# SOKOINE UNIVERSITY OF AGRICULTURE

**OFFICE OF THE VICE CHANCELLOR**
**QUALITY ASSURANCE BUREAU**

## Internal Quality Assurance Framework

**March 2018**

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## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ATE | Association of Tanzania Employers |
| CC | Computer Centre |
| CFWT | College of Forestry, Wildlife and Tourism |
| CICT | Centre of Information and Communication Technology |
| CoA | College of Agriculture |
| CQAB | Coordinator of Quality Assurance Bureau |
| CSP | Corporate Strategic Plan |
| CSSH | College of Social Sciences and Humanities |
| CVM | College of Veterinary Medicine |
| CVMBS | College of Veterinary Medicine and Biomedical Sciences |
| DPD | Directorate of Planning and Development |
| DSI | Development Studies Institute |
| DUS | Directorate of Undergraduate Studies |
| DVC | Deputy Vice Chancellor |
| DVC | Deputy Vice Chancellor |
| EAQF | East African Quality Assurance Framework |
| FoS | Faculty of Science |
| HEDP | Higher Education Development Programme |
| HLI | Higher Learning Institution |
| HoD | Head of Department |
| ICE | Institute of Continuing Education |
| ICT | Information Communication Technology |
| IMS | Integrated management system |
| ISO | International Organization for Standardization |
| IUCEA | Inter-University Council for East Africa |
| MoCU | Moshi Cooperative University |
| MoEST | Ministry of Education, Science and Technology |
| MoFP | Ministry of Finance and Planning |
| MUCCoBS | Moshi University College of Cooperatives and Business Studies |
| PDCA | Plan-Do-Check-Act |
| QA | Quality Assurance |
| QAB | Quality Assurance Bureau |
| QAP | Quality Assurance Policy |
| QAPB | Quality Assurance and Promotion Bureau |
| QMS | Quality management system |
| SAEBS | School of Agricultural Economics and Business Studies |
| SCSRD | SUA Centre for Sustainable Rural Development |
| SMC | Solomon Mahlangu Campus |
| SMCoSE | Solomon Mahlangu College of Science and Education |
| SNAL | Sokoine National Agricultural Library |
| SOPs | Standard Operating Procedures |
| SPMC | SUA Pest Management Centre |
| SUA | Sokoine University of Agriculture |
| SUASA | Sokoine University of Agriculture Academic Staff Association |
| SUASO | Sokoine University of Agriculture Students' Organization |

| | |
|---|---|
| TBS | Tanzania Bureau of Standards |
| TCU | Tanzania Commission for Universities |
| UDSM | University of Dar es Salaam |
| UTLIP | University Teaching and Learning Improvement Programme |
| UWQAC | University-Wide Quality Assurance Committee |
| VC | Vice Chancellor |

# DEFINITIONS OF KEY TERMS AND CONCEPTS

**A stakeholder in higher education means** an individual or groups that have an interest in the quality of provision and standard of outcomes. These include government, employers, students, families, academic and administrative staff, institutional managers, prospective students, parents of students and taxpayers.

**Academic staff** means teaching staff, research fellow and librarian of the University.

**Administrative staff** means a member of staff of the University who holds a position related to administration, technical, agricultural, forestry, veterinary, field and library work as the Council may from time to time determine; and such other members of staff of the University not engaged in teaching or research as the Council may from time to time determine.

**Assurance** means confidence and trust that the customers hold towards the institute and the feeling of safety in case of danger.

**Benchmarking** means formal and structured process of evaluating institution's performance and standards against those of its peers to monitor relative performance and to develop improvement strategies.

**Evaluation** means the process of judging and passing a statement of goodness based on pre-determined criteria or standard.

**Excellence** means achievement of outstanding results amongst peers as perceived by stakeholders.

**External audit** means an evaluation of compliance against threshold criteria as performed by a third party.

**Head of department** means a person heading an academic, administrative or service department.

**Implementation** involves carrying out systematic quality activities and uses quality audits to determine which processes should be used to achieve the university requirements and to assure they are performed efficiently and effectively.

**Implementing committee** means a committee set up at the level of a Department, College, Directorate, School, Institute, Centre or Bureau for the purpose of implementing issues of quality as defined in this Policy.

**Implementing units** means all Departments (academic and administrative); Colleges, Directorates, Schools, Institutes, Centres or Units, which collectively implement designated activities within the University.

**Integrated management system** means merge of some activities in the management processes of the organization aimed to achieve synergistic advantages.

**Internal audit** means an evaluation of compliance against threshold criteria as performed by organizational peers.

**Internal quality assurance** means the process, supported by policies and systems, used by an institution

to maintain and enhance the quality of education experienced by its students and of the research undertaken by its staff. While this definition is relatively broad, it distinguishes IQA from other management tasks, and puts the emphasis on the maintenance and enhancement of quality.

**Quality assurance framework** underpins the University's commitment to academic excellence; it exists to support the continual improvement of our education and the broader student experience at local and strategic levels. The Framework is designed to ensure that the university delivers on the vision for education laid out in the university's Strategic Plan and meets the expectations laid out in the University Qualification Framework for Higher Education.

**Quality assurance** means a systematic and continuous process for ensuring that conditions are in place to achieve standards set by the institution or the means by which an institution can guarantee that the standards and quality of its mandates are being maintained. In other words, QA is the process within an organization's management system that aims to ensure quality objectives are fulfilled.

**Quality** means degree to which a set of inherent characteristics fulfils requirements. By 'inherent characteristics' it means innate characteristics of a product or service not assigned to it, inborn.

**Self-assessment** means a systematic assessment of performance within an organizational unit with the aim to identify improvement areas and to drive continuous improvement.

**Technical committees** means a body or team of experts dedicated to specified components of the Universities' mandates at levels of Department, School, Institute, Directorate or Centre such as the committees dealing with Undergraduate Studies, Postgraduate Studies, Research and Publications, Student Affairs and Social Welfare.

**Technical staff** means laboratory and workshop technicians; laboratory technologists; field officers; library technicians and ICT technicians.

**Total quality management** means a systematic process for continuously obtaining accurate and timely information about the needs, wants and expectations of customers in a manner that can generate information that can be used to constantly re-invent the institution with an emphasis on quality.

## 1.0 INTRODUCTION
### 1.1 Background information
Internationalization in higher education has resulted in "a growing demand for accountability and transparency which has in turn led to a need to develop a quality culture, while addressing the challenges of globalized higher education" (Smidt, 2015, p. 626). Karaim (2011, p. 551) projects that by 2025, the projected global demand for higher education could reach 263 million students, which could represent an increase of 163 million students in 25 years (*ibid*.). As the demand for quality education increases, there is a growing demand for quality assurance (QA)[1], especially for international universities where there is increasing mobility of students, academic staff, programs, and higher education institutions in global networks. As for the European, American and Asian continents' higher education institutions, quality assurance now stands as one of the top priorities of contemporary higher education system in Africa (Odhiambo, 2014; Ansah, 2015). To substantiate, in 2014, the Inter-University Council for East Africa (IUCEA) issued a handbook entitled, *"Principles and Guidelines for Quality Assurance in Higher Education in East Africa"*. The 'Principles and Guidelines' therein are now 'a regionally agreed point of reference for continuous quality enhancement in higher education'. In Tanzania, for example, quality assurance system is guided by the Tanzania Commission for Universities (TCU), which is a body corporate mandated to recognize, approve, register, accredit and oversee quality assurance systems in universities operating in Tanzania and local or foreign university level programmes being offered by non-TCU registered higher education institutions. TCU also coordinates the proper functioning of all university institutions in Tanzania so as to foster a harmonized higher education system in the country. In a nutshell, TCU provides quality assurance services, coordination and rationalization of training programmes, and promotes cooperation among universities in the country.

### 1.2 The concept of total quality management framework in higher learning institutions
Total quality management (TQM) is the name for the philosophy of a broad and systemic approach to managing organizational quality. It is a systematic process for continuously obtaining accurate and timely information about the needs, wants and expectations of customers in a manner that can generate information that can be used to constantly improve the institution with an emphasis on quality. Figure 1 shows 18 quality assurance procedures/steps which serve two major purposes: *quality assurance for accountability* and *quality assurance for improvement*. Quality assurance for accountability purposes is based on criteria set down by external authorities and/or institutions such as the TCU and it implies a summative approach. The criteria set are aimed at strengthening external insight and control with the possibility of undertaking external corrective action, if necessary, including banning or condemning use of some facilities or even closing the institution or its programmes. Quality assurance for improvement purposes implies a formative approach with the focus on improving quality rather than control. This promotes self-regulatory capacities as opposed to quality assurance procedures for accountability purpose which institute the culture of compliance or what others refers to as 'policing'.

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[1]Ansah (2015) defines *Quality Assurance* as mechanism put in place by institutions to guarantee and enact stakeholders' expectations.
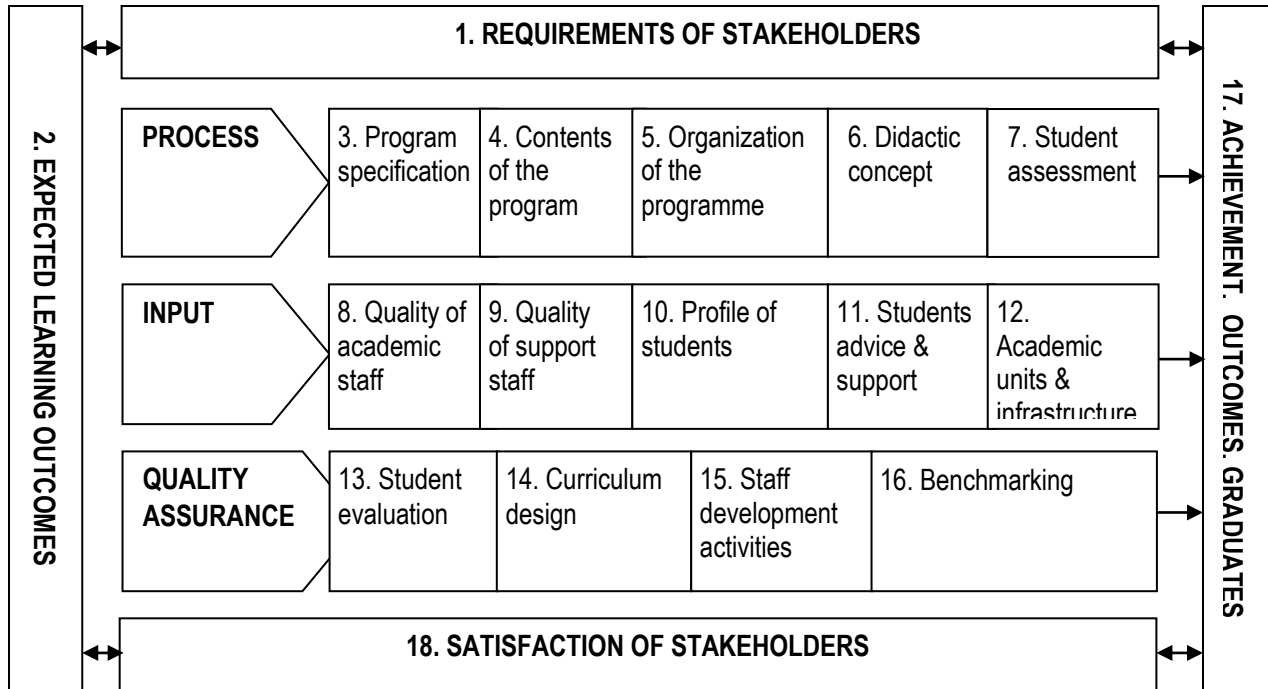
**Figure 1:** Total quality management framework for self-assessment of teaching and learning.

Figure 2 shows a simplified process approach involving customers/interested parties/stakeholders, top management, inputs, realization of processes, support processes and outputs. Top management processes include, for example, planning, allocation of resources, management reviews, among others, while support processes include, for example, training of staff and maintenance. Realization processes, on the other hand, entails customer related processes, design and development, product or service realization.
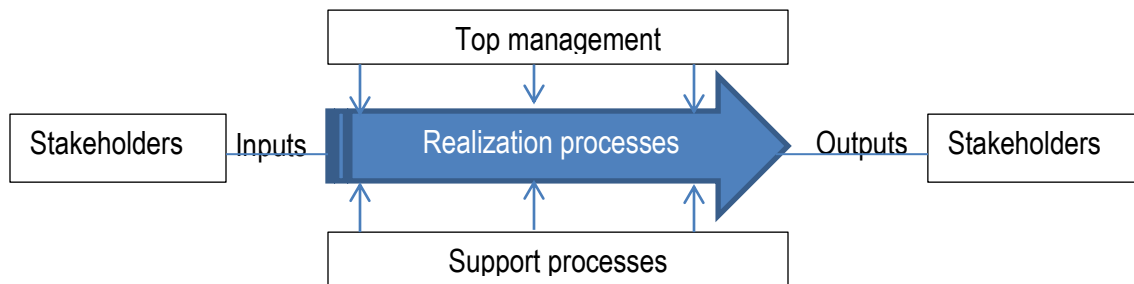


**Figure 2:** A simplified process approach towards attainment of total quality management.

Support processes implies that enhancing quality in higher education demands qualified and highly motivated staff members who are committed to quality outcomes and outputs. This involves staff participation in quality assurance activities through effective and efficient top-down (top management processes) and bottom-up communication channels and rigorous staff recruitment processes, development and incentive systems (support processes). It also requires qualified, highly motivated and empowered students (profiles of students) who provide feedback on their learning experiences to inform improvement activities. Equally, achieving quality also involves information from all key internal and external stakeholders through feedback loops as will be discussed in the integrated management system section. A quality assurance framework of higher education institution ought to cover all these in addition to other operational

areas and activities of the institution in order to sufficiently guarantee and enact stakeholders' expectations of quality. The quality of learning, teaching, research and community service of a higher education institution is dependent on space and facilities of the institution. The common physical facilities which are under the 'microscope' of quality assurance activities are teaching and learning, residential, recreational and transportation facilities. The interplay of people, programme and place (3Ps) support positive outcomes in higher education. Therefore, total quality is maintained and enhanced when all the 3Ps are balanced in terms of treatment and attention accorded to.

### 1.3 Challenges of achieving total quality management system in higher education institutions

Universities worldwide struggle with certain challenges related to internal quality assurance (IQA) systems. These challenges include: how to develop a cost-effective IQA, in which tools and processes are well articulated between each other and function together as a system; how to integrate IQA with planning, management, and resource allocation; striking the right balance between management, consumer, and academic interests; finding or setting up appropriate mechanisms to make best use of evidence to enhance programme quality and student employability; finding the right balance of centralized and decentralized structures; and, last but not least, designing IQA that supports the development of continuous quality-enhancement processes in a university (Ehlers, 2009; Harvey, 2016). IQA embraces both education and research functions of higher education, which is interesting because IQA practices for the two functions are frequently kept separate. Therefore, there is a need for an internationally recognized management system. However, before we delve deeper into this discussion, let us look into the transformational processes of the Sokoine University of Agriculture (SUA) and the current SUA internal quality structure (Section 2).

**2.0 THE DEVELOPMENT OF SUA'S INTERNAL QUALITY ASSURANCE SYSTEM: 1986 - 2017**
**2.1 Establishment of SUA and its transformational processes since 1984**

Sokoine University of Agriculture (SUA) is one of the public-owned universities in Tanzania. The history of SUA, which is located in Morogoro Municipality dates back to 1965 when it started as an Agricultural College offering diploma training in the discipline of agriculture. With the dissolution of the University of East Africa and the consequent establishment of the University of Dar es Salaam (UDSM) in July 1970, the Agricultural College was transformed into a Faculty of Agriculture of UDSM and thereby started offering degree of Bachelor of Science in Agriculture. In 1974, the Division of Forestry was established and hence the faculty was named Faculty of Agriculture and Forestry. Following the introduction of Bachelor of Veterinary Science in 1976 and the establishment of the Division of Veterinary Science, the Faculty was re-named "Faculty of Agriculture, Forestry and Veterinary Sciences". The Faculty was on the 1st of July 1984 transformed, through Parliamentary Act No. 6 of 1984, into a full-fledged University and became known as Sokoine University of Agriculture with the Faculty of Agriculture, Faculty of Forestry and Faculty of Veterinary Medicine. Following repealing of the Act, the University is now operating through the Sokoine University of Agriculture Charter, 2007 through the broad framework of the Universities Act, 2005. Besides this legal framework, the University is also guided by a number of education and training policies that provide a coherent philosophy for the development and management of education in Tanzania. However, since its establishment, SUA has undergone several transformations processes as summarized in Table 1.

**Table 1:** Transformation of SUA since 1984 up to 2017

| Year | Nature of transformation |
|---|---|
| 1986 | • Establishment of the Directorate of Research and Postgraduate Studies |
| 1988 | • Establishment of the Institute of Continuing Education (ICE) |
| | • Establishment of Development Studies Institute (DSI) |
| 1991 | • Establishment of the Sokoine National Agricultural Library (SNAL) |
| 1993 | • Establishment of the Computer Centre (CC) |
| 1999 | • Establishment of Faculty of Science (FoS) |
| | • Establishment of SUA Centre for Sustainable Rural Development (SCSRD) |
| 2000 | • Establishment of SUA Pest Management Centre (SPMC) |
| 2004 | • Establishment of Moshi University College of Cooperatives and Business Studies |
| 2007 | • Establishment of SUA Charter |
| 2009 | • Establishment of SUA Quality Assurance and Promotion Bureau (QAPB) |
| 2014 | • MUCCoBS accredited into a fully-fledged Moshi Cooperative University (MoCU) |
| | • Restructuring process of SUA's Management System and Organizational Structure |
| 2015 | • Splitting of Faculty of Agriculture into College of Agriculture (CoA) and School of Agricultural Economics and Business Studies (SAEBS) |
| | • DSI and SCSRD merged to form prospective College of Social Sciences and Humanities (CSSH) |
| | • Computer Centre transformed into the Centre of Information and Communication Technology (CICT). |
| | • Establishment of the Directorate of Undergraduate Studies (DUS) |
| | • Establishment of the Directorate of Planning and Development (DPD) |
| | • Establishment of the Directorate of Intellectual Property Management and Linkages |
| | • Establishment of the Directorate of Consultancy Services |
| | • Establishment of prospective College of Forestry, Wildlife and Tourism (CFWT) |

| | |
|---|---|
| | • Establishment of prospective College of Veterinary Medicine (CVM) |
| 2016 | • Transformation of the Faculty of Veterinary Medicine into College of Veterinary Medicine and Biomedical Sciences (CVMBS) |
| 2017 | • Faculty of Science (FoS) and Directorate of Solomon Mahlangu Campus merged to form Solomon Mahlangu College of Science and Education (SMCoSE)<br>• Renaming of QAPB into Quality Assurance Bureau<br>• Establishment of Quality Assurance Good Practices Handbook<br>• Review of QAPP of 2011 to come up with revised Quality Assurance Policy of 2017 |

## 2.2 SUA's Vision, Mission and Core Values

SUA's academic business is guided by the university's vision and missions as well as the Corporate Strategic Plan (CSP) 2016-2021.The latter (CSP) spells out plans in keeping with university's core missions and functions as well as the need to remain competitive. The Vision of the university is *"To be a leading University in the provision of quality knowledge and skills in agriculture and allied sciences". This vision* is guided by the mission, which is *"To Promote development in agriculture, natural resources and allied sectors through training, research and delivery of services".* In achieving its vision and fulfilling its mission, SUA adheres to the following core values :i) Pursuit of excellence in service delivery; ii) Entrepreneurial and innovative spirit; iii) Competitive orientation; iv) Integrity, Transparency and Accountability; v) Results/Achievement oriented; vi) Diligence on duty; vii) Adaptive and responsive; viii) Freedom of thought and expression; ix) Gender sensitive; and x) Continuous learning. Therefore, since a huge amount of public money is spent on the pursuit of activities of this University, is required to offer education and research whose quality is worth public spending. As an institution seeking to claim her position in the global, regional and national higher learning institutions, SUA, must pay due attention to quality as the natural way to go.

## 2.3 Establishment of quality assurance system at SUA

During its 107th Meeting held on 18th December 2009, SUA Council approved the establishment of the Quality Assurance and Promotion Bureau (QAPB). The establishment of the QAPB was in compliance with the TCU's University Quality Assurance and Approval of Rules, By-laws, Programmes and Awards Regulations of 2007 made under section 62 of the Universities Act, 2005. The establishment of QAPB marked an important milestone indicative of the intention of the University to pay due attention to quality in both academic and non-academic activities. To facilitate the process, the SUA Council at its 120th Meeting held on 30th June 2011 approved the Quality Assurance and Promotion Policy (QAPP). Moreover, during its 147th Meeting held on 29th June 2017, SUA Council approved the reviewed Quality Assurance Policy (QAP, 2017) and the newly established Quality Assurance Good Practices Handbook (QAGPHb, 2017), which together form the basic tools in implementing quality assurance activities at SUA. Other tools and reports developed by the Bureau in order to foster quality assurance activities at SUA are summarized in Table 2.

**Table 2:** Contribution of Quality Assurance Bureau to the enrichment of SUA processes and procedures

| Year | Contribution of the then Quality Assurance and Promotion Bureau |
|---|---|
| 2014 | • Establishment of the Classroom Services Unit (CSU) under the Quality Assurance and Promotion Bureau (QABP) with support from iAGRI (Innovative Agricultural Research Initiative) project<br>• Evaluation of teaching and research guide approved by Senate held on 16th June 2014<br>• Teaching popular courses guide approved by Senate held on 16th June 2014<br>• Conduct of practical training guide across the university approved by the 212th Senate held on 15th September 2014 |

| Year | Contribution of the then Quality Assurance and Promotion Bureau |
|------|------------------------------------------------------------------|
|      | • Format for reporting reactions to external examiners' reports approved by 214th Senate held on 21st November 2014 |
| 2015 | • A report on mass failure in CIT 100, MTH 106, MTH101 and WLM 208 during 2013/2014 University Examinations presented to Senate in September 2015 |
| 2016 | • Proposal to designate staff as Quality Assurance Officers approved by Senate in March 2016<br>• First Quality Assurance Officer in charge of academic matters designated to Quality Assurance and Promotion Bureau in December 2016<br>• Report on high failure and pass rates in some examination papers for first year BRD students 2015/2016 presented and approved by 235th Senate held on 1st December 2016<br>• Exit students' satisfaction survey report presented at 235th Senate held on 1st December 2016 |
| 2017 | • Second edition of revised SUA Quality Assurance Policy approved by SUA Council on 29th June 2017<br>• First edition of SUA Quality Assurance Good Practices Handbook approved by SUA Council on 29th June 2017<br>• Quality Assurance and Promotion Bureau officially renamed as 'Quality Assurance Bureau' and approved by SUA Council on 29th June 2017<br>• Organized and coordinated TCU-SUA consultative meeting on improvement of the second edition on TCU's Quality Assurance General Guidelines and Minimum Standards for Provision of University Education in Tanzania |

## 2.4 Vision, Mission, Core Values and Policy Objectives

### 2.4.1 The Vision
To be a leading entity in all quality related matters within the University.

### 2.4.2 The Mission
To ensure and enhance the delivery of quality academic and non-academic services.

### 2.4.3 Core values
i.   **Quality.** The Bureau shall monitor the quality of teaching, research, outreach and provision of services to ensure satisfaction of the clientele and stakeholders;
ii.  **Productivity and team work**. The Bureau staff shall collaborate with each other, clientele and stakeholders to promote optimal performance and team spirit to achieve the vision, mission and strategic objectives of the bureau;
iii. **Transparency and accountability**. The Bureau shall maintain a culture of ethics, transparency and accountability in dealing with her stakeholders;
iv.  **Professionalism**. The Bureau shall uphold and promote high standards of expertise and professionalism in her mandates;
v.   **Innovation**. The Bureau shall strive to utilize the latest up-to-date and most appropriate technologies in achieving her objectives;
vi.  **Integrity**. The Bureau shall promote, uphold and sustain social and ethical responsibility; and
vii. **Self-development**. The Bureau shall endeavour to provide opportunities for self-development to her staff.

### 2.4.4 Policy objectives

The following policy objectives represent the overall objectives of quality assurance at SUA and provide guidance in development and implementation of internal and external quality assurance procedures and practices. They include the need or urge to:

i. Mainstream quality in planning, implementation and evaluation at all levels;
ii. Provide a framework for ensuring quality delivery of academic programs and other services offered within the University;
iii. Propel SUA to greater achievement in development of knowledge, technology and scholarly attainment; and
iv. Contribute towards enhanced application of knowledge, technology and scholarship to solve current and emerging societal problems in the pursuit towards achieving SUA's national, regional and international development goals.

To achieve the above objectives, SUA has developed its internal quality assurance system as described below.

### 2.5 Internal quality assurance framework

According to Section 4.4.2 of the SUA's Quality Assurance Policy (QAP, 2017), quality assurance at SUA shall radiate from all implementing units, which have a responsibility of planning and implementing activities that target to address the Mission of the University in order to meet specific institutional objectives. All such units shall be primarily responsible to achieve and maintain high quality standards as set out by the University, including regular conduct of self-evaluations.

### 2.5.1 Stakeholders of quality assurance activities

Quality assurance activities within higher education institutions ought to cover and involve many key stakeholders as outlined in Table 3.

**Table 3:** Internal and external stakeholders of SUA quality assurance system

| Internal stakeholders | External stakeholders |
|---|---|
| Include:<br>• Council members<br>• Management team members<br>• Staff (academic and administrative)<br>• Students | Include:<br>• Government (e.g., MoFP, MoEST, TCU, etc.)<br>• Graduates/alumni<br>• Employees of graduates<br>• Professional bodies<br>• Regulatory authorities<br>• Funders/Development Partners |

### 2.5.2 Position and internal structure of Quality Assurance Bureau

Figure 3 shows the position of QAB within SUA organization structure while Figure 4 shows the internal structure of the quality assurance bureau, which together forms the internal quality assurance system.
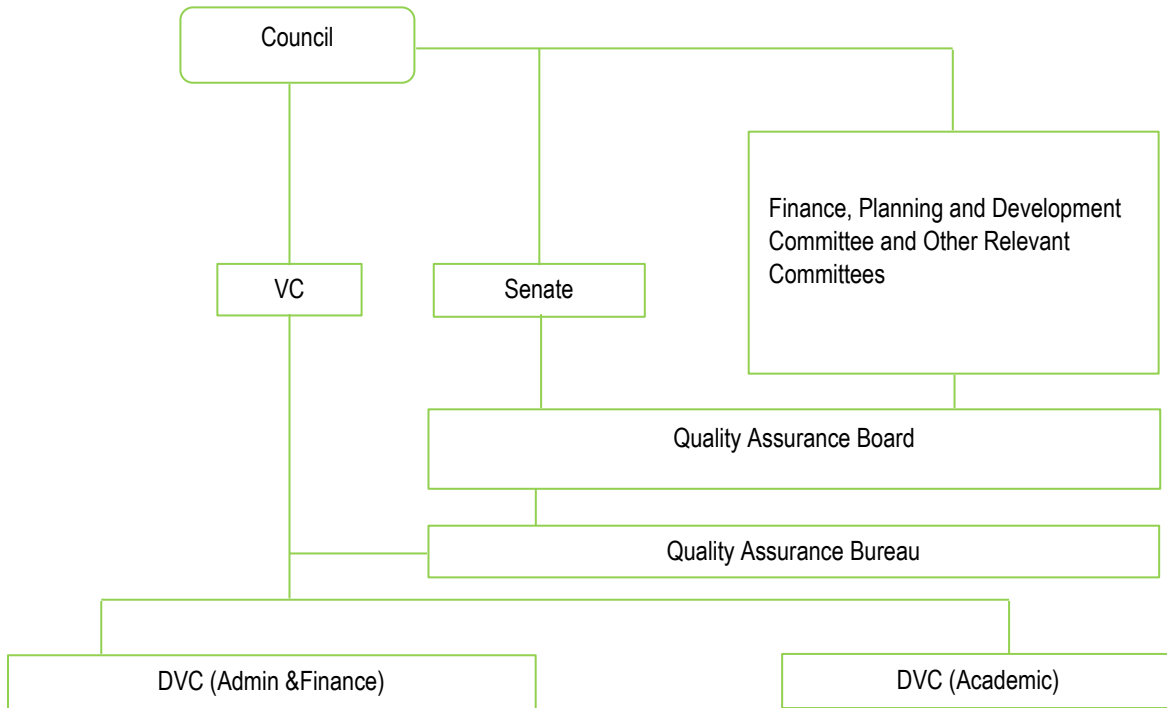
**Figure 3:** Position of QAB within SUA Administrative Structure.

The Quality Assurance Bureau (QAB) assists the key leadership of the University. The role of leadership, as one of the key enablers in the organization, is to provide vision, mission, values, setting up a management system, manning processes, identifying stakeholder's needs and engagement of staff. To achieve its roles and responsibilities, QAB is structured as illustrated in Figure 4.
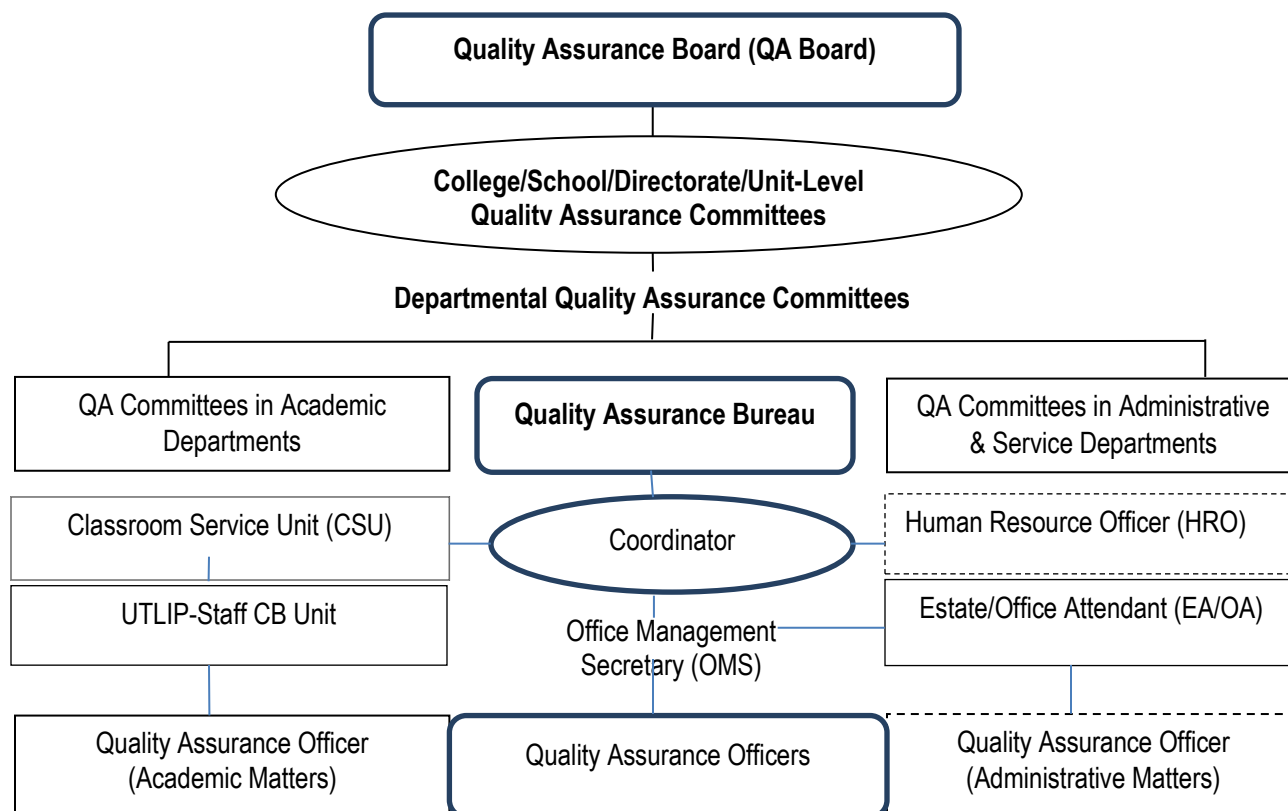
**Figure 4:** The internal structure of Quality Assurance Bureau

### 2.5.3 Quality Assurance Board

The Quality Assurance Board (QA Board) at SUA was constituted based on section 4.4, sub-section 4.4.3 which states that 'there shall be a board on Quality Assurance…'. The first board meeting was held on 22nd February 2018 taking up roles of the previous University-Wide Quality Assurance Committee (UWQAC). The Chairperson of the QA Board is an appointee of the VC. Such person must have attained senior position in a higher learning institution or a senior position in any institution responsible for quality matters. Other members of the board include the following positions:

*Membership to the Quality Assurance Board*
  i.    One member (dealing with quality matters) from the Ministry responsible for Higher Education
  ii.   Chairperson of Utilities and Services Department of the Association of Tanzania Employers (ATE)
  iii.  One senior Auditor from an internal Audit Unit
  iv.   Chairperson of Academic Affairs Committees of SUASA
  v.    Two members from amongst SUASO Ministers/Deputies (One male, one female)
  vi.   The Deputy Vice Chancellors who shall be Ex-officio members and
  vii.  The Coordinator for QAB who shall be the Secretary and an Ex-officio

*Functions of the QA Board*
The functions of the Quality Assurance Board shall be to:
  i.    Oversee the implementation of various responsive strategies for quality assurance in accordance with plans of QAB and advise accordingly;

ii. Approve programme(s) for institutional self-evaluation and to facilitate external evaluation or institutional audits ;

iii. Approve plan (s) to address the external evaluation recommendations;

iv. Advise the university management, staff, and other stakeholders on the evaluation reports;

v. Monitoring the implementation of corrective measures as suggested by external examiners; and

vi. Perform such other functions as may be assigned by the Vice Chancellor.

### 2.5.4 College/School/Directorate/Administrative Unit level QA committees

*Membership to the College/School/Directorate/Unit-based Level Quality Assurance Committees*
i. Chairperson appointed by QA Board
ii. Chairpersons of the Departmental Quality Assurance Committees
iii. Chairperson of outreach committees
iv. One Administrative staff
v. One Technical staff
vi. Two students (one from amongst undergraduate and one postgraduate – one male and one female)
vii. By invitation, the Principal/Dean/Director/Head of Unit

*Functions of College/Institute/Directorate/Unit-level QA Committees*
The functions of the College/Institute/Directorate/Centre level Committees on Quality Assurance shall be to:
i. Formulate and oversee the implementation of various responsive strategies for quality assurance and promotion in accordance with plans of QAB and advise accordingly;
ii. Coordinate programme and institutional self-evaluation and facilitate external evaluation or institutional audits;
iii. Identify strengths and weakness in the training, outreach and research programmes and submit them to QAB;
iv. Evaluate External Examiners' reports and formulate corrective measures; and
v. Perform such other functions as may be assigned by the QA Board.

The College/School/Institute/Directorate/Centre quality assurance committees shall report their matters to the University-Wide Quality Assurance Board.

### 2.5.5 Quality assurance committees in academic departments

*Membership into the Academic Departmental Quality Assurance Committees*
i. A senior member of staff from outside the Department, appointed by QAB
ii. A member of the undergraduate studies committee
iii. A member of the research and publication committee
iv. A member of the postgraduate committee
v. One Administrative staff
vi. One Technical staff
vi. Two students (one from amongst undergraduate and one postgraduate – one male and one female)
vii. By invitation, the head of the respective department

*Functions of the academic departmental QA committees*

The functions of the Departmental Committees on Quality Assurance shall be to:
  i.    Oversee review of curriculum after every 5-years or as determined by the Council;
  ii.   Oversee and evaluate teaching preparations, teaching and end-of-semester examinations;
  iii.  Conduct tracer studies;
  iv.   Oversee effective conduct of regular laboratory practical activities;
  v.    Oversee effective field practical training;
  vi.   Develop Bureau-specific performance procedures and standards;
  vii.  Conduct regular programme self-evaluations to determine whether they meet the set standards in practice;
  viii. Prepare self-assessment reports in readiness for unit and/or university-level external evaluations;
  ix.   Facilitate and oversee students' evaluation of course instructors;
  x.    Evaluate External Examiners' reports and formulate corrective measures, and
  xi.   Monitor and evaluate performance of research and outreach activities; and
  xii.  Perform any other function as may be directed by the Quality Assurance Bureau.

Matters from the Departmental Quality assurance committees shall be reported to College/ School/ Institute/ Directorate-level Quality Assurance Committees.

### 2.5.6 Quality assurance committees in administrative departments

*Membership into Administrative and Service Departmental Quality Assurance Committees*
  i.    A senior members from outside the department
  ii.   One member of social services committee of SUASA
  iii.  One administrative staff from the relevant ministry
  iv.   One SUASO member from relevant Ministry
  v.    One member from the representative trade union
  vi.   By invitation, Head of the respective department.

*Functions of Administrative and Services Departmental Quality Assurance Committees*
The functions of the Departmental Committees on Quality Assurance shall be to:
  i.    Establish open Quality check platform to gauge immediate client satisfaction;
  ii.   Develop Bureau-specific performance procedures and standards;
  iii.  Conduct regular programme self-evaluations to determine whether they meet the set standards in practice;
  iv.   Prepare self-assessment reports in readiness for unit and/or university-level external evaluations; and,
  v.    Perform any other function(s) as may be directed by the Quality Assurance Bureau.

Matters from the departmental quality assurance committees of the Administrative and Service Departments shall be reported to Quality Assurance Board. All technical matters will then be presented before the Committee of Deans, Principals and Directors for inputs and subsequent submission to either Senate or any other relevant committee before the matters are submitted to SUA Council for final approval.

### 2.5.7 Internal monitoring and evaluation at departmental level
According to section 3.2.1c (i-iii), each academic and administrative unit/department, through its departmental quality assurance committee, shall conduct periodic self-appraisal/assessment that enhances

the institutional capacity to effectively undertake its role in ensuring quality training, research and outreach. To achieve this, quality assurance committees have already been set up in all entities of the University and external evaluation of programs, activities and services are in progress on regular basis.

### 2.5.8 Other functional units of the bureau
*Classroom Service Unit (CSU)*
The CSU was established in May 2014, under the QAPB to take responsibility of all teaching venues. The CSU is responsible for ensuring that the teaching and learning environment across the University, at both the Main Campus and Solomon Mahlangu Campus (SMC) are conducive so as to enhance teaching and learning. Hence, the CSU is charged with the responsibility of ensuring that all teaching venues have functioning electricity outlet points, lights and other materials deemed essential for conducive teaching and learning environment including installing, replacing and maintaining classroom equipment and software. Initial emphasis has been on rooms dedicated for delivery of lectures but essentially, when fully staffed and properly resourced, the services should also include laboratories.

*University Teaching and Learning Improvement Programme (UTLIP)*
Teaching is one of the four mandates for SUA, together with research, outreach and consultancy. By tradition, recruitment into the academic cadre at SUA does not require one to have a teacher training background, rather, merit is on the basis of performance in relevant professional degree(s) is given preference. As a result, most of the staff are recruited to teach while having limited skills in teaching, assessing students and related activities. Limited skills in handling the classroom and general student learning environment is a major constraint that affect the quality of teaching, student learning and consequently the quality of graduates. It is from this brief background that UTLIP was formed even before SUA was formally established as a fully-fledged university in 1984. In essence, UTLIP was inherited by SUA from the University of Dar es Salaam but in due course the programme dwindled as a result of lack of resources allocated by the University for Implementation of UTLIP activities. Therefore, the QAPB, in August 2012 sought to revive UTLIP by submitting a request for funding proposal to iAGRI which subsequently provided financial support to implement planned capacity building of academic staff. The initial revival of UTLIP with iAGRI funding eventually stimulated the University to begin allocating funds, though limited, to UTLIP activities. Therefore, even after the exit of iAGRI, UTLIP still continues.

### 2.6 Strategies and instruments for the operationalization of SUA Quality Assurance Policy

### 2.6.1 Key functions of the Quality Assurance Bureau
Based on its relative position in SUA administrative structure Quality Assurance Bureau (QAB) serves as the secretariat to the Vice Chancellor (VC) on all quality related matters. The major task of the bureau is to monitor and guide quality assurance processes across the university, to maintain a close working relationship with the two Deputy Vice Chancellors (DVCs) by keeping them informed of newly arising QA issues falling under their jurisdictions as they carry out their day-to-day activities. In essence, the QAB coordinates the University's quality assurance system including providing technical advice on measures to be taken to maintain high performance standards, including making technical presentations on behalf of the University Management. The QAB shall constantly monitor and periodically evaluate the functioning of other units within the University to determine the extent to which they play their roles as per established regulations and schedules for various activities.

### 2.6.2 Implementation strategies and instruments
Chapter 5 of the SUA Quality Assurance Policy (2017) states that, *'the university shall utilize a variety of*

*strategies and instruments to evaluate the implementation of the QAP's core mission and activities'*. The main strategies will include but not limited to: i) setting milestones or targets to be achieved by means of standard operating procedures (SOPs) and policy implementation plan which, together enable SUA to facilitate internal and external quality audits, its programmes and all the services offered by the University as also complemented by the SUA 'Client Service Charter; and ii) setting up mechanisms of ensuring compliance and accountability by assigning responsibilities of implementation at all levels of the implementation of the QAP through established quality assurance committees at departmental and college/school/directorate/centre/unit levels and cross-checked by the QA Board. The key strategy will be based on conducting after every five years, surveys of stakeholders identified in Table 3 of this document.

**3.0 TOWARDS INTERNATIONALLY RECOGNIZED QUALITY MANAGEMENT SYSTEM (QMS)**
**3.1 Introduction**
According to the International Organization for Standardization (ISO), quality assurance is part and parcel of ISO standard. Therefore, ISO defines quality as part of quality management focused on providing confidence that quality requirements will be fulfilled. At the heart of them all is a focus on stakeholders, robust processes, strong leadership and continual improvement.

During the development of the 4th SUA CSP, it was decided that the CSP should cover a period of five years from 2016 to 2021. This CSP focuses on the University's core functions of teaching, research and public service delivery, but puts emphasis also on capacity building, quality assurance, outreach activities, internal income generation as well as operationalization of the restructuring of the university units. The preparation of the 4th SUA CSP 2016-2021 was participatory and involved SUA management, staff, students and other stakeholders. The Plan also took into consideration the long-term plans of the recently updated SUA 20 years' master plan. To realize the vision of the University and advance the larger goal of an even stronger and more vital University, the key steps to overcome barriers of learning and performance need to be taken and the flexibility needed to meet the changing needs of the institution as well as the nation and the larger world need to be in place. It is against this background and the SUA CSP's strategy number 1.2 and target number 1.2.3 which requires SUA to become ISO[2] 9001:2008 (now ISO 9001:2015) certified and with at least two of its laboratories accredited by 2020 that establishment of internationally recognized quality management system is important.

**3.2 Quality management system: meaning, purposes and potential benefits**
Quality management system (QMS) is a formalized system that documents processes, procedures, and responsibilities for achieving quality policies and objectives. The adoption of a QMS is a strategic decision for an organization that can help to improve its overall performance and provide a sound basis for sustainable development initiatives. Generally speaking, QMS serves many purposes such as the following:
- Improving processes
- Reducing waste
- Lowering costs
- Facilitating and identifying training opportunities
- Engaging staff
- Setting organization-wide direction

The potential benefits of an organization of implementing a quality management system based on this international standard (ISO) are as follows:
i. The ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements;
ii. Facilitating opportunities to enhance customer satisfaction;
iii. Addressing risks and opportunities associated with its context and objectives; and
iv. The ability to demonstrate conformity to specific quality management system requirements.

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[2] ISO is a worldwide federation of national standards bodies (ISO member bodies). The fifth edition (i.e. ISO 9001:2015) replaces the fourth edition (i.e. ISO 9001:2008. It also cancels and replaces the Technical Corrigendum ISO 9001:Cor.1:2009 (ISO 2015).

## 3.3 Principles and actions that connect the quality assurance framework

The following are quality principles and actions that connect the Quality Assurance Framework:

*Principle 1 – Customer focus*

> Organizations depend on their customers and therefore, should understand current and future customer needs, should meet customer requirements and strive to exceed customer expectations. To achieve this, SUA is currently developing a 'Client Service Charter' and the Management has already engaged all Principals, Dean, Directors and heads of academic, administrative and service units to work on the provided guidelines.

*Principle 2 – Leadership*

> Leaders establish unity of purpose and direction of the organization. They should create and maintain the internal environment in which people can become fully involved in achieving the organization's objectives. The Vice Chancellor, as Chief Executive Officer is responsible to make this effective.

*Principle 3 – Engagement of people*

> People at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization's benefit. The Quality Assurance Bureau, in consultation with the office of the DVC (Academic), College Principals, Dean and Directors, and Heads of Departments (academic, administrative and service departments) has constituted the Quality Assurance Board and various quality assurance committees across the University.

*Principle 4 – Process approach*

> A desired result is achieved more efficiently when activities and related resources are managed as a process. This has been the norm since the establishment of the Bureau in 2009.

*Principle 5 – Improvement*

> Improvement of the organization's overall performance should be a permanent objective of the organization. This has also been the norm as illustrated in Table 1 above.

*Principle 6 – Evidence-based decision making*

> Effective decisions are based on the analysis of data and information. SUA usually make its decisions based on evidence-based research through task forces or independent consultants.

*Principle 7 – Relationship management*

> An organization and its external providers (suppliers, contractors, service providers) are implemented and a mutually beneficial relationship enhances the ability of both to create value.

## 3.4 Approaches used in implementing QMS in an Organization

This International Standards can be used by internal and external parties. It employs the process approach, which incorporates the Plan-Do-Check-Act (PDCA) cycle and risk-based thinking.

### 3.4.1 The PDCA cycle

The PDCA cycle (Figure 5) enables an organization to ensure that its processes are adequately resourced and managed, and that opportunities for improvement are determined and acted upon while risk-based

thinking enables an organization to determine the factors that could cause its processes and its quality management system to deviate from the planned results, to put in place preventive controls to minimize negative effects and to make maximum use of opportunities as they arise.
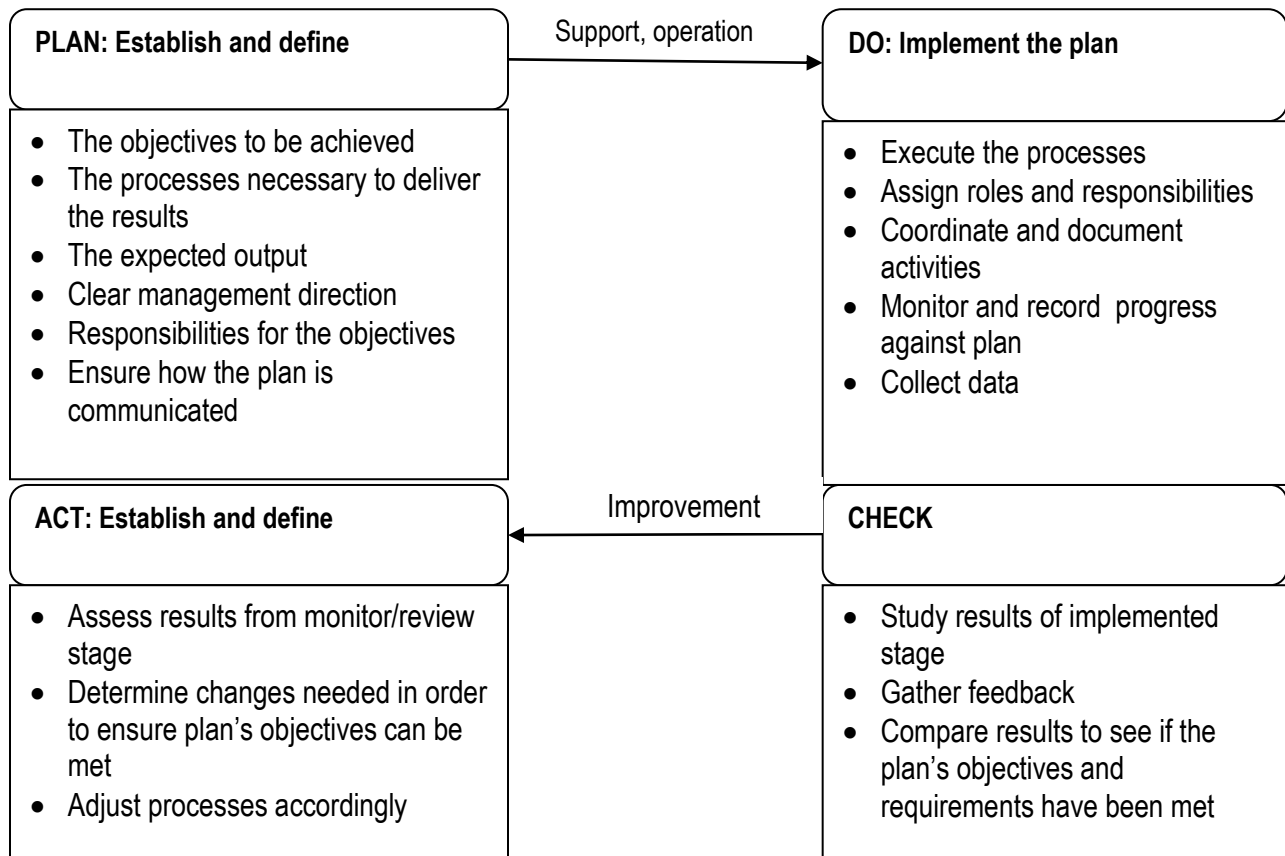
| PLAN: Establish and define | DO: Implement the plan |
|---|---|
| • The objectives to be achieved<br>• The processes necessary to deliver the results<br>• The expected output<br>• Clear management direction<br>• Responsibilities for the objectives<br>• Ensure how the plan is communicated | • Execute the processes<br>• Assign roles and responsibilities<br>• Coordinate and document activities<br>• Monitor and record progress against plan<br>• Collect data |
| ACT: Establish and define | CHECK |
| • Assess results from monitor/review stage<br>• Determine changes needed in order to ensure plan's objectives can be met<br>• Adjust processes accordingly | • Study results of implemented stage<br>• Gather feedback<br>• Compare results to see if the plan's objectives and requirements have been met |

*Support, operation* (PLAN → DO)
*Improvement* (CHECK → ACT)

**Figure 5:** Illustration of the PDCA cycle within the quality management system

For successful QMS, the implementers need to thoroughly know the organization and its context, the customer (student) requirements, needs and aspirations of relevant interested parties (stakeholders), customer satisfaction and products and services as key results of the QMS. Planning, leadership, support operations and performance evaluation are key cross-cutting activities that need to be taken into consideration in the PDCA cycle. In summary, planning entails establishing the objectives of the system and its processes, and the resources needed to deliver results in accordance with customers' requirements and the organizations' profiles, and identify and address risks and opportunities. Doing entails the actual implementation of what was planned. Checking entails monitoring and (where applicable) measure processes and the resulting products and services against policies, objectives, requirements and planned activities and report the results. Acting entails taking actions to improve performance, as necessary.

### 3.4.2 Risk-based thinking

Risk[3]-based thinking is essential for achieving an effective QMS. The concept of risk-based thinking has been implicit in the previous editions, for example carrying out preventive action to eliminate potential nonconformities, analysing any nonconformities that do occur and taking action to prevent recurrence that

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[3] Risk is the effect of uncertainty and any such uncertainty can have positive or negative effects. A positive deviation arising from a risk can provide an opportunity, but not all positive effects of risk result in opportunities (ISO, 2015).

is appropriate for the effects of the nonconformity. To conform to the requirements of the ISO 9001:2015, an organization needs to plan and implement actions to address risks and opportunities. Addressing both risks and opportunities establishes a basis for increasing the effectiveness of the quality management system, achieving improved results and preventing negative effects.

Opportunities can arise as a result of a situation favourable to achieving an intended result, for example, a set of circumstances that allow the organization to attract customers (e.g. students), develop new products (e.g. degree programmes) and services (e.g. TV and radio outreach facilities), reduce waste or improve productivity. Action to address opportunities can also include consideration of associated risks. The introduction on the requirements to establish a quality management system at SUA based on international standards was given by experts from the Tanzania Bureau of Standards (TBS) on 26th February 2018 during awareness raising training for SUA top management. Details of quality management system can be found in the Fifth Edition of ISO 9001:2015 (E).

In a nutshell, to establish a QMS, the organization needs to demonstrate its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements and aims to enhance customer satisfaction through effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. The good news is that all requirements of this International Standard are generic and are intended to be applicable to any organization, regardless of its type or size, or the products and services it provides. In this International Standard, the term ''product' or ''service'' only apply to products and services intended for, or required by a customer and that statutory and regulatory requirements can be expressed as legal requirements such as accreditation by TCU in the case of SUA.

**4.0 TOWARDS AN INTEGRATED QUALITY EVALUATION MODEL**

**4.1 Introduction**

An integrated management system (IMS) is a set of interconnected processes that share a pool of human, information, material, infrastructure, and financial resources in order to achieve a composite of goals related to the satisfaction of a variety of stakeholders. The purpose of this Section is to illustrate and justify why SUA has to adopt an IMS in implementing quality activities. The major aim of IMS is to integrate the systematic and coordinated implementation of the requirements laid down in various international standards and industry standards in a single uniform management system. There are four key questions regarding the designing and implementation of an IMS:

i. How could internal and external evaluations and self-assessments be designed in a synergistic and meaningful manner and how could they be integrated across the three core missions of SUA?
ii. Can SUA-Industry linkage be evaluated using criteria based on existing TCU's quality assurance minimum standards and guidelines?
iii. Which practices in the centers of excellence can be part and parcel of the integrated QA management system at SUA?
iv. What are the current state and trends in integrated management systems in the private sector?

The above key questions can be addressed by an integrated quality evaluation model below.

**4.2 Integrated quality evaluation model**

In order to be efficient and effective, QA activities and processes in higher education should function as a coherent whole (integrated), both across the institution's three missions (teaching, research and outreach) and across units, institutional and societal levels (Figure 6). If successfully designed and implemented, the proposed integrated model will help SUA to expand its scope from conformance to excellence and from the customer to all stakeholders. This is important because as SUA grows in terms of number of students, staff, programmes, linkages and training and outreach stations, different bodies and regulations with mandatory or recommended control systems, it will inevitably experience complexity in systematic evaluation. To get rid of this potential challenge, SUA has to put in place an integrated quality evaluation model (Figure 6).
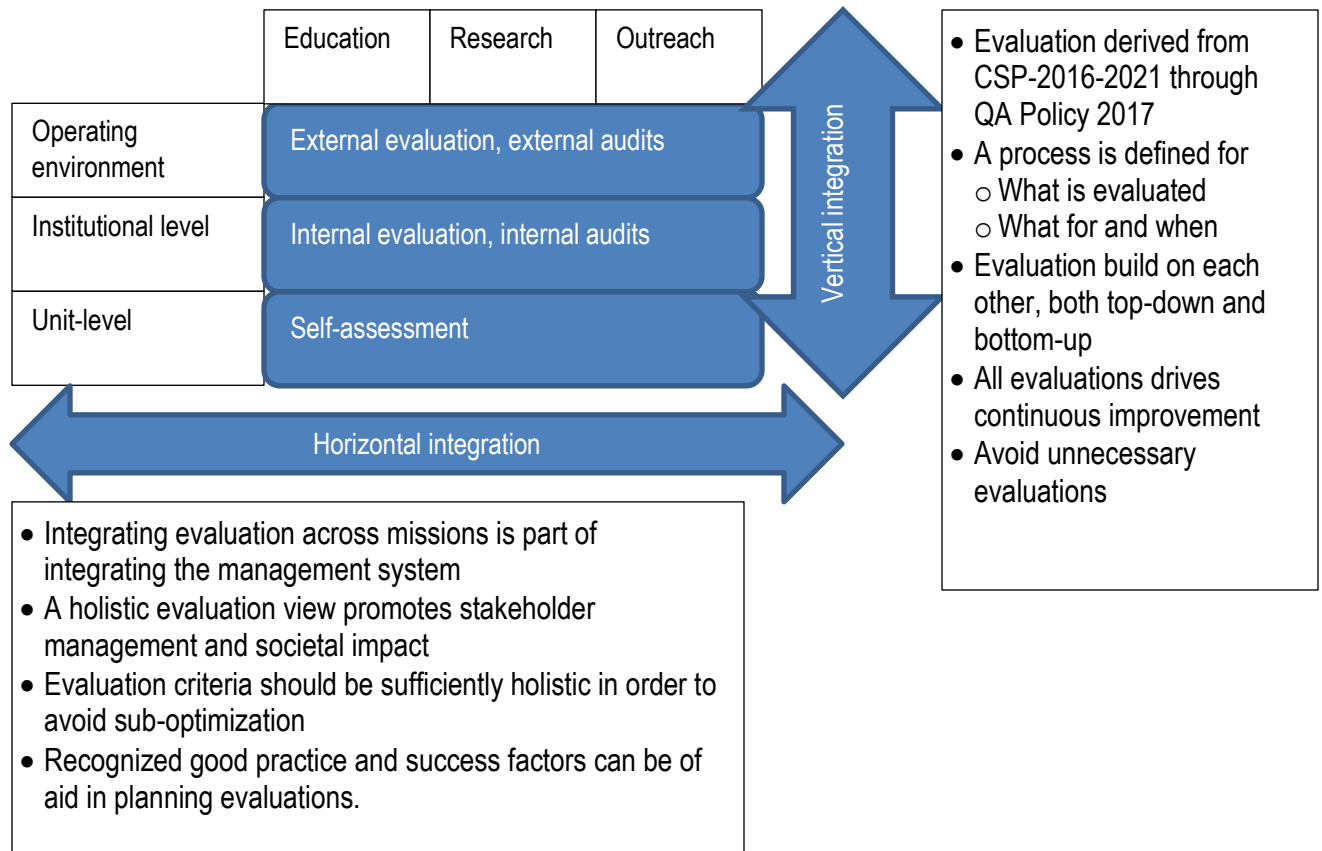
| | Education | Research | Outreach | |
|---|---|---|---|---|
| Operating environment | External evaluation, external audits | | | |
| Institutional level | Internal evaluation, internal audits | | | |
| Unit-level | Self-assessment | | | |

Vertical integration

Horizontal integration

- Evaluation derived from CSP-2016-2021 through QA Policy 2017
- A process is defined for
  - What is evaluated
  - What for and when
- Evaluation build on each other, both top-down and bottom-up
- All evaluations drives continuous improvement
- Avoid unnecessary evaluations

- Integrating evaluation across missions is part of integrating the management system
- A holistic evaluation view promotes stakeholder management and societal impact
- Evaluation criteria should be sufficiently holistic in order to avoid sub-optimization
- Recognized good practice and success factors can be of aid in planning evaluations.

**Figure 6:** Key aspects of vertical and horizontal integration of quality evaluations (Source: Kouppala, 2016)

**5.0 CONCLUSION AND RECOMMENDATIONS**

Inclusive systems or frameworks with leadership commitment and stakeholders' participation are confirmed as important internal factors for effective internal quality assurance. The purposes of developing this internal quality assurance framework are twofold: first, to help SUA comply with the requirement of external statutory and regulatory bodies; and second to generate information that responds to SUA's own requirements for internal quality monitoring and management. However, as already discussed in this document, quality is a multidimensional concept with three main components. The first one is the structural quality component, which looks at how an institution (e.g., SUA) system is designed and organized (organization and its context). This often includes rules associated with the accreditation and approval of SUA; requirement about the number of professionally trained staff; the design of curriculum, regulations associated with the financing of SUA; the ratio of staff to students; arrangements to ensure fair treatment and the availability of health and safety facilities. The second component is process quality, which looks at practice within SUA setting. It often includes the role of experts within the curriculum; relationships with stakeholders and relationships between staff and students. The third component is the output quality, which looks at the benefits for students and graduates, employers, families, communities and the society at large. Based on the above conclusion, QAB is recommending for a dedicated effort to institute an integrated quality assurance system based on the PDCA cycle and risk-thinking as recommend in the ISO 9001:2015 document. Since an integrated model accommodates issues beyond the minimum standards, it inevitably addresses issues of excellence. It is therefore, recommended that SUA based centres of excellence be part and parcel of the design of PDCA cycle and integrated quality model to achieve triple goals (excellent teaching, research and outreach).

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