

# DESIGNING MANAGEMENT EDUCATION FRAMEWORK USING IWA-2 APPROACHES

Agus Sukoco

Faculty of Computer Science, Bandar Lampung University, Lampung, Indonesia

Corresponding email : agussukoco16@gmail.com

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## Abstract

The guide IWA 2:2007 is a value to ISO 9001 system. This guide was elaborated by the experts in the field of education. It emphasizes so important elements of education as: educative value, concentration on social values etc. This guide contains practical instruments of introduction and improving the quality system in the field of education. IWA-2 quality management system can also be regarded as one of the approach as towards achieving best practices in teaching and learning. IWA-2 system not only focuses on quality assurance, but on the design of a quality management system. This leads to the achievement of customers satisfaction through incorporating their requirements in the system and measuring whether or not their satisfaction is achieved continuously. Thus, adopting this system will ensure the teaching and learning processes are of creditable standards and quality. This paper thus, discusses how best practices in teaching and, in general, were designed and practiced using the IWA-2 quality management system framework.

The educational organization conduct internal audits according to an audit program to assess the performance of the quality management system and educational process, verify the use established method for educational process. Standard ISO 19011:2011 provides guidance on auditing management systems, including the principles of auditing, managing an audit program and conducting management system audits, as well as guidance on the evaluation of competence of individuals involved in the audit process, including the person managing the audit program, auditors and audit teams.

*Keywords:* IWA-2, Quality Management System, Higer Education, Internal Quality Audit.

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## 1. INTRODUCTION

Quality Assurance and Quality Control management have become important in Indonesia, one of in higher education. It was could be attributed to consistent focus on quality and quality improvement to regulation such as certification and accreditation. In a higher education, there is now growing interest in the development of quality management systems as a means of the higher education change through the improvement of key performance indicator processes. the higher education embracing to improve their quality with adoption quality standard as a partial or integral [1]. Quality Education is especially a major requirement for a developing, Issues such as accountability to students, meeting the needs of industry and other employers, maintaining academic standards and financial accountability to the government and funding bodies will attract much attention as competition between institutions for students becomes much more severe in the years to come [4].

The citizen more concern for quality and shareholders depending on whether they private or public. Client of education increasingly desire the quality, so certification is a way of responding to such demand. In the system of education the perception the quality was based on the rule of the mutual confidence. In the conditions of the fast development of the higher education, indispensable became creating the formalized systems assuring the fulfillment of the academic standards [3].

Requirements put for the higher education, especially from the point of view of the demand on the job market, caused the necessity of implementing the quality management systems (QMS) compatible with the ISO 9001:2008 standard to universities [2]. The first groups to pay attention were providers of continuing education and training for the business world, as well as, to a lesser extent, vocationally oriented schools. Both types of organizations are indeed closer to market needs and business developments than regular education institutions. Some general education schools and higher education institutions have also taken the ISO 9000 road; a few pioneers have already passed the certification stage. This development is still in its very early stages. It is only since the early 90s that the first education and training institutions have obtained an ISO 9000 certificate, some of them even for only part of their activities.

This paper will attempt to further discuss a quality assurance strategy in education, and provide a framework for a systematic interpretation and a successful design and implementation of the Guidelines for the application of ISO 9001:2008 in education, namely IWA 2 [2]. In order to highlight the significance of adopting the ISO 9001:2008 quality management system framework in an Higher education institutions, this paper will discuss it in terms of designing best practices in the teaching and learning processes.

## **2. OVERVIEW OF ISO 9000 QUALITY SYSTEM IN HIGHER EDUCATION INSTITUTIONS**

ISO series 9000 standards are the international standards worked out by the International Organization for Standardization (ISO), dedicated to the quality management system. This means that all activities having the influence on the quality should be planned, systematic, documented and supervised, and the organization should deliver proves that all works according to requirements described in ISO 9001:2008 standard and with customers requirements [4].

The quality management system contains the organization structure, competence division and responsibility, procedures, processes and resources. It defines the conditions and methods of education, establish the proof of the value of the offered educational service, makes possible the comparability of educational institutions in, can decide in advance about the choice of the university, makes the chance on the growth of workers motivation to better work and leads to lowering the costs. ISO 9001:2008 standard makes the basis to implementation and certification the quality management system. The implementation of this system is equivalent with the introduction of the processes management which is the foundation of the rational, effective management in each organization. ISO 9001:2008 standard has the general and universal character. It relates neither to concrete brand or specialty nor to concrete product or service. It is applied by the production, service enterprises, by organizations set on the profit, but also by the non-profit organizations (e.g. the public administration offices, agencies, hospitals, universities). The basis of the quality management system according to ISO 9001:2008 standard is the processes orientation.

Standard ISO 9001:2008 stipulates a no of requirements on which an organization quality system can be accessed and subsequently verified as compliant to quality system model. The verification of compliance with the requirements is performed by an external and independent body called the "Certification body". The scope of organizational activities covered by ISO 9001:2008 are not only for the manufacturing industries but it includes virtually all processes having an impact on service industry and hence service quality as well. There fore the professional institutions wishing to implement an ISO 9001:2008 compliant quality system would have to address issues such as the identification of the need for curriculum being offered, curriculum design or identification of co-curricular activities to meet such stated needs, adequate curriculum delivery, maintenance and improvement [3].

The ISO 9000 model implementation in higher education supposes a very significant advance in the normalization of the fundamental teaching-learning process activities [5]. the systems of the quality management and supervision audits constitute important element in the improving of the system also in reference to the process of education. The quality of process of education should refer to all the levels of educative system, providing their high level of realization. Achievement of such position is possible thanks to specially elaborated standard Quality Management Systems – ISO IWA 2:2007 (E) complementary to standard ISO 9001:2000 with reference to widely understood education. The elaborated document constitutes a guide facilitating proper introduction of requirements of the norm ISO 9001:2000 in sector of education.

### **2.1 Relationship Between Iso 9000 And IWA-2 In Higher Education**

The guide IWA 2:2007 adds a great value to ISO 9001 system. This guide was elaborated by the experts in the field of education. It emphasizes so important elements of education as: educative value, concentration on social values etc. This guide contains practical instruments of introduction and improving the quality system in the field of education [5]. ISO 9001 specifies requirements for a quality management system that can be for internal by organizations for certification or for contractual purposes. IWA-2 is not intended for certification nor for contractual purposes. Rather, it provides guidance on a wide range of topics for continuous improvement of an organization's performance. IWA-2 is recommended as guide for educational organizations whose top management wishes to move beyond the requirement of ISO 9001, in pursuit of continuous improvement and suitability of success [6].

IWA 2: Quality management systems - Guidelines for the application of ISO 9001:2000 in education, contains the full text of ISO 9001:2000, clause-by-clause, followed by specific text making the standard easier to understand and implement by the education sector. In addition, IWA 2 includes the full text of ISO 9004:2008, which gives organizations guidelines for achieving further benefits from their quality management systems through the pursuit of continual improvement of performance. The IWA 2 guidelines do not add to, change or

modify the requirements of ISO 9001:2008 and it is not intended that organizations be certified to the document. However, it is intended to be useful to both internal and external parties, including certification bodies when the user organization is seeking ISO 9001:2008 certification, to assess the organization's ability to meet customer, regulatory and its own quality requirements [1].

## 2.2 Designing of IWA-2 Quality System in Higher Education Institutions

Increasing competition and growing mandates for accountability by accreditation associations, legislatures, have “forced” higher education institutions to focus on quality to improvement. The IWA-2 quality system provides a framework to establish a quality system in teaching and learning in Higher Education Institutions [2]. The ISO 9000 Quality System is basically a model that provides a unique framework for any organization to establish a customer oriented quality system that is internationally recognized and can be independently assessed however not certified. IWA-2 quality management system can also be regarded as one of the approach as towards achieving best practices in teaching and learning. IWA-2 system not only focuses on quality assurance, but on the design of a quality management system. This leads to the achievement of customers’ satisfaction through incorporating their requirements in the system and measuring whether or not their satisfaction is achieved continuously. Thus, adopting this system will ensure the teaching and learning processes are of creditable standards and quality. This paper thus, discusses how best practices in teaching and, in general, were designed and practiced using the IWA-2 quality management system framework [2].

### Quality Management System in Higher Education

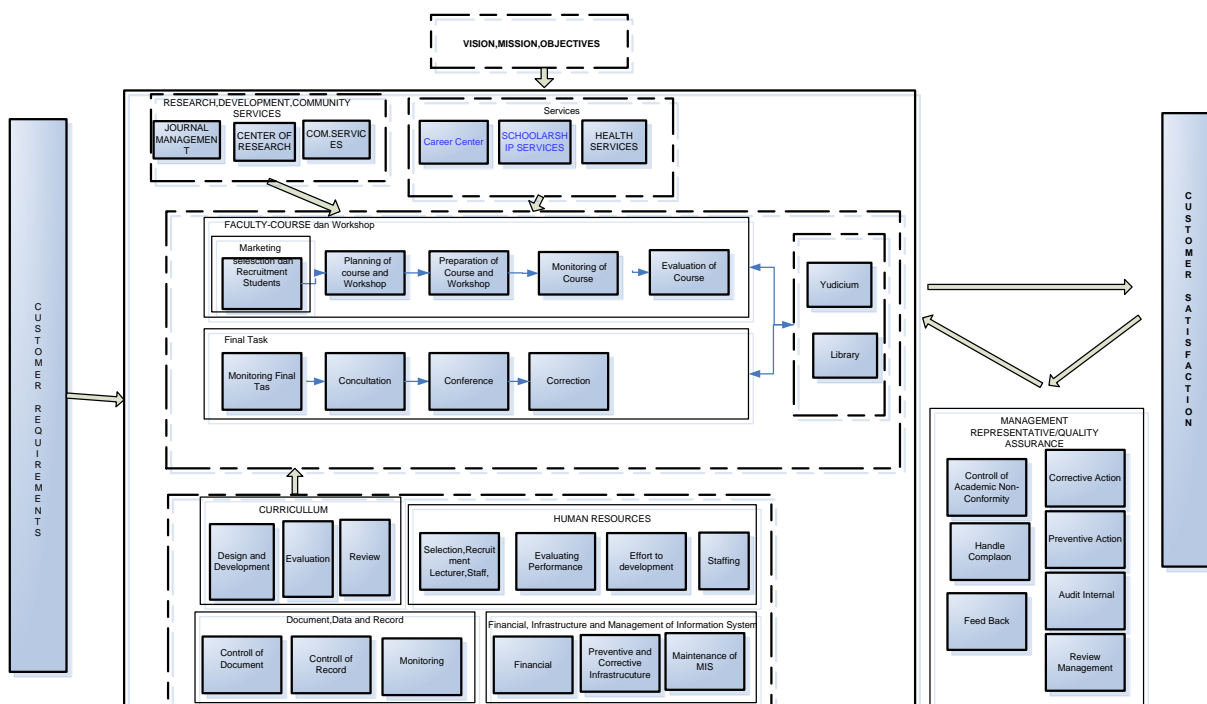


Fig. 1 Process Model Quality Management System in Higher Education

Identifying and understanding the needs and expectations of customers as well as other parties to ensure that their requirements are being met. the commitment of top management to support the implementation of the quality management system and to continuously improve the system the effective utilization of organizational resources in implementing the quality management system the control of the process learning and teaching to ensure all requirements are being met consistently the measurements of quality management system processes to determine the effectiveness of the system and improvement opportunities [2]. Process model in higher education define and manage processes for quality management system processes related to the aim of the organization and following the provision of service : a). education design; b) curriculum development; c) education delivery and d). assessment learning.

Table 1: Description of the clauses IWA-2

Section Headlines	Sub-Section Headlines
1. Scope	
2. <i>Normative Reference</i>	
3. <i>Term and Definitions</i>	
4. <i>Quality Management System in the educational organization</i>	4.1. General Guidance 4.2. Documentation
5. <i>Management Responsibilities in the educational organization</i>	5.1. Management Commitment 5.2. Customer focus 5.3. Quality Policy 5.4. Planning 5.5. Responsibility, authority and communication 5.6. Management Review
6. <i>Resource Management in the educational organization</i>	6.1. Provision resources 6.2. Human resources 6.3. Infrastructure 6.4. Work Environment
7. <i>Realization of the educational services</i>	7.1. Planning Realization 7.2. Learner related process 7.3. Design and development in the educational organization 7.4. Purchasing 7.5. Provision of educational services 7.6. control of monitoring measuring devices
8. <i>Measurement, analysis and improvement in the educational services</i>	8.1. General 8.2. Monitoring an measurement 8.3. Control of nonconforming product 8.4. Analysis of Data 8.5. Improvement

### 3. MANAGEMENT RESPONSIBILITIES IN THE EDUCATIONAL ORGANIZATION

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. Some strategies that top management about management responsibility : a). communicating the quality management system plan throughout the educational organization; b). strategic planning considering the aim and future goals of the educational organization, c). encouraging the identification and use of best practices, d). establishing a quality policy ensuring all the members of the organization know the vision and mission relation to the members work, e). establishing quality objective to realize aims and intentions that are expressed in the quality policy to be realized in operating actions [6].

#### 3.1 Resource Management in the educational organization

Resources including human resource, financial, equipment, utilities, hardware and software must be determined and provided to ensure conformity of service and quality management system for enhancing learning satisfaction by meeting learner requirement. Strategies for ensure resources availability for the effective functioning are : a). establish information input, b). perform resource for the short, medium and long term, c). carry out follow up of verification and assessment task.

#### 3.2 Realization of the educational services

Service realization is the process that will convert the customer requirements into an output that is both acceptable to the customer and one that would not jeopardize the quality. Output refers to the product and/or service that is a result of product realization and one that fulfills the customer requirements. The educational organization plan stage of educational services, including design and development of teaching methods, design, developing, reviewing and updating study plans and curricula, learning assessment and follow-up, support

services activities, resources allocation, evaluation criteria and improvement procedure to achieve the desired results.

### 3.3 Measurement ,analysis and improvement in the educational services

At each step along the way, some form of measurement or analysis has to be conducted to measure the process, product and customer satisfaction. Once data on process, product and level of customer 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 [2]. Outcomes from monitoring and measurement may be used to identify areas for improving the quality management system and educational processes.

The implementation of quality management system in education should be done in the phases: - the preparation phase (5 steps process): 1. The decision of top management about implementation of QMS as inherent part of management 2. The declaration of mission, vision and strategy (quality policy) 3. The definition of project team for implementation of QMS 4. The definition of terms 5. The reservation of sources (financial, HR) - the implementation phase (7 steps process): 1. The training the staff about QMS 2. The implementation of process approach. It consist of : a. Identification of processes and definition of the process map b. Definition and documentation of processes c. Definition of criteria for process performance assessment 3. The comparison of existing processes with ISO 9001 requirements 4. The implementation so far missing procedures (control of document, control of records, internal audits, control of nonconforming product, corrective actions, and preventives actions) 5. The trial period 6. The improvement of existing processes based on evaluation of trial period, The improvement of existing processes based on evaluation of trial period [5]. The quality of education comprises following elements: local and equipment base, teaching programs and program contents, teaching methods, administrative process service, lecturers and students. The quality assurance of education is a continuous and dynamic process, which is liable to constant evolution. The changes inside the process are the result of continuous interaction between these five mentioned elements.

### 3.4 System documentation of the Quality Management System in Higher Education

System documentation an educational organization's include term and required, applicable laws and regulations, accreditation and certification programmes and support services [6]. The university documentation includes : a) Quality Manual - it contains the quality policy (it should contain the obligation to fulfilling the customer requirements and to the continuous improvement of the system) and quality objectives, the system description with discussion and explanation of possible exclusions, the description of relations between processes in the quality management system (the processes map) and procedures (their content or only relations to them), b) Procedures, c) Instructions, d) Other documents (drafts, forms, records). The System Documentation is supervised by Quality Representative. All documents functioning within the System are properly appointed in the aim of their identification [4].

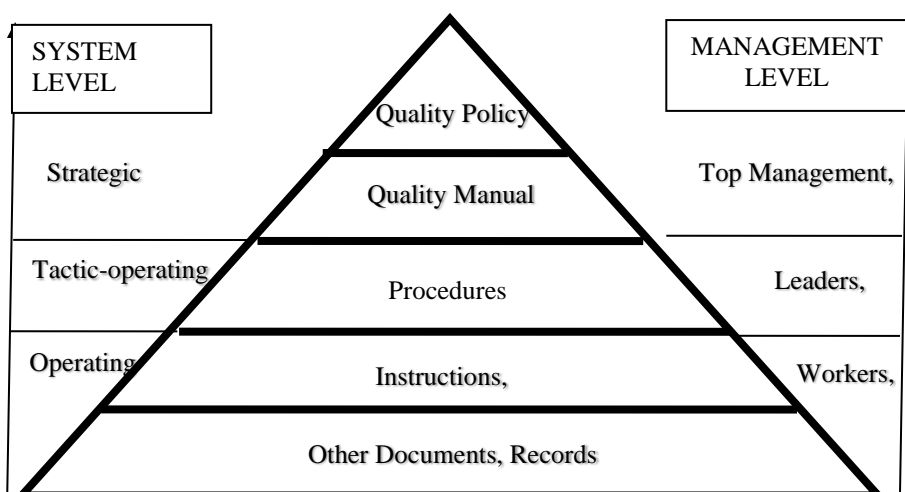


Fig 2. the Hierarchy of the quality managemen system Documentation [4].

### 3.5 Internal Quality Audit

The educational organization conduct internal audits according to an audit program to assess the performance of the quality management system and educational process, verify the use established method for educational process. Standard ISO 19011:2011 provides guidance on auditing management systems, including the principles of auditing, managing an audit program and conducting management system audits, as well as guidance on the evaluation of competence of individuals involved in the audit process, including the person managing the audit program, auditors and audit teams. Internal Quality audits can form the basis for an organization's self declaration of conformity. In many cases, particularly in small organizations, independence can be demonstrated by the freedom from responsibility for the activity being audited or freedom from bias and conflict of interest [13]. The most important advantage of audit is the possibility of the critical view on realized activities and defining if the present documentation and staff assure the proper realization of tasks and the organization objectives [4]. When an audit of the management system processes in the services of education is done one should make an evaluation of the structure of processes and interactions between them. Fixed among research workers feeling of "academic autonomy" is the most important trouble of the modern quality management systems of education. Aversion is associated with testification of the process of education, including its planning, course and results [5].

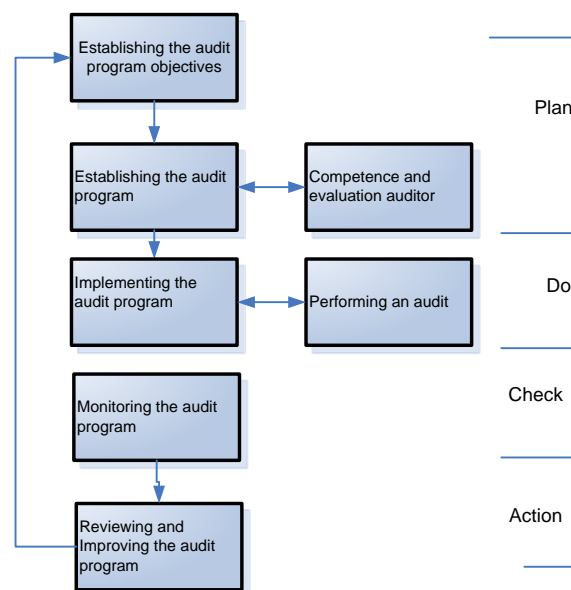


Fig. 4 application of the Plan-Do-Check-Act Cycle Internal Quality audit

An organization needing to conduct audits should establish an audit objective, audit programme that contributes to the determination of the effectiveness of the auditee's management system. The audit programme can include audits considering one or more management system standards, conducted either separately or in combination. The top management should ensure that the audit program objectives are established and assign one or more competent persons to manage the audit program. The extent of an audit program should be based on the size and nature of the organization being audited, as well as on the nature, functionality, complexity and the level of maturity of the management system to be audited. Priority should be given to allocating the audit program resources to audit those matters of significance within the management system. These may include the key characteristics of service in higher education [13].

### 3.6 Management Review

The educational organization conduct periodic reviews of the quality management system, according to the organization's need to assess the effectiveness of the quality management system in fulfilling objective. The complexity and critically of an educational organization's services and associated structure of support services are significant factors that should be considered in determining the frequency of a quality management system review [6]. As a result of management review by top management carry out action to improve the performance of the quality management.

#### 4. CONCLUSION

The paper has considered IWA-2 quality management system as a framework for a Higher Education to design and implement best practices in teaching and learning. The focus of designing best practices in teaching and learning process using IWA-2 . management system; 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; the implementation of continuous audits to determine the effectiveness of the teaching and learning process and the quality management system whilst audit findings are used to identify opportunities for improvement.

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