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The Impact of Quality Assurance on Quality Performance for Academic Programmes in the Colleges of Sudan University of Science and Technology

أثر ضمان الجودة للبرامج الأكاديمية في جودة أداء جامعة السودان للعلوم والتكنولوجيا

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By

Abla Ibrahim Mohamed Salih

B.Sc., College of Science (2009)
Sudan University of Science and Technology

Supervisor

Professor Dr. Amel Omer Bakhiet

Sudan University of Science and Technology

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DEDICATION

- ♣ To my parents for their endless love, support, and encouragement

- ♣ To my sisters and brothers

- ♣ To my husband who gives me strength to reach for the stars and chase my dreams

- ♣ To my colleges in Quality and Excellence Center batch five

- ♣ To all the teachers and instructors I had throughout my educational stages

- ♣ To all my friends

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ABSTRACT

The objectives of this study were to evaluate and determine the role and benefits of implementing the Quality Assurance Guide for Academic Programs on the Faculties of Arab Universities on higher education and how it could contribute on bringing significant improvement to University performance, increasing customers satisfaction, and increasing the ability of University and graduates to global competition and then increasing the competitive advantages and to achieve the University mission and strategic objectives.

Sudan University of Science and Technology a case study; because it is adopting the guide for quality assurance of academic programs. A Questionnaire was distributed randomly to the faculty members at three levels (lecturer, assistance professor, associate professor), the questionnaire include concepts and contents of the guide axes. Thirty questionnaires were distributed, and two were missed, so the results were calculated out from only 28 questionaire

The questionnqire was analyzed by statistical techneques, and the resuls were discussed and the recommendations were developed.

It is concluded that Sudan University of Science and Technol has the adopted of the Quality Assurance Guide effectively and clearly obvious that this guide has contributed on the development of long term goals and these goals were linked with the University vision and mission. This will lead to continuous improvement of the University.

المستخلص

الهدف من هذه الدراسة تحديد وتقييم الفائدة من تطبيق دليل ضمان جودة البرامج الأكاديمية أتحاد الجامعات العربية في التعليم العالي وكيف يساهم في عملية تحسين الأداء بالجامعات وزيادة رضاء العملاء وزيادة مقدرة الجامعة والخريجين على المنافسة العالمية وبالتالي زيادة الميز التنافسية للجامعة وتحقيق رسالتها وأهدافها .

في هذا البحث أُخذت جامعة السودان للعلوم والتكنولوجيا كدراسة حالة بإعتبارها تتبنى دليل ضمان جودة البرامج الأكاديمية. وتم توزيع الإستبيان على أعضاء هيئة التدريس بالجامعة بمستوياتهم الثلاثة (محاضر و أُستاذ مساعد و أُستاذ مشارك). إحتوى الإستبيان على مفاهيم ومضامين محاور الدليل. تم توزيع إستبيان بطريقة عشوائية.

حُللت هذه الإستبيانات بالتقنيات الإحصائية ومن ثم تم مناقشة النتائج ووُضعت التوصيات.

وتوصلت الدراسة الي أن جامعة السودان للعلوم والتكنولوجيا تبنت الدليل بصورة فعالة وساهمت في وضع خطة (أهداف) طويلة الأمد بالجامعة وربطت هذه الأهداف برؤية ورسالة الجامعة مما يؤدي إلى التحسين المستمر بالجامعة.

TABLE OF CONTENTS

LIST OF TABLES

No.		Page
1	The response rate to University vision and mission (%)	22
2	The response rate to University objectives (%)	22
3	The University (College) needs of the new scientific disciplines	26
4	The response to scientific research mechanisms	26
5	The ability of graduates to competition	28
6	The motivation for teachers, administrators and staff	30

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

Universities have proven to be the most difficult areas for adopting and implementation of quality management techniques. However, very little conclusive evidence appears to evaluate what has or has not been effective (Quinn *et al.,* 2009).

Total Quality Management (TQM), Quality Function Deployment (QFD), Six Sigma, ISO 9001, and the Malcolm Baldrige National Quality Award are the mostly used methodologies of quality management in higher education. TQM has been the most applications used in higher education, while QFD is gaining in popularity. The Academic Quality Improvement Program (AQIP), a continuous improvement technique used exclusively in higher education, highlights how higher education has adapted quality management techniques in the framework of collegiate accreditation (Quinn *et al.,* 2009).

The Association of Arab Universities (AARU) is a non-governmental organization and was established in 1964. Its membership includes 260 Arab Universities at the present time. The Council of Quality Assurance and Accreditation is one of the AARU different affiliated councils. Its mission is to assist Arab Universities to improve their quality, through spreading of the culture of QA, preparing QA guides, provide advice and training to support the process of QA and Accreditation for institutes and programs. AARU has indorsed a Guide of Quality Assurance for Academic programs in the Faculties of Arab Universities (www.aaru.edu.jo/).

The successful implementation efforts must include: a diverse, cross-functional planning and implementation team; a broad commitment to the

effort; a well-defined communication plan; and a willingness to have smaller, pilot implementations to build credibility and success (Magutu *et al.,* 2010).

Issues of Quality of Education need to move to the forefront of the educational agenda of policy makers at higher education level. Considering the huge public and private investment in university education, there is an urgent need to evaluate how effectively the investment is being utilized by examining the quality of the educational infrastructure, the cadre of qualified tutors and other resources in place, and the quality of teaching and learning (UNESCO, 2003). The Sudan University of Science and Technology (SUST) is established in 1990 and has developed and evolved strong, diversified academic programmes and specializations in engineering, sciences, fine art, technology, humanities. SUST owes its origin to several developments in higher education within the country and the region. The inception of SUST is traced back to 1950 when the Technical Institute admitted its first lot of A-level graduates for technical courses. Hence there is a need to document the most critical quality management practices used in its education services.

Problem of the study:

Most of the universities in Sudan have no implementation to any quality management system, and also not implementing educational quality standard; which lead to weakness of the output of educational process.

Research Questions:

1 /Is Sudan University of Science & Technology Implement the Quality Assurance Guide for Academic Programs in the Faculties of Arab Universities?

2/Are the Students and Staff at Sudan University of Science and Technology display Satisfaction?

Hypotheses:

1/Implementing the Quality Assurance Guide for Academic Programs in the Faculties of Arab Universities in Universities will lead to constant processes of improving the universities

2/Implementing the Quality Assurance Guide for Academic Programs in the Faculties of Arab Universities in process niversities will lead to customer satisfaction (Internal and External customers)

3/Implementing the Quality Assurance Guide for Academic Programs in the Faculties of Arab Universities in universities will lead to global competition among the international Universities

The objectives of this study were:

- To study the University academic services in conjunction with the main Quality Assurance (QA) features of the Guide for ensuring the Quality of Academic programs in the Faculties of Arab Universities
- To investigate the quality assurance implementation at the institutional level.

CHAPTER TWO
LITERATURE REVIEW

2-1. Quality assurance concept

To improve company performance Joseph Juran (1950's); Edward Deming (1950's) and Philip Crosby (1980's) have put forth several approaches towards quality (Magutu *et al.*, 2010). These approaches are a set of quality management practices, known as Total Quality Management (TQM). Quality management in universities on account of these policies has been as selfassessment and external assessment of the institutions, accreditation and certification systems, and different models of TQM (Wiklund *et al.*, 2003, Magutu *et al.*, 2010). Quality Management (QM) presents a strategic option and an integrated management philosophy for organizations that allows them to reach their objectives effectively and efficiently, and to achieve sustainable competitive advantage (Goldberg and Cole, 2002; Magutu *et al.*, 2010).

QM is generally described as a collective, interlinked system of quality management practices that is associated with organizational performance (Cua *et al.* (2001), and Kaynak (2003), outlined the importance of causal relations between quality management practices. There is a prevailing belief that higher education has entered a new environment in which quality plays an increasingly important role (Bergman, 1995; Magutu *et al.*, 2010).

Quality of education is the key factor in the competition between countries since the quality of products and services is determined by the way that "managers, teachers, workers, engineers, and economists think, act, and make decisions about quality"(Feigenbaum, 1994).

Higher Education considered as one of the few industries in the world where a single person can design, develop, deliver and evaluate the quality of a product

with little oversight or supervision. Education is not like industry as an element of pride. If education likes industry, students would be getting a better, faster and cheaper education than they now enjoy (www.iso.org).

The world of education is facing a rapidly rising tower of Babble of unlimited and fragmented worldwide educational resources creating infinite skills that can neither be valued nor connected to the needs of employers. Nothing short of a global effort is required to rapidly define, develop and implement a new set of standards both in terms of quality and quantity that defines holistic learning for individuals and organizations, just as ISO 9000 did for quality management systems (www.iso.org)

Rath (2010) stated that the purpose of higher education is more complex because there are multiple stakeholders such as governments, employers, professional bodies and associations and so on involved in discussions about quality assurance issues, and they tend to impose different views on the quality of higher education. The auther reported that a business organization has a clear purpose o brofitability and to achieve this purpose, a managerial approach to quality management is appropriate for the business setting. The increase in the use of a managerial approach to quality assurance in the academic context has attracted much criticism, because it weakens the well-established collegial tradition in higher education institutions (Rath, 2010).

Harvey and Newton, (2007) noted that the conceptual framework for quality assurance in higher education is rather realistic by new public management and is mainly driven policy that higher education needs to be held accountable to the public. Although not a universal approach, methods such as self-evaluation, performance indicators, peer review, and self- assessment reports (SRA) have been used as a forms for checking and assuring quality in higher education (Harvey and Newton, 2007).

2-2. Quality:

Quality has always been a most important issue for purchasers of products and services whether the product or service bought or provided fulfil its expectations or not. Therefore, the theory of quality control was developed to check product and services: inspecting and testing products, or monitoring the service process and service delivery, then feeding the results back to the process to achieve improvement. This often involves the use of statistics with samples being checked at various stages. However, this still did not guarantee quality (www.iso.org)

2- 3. Standard:

The International Organization for Standardization (ISO) and others define a standard as a "Document approved by a recognized body that provides, for common and repeated use, rules, guidelines, or characteristics for products, processes or services with which compliance (www.iso.org)

2-4. Education about standards

International Standards bring technological, economic and social benefits. They help to harmonize technical specifications of products and services, making industry more efficient and breaking down barriers to international trade. International Standards also contribute effectively to sustainability, by providing good practices on the use of technologies and the management of processes affecting economic, social and environmental aspects (www.iso.org)

2-5. ISO 9001:2008:

Provides a set of standardized requirements for a quality management system, provides a tried and tested framework for taking a systematic approach to managing the organizations processes so that they consistently turn out

product that satisfies the customers' needs, and puts what requirements the quality system must meet, but does not indictate how they should be met (www.iso.org).

Educational institutions are increasingly recognizing these benefits and international standardization features in many curricula. ISO recognize the important contribution educational institutions bring to raising awareness of standardization and its benefits, and are enthusiastic to support their work (www.iso.org)

2-4-1. ISO 9001:2008 Quality Management Systems Requirements:

The ISO 9000 family addresses various aspects of quality management and contains some of ISO's best known standards. The standards provide guidance and tools for organizations to ensure that the products and/or services consistently meet customer's requirements, and that quality is consistently improved (http://www.iso.org/iso/iso_9000).

2-5. Quality Management in Higher Education

Quality in higher education has proved to be a challenging task (Magutu *et al.,* 2010). Cheng and Tam (1997) noted that "education quality is a rather vague and controversial concept" and Pounder (1999) suggested that quality is a notoriously ambiguous term. Magutu *et al.,* (2010) recorded that the result of the difficulty in defining quality, the measurement of quality has also proved to be contentious. Various attempts have been drawn on industry models to develop quality assessment models for higher education such as the quality dimensions of Gronroos, Garvin and Parasuraman (Owlia and Aspinwall, 1996), SERVQUAL (Oldfield and Baron, 1998; Aldridge and Rowley, 1998), importance performance analysis (Ford *et al.*, 1999) and the balanced scorecard (Cullen *et al.*, 2003). Internationally, total quality management (TQM) is the tool most frequently drawn upon (Cruickshank, 2003), TQM is

defined as a management approach of an organization, centered on quality, based on the participation of all its members and aiming at long run success through customer satisfaction and benefits to all members of the organization and to society (Wiklund *et al.*, 2003; Magutu *et al.,* (2010).

Roffe (1998) suggested that there are a small number of quality indicators in industry, that are more numerous and complex in higher education and are therefore more difficult to assess. Hewitt and Clayton (1999) recommend that a model of educational quality that is different from, but capable of being related to commercial models is beginning to emerge.

Srikanthan and Dalrymple (2003) suggested a starting point for comprehensive assessment of practices to determine the extent to which different meanings of quality and different stakeholder perspectives are taken into account. Drawing on relevant literature from both education and industry, a new framework for a quality audit tool has been developed in order to assess quality management approaches within higher education.

The perception of quality of education by many academics is increasingly becoming a problem (Lewis and Smith (1994) and (Coate, 1993) stated that unsatistied customers and low employee morale are also mentioned as major challenges in universities. Engelkemeyer (1993) described the shortcomings of present higher education systems as poor teaching, anachronistic programmes, incoherent curricula, excessive price, and growing and inefficient administrative bureaucracies. Hansen, (1993) recorded that QM is seen by many as having enormous potential to respond to the challenges. Cowles, (1993) also noted that QM can be applied as a means for improving student/ staff morale, increasing productivity, and delivering higher quality services to both internal and external customers.

The characteristics of a higher education system need an operational definition of quality, one that provides a way for improvement as the variety of

stakeholders (e.g. students, parents, employers, faculty members, government, and general society) having different interests, adds to the complexity of higher education(Magutu *et al.,* (2010).

Stensaasen, (1995) stated that higher quality can be gained through attracting more capable students and hiring higher quality staff, as well as absorbing more industrial grants which are all market related. This proposes the possible adoption of commercially based approaches such as QM in a public sector like higher education.

Magutu *et al.,* (2010) suggeded that higher education is able to adopt many of the principles of QM. The concern is that there will be a direct relationship between the conception of higher education being taken, the definition of quality being used and the performance indicators chosen to measure quality (Tam, 2001).

2-6. Characteristics of Education Services

Magutu *et al.,* (2010) mentioned that a conceptual foundation that involved five criteria, each of which can be examined on four dimensions has been offered by Lovelock (1983). These characteristics can be described as follow: The nature of the service act – the education service act is directed at people (their minds rather than their bodies), it is primarily "people based" rather than "equipment based" (Thomas, 1978), and involves largely intangible actions (Shostack, 1977). The relationship with the customer –education involves a lengthy and formal relationship with the client and a continuous delivery of the service. Magutu *et al.,* (2010) added that the students have what Lovelock (1983) refers to as a "membership" relationship with the service provider, offering an opportunity to develop strong client loyalty and enhanced client services.

2-7. The Arab Network for Quality Assurance in Higher Education (ANQAHE)

ANQAHE is launched on the 9th of June, 2007 in Jordan. It is an independent, non- profit, non governmental, organization. The mission of ANQAHE is to ensure and strengthen the quality assurance of higher education institutions, to enhance the collaboration between similar quality assurance organizations in the Arab region and to develop cooperation with other regional and international quality assurance networks (Badrawi, 2008).

2-7.1. Goals of ANQAHE

Support and enhance quality assurance organizations in the Arab region, establish a mechanism of cooperation in the field of quality assurance in higher education in the Arab region, initiate and sustain regional and international cooperation for quality assurance in higher education, exchange information on quality assurance in higher education and develop a system for capacity building in the Arab region (Badrawi, 2008).

2-7.2. Methodology of ANQAHE

The methodology of ANQAHE is the dissemination of information, reference to the databases and good practice, organization of seminars workshops and conferences, exchange experts and assist in mutual recognition (Badrawi, 2008).

2-7.3. Challenges encountered in Emerging ANQAHE

These challenges are identification of the region, small scale representation of all the Countries, diversity of the nature of Quality Assurance Bodies, financial constrains, lack of professional Quality Assurance expertise, communication deficiencies, political intervention and domination of the State, and the emerging of other networks with similar name for the same region (Badrawi, 2008).

2-7.4. Situation of QA in Arab Countries

There are differences/diversities in quality assurance levels and HE system between the countries.All current national QA bodies have not addressed both issues of quality assurance and accreditation and the national quality assurance bodies are governmental and non are completely independent (Badrawi, 2008). Only few countries have quality assurance commission or agencies separately from the ministries of higher education but still nominated by the ministries or the prime minister as in Bahrain, Egypt, Jordan, Oman, Palestine, Saudi Arabia, Sudan, and UAE (Badrawi, 2008). There is a high political influence on QA in the Arab countries, little adequate information provided to the public on quality assurance issues, a lack of sufficient numbers of qualified faculty members, weak documentation in general and weak cooperation and links between national quality assurance bodies with regional and international quality assurance counterparts (Badrawi, 2008).

2-8. The Association of Arab Universities (AArU)

It is a non-governmental organization that has an independent legal character. Its membership includes 260 Arab Universities at the present time. AARU's was established in 1964 upon a resolution issued by the Arab League. A temporary Secretariat General was formed in Cairo, Egypt. In 1969, permanent Secretariat General was designated. Its permanent headquarters has been in Amman since 1984, the capital of the Hashemite Kingdom of Jordan (http://www.aaru.edu.jo)   .

The mission of AARU aims at "Assisting and coordinating the efforts of Arab Universities to prepare capable graduates who can serve their Arab communities and preserve its unified culture and civilization, as well as to assist in developing its natural resources."

The Association of Arab Universities has many important goals such as:

Enhancing cooperation amongst Arab universities and institutes of higher education and scientific research; cooperating with counterpart associations and institutions to raise the level of higher education, to promote joint research projects, and to exchange knowledge; maintaining close relations with many national, regional and international institutions and organizations to exchange ideas and experience in fields of higher education and research; supporting and encouraging mutual mobility of students and staff members among Arab universities and cooperating to promote quality assurance and accreditation in the Arab Universities (http://www.aaru.edu.jo).

The Association of Arab Universities functions through three main bodies; The General Conference of the Association, which is the highest authority of the Association; The Executive Council and the General Secretariat http://www.aaru.edu.jo),

AArU has also affiliated councils, centers and funds that are hosted by various member universities (http://www.aaru.edu.jo)

2-8-1. The Council of Quality Assurance and Accreditation (AArU).

The Council's mission is to assist Arab Universities to improve their quality, through spreading of the culture of QA, preparing QA guides, provide advice and training to support the process of QA and Accreditation for institutes and programs (http://www.aaru.edu.jo) .

The Arab world today faces a host of hurdles when it comes to higher education and scientific research including a lack of clear focus in research priorities and strategies, insufficient time and funding to meet research goals, low awareness of the importance and impact of good scientific research, inadequate networking opportunities and databases, limited international collaborative efforts, and of course, the brain-drain (http://www.aaru.edu.jo)

2-8-2. Quality Assurance

As a result of Globalization, competitiveness and accelerating expansion of private Higher Education, it is vital to take several actions such as:

To establish national quality assurance frameworks and to develop current established ones in order to guarantee the quality of education and control its outcomes; to develop, enhance and review current internal quality management systems; to encourage establishing regional quality assurance networks to help promoting QA of higher education in the region; to build capacities for education quality assurance systems

To develop action plans on quality assurance of higher education institutions and to enhance international cooperation in fields of Higher education quality assurance (http://www.aaru.edu.jo)   .

2-8-3. Role of AARU in Quality Assurance

Due to the importance of the topic of quality assurance, the Council of AARU agreed in its meeting in Algeria 2006 to establish a council for quality assurance and accreditation (QAAC) for member universities to adopt the policies of the Association (http://www.aaru.edu.jo).

AArU cooperates with national accreditation bodies to discuss and plan together in order to create an Arab umbrella to take the responsibility of quality assurance, while making all efforts with UNESCO and relevant organizations, to give effect to the Convention on the Recognition of Studies, Certificates, Diplomas, Degrees and other Academic Qualifications in Higher Education in the Arab States to ensure promoting academic mobility and strengthening international understanding (http://www.aaru.edu.jo).

2-9. Quality Assurance Guide for Academic Programs in the Faculties of Arab Universities (appendix 1)

The General Secretariat has prepared a draft of self and external assessment of the Arab Universities -Union members- and has been approved by the ministers responsible for higher education and scientific research in the Arab world at their seventh meeting in Riyadh in May 1999 (Majeed, 2009). (www.aaru.edu.jo/).

Evaluation and Accreditation Authority of Arab universities were established with its programs in 2001. A panel of experts was formed in September 2001, and has prepared a guide of self and external evaluation of Arab universities and was circulated to Arab Universities in 2003.

For the development of the concept of quality and accreditation, and to acquire growing interest globally and regionally, was prepared by the Secretariat of the Union a project of establishing the Board of Quality Assurance and Accreditation, where its statutes, its organizational structure, defining the functions and units of the Executive Office of the Council of Quality Assurance and Accreditation in Arab Universities were approved in 2007 (Majeed, 2009). The formation of an advisory committee of the General Secretariat of the Union and experts was done in 2007.

The Council of Quality Assurance and Accreditation in Arab Universities Union, put evidences to guide universities to evaluate the quality of their performance, or to request the Board of Quality Assurance and Accreditation for quality assurance certification, namely:

A. A Guide of self and external evaluation of the Arab Universities- Union members .

B. A guide of quality assurance and certification of the Arab Universities- Union members.

C. A guide of quantitative indicators and quality metrics, to measure the quality of the performance of members of the Union of Arab Universities.

D. A guide of quality performance standards of Arab Universities.

E. A manual of quality assurance and accreditation of academic programs.

F. A guide of quality assurance and accreditation for academic programs

G. A guide to compose a database and information (Majeed, 2009, www.aaru.edu.jo/).

2-9-1 The purpose of the preparation of this evidence is:

A/ Self-evaluation of Universities:

A process carried out by the Quality Assurance Unit at the university, in the light of the rules and standards set out in the guide for self and external-evaluation prepared by the General Secretariat of the Union , it can be a self-evaluation of the university, the academic department, curriculum, faculty members and others (Majeed, 2009, www.aaru.edu.jo/).

The guide should be composed of the following themes:

i- Mission of the university- its goals and programs

ii- Financial and material resources.

iii-Administration.

iv- Programs and academic disciplines and evaluation of students.

v- Faculty members and their assistants.

vi- Students.

vii- Scientific research.

viii- Community service.

ix- Libraries and information sources.

x- Cultural relations, public relations and graduates' affairs.

B/ style of exterior evaluation

It is a process carried out by a third party, assigned the Executive Office of Quality Assurance and Accreditation, in the Union or the Ministry of Higher Education or any other party, and is working to evaluate the university in light of the regulations and standards set by external actors and external evaluation, can be of the university or the unit or section or course or a specific curriculum (Majeed, 2009, www.aaru.edu.jo/)

C/ Style of reference comparisons:

It is a continuous and regularly process, performed to compare the results of the performance of the institution's work with the results of the work itself in another institution of the same jurisdiction, taking into account the activities and internal processes and functions carried out by the institution (Majeed, 2009, www.aaru.edu.jo/)

D/ Peers evaluation:

It means the process of participation and contribution of university professors, researchers and practitioners, in the sentencing or giving advice or issuing decisions on the proposal of new academic programs or to continue or modify the existing ones (Majeed, 2009, www.aaru.edu.jo/)

E/ Ensuring the overall quality of the university:

It means; to evaluate the quality of the university as an integrated system, covering all components, dimensions and areas. It is a continuous process of monitoring of the inputs, processes and outputs of the institution and the level of quality achieved, or are working to achieve comparable national or Arab or international level, often are used the handling systems, as an evolutional model, with detailed and precise features of calculation of all the elements and variables involved in the system of inputs and operations Process and Output (Majeed, 2009, www.aaru.edu.jo/)

F/ Accreditation:

It is an academic rank or an academic position ,were is granted to a scientific institution or program , in case the institution meets national or Arab or international quality standards according the institution's educational evaluation, and this is a key step for the organization to move towards excellence in the framework of compatibility and harmony with the best global standards known, and to facilitate recognition of academic and international professionals, and the ability to compete with other colleagues (Majeed, 2009, www.aaru.edu.jo/)

2-9-2. The axes of the Quality Assurance Guide for Academic Programs in the Faculties of Arab Universities:

The first axis: the organization's mission, vision and goals, The second Axis: leadership and administrative organization

The Third Axis: evaluating the quality of the resources,

The fourth Axis: faculty members,

The Fifth Axis: Students Affairs,

The Sixth Axis: Student Services,

The Seventh Axis:

 A / Academic Programs

B / methods of teaching and learning resources

C / University Book,

 The Eighth Axis: Scientific Research,

The Ninth Axis: Community Service,

The Tenth axis: Evaluation,

The Eleventh Axis: University Ethics,

(Appendix)

2-9-3 Performance Indicators:

It is a set of quantitative and qualitative metrics used to track performance over time to deduce how it responds to the performance levels of the agreed points and is considered as examination points, which monitor progress towards achieving the standards (Majeed, 2009).

2-10. Sudan University of Science and Technology (SUST)

The history of the Sudan University of Science and Technology goes back to 1950 when Khartoum Technical Institute (KTI) was founded to graduate qualified technicians in the fields of buildings and commercial studies. In 1975 all technical institutes in Sudan were merged with KT I to form what was known as Khartoum Ploytechnique (KP). In 1990 the KP was upgraded to a university named Sudan University of Science and Technology, with all the Institutes changed to Collages. The growth of the University was very rapid during the second decade of its establishment.

By 2009, the University has had 19 colleges distribute among 9 campuses in Khartoum, with total student population of 24000 at the B.Sc. level, 31000 at the Diploma level, and 5000 postgraduate students. In addition 5000 students are enrolled in distance education programs. The diversified colleges of the University reflect the constant endeavour to seek knowledge in all fields to produce successful graduates and a successful nation. Now (2014) the University has 22 Colleges, 5 Deanships, 3 Insitutes and 6 centers (www.sustech.edu).

CHAPTER THREE
MATERIALS AND METHODS

3.1. Study design and samples

This survey was conducted during the period from July to October 2014. A questionnaire (Appendix 2) was designed and distributed to 30 members of the Sudan University of Science and Technology representing all staff at different status. This was to study the implementation and utilization of AArU Guide according to the indicators of the Quality Asssurance Guide from the point of view of the university staff. The questionnaire covered all the indicators of the Guide.

3.2. The questionnaire

All (30) Questionnaire were distributed, (28) were used (95.8% of the total sample), two were excluded due to lack of validity.

The questionnaire included 14 statements to be answered by the respondents; with strongly agree, agree, neutral, disagree and strongly disagree.

These statements or questions were about the University mission and vision, the goals, the objectives and whether the staff has had participated or have shouldered in implementing them and at what level. Moreover, questions about the suitability of environment for the student, staff and all workers and employees human relationship were included. The questionnaire also included whether the Dean of the College or the Head of Departments working to meet the needs of College Administration, support the advancement of scientific research mechanisms. The number of published scientific research papers in international and regional journals as well as the staff authorship of books and whether graduates have the ability to compete in the big local and global labor market.

The questionaire was also aimed to gather knowledge about the University students towards having high degree of satisfaction for College and curriculum and teachers and the university services. There is also the notice if high degree of communication between faculty and students and members of the administration. University care policy motivation for teachers, administrators and staff to improve performance and enhance the concept of innovation were also included. University bothers upgrading of community service and by contributing to rural development, and the establishment of continuing education centers, and the establishment of scientific seminars and lectures there were also investigated.

3.3. Methodology:

Randomly 30 questionnaires included the concepts and contents of the guide for insuring quality like the university vision, mission, and objectives, human, material and technical resources are optimally used, the University environment, and the motivation factors and other axes of the guide. The questionnaire was distributed to status at three levels of staff (lecturer, Assistance Professor and Associate Professor). The results out of 28, two questionnaires were missed.

3.4. Data analysis

The result of questionnaire (Appendix 2) was analyzed by basic statistical techniques. Results were based on the objectives and analysis of the sample answers of the faculty members depending on the requirements of (QA). The statistical analysis was conducted by using Tables, histograms of the study sample response, mean and weight percentage to determine the requirements of (QA).

CHAPTER FOUR

RESULTS

4.1. University mission and vision

Table (1) shows that 50% (14 out of 28) respondents are strongly agreed that the University has a clear and specific mission for the public and private educational vision, 39% (11) have just agreed and 21.4% (3) disagreed with them.

4.1.1. The objectives of the University

Table (2) shows that 39.29% (11 out of 28) of respondents have strongly agreed with the mission was translated to specific objectives, 39.29% (11) have just agreed ,14.29% (4) neutral, and 7.14 (2) have disagreed with them.

4.1.2. The frequency of respondents on the University mission development

The frequency of responses to the development of the mission statement (Fig. 1) was mostly neutral (51.85%), while 18.52% of respondents agreed, 22.22% disagreed and 7.41% strongly disagreed with the mission development

4.1.3. The University goals

The response distribution of participants to University goals as comprehensive and integrated is shown in Fig. (2). Six (14.28%) and 15 (53.57%) were strongly agreed and agreed respectively, 3 (10.71%) were neutral and 4 (21.43%) of respondents disagreed.

Table 1: The response rate to University vision and mission (%)

Phrase	Strongly Agree	%	Agree	%	Neutral	%	Disagree	%	Strongly disagree	%
The University has a clear and specific mission for the public and private educational vision	14	50	11	39	0	0	3	21.4	**0**	**0**

Table 2: The response rate to University objectives (%)

Phrase	Strongly Agree	%	Agree	%	Neutral	%	Disagree	%	Strongly disagree	%
Mission of the university has been translated into specific and clear objectives	11	39.29	11	39.29	4	14.29	2	7.14	**0**	**0**
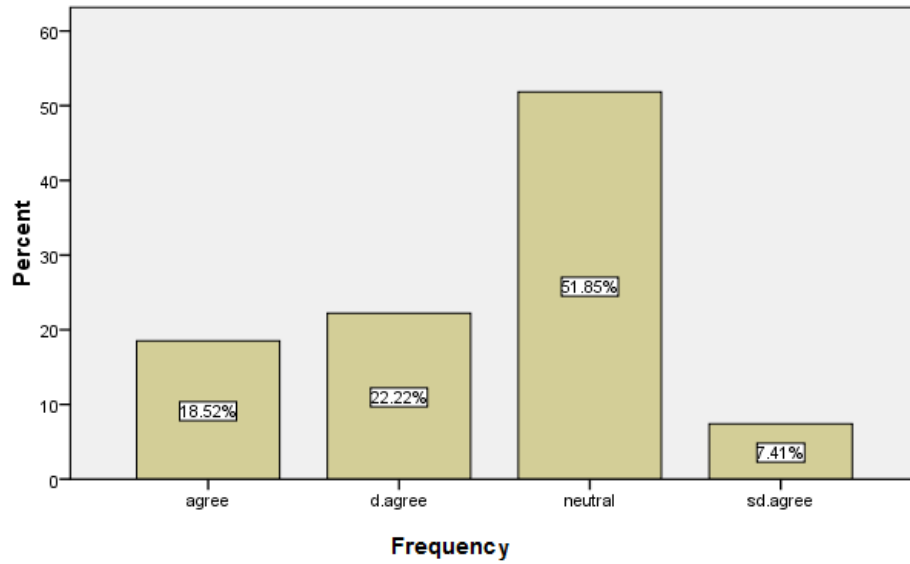
Fig 1: The frequency of respondents to the University mission development
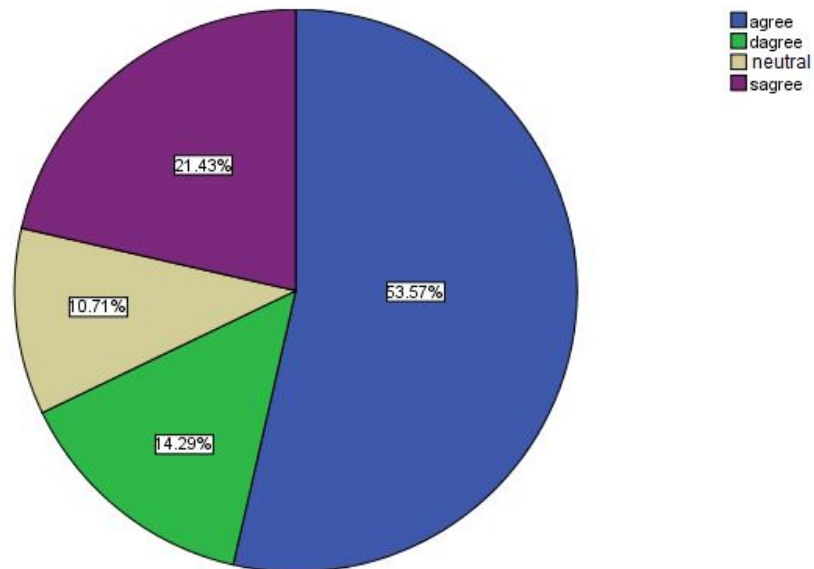
Fig. 2: The distribution of respondents to university goals

4.2. Academic and scientific environment

Management is concerned with providing appropriate academic and scientific environment**.** To this statement the distribution respondent is shown in Fig (3). Six (17.86%) and 11 (39.29%) had strongly agreed and agreed respectively, while 4 (14.27%) were neutal. Five (21.43%) and 2 (7.14%) were strongly disagreed and disagreed respectively.
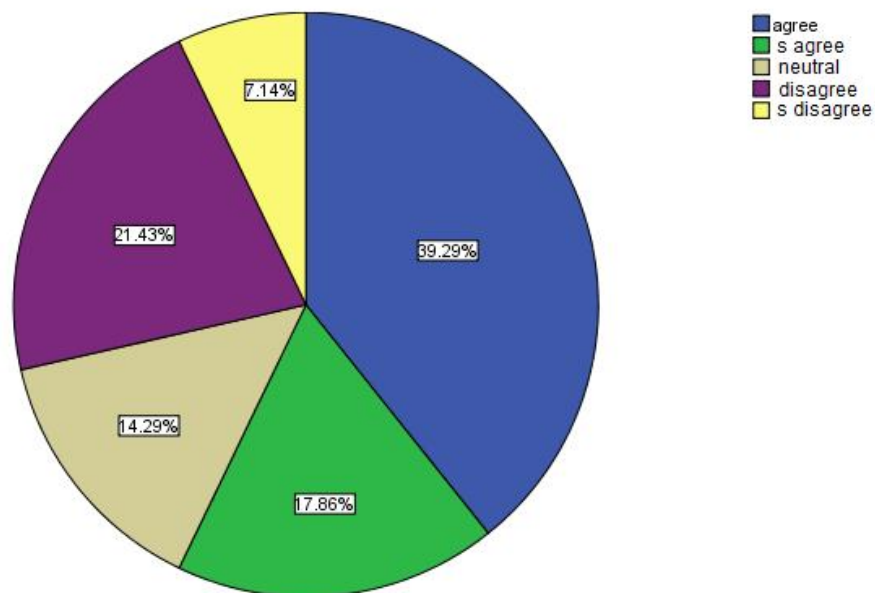
Fig.(3): Distribution of respondents to academic and scientific environment

4.3. Human, material and technical resources

Most of the participants 11(40.74) and 2 (7.14%) were strongly disagreed and disagreed respectively, with the optimal use of human and technical reseaources of the university and 9 (33.33%) were neutral. Four (14.81%) positively agreed and one (3.7%) strongly agreed.
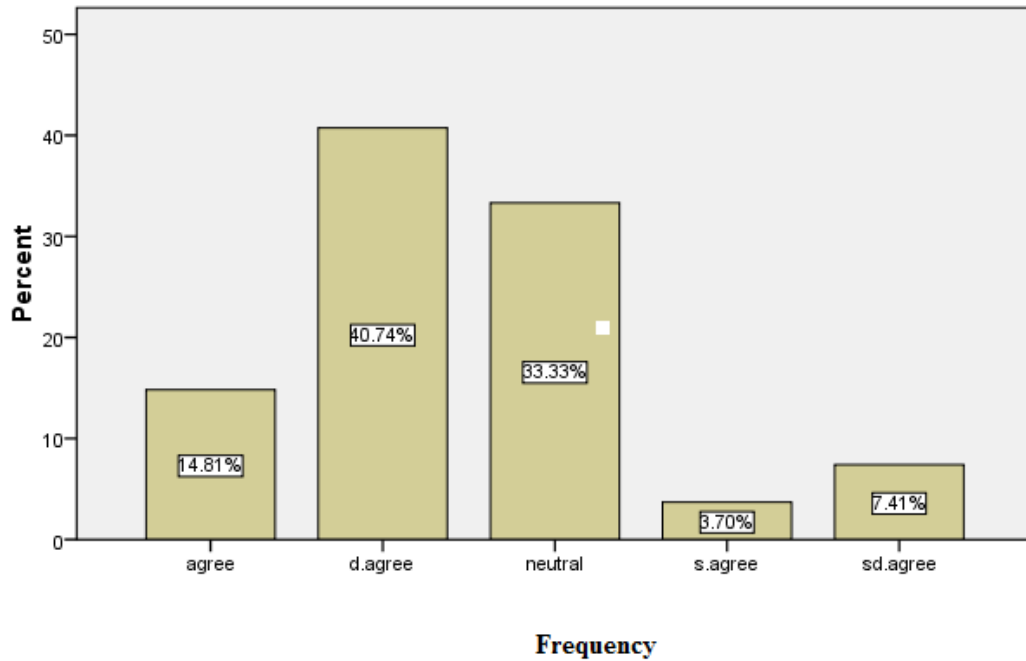
Fig. (4): The response to human, material and technical resources

4.4. The University (College) needs of the new scientific disciplines

Table (3) shows that 14.29% (4 out of 28) participants had strongly agreed with the University meets the needs of the colleges, 75% (21) had just agreed,7.14% (2) neutral, and 3.57 (1) disagreed.

Table 3: The University (College) needs of the new scientific disciplines

Phrase	Strongly Agree	%	Agree	%	Neutral	%	Disagree	%
Dean of the college or the head of department is working to meet the needs of college or section of the new scientificd isciplines (associate professor, assistant professor, lecturer, teaching assistant).	4	14.29	21	39.29	2	7.14	1	3.56

4.5. The response of respondents to scientific research mechanisms

Table (4) shows that 46.43% (13 out of 28) participants just agreed with the supported the scientific research, 14.29% (4) disagreed, 32.14% (9) neutral, and 7.14 (2) strongly disagreed.

Table 4: The response to scientific research mechanisms

Phrase	Strongly Agree	%	Agree	%	Neutral	%	Disagree	%	Strongly Disagree	%
Administration supports the advancement of scientific research mechanisms.	0		13	46.43	9	32.14	4	7.14	2	7.14

4.6. Research and books of the faculty member

Fig.5 shows the response of the number of published scientific research in international journals or Arab and local ones as well as the author of books for faculty members. Eight (28.57%) strongly agreed and 14 (50%) had agreed to the importance of research and publishing in journals. Four (14.24%) were neutral while 2 (7.14%) disagreed with this concept
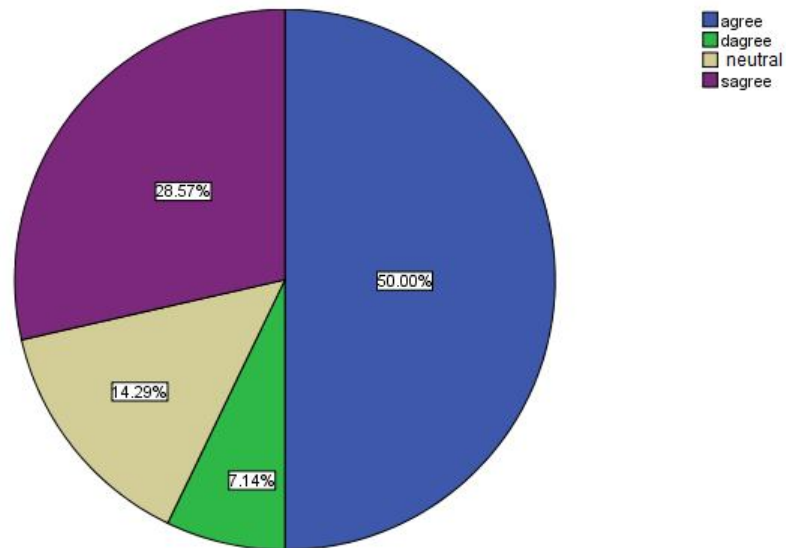
Fig. 5: Research and books of the faculty member

4.7. The ability of graduates to competition

Table (5) shows that 35.71% (10 out of 28) participants had strongly agreed with the ability of graduates to competition, 60.71% (17) had just agree, and 3.57% (1) were neutral.

Table 5: The ability of graduates to competition

Phrase	Strongly Agree	%	Agree	%	Neutral	%	Disagree	%	Strongly disagree	%
Graduates have the ability to compete in the big local and global labor market.	10	35.71	17	60.71	1	3.57	0	0	0	0

4.8. The response to the inquery of Student's satisfaction

University students have a high degree of satisfaction for faculty and curriculum and teacher members and the University services. This was consistent with the distribution of the responses of participants as 1 has strongly agreed and 10 were agreed. Thirteen were neutral and 2 strongly disagreed and 2 diagreed (Fig. 6).
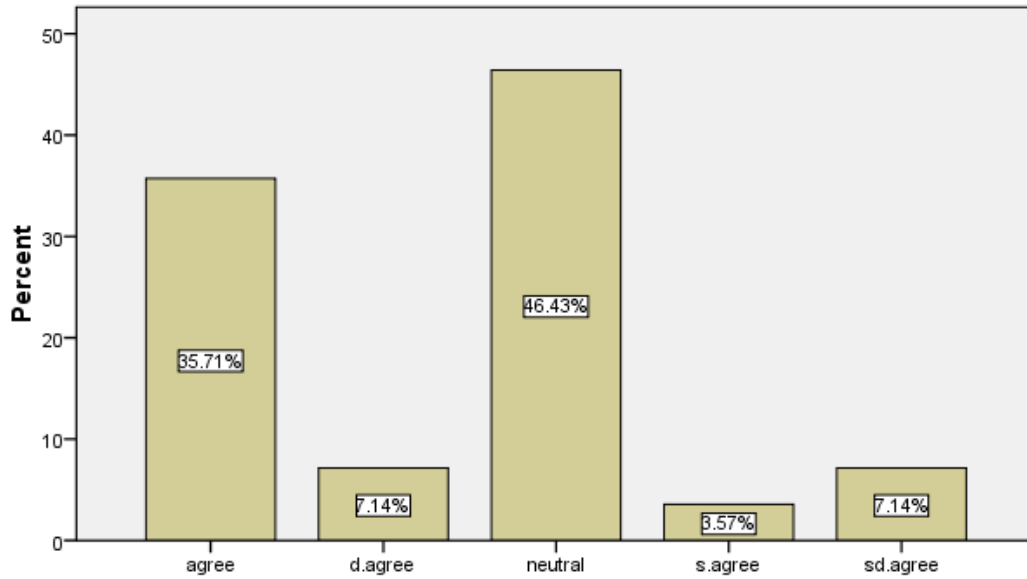
Fig. 6: The response to the inquery of Student's satisfaction

4.9. Communication at University

Fig. 7 shows the response to the query if there is a high degree of communication between faculty and students and members of the administration. Sixteen were strongly agreed (3) and (13) agreed with percent 7.14% and 46.43% respectively. Nine were neutral (32.14%), 2 (10.71%) strongly agreed and 1 (3.57%) had agreed.
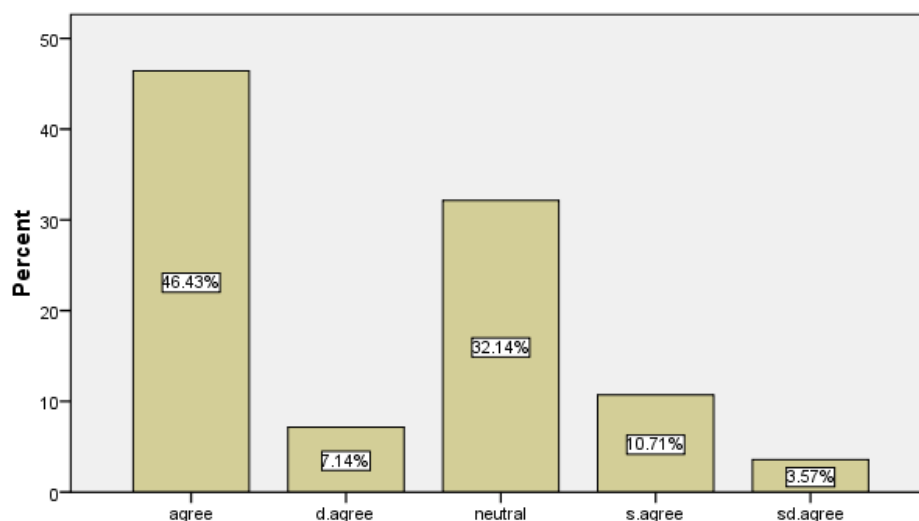
Fig. 7: The response to communication at University

4.10. The motivation for instructors, administrators and staff

The response to University care policy motivation for teachers, administrators and staff to improve performance and enhance the concept of innovation are presented in Table (6). It shows that 3.57% (1 out of 28) participants had strongly agreed with the motivation the university staff and academic staff, 25% (7) have just agreed ,17.86% (5) were neutral, 28.57 (8) strongly disagreed, and 25%(7) disagreed.

Table 6: The motivation for teachers, administrators and staff

Phrase	Strongly Agree	%	Agree	%	Neutral	%	Disagree	%	Strongly disagree	%
University care policy motivation for teachers, administrators and staff to improve performance and enhance the concept of innovation	1	3.57	7	25	5	17.86	7	28.57	8	25

4.11. Contributing to community development

The majority strongly agreed with University bother upgrading of community service and by contributing to rural development, and the establishment of continuing education centers, and the establishment of scientific seminars and lectures (Fig. 8).
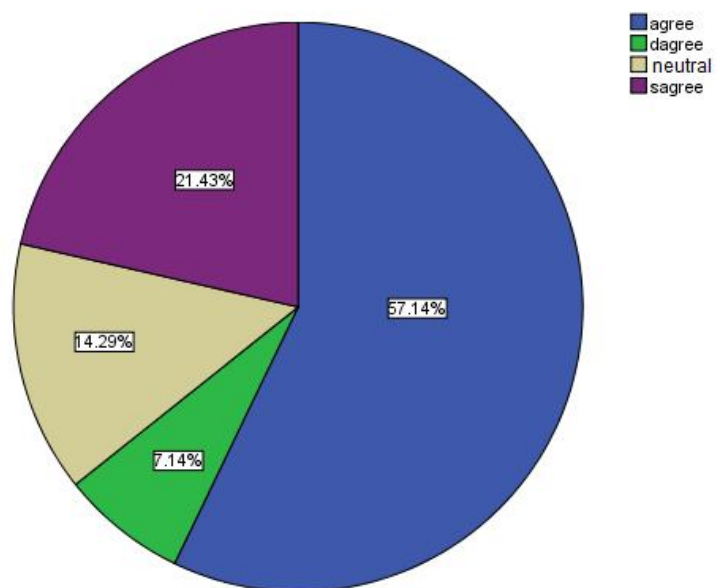
Fig. 8: Contributing to community development

CHAPTER FOUR
DISCUSSION

Quality assurance is becoming a priority in national strategies for Higher Education Institutions. Several countries have now changed their laws to make accreditation of public institutions mandatory (Materu, 2007).

At the global level, the International Network for Quality Assurance Agencies in Higher Education (INQAAHE) was established in 1991 with the purpose of collecting and disseminating information on current theory and developing practice in the assessment, improvement and maintenance of quality in higher education (Materu, 2007). Within the European Union area, the Bologna process was launched in 1999 with the goal of strengthening European cooperation in quality assurance (Materu, 2007)

The World Bank supported the establishment of regional quality assurance networks; the Asia Pacific Quality Network-APQN in the Asia-Pacific region and in the Latin America and Caribbean region (RIACES). Within Africa, a number of sub regional networks can be found whose mandates include collaboration in quality improvement in higher education (Materu, 2007). These are: the Conseil Africain et Malgache pour l'Ensignement Supérieur (CAMES), the Inter-University Council of East Africa (IUC-EA), the Southern African Development Community (SADC), the Southern African Regional Universities Association (SARUA), the Higher Education Quality Management Initiative for Southern Africa (HEQMISA), and the Association of African Universities (AAU). In addition, the North Africa and the Middle East region plans to establish an Arab Quality Assurance Network for Higher Education (ANQAHE) in which Egypt-one of the countries being assisted by the World Bank to set up a national QA agency—is playing a leading role (Materu, 2007).

Higher Education in Arab countries is considered a recent issue. The Arab world today faces a host of hurdles when it comes to higher education and the first challenge to meet the Association of Arab Universities (AArU) is Quality Assurance (Abu-Orabi, 2013).

Abu-Orabi, (2013) reported that as a result of globalization, competitiveness and accelerating expansion of private higher education, it is vital to take several actions such as to establish national quality assurance frameworks and to develop current established ones in order to guarantee the quality of education and control its outcomes, to develop, enhance and review current internal quality management systems, to encourage establishing regional quality assurance networks to help promoting QA of higher education in the region, to build capacities for education quality assurance systems. to develop action plans on quality assurance of higher education institutions and to enhance international cooperation in fields of Higher education quality assurance (Abu-Orabi, 2013).

The Council of AARU agreed in its meeting in Algeria 2006 to establish a council for quality assurance and accreditation (QAAC) for member universities to adopt the policies of the Association in this regard. Its mission is to assist Arab Universities to improve their quality, through spreading of the culture of QA, preparing QA guides, provide advice and training to support the process of QA and Accreditation for institutes and programs (Abu-Orabi, 2013).

The council has issued six reference manuals and guides related to self and external assessment and general accreditation in addition to performance indicators and criteria and weights to measure the performance indicators (Abu-Orabi, 2013). The importance of these indicators is the fact that Arabs lack readiness to strongly compete in the twenty-first century. The Arab world

must start reforming HE to meet the challenges that globalization has imposed upon it (Abu-Orabi, 2013).

Most Arab states performed poorly with regard to the quality of their education systems (Sawhel, 2012). In the 2012 academic ranking of world universities, or ARWU, from Shanghai Jiao Tong University, only four universities from Arab states were included in the top 500: Cairo University (Egypt) and three in Saudi Arabia: King Saud University, King Abdulaziz University and King Fahd University of Petroleum and Minerals (Ahmed and Siddik, 2012; Sawhel, 2012).No Arab university was ranked among the top 100. So in the light of these results experts from Arab countries recently concluded the fourth annual conference of the Arab Organization for Quality Assurance in Education, or AROQAE, by announcing the Cairo Declaration, in terms of which Arab standards for quality education similar to those achieved internationally were to be formulated (Ahmed and Siddik, 2012). The Cairo Declaration called for improving education quality had as its theme "Methods for Consensus and Common Standards for Quality Assurance and Academic Accreditation in Arab Universities" (Ahmed and Siddik, 2012; Sawhel, 2012).

The results of this study indicate that there are many indicators or standards available in the university program.

One of the priorities for colleges and academic departments in the University is the vision and mission. The mission of the University reflects the vision and mission of colleges of the University. The mission is updated through distribution it to the colleges boards / staff and reviewed on a continuously basis. The results conformed to Al-Otaibi, and Alrabea, (2012); Al-Zoubi and Abdel Rahman, (2013).

Indicator student affairs and support services: the information of the program and courses are available to students and their families before submitting

applications. The University departments are providing orientation programs at the beginning of each semester for new students to familiarize them with the university system, the duties and responsibilities. In addition, there is academic guidance, in order to identify students who are suffering from problems in their studies, financial, family, psychological, or health. This result is consistent with the results of Aoun, (2010); Al-Khateeb *et al.*, (2012); Al-Khateeb *et al.*, (2013); Al-Otaibi, and Alrabea, (2012); Al-Zoubi and Abdel Rahman, (2013).

The indicator for the employment processes: This can be attributed to the regulations and instructions for employment within the Departments and Colleges of the university which are responsible for reviewing qualifications, teaching experience, and educational competencies. Furthermore, the Departments have been providing candidates for employment of job descriptions, conditions of employment, information about the university programs. This result is conforming to Lee *et al.*, (2008); Hussain, (2009); Al-Otaibi, and Alrabea, (2012); Al-Zoubi and Abdel Rahman, (2013).

Indicator of learning and teaching: The departments of university are entering the appropriate adjustments to the programs and courses based on results of student assessment for these courses. The departments also benefit from the view of graduates students and labor market when reviewing the quality of the program. However, there are plans to evaluate the education programs by the Deanship of Development and Quality. This result is conform with Lee *et al.*, (2008); Hussain, (2009); Al-Khateeb *et al.*, (2012); Al-Khateeb *et al.*, (2013); Al-Otaibi, and Alrabea, (2012); Al-Zoubi and Abdel Rahman, (2013).

Relationships with community and Society: the University contributes to community service hghly and there is an encouragement for faculty members to participate in seminars and conferences that discuss special education issues. Besides, there are consultancy councils composed of community

institutions. The University has strong relations with the labor market, and communication with alumni to update them with developments in the program, and invited them to participate in the activities of the departments. The results are not conformed to Fadel, (2011); Al-Zoubi and Abdel Rahman, (2013).

In the Scientific Research concept the financial support for faculty members in the field of scientific research is still small, but there are clear policies in University or Colleges of education about the contributions of faculty research activities or standards consistent with international standards in this area. As well as, there are agreements for joint research between faculty members and their colleagues in the local or international universities, laboratories, equipment, libraries and systems. The results are disagreed with the results of other authors Fadel, (2011); Al-Zoubi and Abdel Rahman, (2013).

Standard of administration of program: The University has job descriptions, there are foundations assess the performance of faculty members, there are representation of department's male and female staff equally in the membership of Committees & Councils, and the head of the departments. The results are not conformed to Al-Khateeb *et al.*, (2012); Al-Khateeb *et al.*, (2013); Al-Zoubi and Abdel Rahman, (2013).

Standard of quality of program: The University education programs have information about key performance indicators for commendable improvement of performance and assess the achievements, as well as, there are available benchmarks for the programs. This result is not consistent with Al Babteen, (1997); Abudagga, (2009); Hussain, (2009); Aoun, (2010); Al-Zoubi and Abdel Rahman, (2013).

Standard of quality of facilities and equipment: the University is in continuous process of growing up and updating of its facilities equipments and buildings. Also the faculty members are consulted before the purchase of equipment to

ensure their appropriateness to the current and future needs. This result is not consistent with numbers of other authors Fadel, (2011); Al-Hajri, (2012); Al-Khateeb *et al.*, (2012); Al-Khateeb *et al.*, (2013); Al-Zoubi and Abdel Rahman, (2013).

Indicator of learning resources: Students and faculty members have difficulty in access to electronic databases and journals. In addition, libraries do not provide new students the counseling and training on library services, as well as, they do not inform faculty members and students about the new developments, finally, there are no sufficient books, journals, and electronic resources to meet the needs of the education program in both Arabic and English. This result is consistent with Fadel, (2011); Al-Hajri, (2012); Al-Zoubi and Abdel Rahman, (2013).

Standard of planning and financial administration: the university administration has good financial resources, annual budget, financial spending powers, and the Head of Departments participate in the budget planning process of the college or university. This result is not consistent with (Al Badri, 2008; Al-Hajri, 2012; Al-Zoubi and Abdel Rahman, 2013).

Quality assurance within institutions of higher learning takes place throughout the teaching and learning process. It includes screening of candidates for admission, staff recruitment and promotion procedures, curriculum reviews, teaching and learning facilities, quality of research, policy development and management mechanisms, student evaluation of staff, external examiners for end-of-semester or end-of-year examinations, tracer studies, academic reviews and audits.

CONCLUSION AND RECOMMENDATIONS

Conclusion:

Through the investigation of the issue of QA application in SUST the following outcome was obtained:

1. The vision and the clear mission of the SUST are perfect and should lead towards achieving quality standards in the long run.
2. There is a significant relationship between Quality Assurance and strategic plan of the University.
3. The Quality Assurance system is linked with the vision, mission and objectives of the University and its strategic plan as well.
4. The QA of AArU is a comprehensive system; its application can fit in all institutions of higher education in Arab States.

Recommendations

1. Continuous improvement should be the most important principles as it helps in achieving the strategic objectives of the University.
2. All institutions of higher education should develop a vision and clear mission about their role in attaining clear learning outcomes.
3. The application of Quality Assurance will help the attainment of long-term goals of the University
4. The results recommend the application of quality Assurance Guide as management strategies in every higher education institution in the region.

5. All Universities should put into account the satisfaction of the stakeholders who are interested in education (students, parents, organizations) in order to achieve highest efficiency and effectiveness with consideration to the internal and external environment.

6. Global accreditation and recognition by international organizations should not be the sole objective of the university, but application of total quality management and quality assurance should have priority.

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APPENDICES

Appendix 1

The axes of the Quality Assurance Guide for Academic Programs in the Faculties of Arab Universities:

The first axis: the organization's mission, vision and goals

¬ Providing a clear document, which express the organization's vision and its public and private educational goals?

¬ To get sure of the authentication of the Board of the Foundation, on the University's vision and goals.

¬To get sure that the text of the message and the goals are clear and comprehensive, published and declared and known to the community, members of the faculty, administrators, and students.

¬ To revise its mission and its goals on a regular basis and, to revise for improvement and development

¬ To base the process of planning and decisions on its mission and goals in - making institutional work.

¬ To get sure that the goals, include the expected results of the graduates

¬ To describe in its mission, the forms of relationship between them and the corresponding institutions, local and international .... and others.

The second Axis: leadership and administrative organization
¬ To get sure that the council of the institution draws policies those are consistent with its mission to ensure the quality of programs and educational services provided to students, and the resources needed for support

¬ To get sure that its policy and its procedures, ensure clarity and transparency in the decision-making process.

¬ To get sure that its organizational structure allows a degree of flexibility to change priorities and review policies depending on the requirements of the institution

¬ To provide an accurate description of the organizational structure, and a clear definition of the duties of the Academy and its responsibility.

¬ To provide procedures adopted in the appointment of Supreme Administrative positions (Dean, Vice Dean, heads of departments) and controls of appointment, and the duration of the appointment.

¬ To work to secure the presence of an effective relationship between senior management (President of the University, Dean) and members of the faculty.

The Third Axis: evaluating the quality of the resources

¬ Includes the quality of material and technical resources
¬ Quality of human resources
¬Quality of financial resources
¬ Quality technical resources

The fourth Axis: faculty members

¬To develop a clear vision for the requirements of faculty members based on the vision, mission and goals.

¬ To afford enough professors and faculty members, qualified to total attendance and part-time, to support programs and educational services

¬ To clearly define the criteria for selection of a faculty member (such as knowledge of study materials, effective teaching, and the ability to contribute to the implementation of the organization's mission ... etc.), and to define degrees which have been obtained from accredited universities and internationally recognized, and the employment procedures and publication in official newspapers.

¬ To identify the competent professional committees for the selection of members of the faculty candidates to work in the organization. ...... And others.

The Fifth Axis: Students Affairs

¬ To provide systems and models of acceptance, enrollment, conversion and behavioral sanctions and replays on them.

¬ To maintain a special file for each student, that contains information about his behavior and activity and level of academic and social development.

¬ To specify the desired setting acceptance in the program commensurate with the nature of the program and it's potential.

¬ The existence of a mechanism, to make sure of the readiness of students academically and emotionally and mentally and physically to learn (acceptance tests).

¬ To ensure quality acceptance tests, by securing confidentiality and to ensure the safety of construction procedures and their application and correct interpretation of the results and the distribution of students equitably on the disciplines based on the results and taking into account their wishes

¬ To seek to activate the relationship between students and institutions of the community before going out into the job market.

The Sixth Axis: Student Services.

¬ To determine the basic needs of the students and to provide services and programs appropriate for the study of those needs (based on the results of scientific surveys).
¬ To provide brochures and guidance for Student Services provided by the specialty of the unit for psychological and educational guidance, to help students grow , succeed and create jobs for the exercise of professors' guide way

¬ The foundation provides student development units (technical, scientific, cultural, sports, etc.), that lead to the refinement of character of a university student, and to raise the level of school performance and involvement in university life and community...

¬ To provide secure and convenient housing for students in university towns

¬ To provide a private and comfortable places for female students in the various departments and faculties

¬ To provide a fund for loans and financial and material assistance to needy students.

¬ To conduct periodically polled students in complementary services in the enterprise (sporting activities, dormitories, restaurants, parking, etc.).

¬ To provide services to help students interact with their peers in the academic environment.

The Seventh Axis:

 A / Academic Programs

¬ The relevance of academic programs and courses are determined with the general philosophy of the state, and the vision, mission and goals of the institution, the needs of the students and the community, and the development of the personality of the students ... etc.

¬ A detailed plan for the academic program in terms of:
¬ Clearly defined goals.
¬ Exact description of the nature of the courses.
¬ Integration plans with other departments in the organization.

¬ Full definition of the components of the program (the system adopted, quarterly, annual, accredited hours), duration of the study, the number of credit hours, type of certificate awarded to a graduate, specialization basic and sub-specialty, the academic burden, university requirements, faculty requirements, the requirements of the section, the optional requirements

¬ To provide brochures and the clear evidences, which show the necessary regulations governing educational programs and procedures for admission and withdrawal?

B / methods of teaching and learning resources

¬ To have the vision of the level of knowledge and information required to be provided in line with its mission and vision of the future.

¬ To modernize r and diversify instruments and tools in line with the requirements of each knowledge domain.

¬ To get sure that educational media used are associated with the institution, and the educational content, and to take into account individual differences, and excite the senses of learners to be practical and inexpensive, usable, and can be obtained ... and others.

¬ To provide evaluative researches on the methods used in teaching students in terms of the ability of faculty members to lay down their lecture, and presentation of information, and the use of educational media in the lecture, and the involvement of students in class work , and to provide feedback to improve the learning process ... and others

C / University Book

¬ To get sure that the content of the university book is true, accurate, with modern information, and with correlation between the parts of the book and the content of its ideas...

¬ To get sure that the content of the book raises the motivation of the students, motivates them to scientific research, and raises their ability to think critically and creatively...and others

¬ To get sure of the existence of proportionality between the size of the book, and the number of hours scheduled for it.

¬ To examine the university book in terms of its style of presentation, appropriateness of the level of mental development of students, documentation of information and facts with references and sources, and other periodicals.

¬ To get sure of the university book is prepared and designed in a good way in terms of shape, printing, paper, fees, forms ... and others.

The Eighth Axis: Scientific Research

¬ To provide a unit to plan for scientific research and management of its affairs.

¬ To provide an atmosphere of scientific research, and to encourage faculty members to carry out scientific research related to the needs of society and the labor market.

¬ The university grants priority to scientific field research of physical and economic returns to the local community and its institutions.

¬ The University provides a supportive regulatory environment for research, development and deployment.

¬ To encourage faculty members to contribute to the activities of applied research.

¬ To provide opportunities for the contribution of faculty members in conferences, scientific symposia and scientific workshops.

The Ninth Axis: Community Service

¬ To provide a plan for community service and to work to provide the appropriate conditions to be applied.

¬ To manage a specialized scientific unit and enhance the relationship with the institutions of the local and the regional community and the labor market.

¬ To establish specialized centers for community service, such as continuing education and consulting offices, medical clinics, agricultural and veterinary centers and community service, targeting women in particular.... and others.

¬ To contribute to the establishment of exhibitions and symposiums, cultural and developmental issues, training and cultural magazines, and the evolution of technology and software and to provide consulting studies and community institutions to the public and private sectors.

The Tenth axis: Evaluation

¬ To provide specific regulations and to declare fair systems and of evaluating students.

¬ To examine a number of models of the questions and to indicate the extent they relate to educational objectives of the institution, and represent the content of the book, and measure the levels of mental variety, and that the instruction of the answer is clear, and arranged logically from easy to difficult, and that it takes into account individual differences .... And others.

-To rack systems in the modern evaluation and to monitor the results.

¬ To ensure the efficiency of the system used in the conduct of examinations and monitoring results, and how to take advantage of them in the evaluation process

¬ To inform parents of the students about the levels of evaluation of their sons and daughters.

¬ To employ the results of evaluating the performance of faculty members and staff career, in

The Eleventh Axis: University Ethics

¬ To ensure its integrity through the dissemination of accurate and reliable information about the organization's vision, mission and goals, programs and courses , academic degrees and tuition fees, financial situation and requirements for admission and graduation , members of the Board of Trustees and the boards of the university, faculties , departments and members of the faculty, staff and students.

¬ To provide a charter for the ethics of the institution, and ethical codes of professionals (doctors, teachers, journalists, and others ...)

Appendix 2

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جامعة السودان للعلوم والتكنلوجيا

كلية الدراسات العليا

عمادة التطوير والجودة

أستبيان عن أثر ضمان الجودة للبرامج الأكاديمية في جودة أداء جامعة السودان للعلوم والتكنولوجيا

السيد:...

أشكر لكم تعاونكم وإستجابتكم ; المعلومات في هذا الإستبيان سوف تستخدم في دراسة عن أثر تطبيق دليل ضمان جودة البرامج الأكاديمية في كليات الجامعات العربية بجامعة السودان للعلوم والتكنلوجيا.

هذه المعلومات سوف تستخدم بغرض الدراسة والبحث فقط.

بالباحثة

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الرقم		أوافق بشدة	أوافق	محايد	لا أوافق	لا أوافق بشدة
1	تتوفر بالجامعة رسالة واضحة ومحددة عن رؤيتها التربوية العامة والخاصة.					
2	تم ترجمة رسالة الجامعة إلى أهداف محددة وواضحة.					
3	تم مشاركة العاملين والطلبة في وضع رسالة الجامعة, أوالكلية.					
4	أهداف الجامعة شاملة ومتكاملة.					
5	تهتم الإدارة بتوفير الأجواء العلمية الملائمة والعلاقات الإنسانية داخل الجامعة لإنجاح العملية التعليمية.					
6	تستخدم الإدارة الموارد البشرية والمادية والتقنية إستخداما أمثل.					
7	يعمل عميد الكلية أو رئيس القسم على تلبية إحتياجات الكلية أو القسم من الإختصاصات العلمية الجديدة(أستاذ مشارك, أستاذ مساعد, محاضر, مساعد تدريس).					
8	تدعم الإدارة آليات النهوض بالبحث العلمي.					
9	إزداد عدد البحوث العلمية المنشورة في مجلات دولية متخصصة أو عربية ومحلية محكمة وكذلك الكتب المؤلفة لأعضاء هيئة التدريس.					
10	لدى خريجو القسم المقدرة على المنافسة بصورة كبيرة في سوق					

					العمل محليا وعالميا.	
					الطلبة بالجامعة لديهم درجة عالية من الرضاء عن أعضاء هيئة التدريس والمنهج المدرس والخدمات بالجامعة.	11
					هنالك درجة عالية من التواصل بين أعضاء هيئة التدريس والإدارة والطلبة.	12
					تهتم الجامعة بسياسة التحفيز للأساتذة والإداريين والعاملين بها لتجويد الأداء وتعزيز مفهوم الأبتكار.	13
					تهتم الجامعة بترقية خدمة المجتمع وذلك من خلال المساهمة في التنمية الريفية ,وإقامة مراكز التعليم المستمر, وإقامة الندوات والمحاضرات العلمية... إلخ.	14

number	phrase	Strong agree	Agree	Neutral	Disagree	Strong disagree
1	The University has a clear and specific message for the public and private educational vision					
2	Mission of the university has been translated into specific and clear objectives					
3	Staff and students participated in the development of the university message					
4	University goals comprehensive and integrated					
5	Management is concerned with providing appropriate human relations within the university scientific atmosphere for					

	the success of the educational process					
6	Human, material and technical resources are used optimally use					
7	Dean of the College or the head of department is working to meet the needs of college or section of the new scientific disciplines (Associate Professor, Assistant Professor, Lecturer, teaching assistant).					
8	Administration supports the advancement of scientific research mechanisms.					
9	Increased the number of published scientific research in international journals or Arab and local					

	court as well as the author of books for faculty members					
10	Graduates have the ability to compete in the big local and global labor market					
11	University students have a high degree of satisfaction for faculty and curriculum and teacher members & the university services.					
12	There is a high degree of communication between faculty and students and members of the administration.					
13	University care policy motivation for teachers, administrators and staff to improve performance and enhance the concept of innovation					

14	University bother upgrading of community service and by contributing to rural development, and the establishment of continuing education centers, and the establishment of scientific seminars and lectures ... etc.					