03	**Strengthen the management of the colleges related to human resources, including the implementation of the HIV/AIDS workplace policy and the gender policy**										
	Identify needs/weaknesses/gaps in the implementation of existing acts/policies/guidelines and current practices on strategic management of the colleges	x	x								
	Define role and tasks of the stakeholders involved according the quality assurance strategy	x	x								
	Assess the capacities at the level of the colleges and related institutions	x	x								
	Prioritise needs and define work plan to address the gaps with all stakeholders involved including awareness raising activities related to gender and HIV/AIDS	x	x	x							
	Implement work plan and adjust when needed		x	x	x	x	x	x			
	Elaborate new and fine-tune existing guidelines/working instruments/tools reflecting the quality assurance strategy						x	x			
	Review the improved instruments and adapt further if necessary							x	x		
	Validate the guidelines/working-instruments and practices							x	x		
A_02_04	**Strengthen the financial and procurement management of the colleges**										
	Identify needs/weaknesses/gaps in the implementation of existing acts/policies/guidelines and current practices on strategic management of the colleges	x	x								
	Define role and tasks of the stakeholders involved according the quality assurance strategy	x	x								

	Assess the capacities at the level of the colleges and related institutions	x	x							
	Prioritise needs and define work plan to address the gaps with all stakeholders involved including awareness raising activities related to fiduciary risks	x	x	x						
	Implement work plan and adjust when needed		x	x	x	x	x	x		
	Elaborate new and fine-tune existing guidelines/working instruments/tools reflecting the quality assurance strategy						x	x		
	Review the improved instruments and adapt further if necessary							x	x	
	Validate the guidelines/working-instruments and practices							x	x	
A_02_05	**Strengthen the academic management of the colleges, including the collaboration with practice schools**									
	Identify needs/weaknesses/gaps in the implementation of existing acts/policies/guidelines and current practices on strategic management of the colleges	x	x							
	Define role and tasks of the stakeholders involved according the quality assurance strategy	x	x							
	Assess the capacities at the level of the colleges and related institutions	x	x							
	Prioritise needs and define work plan to address the gaps with all stakeholders involved, including awareness raising activities related to fiduciary risks	x	x	x						
	Implement work plan and adjust when needed		x	x	x	x	x	x		
	Elaborate new and fine-tune existing guidelines/working instruments/tools reflecting the quality assurance strategy						x	x		
	Review the improved instruments and adapt further if necessary							x	x	
	Validate the guidelines/working-instruments and practices							x	x	
A_02_06	**Strengthen the management of the colleges related to the infrastructure and the maintenance**									
	Identify needs/weaknesses/gaps in the implementation of existing acts/policies/guidelines and current practices on strategic management of the colleges	x	x							
	Define role and tasks of the stakeholders involved according the quality assurance strategy	x	x							
	Assess the capacities at the level of the colleges and related institutions	x	x							
	Prioritise needs and define work plan to address the gaps with all stakeholders involved including awareness raising activities related to environmental protection	x	x	x						

Code	Activity												
	Implement work plan and adjust when needed			x	x	x	x	x	x				
	Elaborate new and fine-tune existing guidelines/working instruments/tools							x	x				
	Review the improved instruments and adapt further if necessary								x	x			
	Validate the guidelines/working-instruments and practices								x	x			
A_02_07	**Support leadership and management at Mulago HTC**												
	Strengthen the collaboration with major stakeholders	x	x	x	x	x	x						
	Clarify the position of the curricula programmes in the overall 'training framework'	x	x	x	x	x	x						
A_02_08	**Support leadership and management at Abilonino CPIC**												
	Strengthening the collaboration with major stakeholders	x	x	x	x	x	x						
	Clarify the position of the programmes in the overall 'training framework' and the new BTVET sector strategy, when in function		x	x	x								
	Clarify the concept of the 'Centre of Excellence' and possible implications for Abilonino CPIC				x	x	x						
A_03 Quality teaching and learning													
A_03_01	**Baseline study and capacity assessment exercise of the teaching and learning in each of the four selected colleges**												
	Baseline study	x	x										
A_03_02	**Design a college improvement programme for NTCs**												
	Create link with the approach in primary education		x	x									
	Prioritise needs with major stakeholders		x	x									
	Define work plan to address the different departments and subjects and to incorporate major stakeholders			x	x								
	Elaborate training materials for academic staff and student teachers				x	x							
A_03_03	**Design a college improvement programme for Mulago HTC and Abilonino CPIC**												
	Prioritise needs with major stakeholders (MoES, awarding bodies, inspection and supervision staff)		x	x									
	Define work plan to address the different departments and subjects and to incorporate major stakeholders			x	x								
	Elaborate training materials for academic staff and student teachers				x	x							

Code	Activity											
A_03_04	**Implement the college improvement programme in the 4 colleges**											
	Implementation of the programme				x	x	x	x	x	x		
	Revision of work plan, pedagogic material and tools when needed						x			x		
	Promote innovative small-scale activities at improving teaching and learning or increasing quality by the establishment of a small-project fund				x		x		x			x
	Integration of student-centred learning approach in the demonstration schools and during practicum				x	x	x	x	x	x		
	Elaboration of final pedagogic material integrating 'lessons- learned'										x	x
A_04 Construction and equipment												
A_04_01	**Baseline survey**											
	Structure and complete the information from the Needs Assessment Study	x	x									
A_04_02	**Conduct studies and set up a maintenance plan**											
	Conduct study of a long-term master plan for Kaliro, Muni, Abilonino		x	x								
	Conduct study on renewable energy		x	x								
	Set-up of a maintenance plan			x	x							
A_04_03	**Design of the colleges facilities based on pedagogical requirements, green architecture, including sanitation facilities**											
	Design of colleges facilities			x	x							
A_04_04	**Rehabilitation and construction of the colleges facilities, including experimentation and innovation in green building**											
	Rehabilitation and construction of the colleges' facilities				x	x	x	x	x			
A_04_05	**Equip and furnish the 4 colleges and their practice schools, including transport means**											
	Supply of furniture and equipment								x	x	x	

7.3 Annex 3: ToR long-term personnel

7.3.1 Project Coordinator

The Project Coordinator (PC) shall be selected by MoES from within the MoES with a *'no objection'* agreement of BTC. He/she will supervise the Project Coordination Team (PCT) and will work on a full-time basis in coordination with the project co-director.

Duty station: Kampala

Duration of the assignment: 60 months

Tasks

The PC will report to the Project Steering Committee (PSC) and ensure that the members are well informed of project progress and are adequately supplied with sufficient information to carry out their decision-making responsibilities. The PC will feed back to the MoES any changes in policy or direction that the PSC may wish to carry out within the Project framework.

Reporting to MoES and BTC the PC's specific tasks include:
- Providing overall leadership of the PMT and coordinating its activities with those of MoES
- Organising, coordinating and supervising the implementation of project activities in accordance with the approved project work plans;
- Technical guidance on project methodology and strategy;
- Supervise financial management, accounting and timely compilation of quarterly progress reports and budgeted work plans for the following period for consideration by the PSC;
- Contribution to compilation of the project final report at the end of the project;
- Coordination and networking with other national and international partners;
- Analyse and consolidate monitoring reports and prepare recommendations to the PSC;
- Organise bi-annual PSC meetings;
- Prepare the contents and agenda of the PSC meetings;
- Be responsible for regular communication with BTC on the management and supervision of Project implementation;
- Act on behalf of the Chairman of the PSC when authorised, and report back to the Chairperson on actions taken;
- Ensure the capturing and integration of lessons learnt and experience drawn in the implementation of project activities;
- Ensure coordination and exchange of experiences between the project and other related experiences;
- Be authorised account-holder for the accounts.

Reporting

The PC shall discuss and agree with the Chairperson of the PSC on the form and frequency of reporting. Besides periodic progress and financial reports the PC shall provide the following reports:
- Consolidated and coordinated quarterly and annual progress reports, including recommendations;
- Financial reports in accordance with the requirements of BTC and the MoES;
- A Final report summarising the results of the Project including lessons learnt, conclusions and recommendation on how the achievements of the Project can be sustained;
- Any other reports as requested by the Chairperson of the PSC or BTC.

Minimum profile
S/he has
- A university degree (minimum Master level);
- Good project management abilities, an experience in human resource management, and a good knowledge of teacher and instructor's training;
- Has managed similar international cooperation projects;
- Has at least 5 years of relevant experience in monitoring and evaluation of education projects;
- Proven relevant experience in leading a team of professionals, in supervising staff and in coaching co-workers;
- Proven experience in implementing cross-cutting themes such as gender, HIV/AIDS and environment will be an asset
- Clear and concise writing skills and experience in preparing reports and other administrative and technical documents;
- Good communication, presentation and facilitation skills;

7.3.2 International Sector Expert Pedagogy (Co-coordinator)

The International Sector Expert in Pedagogy (ISE) shall be selected by BTC and presented to the MoES. S/he will be one of the members of the PCT, and will work on a full-time basis in coordination with the project Coordinator.

Duty station: Kampala

Duration of the assignment: 60 months

Tasks
The ISE will report to the Project Steering Committee (PSC) and will ensure that the members are well informed of project progress and adequately supplied with sufficient information to carry out their decision-making responsibilities. The ISE will feed back to the MoES any changes in policy or direction that the PSC may wish to carry out within the Project framework.

S/he :
- Must ensure, in close consultation and collaboration with the respective officers of MoES, the coordination between the different stakeholders;
- Makes sure the strategy of the project is consistent and ensures a technically sound implementation of the project ;
- Ensures the national and international sector specialists supporting the improvement of teaching and learning are recruited on time, properly briefed and prepared for their assignment
- Oversees the planning and preparation phase of the pedagogical component of the intervention
- Provides direct technical support to all activities and brings a key contribution to the promotion of learner-centred education and active learning methodologies ;
- Coaches and follows up the project management team, including the four technical advisors in the different institutions;
- Presents to the Project Steering Committee the state of progress of project activities;
- Participates, without voting right, in the Project Steering Committee meetings and ensures its secretariat.
- Organises, coordinates and supervises the implementation of project activities in accordance with the approved project work plans;
- Supervise financial management, accounting and timely compilation of quarterly progress reports and budgeted work plans for the following period for consideration by the PSC;
- Contributes to the compilation of the project final report at the end of the project;
- Analyses and consolidates monitoring reports and prepares recommendations for the

PSC;
- Organises bi-annual PSC meetings;
- Prepares the contents and agenda of the PSC meetings;
- Is responsible for regular communication with BTC on the management and supervision of Project implementation;
- Ensures the capturing and integration of lessons learnt and experience drawn in the implementation of project activities;
- Ensures coordination and exchange of experiences between the project and other related interventions and activities;
- Is an authorised account-holder for the accounts.

Minimum profile

S/he has :
- A university degree (minimum Master level) in Education/Social Sciences/Human resource management, together with at least 10 years experience in project management and at least 5 years in project coordination;
- Proven relevant experience in leading a team of professionals, in supervising staff and in coaching co-workers;
- Managed similar international cooperation projects;
- Proven and extensive experience in teacher training and coaching of professionals
- Proven experience in implementing cross-cutting themes such as gender, HIV/AIDS and environment will be an asset;
- Clear and concise writing skills and experience in preparing reports and other administrative and technical documents;
- Good communication, presentation and facilitation skills; Fluent in English;
- Able to work under stressful conditions with no objection to working overtime and undertaking field missions;
- Knowledge of the local context will be an asset.

7.3.3 International Contracting and Financial Coordinator

The International Contracting and Financial Coordinator shall be selected by BTC and presented to the MoES. S/he will be a member of the PCT.

Duty station: Kampala

Duration of the assignment: 60 months

Tasks:
S/he will
Financial management of the program
- Assist in budget preparation and financial planning
- Validate annual budgets
- Supervise accounting of main account and operational account
- Control and approve the accounting of the implementing unit
- Control and validate the financial reports of the implementing unit
- Take final responsibility for timely production of FIT statements; and provide guidance and supervision to the accountant who produces the FIT statements.
- Validate consolidated financial reports
- Monitor budget execution
- Control and validate cash requests from implementing units and prepare cash requests to fund main account
- Manage audits and draft actions plans
- Execute payments or provide no-objection approval for payments
- Provide no-objection approval for commitments

- Draft implementation agreements

Procurement management
- Draft the procurement plan
- Supervise the procurement process and raise its efficiency
- Ensure compliance with the Belgian and Ugandan procurement rules
- Supervise the management of the vehicles, infrastructure and materials
- Ensure management and contracts follow-up

HR management
- Ensure administrative management of the local personnel with the help of the administrative and accounting officer (contracts, payroll, days-off)
- Help with the recruitment and the personnel selection

Technical assistance
- Provide advice to the MoES and schools in order to improve their financial management and procurement
- Provide assistance in the development of new procedures and tools
- Provide assistance in the development of the project implementation manual.

Profile:
- University degree in administration and accounting;
- Minimum 8 years experience in accounting and project administration;
- Experience with working for an international organization or NGO;
- Very good hands-on knowledge of Excel and Word are essential. Other programs (Database, accounting programs) a strong advantage;
- Proficient in English;
- Mature, good communicator and team player;
- Able to work under stressful conditions and with no objections to working overtime and undertaking field missions
- Knowledge in Total Quality Management will be considered an advantage.

The administrative and accounts assistant shall be selected by BTC and presented to the MoES and will be responsible for a variety of administrative and finance-related tasks including the ones listed below (NB: this list is not exhaustive). S/he works under direct supervision of the International Contracting and Financial Coordinator in relation to administering and reporting on all types of expenses.

Major tasks

S/he will:

Banking, cheque and cash management
- Prepare, register and keep cheques
- Prepare staff payrolls for bank transfers at the end of each month.
- Ensures all invoices from external parties (contractors, suppliers,…) are paid in time, by bank transfer, cheque or cash and arrange those documents by date. It will be her/his task to prepare bank transfers and cheque documents, and also to manage pipeline payment to external parties.
- Attend to, and record, all bank transactions, maintain bank accounts, ensure monthly bank statements and account overviews
- Take final responsibility for the cash management, and supervise the person allocated the role of petty cash management: this includes regular daily cash counts, verification of balance of cashbook and cash-on-hand, assisting the cashier in solving

imbalances, establishing and signing of cash count statements.
- Ensure liquidation of any internal advances and update advances outstanding by the end of each month and report accordingly to the Finance officer.
- Be responsible for sound cash planning & cash withdrawals, in order to avoid cash shortages or large amounts of cash left in the safe (security issue).
- Updates fixed asset register, and follows up consultancies, contractor contracts and the stationary stock.

Financial activity reporting
- Record all project expenses properly in FIT, following the set guidelines and within the required deadline being at the latest the 15th of the following month.
- Produce FIT statements for checking and control by the PMU management; make all necessary corrections; and make all necessary preparations for the monthly closing of the accounting.
- Supervise daily entry of expenses in the cashbook by the cashier.
- Supervise and ensure the smooth sub-accounting of schools – including verification of financial reports, expenses and supporting documents.
- Produce FIT statements for control by the International and Contracting Coordinator, make all necessary corrections and make all preparations for the monthly closing of the accounting.
- Supervise daily entry of expenses in the cashbook by the cashier.
- Check and control to ensure quality and completeness of justification and supporting accounting documents of all expenses following the set guidelines
- Ensure accounting coding and budgeting lines are correct: this includes verification of financial reports, expenses and supporting documents.
- Keep track of accounting data by putting reference as GT and AT on the specific documents on a monthly basis.
- Ensure monthly balance of FIT/Cashbooks/Cashboxes and bank statements are the same, and take responsibility for completion and approval of reconciliation statements if any.
- Be responsible for the transparent and consistent filing of all accounting, banking and cash management documents (that are arranged by the cashier).
- Ensure that copies of all supporting Bank documents are taken, and check cash document copyingy by cashier, before these documents are sent to LAF on a monthly basis.

Financial Administration
- Check to ensure correct application of allowances by verifying the calculations of cashier.
- Assist PCT with a variety of tasks: e.g. cost calculations, filing finance-related documents, monthly and weekly financial planning, managing pipeline payments…etc.

Budgeting and financial planning
- Provides all necessary accounting data and information to the Managers and International and Contracting Coordinator, for him/her to be able to follow up on budget and planning.
- Assist the International and Contracting Coordinator in the elaboration of reports, budgets and plans.

Profile:
- University degree in Administration and accounting;
- Minimum 5 years experience in accounting and project administration;
- Experience of working for an international organization or NGO;
- Very good hands-on knowledge of Excel and Word are essential. Other programs (Database, accounting programs) will be considered a strong advantage;

- Proficient in English;
- Mature, good communicator and team player;
- Able to work under stressful conditions and with no objections to overtime working and undertaking field missions

7.3.5 Four national sector specialists in teaching and learning

Four national teaching and learning sector specialists will be recruited by BTC Kampala, with each being assigned to work full-time in one of the four supported colleges. They will focus predominantly on improving the practical side of teaching and learning, bringing in theory as and when this is necessary and appropriate to explain and underpin the practical side. They will pay particular attention to ensuring the sustainability of any gains achieved during the intervention.

Duty Station: 1 specialist to be place in each of the supported colleges: Abilonino CPIC; Mulago HTC; Kaliro NTC; Muni NTC

Duration of Assignment: 48 months

Tasks
Each sector specialist will:
- Deliver within the assigned college, a comprehensive programme of training and coaching on the practical side of teaching and learning covering all college teaching staff;
- Organise, coordinate and supervise the implementation of project activities in accordance with the approved project work plans;
- Provide the specialist knowledge, expertise and experience of modern, active-teaching and learning, and other learner-centred teaching approaches, necessary to bring about a paradigm shift in the way teaching and learning is organised and provided in the college;
- In cooperation with the college management, identify a number of mentor teachers covering the main broad subject fields
- Advise, guide, coach and provide top-up on-the-job training, supervision, guidance and support to the mentor teachers, and guidance to the regular teachers, with a view to improving the effectiveness of their teaching through the adoption of active teaching and learning and other learner-centred methods
- Organise regular workshops with college staff to review progress, deliver further information and guidance, and troubleshoot any problems or difficulties being experienced by teachers in relation to teaching and learning
- Undertake regular class observations and provide feedback and guidance to the lecturers and teachers, and participate in the practicum activities,
- Assist in the design, preparation, adaptation and refinement of teaching support materials for college teaching staff
- Introduce throughout the college the "course manual preparation" approach into the college
- Advise college management and MoES on matters related to the teaching / learning improvement process – including both its successes and its challenges
- Take a leading role in the dissemination by the college of successes and good practices to other colleges not supported by the project and invite where possible other colleagues from other schools
- Any other tasks of a similar nature, that may be prescribed from time to time, necessary to achieve improvement in teaching and learning and the objectives of the intervention

Minimum profile:

- A university degree – relevant to the broad field of study of the assigned college (teacher education; BTVET-technical; BTVET-health tutors) or equivalent, (preferably 4 specialists with different academic background)
- A teaching qualification
- At least 7 years of proven successful teaching experience
- Proven and successful experience as a teacher-educator will be considered an advantage
- Proven expertise in the practical side of teaching and learning, using modern active teaching and learning approaches
- Mature, good communicator and facilitator,
- Fluent in English
- Able to work under stressful conditions and having no objection to working overtime

7.3.6 International Sector Specialist Mulago and Abilonino

An international sector specialist in strategic planning and management in the teaching and learning side of the BTVET sub-sector, will be selected by BTC and presented to the MoES. S/he will be a member of the PCT.

Duty Station: Kampala – Mulago HTC

Duration of Assignment: 36 months

Tasks
Mulago HTC
- Carry out an information-gathering research exercise into the recent history and developments in the area of health tutors training in Uganda, and a thorough analysis of all legal, formal and informal documentation, as a starting point for a strategic planning exercise
- Assist in the identification of the major stakeholders and actors within this broad field of study and ascertain what plans are in place for the short and medium-to-long term trajectories
- Assist the key persons amongst the senior management of the college; the MoES; the MoH; in the development of a strategic plan for the short and middle-to-long term future, including the physical infrastructure, the educational programmes and international lessons learned
- Assist the leadership of Mulago HTC and the MoES, and in close consultation with the MoH and other key stakeholders, in the development of a new vision for the future of training health tutors, including a roadmap that will allow this vision to be achieved and the preparation of a concrete comprehensive institutional development plan for the medium-to-long term future.
- Maintain close relationships with MoES and other relevant Ugandan agencies and Ministries and the donor community;
- Technical guidance on project methodology and strategy;
- Assist the PCT and MoES in the writing of the terms of references and all related technical specifications required for the execution of the project activities related to this component;
- Provide an input in terms of innovative approaches and technologies related to capacity building;
- Organise activities to evaluate and capitalise the lessons learned both for MoES and BTC;
- Provide support to the PCT in the management of the project;
- Prepare, in collaboration with the PCT, the Project progress reports;
- Organise, coordinate and supervise the implementation of project activities in accordance with the approved project work plans;

- Assist the PCT to supervise the preparation of regular financial reports for the Belgian contribution;
- Undertake any other similar, or different, activities as may be prescribed from time to time by the project steering committee in relation to the provision of specialist support, advice or guidance

Abilonino CPIC
- Assist Abilonino CPIC to carry out a similar activity as conducted for Mulago HTC, focused on the current situation and the present and future needs of Abilonino CPIC
- Assist Abilonino CPIC, in cooperation with the MoES, in preparing a detailed institutional development plan for the medium-to-long-term future of the college
- Provide expert guidance and advice to the leadership and governance of the college, and to the MoES, regarding strategic aspects of the operational and educational sides of the college – including in relation to management, governance, maintenance and physical infrastructure and education and training
- Provide advice and guidance to the college and to the MoES in relation to the selection of priority fields of study for the college and also in relation to all that might be entailed in the possible development of a Centre of Excellence at Abilonino

Reporting
The ISE shall assist the PCT in the preparation of periodic progress reports and financial reports. In particular s/he shall assist the PM in preparing:
- Consolidated and coordinated quarterly and annual progress reports including recommendations;
- Financial reports in accordance with the requirements of BTC;
- A Final report summarising the results of the Project including lessons learnt, conclusions and recommendation on how the achievements of the Project can be sustained;
- Any other reports as requested by the MoES, PSC or BTC.

Minimum profile -
- A Master's degree or equivalent in Social Sciences/ Management/ Education
- At least 7 years of proven successful experience in the field of strategic / organisational management
- Relevant experience in strategic planning of the education and training of health tutors and other BTVET education and training
- Fluent in English
- Able to work under stressful conditions and having no objection to working overtime

7.3.7 National Infrastructure Facilities Coordinator (NIFC)

The National Infrastructure Facility Coordinator (NIFC) will be recruited to operate within the MoES at the CMU department. He/she will be a member of the PCT, and will work under the supervision of the PC and the ISE-I.

His/her specific tasks include:
- Overall planning of the project activities related to construction;
- Organising and coordinating MoES inputs in the project, especially between CMU, PDU and EPPAD;
- Organising, coordinating and supervising the implementation of project activities in accordance with the approved project work plans;
- Organising the infrastructure activities, including capacity development and awareness raising, in coordination with the other project activities
- Supervising engineers and consultants during the preparation and tendering of contracts for procurement of works, goods and services related to the infrastructure;
- Introducing 'State of the Art' environment protection, energy efficiency and gender

sensitive principles into MoES guidelines and strategies ;
- Contributing to the financial and activity reporting of the PCT;
- Conducting weekly site inspections during rehabilitation/ construction works;
- Organising the partial and final handover of both works and equipment, including furniture supply.

Minimum profile
- Degree in civil or architectural engineering;
- At least 7 years experience in construction;
- Experience in school building projects;
- Experience in working with an international organization or NGO;
- Fluent in English;
- Mature, good communicator and team-player;
- Able to work under stressful conditions and with no objection to working overtime and undertaking field missions.

7.3.8 International Sector Expert - Infrastructure (ISE-I)

In consultation with the MoES, the International Sector Expert in infrastructure facilities (ISE-I) will work on a full-time basis for a period of 2,5 years. He/she shall be selected by BTC and presented to MoES. He/she will be a member of the PCT.

Duty station: Kampala, with frequent site visits

Duration of the assignment: 30 months full-time

Tasks
The ISE will support the MoES and the PCT to follow-up some studies, guide the design and implementation stages of the investments works in the four colleges, develop capacity development activities, and lead the process of evaluation and dissemination of experience. She/he will work and collaborate closely with MoES, the PCT and the International and local consultants and will assume significant coordination responsibilities.

The specific tasks for the ISE include:
- Oversee the infrastructure project activities in close cooperation with the PCT and MoES;
- Assist in the identification of key stakeholders for the project;
- Maintain close relationships with the MoES and other relevant Ugandan agencies, Ministries and the donor community;
- Supervise and guide the contracting of international and local technical consultancy services in close collaboration with the PCT and MoES;
- Supervise and guide the contracting of capacity building organisations and other training providers in close collaboration with the PMU;
- Provide technical guidance on project methodology and strategy;
- Assist the PCT and MoES in the writing of the terms of reference and all related technical specifications required for the execution of the project activities in the area of infrastructure provision and equipment;
- Provide an input in terms of innovative approaches and technologies related to capacity-building, awareness-raising and alternative design and construction of infrastructure facilities and their evaluation;
- Organise activities to evaluate and capitalise on the lessons learned both for MoES and BTC;
- Set up the methodology, the tools, and the assignment of responsibility for the technical site supervision of the rehabilitation and extension works;
- Supervise engineers and consultants during the preparation and tendering of contracts for procurement of works, goods and services;

- Provide support to the PCT in the management of the project;
- Prepare in collaboration with the PC, co-PC and the PCT the Project progress reports;
- Coordinate with the PC the preparation of project work plans in cooperation with the PCT;
- Organise, coordinate and supervise the implementation of project activities in accordance with the approved project work plans;
- Assist the PC and co-PC in their role of supervising the preparation of regular financial reports for the Belgian contribution;
- Assist the PC and co-PC in relation to ensuring the timely replenishment of the project account;
- Coordinate and facilitate the financial audit for the Belgian contribution;
- Contribute to the compilation of the project final report at the end of the project;
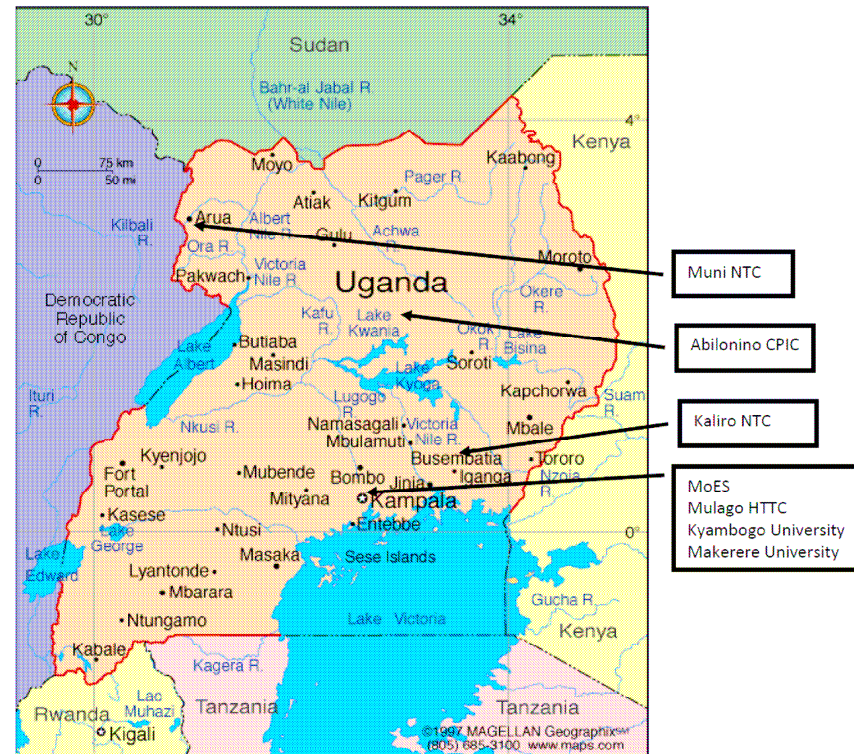- Coordinate and network with other national and international partners.

Reporting

The ISE shall assist the PCT in the preparation of periodic progress reports and financial reports. In particular s/he shall assist the PM in preparing:
- Consolidated and coordinated quarterly and annual progress reports including recommendations;
- Financial reports in accordance with the requirements of BTC and the MEHE;
- A Final report summarising the results of the Project including lessons learnt, and providing conclusions and recommendation on how the achievements of the Project can be sustained;
- Any other reports as requested by the MEHE, PSC or BTC.

Minimum profile
- Degree in civil or architectural engineering;
- At least 10 years experience in construction and at least 5 years experience in development cooperation projects;
- Proven experience in school buildings and capacity building activities is an asset;
- Proven knowledge in sustainable projects using energy efficiency principles, alternative technologies and renewable energy production is an asset;
- Fluent in English;
- Mature, good communicator and team-player;
- Able to work under stressful conditions with no objection to working overtime and undertaking field missions;
- Knowledge of the local context will be an asset.
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7.4 Annex 4: Geographical map

7.5 Annex 5: Detailed situation of the infrastructure conditions

		Abilonino	Muni	Kaliro	Mulago
1	Student Enrolment	Currently at 213 for a capacity of 300	Currently at 893 Capacity is 400	Currently at 932 Capacity is 400	Currently housing 71 students for a capacity of 14 students
2	Teaching staff	- Filled posts: 14 - Total number of posts: 39	- Filled posts: 56 - Total number of posts: 74	- Filled posts: 48 - Total number of posts: 66	- 1 full time and 4 part-time - Total number of posts: 21
3	Background	-Established in 2002 among 11 other colleges -The college lacks basic facilities, tools and sufficient Human Resource	- College started as a Primary Teachers' college in 1974 but later upgraded. - In 1985, it became an NTC.	College started as a Grade II Teachers' college in the 1970s Upgraded to a Grade III teachers' college in the 1980s Has Grade V status Teachers College since 1985	Established as and is the only HTC in the country
4	Location	Abilonino village, 28 kilometers from Lira Town	Oluko Sub-County, 6.2 km from Arua town, 520 km North West of Kampala	Near Kaliro town, 153 km to the North East of Kampala.	Within the Mulago national referral hospital complex, 3 km from Kampala centre
5	Services				
5.1	Electricity	-No Hydro Electric power supply - 11.5KVA diesel generator - Rationed power supply to a maximum of 8 hours per day	- Not connected to the national grid, the region has no hydro-power - 64 KVA generator supplied by WENRICO between 6:00am and 12:00 midnight	- Connected, to the main national grid supplied by UEDCL - 75KVA emergency generator	- Connected to the main grid supplied by UEDCL. Costs for the power supply shared with Mulago Hospital - 12kva generator

5.2	Water Supply	- No piped water - 4000 liter water reservoir supplied by rain water harvesting - Supplementary bore hole dry during dry season	- No piped water - 2 hand pumps (bore holes)	- Piped water from the main water grid that supplied Kaliro Town with a 32 m³ elevated reservoir - The college also had 2 hand pumps (bore holes)	- Connected to the network shared with the hospital With a 32m³ reservoir - Rain water harvesting - Connected to sewerage network
		Abilonino	Muni	Kaliro	Mulago
5.3	Solid waste Management	-No collection system -Poor solid waste management	-No collection system -Poor solid waste management	-No collection system -Poor solid waste management	- No external solid waste collection facilities
5.4	Security & Fencing	No fencing	No fencing	No fencing	Fenced but does not prevent violation
5.5	Access & Transport	-No public transport to the college apart from private motorbikes	- Accessible by a number of roads, both from Arua town surrounding - Public transport available along the highway	- Accessible by a number of roads (all weather gravel surface), both from the nearest town of Kaliro and also from the surrounding communities	Easy access
6	Land Ownership & Title Details	- Approx 17.25 hect. (42.625 acres) without claim by community; other might require compensation - Untitled	- Owned approx 84.24 hectares (208.16 acres) - Untitled	Owned approx 80 hectares (198 acres) Untitled	-Land owned by Mulago Hospital; The College has not official certificate (approx. 0.653 acres)
7	Physical infrastructure	Incomplete structures in very poor shape with un-plastered walls, no ceiling, ground floor slabs, doors and windows, while the structural strength being poor. Very dilapidated building without	Structural strength of most of the buildings fairly good and only required minimal repairs, while the finishing have to be rehabilitated with replacement of asbestos roofs Lack of learning space	-Structural strength of most of the buildings fairly good and only required minimal repairs, while the finishing have to be rehabilitated with replacement of asbestos roofs Lack of space dormitories	Recent large renovation to the entire college building. General quality is fairly good, but the college lacks space, being designed for a fourth of is present occupancy

		improvement except some student projects (latrines and teachers dormitories).	No rehabilitation except some minor maintenance works (painting and repairs in staff quarters)	No rehabilitation except some minor maintenance (painting of administration block)	
8	Condition of Operational Facilities				
8.1	Furniture & Fixtures	Need repairs and largely incomplete	Need repairs and largely incomplete	Need repairs and largely incomplete	Need repairs and largely incomplete
8.2	Equipment, Tools & Apparatus	No typical science lab equipment No workshops facilities	Inadequate science lab. Equipment & tools Insufficient BTVET tools	Need repairs and largely incomplete	No lab. Equipment (use Mulago Hospital facilities)
		Abilonino	Muni	Kaliro	Mulago
8.3	ICT Facilities	- Only one computer for management and academic staff - Lab. with 21 working computers	- 7 computers for management and academic staff - Lab. with 13 working computers	- 7 computers for management and academic staff - Lab. with 13 working computers	- 6 computers for management and academic staff - Lab. with 11 computers in use & 15 in stores
8.4	Teaching aids	Few tools and equipment available	Music and B.S.S (typing) depts.	Aids for music dept.	No significant teaching aides
8.5	Text books	Small stock of books	Large stock of largely 'irrelevant' text books (not compliant to curriculum)	Large stock of largely 'irrelevant' text books (not compliant to curriculum)	Stocked with fairly relevant books
8.6	Motor vehicles	One non-functioning motor vehicle	1 Tata lorry (old but functioning)	1 functioning single cabin, double cabin and Tata lorry not functioning	- 1 30 Seats coaster - 1 Pajero - 2 14 seats mini-buses (not functioning)

7.6 Annex 6: Principles of the Total Quality Management approach

The following eight principles form the basis for the quality management system standard ISO 9001:2008, which is adapted in a customised way to fit the context and situation of the four supported colleges. In briefly outlining these principles below, in each case the original wording of the ISO standard is given first (being broadly relevant for all systems), followed by a brief explanation of how this will be adapted for the present intervention.

Customer focus
"An organisation attains customer focus when all people in the organisation know both the internal and external customers, and also what customer requirements must be met to ensure that both the internal and external customers are satisfied."

- When applied to the four selected colleges, it can be seen that their main focus is to train good teachers (or technical teachers or tutors) for secondary schools, community polytechnics and other BTVET institutions, and HTIs. The college staff should gain a clear and full understanding of the mission of their college and strive to improve the quality and effectiveness of the education delivered by their college.

Leadership
"Leaders of an organisation establish unity of purpose and the direction of it. They should go for creation and maintenance of such an internal environment in which people can become fully involved in achieving the organisation's quality objective."

- The college principals will have the responsibility of leading the quality process and making sure all staff understand it, embrace it and adhere to it. That is to say, to ensure that all of the staff are involved in the process and looking in the same direction.

Involvement of people
"People at all levels of an organisation are the essence of it. Their complete involvement enables their abilities to be used for the benefit of the organisation."

- TQM cannot be designed and implemented at management level only. To be effective and sustainable, it will require the participation of all staff. In fact, TQM can be seen as a way to encourage members of staff from various departments to work together to jointly look for ways of solving problems.

Process approach
"The desired result can be achieved when activities and related resources are managed in an organisation as a process."

- The process approach, including the four steps of plan-do-check-act, can be applied to any activity included in the scope of quality management. It can stretch from administrative and managerial functions (accounting, budgeting, human resources management, etc.), to teaching (including library, computing, practicum, etc.), to the support functions (accommodation, catering, security, estates management, etc.), and relations with partners and stakeholders.

System approach to management
"An organisation's effectiveness and efficiency in achieving its quality objectives are contributed by identifying, understanding and managing all interrelated processes as a system."

– TQM is a system approach that looks not only at individual processes on their own but also at their interrelations. In the case of the colleges, TQM will become particularly meaningful when all the functions of the college are addressed and all staff are involved. For example, improving the quality of teaching and learning not only requires changing teaching and learning methods, but also improving managerial functions, having adequate infrastructure and equipment, proper accommodation for students, etc.

Continual improvement
"One of the permanent quality objectives of an organisation should be the continual improvement of its overall performance."

- The four-step PDCA cycle described above includes the feedback loop that allows the organisation to benefit from the learning experiences within each activity and thereby to avoid repeating past mistakes. This iterative process gradually allows for the performance objectives of the colleges to be raised (and targets for improvements to be achieved).

Factual approach to decision making
"Effective decisions are always based on the data analysis and information."

- Having access to, and properly using, information is a key element for good decision-making. It will (amongst others) be important for the colleges to be well-informed on the education sector's evolution and perspective. For example, information on how many lecturers are required to teach which subjects - to how many students – is a strategic issue for the colleges as they design their institutional development plan, which in turn has repercussions on budget levels, support staff, etc.

Mutually beneficial supplier relationships
"Since an organisation and its suppliers are interdependent, therefore a mutually beneficial relationship between them increases the ability of both to add value."

- The colleges are interconnected with the Ministry of Education and Sport, with supporting institutions, and with secondary, vocational and professional schools and other partners, and it is in a college's interests to promote a cordial and mutually beneficial relationship with all of these.

7.7 Annex 7: An indicative list of aspects of the management training

Table X: An indicative list (not exhaustive) of aspects to be selected from in the management training

Strategic planning and the preparation of plans
Preparing an institutional development plan
Preparing a business plan
Preparing a human resources plan
Preparing a financial plan
Preparing a maintenance plan
Managing yourself
Managing and organising yourself
Developing yourself
Leading by example
Delegating and how to delegate
Managing your institution
The legal and policy side of education
Knowing your institution
The governance of colleges of education
Managing the relationship between the college and the MoES and the supporting universities
Managing the relationship between the college and other institutions, enterprises,
stakeholders of the direct neighbourhood of the college

Leading and managing in a college
Managing your budget
Managing your staff
Recruiting and selecting staff
Developing staff – including valuing staff development and how to organise it
Team building and working as a team
Motivating staff
Handling conflict
Handling complaints, discipline and grievances
Managing staff performance
Quality Assurance Techniques
Tackling poor performance
Managing students and the college community
Focusing on the college, community engagement and poverty eradication
Enhancing the student experience
Managing the teaching and learning process
Managing college facilities and inventory
Student Affairs Management
Health & HIV/AIDS
Miscellaneous other topics
Monitoring and evaluation
ICT for college management
Managing change
Other topics identified by the participants

7.8 Annex 8: TOR for the international/national consortium (result 3)

The role of the combined international / national consortium

The supporting organization, will include a mix of both international and Ugandan experts in teacher-education and training. Under the guidance and supervision of the PMU, the PSC and the MoES, the international consortium or organization (supplemented with part-time national experts,) will play a leading role in designing and overseeing the detailed implementation of the activities of result 3.

In particular it will:
- Take a lead in conceptualising and designing the detailed organization of the college-based pedagogical improvement programme
- Supervise and oversee the content-side of this overall result
- Bring in the best of modern approaches to the design of the overall college-based programme.
- Contribute to the preparation of training materials, and other materials, needed at college level
- Provide regular progress reports to the MoES, the Project Management Unit and BTC.
- Provide specialist training (and /or workshops) for the local long-term specialists that will be placed in each of the supported colleges, and for the mentor teachers
- Provide further additional support to the local long-term specialists in the colleges through occasional visits throughout the span of the intervention – running workshops and other training and mentoring activities there, as well as advising, coaching, and generally backstopping the on-going work at college level.
- Support the management of the colleges by way of advising management on teaching-and-learning issues, and providing a full report of work undertaken at the colleges visited, together with advice and guidance on possible actions or directions to be taken by each College in order to further improve teaching and learning.
- Other tasks of a similar nature as might be prescribed from time to time.

7.9 Annex 9: Competencies of teacher educators

An indicative list (illustrative)of competencies to be developed in the teacher educators through the college-based training and coaching programme
Content competencies
Being able to discuss one's professional field with others
Being perfectly at home with the content of one's field
Having a vision with regard to the pedagogical side of one's field
Being knowledgeable about the current situation in the field of education
Being able to anticipate new developments
Communicative and reflective competencies
Being able to evaluate one's own teaching and make changes accordingly
Being able to reflect on the ways one operates and to develop alternatives
Being able to communicate with students from different backgrounds
Being able to give a good example in one's interaction with students
Having excellent communication skills
Being able to manage group processes
Being able clearly to articulate one's own opinion and helping others to articulate
Having an inquiry-oriented attitude
Being able to communicate with schoolmanagement and with concerned authorities
Organisational competencies
Being able to work in a team
Being able to work with school supervisors and inspectors
Being able to strike a balance between work and leisure
Being able to further develop a joint vision and implementing it
Being able to establish contacts outside of the college
Being able to deal efficiently with administration and record-keeping
Pedagogical competencies
Being able to plan and organise one's own teaching activities starting from the existing competencies students possess and working towards competencies students should possess in the future
Being able to help students in working on their own learning needs
Being able to make one's own pedagogical approach accessible to student teachers
Being able to adjust course components to the rest of the curriculum
Being able to work from students' experiences
Being able to give students concrete pointers for their teaching practice (practicum)
Being able to be a model with regard to pedagogical and communicative competencies and to overall integrity
Being able to develop and use evaluation and (self) evaluation systems for professional competencies for yourself as a trainer of teacher and for the trainee-teacher
Being able to use ICT in one's own teaching
Being able to stimulate learning among teachers in the field
Other competencies of a similar nature

7.10 Annex 10: CABE school design principles

CABE is the UK government's advisor on architecture, urban design and public space. It has produced a 10-assessment-criteria list with sub-indicators presented in the form of questions to define the relevance of school design. These criteria, listed below, are increasingly used as reference for assessing the quality of school buildings in several European countries and other regions.

1. Identity and context: making a school that the students and community can be proud of
School ethos and identity
- Is the educational vision successfully manifested in the design?
- Is the school inviting to the local community?

Relationship with neighbourhood
- Does the design respond and contribute positively to its locality?

Civic character
- Does the scheme establish an appropriate civic presence for the school in the neighbourhood?
- Will the design strengthen the image of education locally?

2. Site plan: making the best use of the site
Enhancing the character of the site
- Does the design foster a sense of place?

Working with existing site constraints and opportunities
- How well does the design deal with site-specific constraints?

Strategic site organisation
- Are the buildings, grounds and facilities arranged well on the site?
- Does the configuration of buildings create positive internal and external spaces?
- Are the external circulation routes clear and do they balance the demands of different users?

3. School grounds: making assets of the outdoor spaces
Relationship between the grounds and building
- Do the grounds and planting contribute to creating a sense of place?
- Does the design respond to the existing topography, climate and ecology of the site?

Social spaces and play
- Are outdoor spaces provided for a variety of different student social activities, interest ranges and group sizes?

Outdoor learning
- Are there provisions for outdoor learning?

Physical activity
- Are there opportunities for a wide range of physical activities?

4. Organisation: creating a clear diagram for the buildings
Accommodating the educational agenda
- Is this successfully accommodated in the internal arrangement of spaces?

Spatial organisation
- Is there a clear spatial diagram for the building?
- Are the learning spaces arranged well across the school?

Movement routes
- Is there a clear hierarchy of circulation routes?
- Are links between indoor and outdoor spaces optimised?

5. Buildings: making form, massing and appearance work together

Concept
- Is there a coherent design idea that relates plans, sections and elevations?

Form and massing
- Is the building's form and massing appropriate to the site?
- Does the massing create well-proportioned internal and external spaces?

Appearance
- Do the elevations reflect the design concept to create an inspiring building?
- Is the building good architecture in its own right?

Construction and materials
- Do the materials contribute positively to the quality of the scheme?
- Will the fabric of the buildings be durable and easy to maintain?

6. Interiors: creating excellent spaces for learning and teaching

Variety and delight
- Will occupants experience variety and delight as they move around the school?
- Are circulation and social spaces inviting to students?

High quality
- Will the internal environment help students and staff feel valued and motivated?
- Are learning spaces well proportioned and pleasant?

The building in use
- Will the building work well in full use?
- Have the acoustic requirements of different spaces been achieved?

7. Resources: deploying convincing environmental strategies

Orientation
- Has the optimum orientation for different types of spaces been considered?
- Does the design of the elevations respond to different orientations?

Ventilation
- Does the ventilation strategy provide a comfortable environment in which to learn in all seasons?
- Where possible, are spaces naturally ventilated?

Daylighting
- Are key spaces daylit for most of the year?
- Is there an imaginative use of daylight to create uplifting spaces?

Energy and services strategies
- Does the whole design help to minimise energy use and carbon emissions?
- Is any on-site energy generation appropriate and meaningful?
- Will the design provide an environment with a comfortable temperature for learning throughout the year?

8. Feeling safe: creating a secure and welcoming place

External environment

- Are external routes and boundaries clear and well defined?
- Is the security strategy balanced with openness?

Internal environment

- Is there passive surveillance of key points in the school?
- Does the design of toilets, staircases and circulation spaces allow for visibility so that they feel safe?

9. Long life, loose fit: creating a school that can adapt and evolve in the future

Day-to-day adaptability

- Does the design provide day-to-day adaptability for different types of learning and teaching?

Flexibility

- Is the building able to accommodate different organisational structures or pedagogies?
- How well does the design allow for future expansion of the school?

Furniture, fittings and equipment

- What range of layouts can be made using the proposed furniture?

10. Successful whole: making a design that works in the round

Appropriateness

- Does this design as a whole offer a thoughtful, coherent and convincing response to the key issues of this site and brief?
- Does the whole design add up to more than a sum of its parts?

Delight

- Will it be a pleasure to work, eat, learn, play, teach and socialise in this school?

Timelessness

- Is this school set to be a cherished part of its locality?

Fulfilling user intentions

- Does the architectural approach successfully meet the aspirations of the client and community?
- Will the school help to deliver educational transformation?