# THE QUALITY ASSURANCE OF TEACHING AND LEARNING IN THE FACULTY OF BUSINESS AND ECONOMIC IN UNIVERSITI PENDIDIKAN SULTAN IDRIS

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**Abstract**

The Higher Education Institutions (HEIs) are forced to improve their quality of service due to certain reasons. This includes the declining of graduates quality, stiff competition and the pressure of statutory and funding bodies. In order to ensure the quality of HEIs product they choose the certification of ISO 9000:2000. The purpose of the study is to determine the academic management and teaching and learning evaluation are fulfill the ISO 9000:2000 and to examine all activities and processes in teaching and learning are meet specified requirements set by statutory bodies and stakeholders. The sample consists of 100 undergraduate students who are studying in the FBE. A structured of 50 closed ended items questionnaires were used to collect the data. This study uses descriptive statistic. The finding confirms that FBE has the entire requirement set by ISO 9000 and met the standard set by statutory bodies and stakeholders.

***Keywords:*** HEIs, Quality Assurance, Quality Management System, ISO 9000, stakeholders driven

## Introduction

The quality management system (QMS) is key tool of organizational change. Originally the QMS was adopted by the manufacturing firms. However HEIs also has embraced the QMS philosophy and incorporating quality assurance standards as an integral part of their quality systems. Furthermore the Baldridge Award, the Deming Prize and the ISO 9000 standards has also being applied in an educational sector (Vandenberghe in Izadi, Kashef and Stadt, 1995).

## Implementation of ISO 9000:2000 Standard

The effectiveness of the quality concept with in manufacturing sector has motivated the HEIs to adapt this concept and practice it in their own domain (Kanji et. al, 1999). The key success factor of quality system in HEIs is mainly influence by externalities such as conducive government regulations, economic conditions, confident leaderships and a certain level of stress to initiate a need for change (Idrus, 2001). In the United Kingdom, the first university to implement and obtain ISO 9000 certification for its full scope of activities was Wolver Hampton University. The University's initial adoption of the TQM approach to quality produced high expectation but had very little to show at the end of the day because of the lack of focus (Doherty in Subramaniam, 1988). It switched to the ISO 9000:2000 quality system mainly because it was felt that an independently certified quality system would put it in better market position as compared with its competitors. It felt that the discipline of writing the quality manual, identifying procedures and writing work instructions would provide a much better grasp of the University's internal processes, and internal and external stakeholder's links. The Quality Management System was intended to form the base for a Total Quality Management System (TQM) culture of continuous improvement across the university. Kanji (1998 in Kanji, 1999) says that ISO 9000 could be integrated with TQM for the development of a total quality system where quality improvement can be achieved by examining the organization's processes in terms of process definition, process improvement and process design.

In Australia, a Senate inquiry have shown dramatic fall in the quality of teaching standards student entry-level qualifications, campus conditions and quality of learning experience. The inquiry has also shown increases in problems such as student plagiarism, grade inflation and 'soft' marking (Smart, Sim & McMahon, 2001). In Malaysia, the initiative to implement ISO 9000 in public HEIs was undertaken with the introduction of the Development and Administration Circular by the Malaysian Government in 1996. According to this circular, all government agencies including pubic HEIs, should implement MS ISO 9000 quality system to ensure the delivery of quality services to customers. Among the public HEIs that are already certified to ISO 9000 are Universiti Teknologi Malaysia, Universiti Utara Malaysia, Universiti Putra Malaysia, Universiti Pendidikan Sultan Idris, Universiti Sains Malaysia, and Universiti Teknologi Mara. Most of these institutions have adopted the 1994 version of ISO 9000 and are now in the process of up-grading the system to ISO 9001:2000. The faculty of Business and Economics (FBE), UPSI was assigned the task to initiate the adoption of ISO 9000 certification in its core business of teaching and learning. The system and procedures that lead to the success in adopting the system at the Faculty would be used as the main template for all the teaching-learning processes at UPSI. To date there are eight faculties have been ISO 9001:2000 certified.

According to Idrus (2001), the ISO 9000 version 1994 however is considered as lacking in customer-orientation. Where Robert (1997) argued that version is overly emphasis on documentation. The 1994 version consisting of the 20-element model was biased towards manufacturing organizations and the increased use of the standard especially by the service sector requires subsequent and substantial changes to the standard. Although the ISO 9000 version ISO 9000 version 1994 has been adopted by Malaysia's public HEIs , there are several weaknesses were observed as follows:

a. The application of ISO 9000 quality systems for non core business of the institutions.
b. The lack of standardization of quality assurance and standards procedures.
c. The development of ISO 9000 quality systems were focused on Faculties and Departments, not for the entire University.
d. The emphasis on the coordination and integration among the systems are lacking. Too much documentation.
e. The 20 elements of ISO 9000 are biased towards manufacturing organizations.

However, the latest ISO 9000 series that is ISO 9001 Version 2000 that was introduced in October 2000 is more generic and flexible in nature, and has both stakeholders requirements and stakeholders satisfaction as an integral part of the standards (Idrus,2001). The ISO 9001:2000 focuses on designing and establishing a quality management system aim at meeting and enhancing the requirements of the customers, organizations and other interested parties. The ISO 9001:2000 quality management system can also be regarded as one of the approaches towards achieving best practices in teaching and learning. ISO 9001:2000 systems not only focus on quality assurance, but on the design of a quality management system. This leads to the achievement of stockholder's satisfaction through incorporationg their requirements in the system and measuring whether or not their satisfaction is achieved continuously.

**Table 1:** ISO 9001:2000 Major Clauses

| The major clauses | Requirements |
|---|---|
| Management Responsibility | The top management of an organization must demonstrate its commitment to the establishment and implementation of the quality management system and to continuously improve the effectiveness and efficiency of the system. |
| Resource Management | Resources including human resource, financial, equipment, utilities, hardware and software must be determined and provided to ensure conformity of product/service and quality management system to specified requirements. |
| Product and/or service realization | Product and/or service realization is the process that will convert the stakeholder's requirements into an output that is both acceptable to the stakeholders and one that would not jeopardize the quality. Output refers to the product and/or service that are a result of product realization and one that fulfils the stakeholder's requirements. |
| Measurement, analysis and improvements | At each step along the way, some form of measurement or analysis has to be conducted to measure the process, product and stakeholders satisfaction. Once data on process, product and level of stakeholders satisfaction is gathered, an analysis needs to be done to determine whether any correction and corrective action has to be taken or not. If there is no cause for this to take place, the emphasis will be on the need to carry out continual improvement to ensure the high standard is maintained. |

**ISO 9001:2000 QUALITY MANAGEMENT SYST**

Source: Shoki et al,. (2004)

This model emphasizes on the following:

a. The importance of identifying and understanding the needs and expectations of stakeholders to ensure that their requirements are being met.
b. The commitment of top management to support the implementation of the quality management system and to continuously improve the systems.
c. The effective utilization of organizational resources in implementing the quality management system.
d. The control of the product and/or service realization process to ensure all requirements is being met consistently.
e. The measurement of quality management system processes to determine the effectiveness of the system and improvement opportunities.

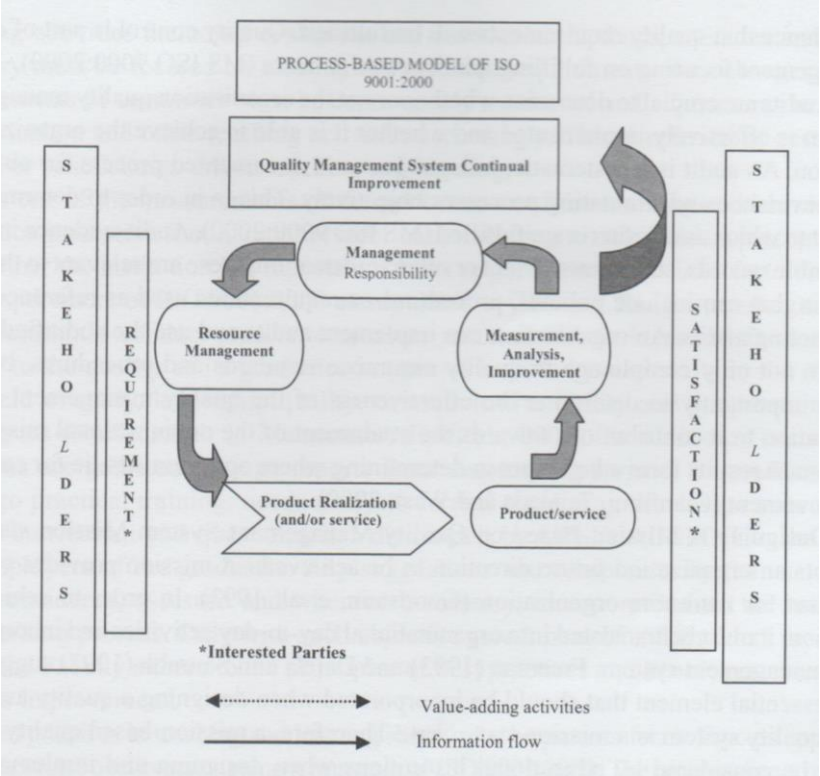


**Figure 1** Process-Based Model of ISO 9001:2000

**The Teaching and Learning using ISO 9001:2000**

According to Quigley (1993) mission or purpose can be described as what an organization is today and what is aspires to become in the future. It provides a general direction and a means for achieving the aspired future. Goodstein, Nolan, and Pfeifer (1993) refers the concept of mission as one expression of why an organization exists and why it competes in certain sectors or industries and not in others. Therefore, mission involves a clear statement of what business the organization is in and what the organization is attempting to achieve in the industry. ISO 9001:2000 clause 5.3 specifically requires an organization to establish a quality policy that is consistent with the purpose or mission of the organization. The formulation of quality objectives that are measurable and consistent with the quality policy is a requirement of clause 5.4.1. A quality management system is required to direct and control an organization with regard to quality (MS ISO 9000:2000). The establishment of a quality management system focuses on the achievement of results, in relation to quality objectives, to satisfy needs, expectations and requirements of customers and other interested parties. In addition, the development of a quality management system should serve as a means to achieve organizational mission.

Two essential components of a quality management system are quality assurance and quality control. Quality assurance is part of quality management focusing on providing confidence the quality requirements will be fulfilled. Quality control is part of quality.

Audits are crucial to determine whether or not the organization quality management system is effectively implemented and whether it is able to achieve the organizational mission. An audit is a systematic, independent and documented process for obtaining audit evidence and evaluating process objectively. This is in order to determine the extent to which audit criteria are fulfilled (MS ISO 9000:2000). Audit evidence includes verifiable records, statements of fact or other information; these are relevant to the audit criteria that can include policies, procedures, or requirements used as reference when conducting audits. An organization can implement audits and use the audit findings to ensure not only compliance to quality assurance standards and procedures, but also more importantly to determine the effectiveness of the quality management system in relation to it contributions towards the attainment of the organizational mission. In fact, audit results form a key input in determining where opportunities lie for continual improvement (Cianfrani, Tsiakals and West, 2000).

Designing A Mission-Based on Quality Management System Mission statement reflects an organization future direction to be achieved. A mission provides sense of purpose for the entire organization (Goodstein, e. al. 1993). In order to achieve the mission, it must be translated into organizational day-to-day activities and incorporated in a management system. Freeman (1993) and Dalela and Saurabh (1997) suggest that one essential element that should be incorporated when designing a quality assurance or quality system is a mission statement. Therefore, a mission-based quality system must be considered by educational institutions when designing and implementing a quality management system for teaching and learning.

FBE's mission reads as "to produce competent graduates capable of managing technology and answerable to the society". Towards the realization of the mission FBE has formulated long-term and short-term plans and established goals and objectives to be attained by 2010. The goals and objectives of the Faculty are then translated into FBE's quality policy and quality objectives. The formulations of quality objectives are consistent with the mission and quality policy as required by MS ISO 9001:2000; Quality Management System- requirements: Clause 5.4.1. This reflects FBE's effort and commitment to develop a mission-based quality management system.

***The Stakeholders Driven and Process Focused***

The best practices in teaching and learning should be customer-driven and prosess focused. In education, two categories of customer are identified. One is the Internal Customers (students) who receive the services provided by a faculty. The other is the External Customers that includes the industries and government agencies which employs the graduates. Quentin (2000) referred to this stakeholder as beneficiary of education. Designing best practices in teaching and learning using ISO 9001:2000 quality management system framework requires an education institution to carefully determine external customer's requirements (as well as other interested parties requirements) and to translate those requirements in the academic curriculum. Subsequently, all teaching and learning activities including evaluation and assessment methods, modules and class delivery must be focused on meeting the specified requirements. Any changes in the requirements of customers must be continuously monitored and adjustments be made to curriculum and other teaching activities accordingly. This is referred as customer-driven or beneficiaries-driven teaching and learning.

As one of the measurements of the performance of the teaching and learning, an education institution should monitor information relating to stakeholders perception as to whether the institution has met stakeholders requirements. This is in fact a mandatory requirement of ISO 9001:2000 as stipulated in Clause 8.2.1. Responding to this, FBE constantly conduct studies to measure the external stakeholders satisfaction with regard to the quality of its graduates in term of knowledge and skills in the respective field of study, leadership, quality, communicative ability, and cooperation with colleagues (Norfadzillah in Maimunah Ali, et al., 2001). In additions, customer's opinions gathered through reports fromexternal supervisors on students who undergo practical training; needs analysis carried out during the design state of the course/curriculum and questionnaires distributed by UPSI's ALUMNI to the present employers of the graduates . Any suggestions and complaints by the customers were considered, assessed and wherever necessary, incorporated into the teaching and learning process. Only with such objective assessment of stakeholders feedback could the Faculty adhere to the principles of best practices and hence, practices continuous improvement.

Best practices in teaching and learning should also be process-focus. Process approach is an important quality management principle of ISO 9001:2000. The process-focus regards students as internal customers as they are the ones who receive output of the teaching and learning process. The output of teaching and learning process includes teaching materials, modules, class delivery, project papers and other academic related services. These outputs must meet quality standards and must be consistent with the curriculum design. This approach is consistent with ISO 9001:2000 which clearly focuses on controlling the processes of a quality management system and output of those processes.

Although students are regarded as internal customers, they cannot specify to the institution how the course should be run or how assessment should take place. In this context, Quentin (2000) preferred to address students as recipients because they do not set education specification.

Even though internal customers or students or recipients cannot set education specification or curriculum, it is very important that a faculty encourage them to express their opinion or suggestions. For this purpose, each semester the students are asked to respond to a set of questionnaire that aims to solicit information concerning the following:

a. Lecture preparation: the lecturer has to ensure sufficient and necessary teaching and learning materials and aids.
b. Lecture delivery: the lecturer has to design a variety of teaching and learning techniques.
c. Lecture evaluation: the lecturer has to provide mode of student assessment.
d. Teaching outline: the lecturer has to prepare and distribute the course outline during the first week of semester.
e. Lecturer-student interaction: the lecturer is able and willing to listen to student's suggestions and opinion.

Information regarding lecturer's performance based on the above questionnaire is then used to identify further improvement in the delivery of teaching and learning activities. Such improvements include identification of training needs and teaching aid equipment to enhance the teaching and learning process. Figure 2 summarizes the customer-driven (beneficiaries) and process-focus (recipient) conceptual model that is used by FBE in designing best practices in teaching and learning.

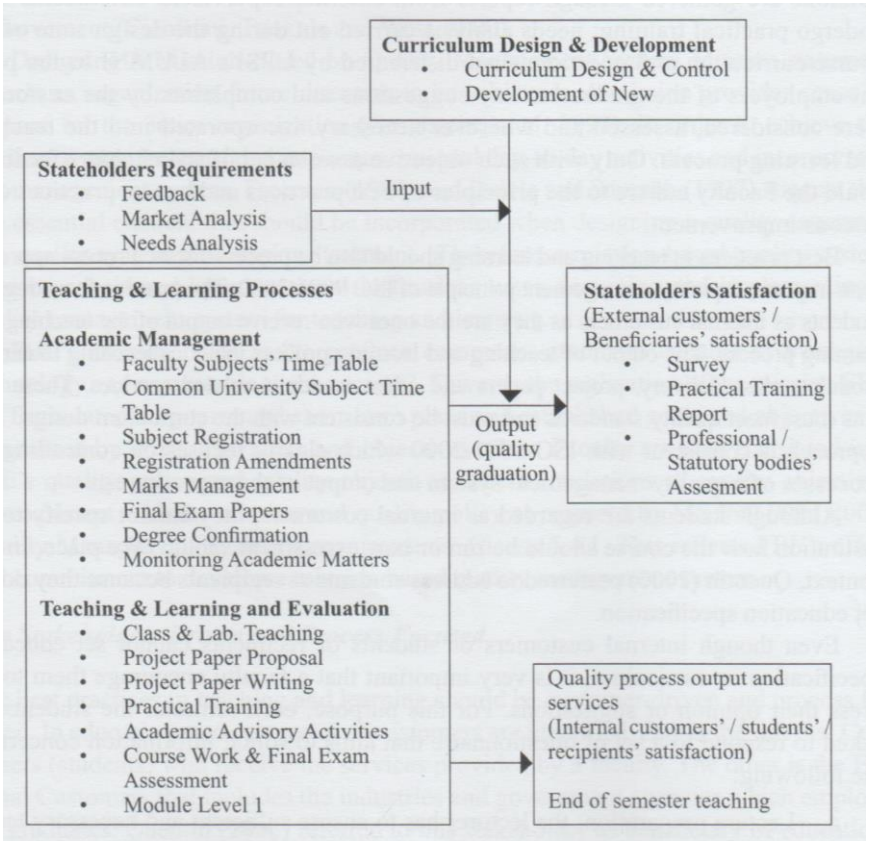


**Figure 2:** FBE's Stockholder's Driven (Beneficiaries) and Internal Stakeholders (Process Focus)

The FBE's model of best practices in teaching and learning is further elaborated below:

a. Stakeholders requirements
   This component refers to external stakeholders requirements (and other interested parties requirements including statutory and regulatory procedures that the Faculty has to comply with). The external customers include industries, government agencies, and other related agencies. Feedback, market analysis and needs analysis are tools used to objectively identify the requirements of the customers. Input: The requirements stipulated by the respective and varied external customers serve as integral input to best practices and must be translated into the curriculum design. Curriculum design: Designing an academic curriculum that reflects the knowledge, skills, attitude, and so on that the external customers want. The curriculum design must be up-dated and modified in line with the demands and the development of the customers.

b. Teaching and learning process
   In ISO 9001:2000, this process ids referred as product and/or service realization. To establish best practices in teaching, the focus is given to the 3P's – People, Process and Product. The focus on people stresses on encouraging creativity in the classroom environment in addition to creating competency in the respective area or field of expertise of the lecturers. The process involves the teaching and learning activities in producing quality graduates. On the other hand, focusing on product will ensure graduates of FBE meet requirements of external customers, as identified in the early stage.

c. Quality process output and services
   This component of best practices refers to process output (eg. Examination papers, teaching modules, course work materials) and services (delivery of lectures, registration of subjects, marks management) given to the students. All process outputs and services must meet quality standards stipulated in the quality management system documents, customer's charter and quality objectives.

d. Output
   This is the ultimate product or result of teaching and learning; the quality graduates that meet external customer's requirements in terms of knowledge, skills, attitude, and other relevant qualities.

e. Stakeholder's satisfaction
   As a measure of the effectiveness of the teaching and learning process and the entire quality management system, surveys, assessment by professional and statutory bodies and practical training reports are gathered regularly.

f. System Audit
Audits are used to determine the extent to which the quality management system requirements are fulfilled whilst audit findings are used to assess the effectiveness of the quality management system and to identify opportunities for improvement (MS ISO 9000:2000; Quality Management System).This implementation of audit is a requirement of ISO 9001:2000 as specified in Clause 8.2.2. In ISO 9001:2000, audits can be performed as follows:

i. First-party audits or internal audits which are conducted by, or on behalf of, the organization itself for internal purposes and can form the basis for an organization's self-declaration of conformity.
ii. Second-party audits are conducted by consumer of the organization or by other persons on behalf of the customer.
iii. Third-party audits conducted by external independent organizations which provide certification or registration of conformity with requirements such as those of MS ISO 9001:2000.

For teaching and learning at FPE, audits are conducted at two different levels, namely internal audit and third-party audit. The internal audits are performed by internal auditors (FPE staff) who are independent from the area or process being audited. These audits conducted at least once a year and cover all teaching and learning activities. To date, FPE has conducted three internal quality audits and two third-party audits since 2004. There were done to ensure continuous best practices in teaching and learning.

In auditing processes the audit findings are important because the findings demonstrate compliance of FPE's quality management system to quality assurance standards, service standards and the effectiveness of the system meeting customer's and all interested parties' requirements.At the same time, results of the audits also indicated nonconformities in teaching and learning process that need immediate corrective actions. Some areas were also highlighted in the findings for further improvement in the teaching and learning processes.

From FPE's experience, auditing the quality management system is regarded as crucial in order to check on the compliance of the teaching and learning activities to quality assurance standards abd customers' requirements. Findings of audits then can be used to continuously improve the effectiveness of the system. Thus, best practices in teaching and learning must include audits as an efficient method to demonstrate the effectiveness of the teaching and learning processes and area of improvement.

Continual Improvement refers to recurring activities that increases the ability to fulfill requirements (Cianfrani, et al., 2000). This is the key requirement for sustaining the organizational journey towards achieving the aspired future state. Continual Improvement is also one of the eight quality management principles of ISO 9001:2000 and it should be a permanent objective of an organization to continuously enhance the organization overall performance. The essential elements that should be considered by HEI's when designing best practices in teaching and learning are:

a. The integration of mission statement with quality management system processes provide as sense of purpose in offering courses that meet the requirements of stakeholders.
b. The establishment of a quality management system including the quality control and quality assurance to ensure that all activities and processes in teaching and learning meet the specified requirements consistently.
c. The implementation of continuous quality audit to provide evidence that the teaching and learning processes are effectively implemented; and
d. Continuous improvement efforts to enhance customer's and organizational stakeholder's satisfaction.

The aim of continual improvement of ISO 9001:2000 quality management system is to increase the probability of enhancing the satisfaction of customers and other interested parties. This can be achieved through:

a. The implementation of correction measures to eliminate a detected nonconformity or corrective action to eliminate the cause of a detected nonconformity and other undesirable situation in order to prevent recurrence.
b. The execution of preventive action to eliminate the cause of a potential nonconformity or other undesirable potential situation.
c. The improvement of quality management system processes by reviewing the quality policy and objectives, quality assurance standard, adding value to products and services to customers and the setting-up of higher organizational targets.

In the context of teaching and learning FPE, improvements were focus on the following 3P's: Product, Process and People:

a. Product which covers enhancing quality of graduates and improving process products, which involves the quality of examination papers, the undergraduate projects, course work materials and practical training.
b. Process which involves improvement in the teaching and learning activities in producing quality graduates. Such improvement includes the introduction of new ways of class delivery, the enhancement of student's evaluation methods, the adjustment of course curriculum to match changes in the needs and requirements of customers and professional bodies.
c. People who involves effort to increase staff competency in delivering academic courses and management of academic related activities and processes.

Such improvements were carried through taking corrective and preventive actions based on the audit findings, feedback from customer and other interested parties, data regarding the achievement of quality objectives and suggestions from faculty staff.

**Conclusion**

The paper has considered ISO 9001:2000 quality management systems as a framework for FPE to design and implement best practices in teaching and learning. The focus of designing the best practices in teaching and learning process using ISO 9001:2000 should entail:

a. The incorporation of organizational mission and strategic goals into the educational quality management system.
b. The establishment of a quality management system as a framework to direct and control all processes in teaching and learning to ensure specified requirements are met on a consistent basis.
c. The implementation of continuous audits determine the effectiveness of the teaching and learning process and the quality management system whilst audit findings are used to identify opportunities for improvement.
d. The implementation of continuous improvement to enhance the satisfaction of customers and other interested parties as well as to continuously increase organizational capabilities in providing and delivering academic courses.

Adopting best practices in teaching and learning in FPE using ISO 9001:2000 will ensure that all academic standards are fulfilled; efficient teaching and learning activities through measurement as practiced, analysis and improvement activities at each step of the quality measurement system are undertaken; customer's satisfaction by each step of the quality management system are undertaken; customer's satisfaction by continuously meeting their requirements are enhanced; and institutional effectiveness and improvement effort through internal and external audits are determined. In the context of Malaysia, the intention to introduce quality assurance standards and procedures for public HEI's by the Ministry of Education, similar to the Quality Assurance Agency in the United Kingdom and the Unified Higher Education System in Australia, will certainly enhance the institutions ISO 9000 quality management system adherence to a common and high education standards in delivering academic courses . In continuing the quality journey and ensuring quality of the highest creditable and standards, higher education institutions should continuously improve their teaching and learning effectiveness and efficiency by embarking projects with renowned education institutions to ensure it is of a world class standard.

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