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**ISO 9001: A Standard to Develop a Robust Governance System in Higher
Education Institutions**

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Abstract

This study evaluates the implementation of Quality Management System-ISO 9001 (QMS) in a degree awarding institute (institute), which was established in 1999 with a single campus. With the passage of time the institute has established its satellite campuses in other cities of the country. This institute has a mixed centralization and decentralization administration style. Head Office is mainly responsible for policy making, expansion, R&D, curriculum development, institute level events organization, HRM and financial control, where as campuses have their role of teaching-learning and campus level administration.

With its rapid expansion, the institute faced administrative challenges and adopted various administration models, but the challenges kept on growing to an extent that the management of the institute had apprehensions regarding further expansion. HRM, training & development, financial controls, research & development, record keeping, building maintenance, curriculum

revision & development, introduction of new programs, industry-academia partnership, research productivity, quality teaching-learning, etc. were the challenges for the institute management.

The management displayed a strong intention to address these challenges; after several top level consultative meetings it was determined that there is a need for a robust management system. Finally the management realized that the international standard of quality management system ISO 9001 has the ability to address these challenges effectively and has a potential for developing a robust management /governance system. With these hypotheses the management decided to implement the QMS in the institute.

This study evaluates how QMS helped this institute to cope with the above highlighted challenges, and how it builds the overall structure of governance; how it assesses the role of standards or tools such as ISO 9001:2008 can help an educational institution towards developing and managing the organizational profile. This study also discusses the steps of QMS implementation at the institute. From very outset, the author was involved in the implementation of QMS in the institute.

Keywords: Quality, Governance, ISO (International organization for standardization), QMS (Quality management system, an international standard which is a set of requirements to develop a management system).

Introduction

We live in the age of information, creativity and innovation, wherein new technological advancements, opportunities and challenges are being faced by us all the time. Organizations are also facing these challenges and trying to be the best in their field. In this endeavor, standards are set and best practices are being mandated in businesses. But to have good governance in any organization, they have to develop strategies to bring their resources together to achieve their goals and objectives; to this end, they set benchmarks or standards against which the organizations can measure their standards, procedures and practices. Quality is important for a company in order to excel; this is what quality is all about.

Quality does not only deal with the corporate sector but also has application in Higher Educational institutions for teaching, learning and management (Bollaert et al, 2007). Moreover, Higher Education Commission of Pakistan (HEC) is also making efforts toward quality education (Ameen, 2007:1). Our institutions need a transformation in the strategies being used so far. To change our organizations into world class institutions, we need progression in the field of knowledge; nations that fail to bring quality in its institutions seldom make it to the forefront of world leaders. Quality has become the buzz-word, of the 21st century.

ISO (International Organization for Standardization), established in 1947, is the world's largest developer and publisher of International Standards; it is a network of the national standards institutes of 163

countries, one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. ISO is a non-governmental organization that forms a bridge between the public and private sectors. On the one hand, many of its member institutes are part of the governmental structure of their countries, or are mandated by their governments; on the other hand, other members have their roots in the private sector, having been set up by national partnerships of industry associations (ISO, 2010).

ISO gives us the standards that are the tools to achieve goals; it provides guidance to develop a process and ways to implement it as a framework. ISO not only provides guidance on the role of a governing body, but also encourages organizations to use appropriate standards to underpin governance and quality assurance (Tufail and Lodi, 2006). The objective is to provide a framework of principles for management, good corporate governance, evaluating, directing and monitoring in an organization. Therefore, ISO enables a consensus to be reached on solutions that meet both the specific requirements of business and the broader needs of society as a whole.

Education is considered to be an industry which makes investments in people; however educational organizations are not usually a business / corporate organization or a profit making industry. As an educational institution, the objective is to deliver quality education and for that, an organization carries out all kinds of processes and structural strategies to achieve its goals. To

this end, an educational organization must have a clearly defined mission statement. To achieve this mission, objectives are developed; and to achieve these objectives, some mechanism is developed e.g. an organization has a Governing Body, departments and a structure and these structures are designed to achieve the goals. In Pakistan very few educational institutions have considered ISO important in academia, research, innovation and creativity, as there are no measurable, tangible or quantifiable criteria to assess knowledge; however the institute which is the subject of this case study is not one of them. This research case study evaluates the role of how the standards or tools such as ISO 9001:2008 can help an educational institution towards providing and managing the organizational profile and to build an overall structure of corporate governance. ISO framework provides that challenge to this institution which has now adopted the ISO framework as guidance for good governance.

Although this organization is not amongst the corporate sector, but it has implemented ISO standards as a benchmark and evaluated what it has been doing in the past and what new should be introduced. It has implemented this tool by developing parameters / criteria (measurable and quantifiable parameters); they have been able to define them in education. Though, exact quantifiable measures are yet to be developed and implemented, but there is some improvement and progress in this regard.

Background

This study is about the implementation of Quality Management System - ISO 9001 (QMS) in a degree awarding institute (institute), which was established in 1999 with a single campus. With the passage of time the institute has established its satellite campuses in other cities of the country. This institute has a mixed centralization and decentralization administrative style. The Head Office is mainly responsible for policy making, expansion, R&D, curriculum development, institute level events organization, HRM and financial control, whereas campuses have their role of teaching-learning and campus level administration.

The rapid expansion created a variety of problems; although the institute has tried to embed quality in academics as well as in administration by developing some basic rules and regulations, but with the passage of time it was realized that the developed systems were unable to deliver the desired quality in academics and administration. The challenges grew to an extent that the management had apprehensions regarding further expansion.

The management displayed a strong intention to address these challenges; after several top level consultative meetings, it was determined that there is a need for a robust management system. The management determined that the international standard of quality management system, ISO 9001, has the ability to address these challenges effectively, and the potential for developing a

robust management / governance system; it was agreed that QMS should be used as a tool to achieve the desired level of quality and good governance.

For this purpose the institute engaged a Consultancy Firm (firm) through a transparent process for the implementation of QMS. The institute was asked to appoint a Management Representative /Project Leader (MR) and to nominate a QMS Steering Committee (SC). The role of MR and SC was to review, verify and validate the developed procedure/systems. An implementation committee / task force (TF) was constituted, comprising representatives of all academic and non-academic departments/sections; the role of this task force was to develop procedures at the functional level. The firm conducted a number of training sessions for the MR, SC and TF on QMS implementation and their role. It is worth mentioning that the trainings sessions were chaired by the Rector himself, wherein he embodied the commitment of top management to this initiative, and desired that all concerned academic and non-academic officers should fully cooperate with the consultants in the implementation of QMS.

After these training sessions, the firm conducted a comprehensive gap analysis / organizational assessment, in which they evaluated the existing academic and management practices with an aim to identify the areas for improvement and to prioritize the critical processes which need urgent attention. A consultative approach was used for gap analysis in which a series of meetings were held with different tiers of

management and a series of individual interviews were conducted with the concerned officials. Existing documents, policies, rules, regulations and statutes were reviewed to assess what changes / improvements were required.

This study evaluates how QMS helped this institute to cope with the above highlighted challenges, and how it builds the overall structure of governance; it assesses how standards or tools such as ISO 9001:2008 can help an educational institution towards developing and managing its organizational profile. This study also discusses the steps of QMS implementation at the institute.

Objectives

The objectives of this study are as follows:

- To evaluate the existing academic and management practices of the organization.
- To identify the areas for improvement and devise a roadmap by formulating a quality policy for administrative efficiency.
- Successful implementation of the quality system procedure, capacity building and continual improvement.
- To evaluate how QMS helped this institute to build the overall structure of governance.

Methodology

In this research the tool used is the case study method in which a series of interviews, group discussions, question / answer sessions and interactive sessions were conducted as explained in (Saunders, Lewis and Thornhill, 2009; Kumar, 2005) with the top

management, heads of academic and non-academic departments, faculty members and students. The author visited all departments; especially those newly developed, and reviewed the previous rules and regulations in practice and newly developed procedures and policies.

Case study method, being a multi perspective analysis and an empirical inquiry, has been increasingly used in many social sciences, as it gives the holistic view and an opportunity for in-depth investigation. Yin (1993:23) says that the case study research method is an empirical inquiry that investigates the issues within real-life context in which multiple sources of evidence are used.

This approach provided an appropriate understanding of the issues and the context in which the issues were operating; it was a single event which helped in looking at the sequence of events in a systematic way. As the author was an integral part of this process throughout; it helped in seeking effective outcomes. This study investigates the phenomena and enabled the author to identify real life problems / issues of the institute and their solutions to develop a set of robust procedures for the institution under discussion.

Results of Gap Analysis

The major findings of the gap analysis study are:

- On the academic side, teaching-learning environment, curriculum revision, industry-academia partnership, student feedback, effectiveness of quality enhancement cell, core skill development,

department alumni and research productivity need serious attention.

- Administration needs to work on recruitment and performance appraisal, procurement policies, clarity of roles and responsibilities of staff, laboratory management, capacity building of administrative officials, internal client feedback mechanism, setting up and monitoring of smart goals and objectives, clarity in reporting structure, efficient flow of processes, effective record keeping, internal checks and balances, internal planned reviews and mechanism for continual improvement.

Recommendations for System Improvement

In the light of identified gaps an agreed action plan was developed as follows:

Academic (enhancing teaching efficiency)

- Interactive Research Sessions (IRS) for Faculty Members: To enhance the research productivity it is recommended that each and every academic department should hold interactive research sessions twice a month. IRS will help faculty members in producing research papers as they would be able to review a numbers of studies consistently.
- Curriculum Revision: Considering the rapid developments in technology, it was decided that the curriculum should be revised every three years. Curriculum revision should also include the feedback from industry and alumni, because of their expertise to identify new trends in market /industry and to identify gaps in the old system. Thus curriculum review and revision should be based on data obtained

from a number of sources, including student evaluation feedback, faculty input, graduate follow-up evaluation data and practicing agency's feedback. A well defined Standard Operating Procedure (SOP) would be devised in consultation with faculty members in this regard.

- **Industry-Academia Partnership:** The consultancy firm suggests that the ties between the departments of the institute and related industry should be strengthened. In this way the institute can contribute towards overall development of the related industry, and can add value in the processes and products of the related industry in both the public and private sectors. This shall facilitate the institute to fulfill its corporate social responsibility in addition to exploring earning opportunities. A two-tiered approach can be developed in this regard; the departments may offer their services to the related industry and, similarly, faculty members may also provide consultancies in their individual capacities. The strengthened ties between the departments and the industry would pave the way to identify industry needs, job opportunities for graduates and potential revisions in the curriculum. It would also be a source of practical exposure for the students attached with the concerned faculty member.
- **Student Feedback:** The consultancy firm will hold consultative sessions with students and faculty members to deliberate on different aspects of student feedback. Apart from QEC initiatives of

spreading student feedback questionnaires and getting feedback from them, there should be some formal meetings with the students, preferably by the HOD, to take recommendations from them regarding faculty and course layout. These recommendations should be discussed in faculty meetings of the departments in an institutional manner.

- **Departmental Alumni:** The consultancy firm has proposed that there should be an interface of the departmental alumni. Initially a group or face book interface may be established by each department and later a website of the alumni may also be developed. The graduates will use this to share job opportunities, research papers, inputs on industry needs and suggestions to improve academic curricula. The departments have also emphasized to manage this activity at department level rather than at a central alumni and placement office. It has been observed that some informal efforts are also in place by the Department of Management Sciences in this regard.
- **Laboratory Management:** There should be well defined standard operating procedures for key experiments, as well as manuals for equipment maintenance and handling, and health & safety. Calibration of sensitive equipment must be regularly checked and scaled.
- **Core Skill Development:** Special focus should be laid on building English language proficiency of the business students and others.

- **Capacity Development Regarding Examination Processes:** It has been pointed out by a number of faculty members that some form of capacity development initiative should be carried out for faculty members regarding test item development and evaluation processes. The organization should organize identified capacity building sessions for faculty members.

Non-Academic (enhancing administrative efficiency)

The following areas were identified for enhancing administrative efficiency and to improve service delivery. It is pertinent to mention that representatives of all the staff in the principal seat unanimously agreed to initiate the proposed steps.

- **Job Descriptions:** It was observed during the diagnostic phase that the departments have a lot of work to do in this area. It was mutually agreed with all departments that there should be job descriptions for each official so that they are clear about their roles and responsibilities, and form the base for their accountability and performance management.
- **Development, Implementation and Accessibility of SOPs:** Most of the departments do not have SOPs for relevant functions. The consultancy firm will work with each department to develop their SOPs.
- **Capacity Building of Administrative Officials:** The Institute is a relatively large

organization having a large number of teaching and non-teaching staff. During the gap analysis study, it has been observed that whereas different formal mechanisms are available for the professional development of teaching staff, there is no formal system for the professional development of non-teaching (administrative) staff. It is strongly recommended that there must be a formal mechanism for continuous professional development of non-teaching staff in the departments and administrative offices. Annually, each academic and administrative department should conduct a training need assessment (TNA) survey, and then prepare a professional development plan on the basis of the TNA.

- **Client Feedback Mechanism:** Client feedback plays a vital role in ensuring client satisfaction. To improve the service level of administrative departments, ISO 9001:2008 standards recommend that there must be a feedback mechanism in each department for having unbiased feedback from stakeholders. Careful analysis of feedback will help departments to improve their efficiency and develop their departmental policies and workflow based on that feedback.
- **Recruitment and Performance Appraisal Policies:** There should be fair and effective recruitment procedure to ensure that staff appointed to posts has appropriate qualification and skills to meet the organizations current and future needs. Appraisals should be undertaken at least

once a year and there should be comprehensive training program for managers involved in appraising staff in order to understand the appraisal system. This is a complex and technical area which requires a long term concerted and consistent effort to modernize the policies as per the changing needs. ISO 9001:2008 standards recommend that in each department there must be a comprehensive competence criteria matrix for all posts, which clearly establish the qualifications, experience and skill level required for a particular post; during the ISO certification process, it would be tried that, at the very least, these criteria should be in place.

- Procurement Policies: The mission of the Purchasing Office is to procure the highest possible quality of goods and services for the organization at the lowest possible cost. To accomplish this mission, certain guidelines and procedures need to be established. Although purchasing is made as per PPRA (a government agency) rules, but there is still room for improvement. These procedures must be adhered to in order to ensure budgetary control over organization resources. There should be standard operating procedures for the purchase order preparation, authorization limits and approval process. Supplier evaluation is a mandatory parameter for ISO certification. The consultancy firm will assist the procurement office in this regard.
- Mandatory Quality Management System Documents: The concept of ISO

Certification is not only to achieve an international certification, but also to provide a roadmap to improve the organizational strength and quality of services in all domains of deliverables with a laid down strategy and approved procedures for improvement and corrective measures and methods.

- Formulation of Quality Policy: Quality policy is a guiding principle. It shows the overall intentions and directions of the organization. It is the responsibility of the top management to sketch a comprehensive quality policy. The Consultant will provide guidelines and sample quality policies to the top management for the establishment of the quality policy.
- Establishment of Quality Objectives and Plans: ISO 9001:2008 requires that quality objectives shall be established at each relevant function and level within the organization, i.e. just about everywhere. The manner in which quality objectives are established and managed will have an enormous impact on the organization's performance. The quality objectives will drive strategic improvements throughout the organization, significantly elevating the importance of the quality management system. ISO 9001:2008 standards recommend that quality objectives must be established using the SMART principle. SMART stands for: S-Specific – objectives should specify what they want to achieve; M-Measurable – you should be able to measure whether you are meeting the objectives or not; A-

Achievable - are the objectives you set, achievable and attainable?; R-Realistic – can you realistically achieve the objectives with the resources you have?; T-Time bound – When do you want to achieve the set objectives?

- Development of Organizational Charts: ISO 9001:2008 standards recommend that an organizational chart must be developed at the organization and departmental levels. These organizational charts must clearly indicate the departmentalization, chain of command, distribution of authority and span of control. An organizational chart must show how departments, divisions, and various levels of an organization interact with each other.

- Development of Quality System Procedures:

1. Quality System Procedure for Document and Record Control: A lot of documents have to be handled every day. ISO 9001:2008 standards recommend that every organization must have a documented procedure for documents and record control. This quality system procedure outlines the approval mechanism of a document, review / changes / updating process of documents, identification, storage, protection, retrieval and retention mechanism, distribution and recall of documents, identification and control of external origin documents and disposal method of records.

2. Quality System Procedure for Internal Quality Assurance Auditing:

(Sustainability of System): Audit is an examination of performance to determine whether defined performance standards have been met; it is the measurement component of the quality system. It does this by using a systematic methodology for analyzing processes, procedures and activities with the goal of highlighting organizational problems and recommending solutions. The consultancy firm will provide internal auditing training to one representative from each academic and administrative department. The first internal audit will be facilitated by the consultants while six monthly internal audits will be carried out by them on their own.

3. Quality System Procedure for System Review: To ensure continuing suitability, adequacy and effectiveness of management system and to assess the opportunities for improvement and the need for changes to quality policy, objective or QMS, it is recommended that top management shall meet on periodic basis to conduct a review of the system. This practice is already in place in the form of a number of established forums; so we would incorporate this existing initiative in the QMS framework.

4. Quality System Procedure for Continual Improvement: To continuously improve the performance of the Institute there must be a well-defined mechanism for corrective and preventive actions. The basic purpose of implementation of

QMS standards is the continual improvement of the performance of the organization. To measure the performance there are key performance indicators (KPIs), which are backed by quality objectives. During implementation of standards, measurable quality objectives are established at each relevant function and level within the organization i.e., just about everywhere. After a given time, objectives are measured using quantitative data to track the performance over time. Selection and management of result oriented objectives will move ISO 9001:2008 into a new territory of driving strategic performance improvements throughout the entire organization.

Action Plans for System Implementation

To adopt a graduated approach and to ensure sustainability, it was planned that the system should be implemented in phases; accordingly a phased implementation plan was developed as follows:

Phase 1

Sensitization and Awareness Development

- Awareness sessions for all tiers
- Formation of the steering committee (SC) and a Task Force (TF)
- Training of Task force officials

Phase 2

Organizational Streamlining

- Development of the vision, mission and quality policy.

- Development of organograms (overall and at departmental level)
- Review of the functions of the departments.
- Development of roles and responsibilities of employees (job descriptions).
- Review of the existing policies and procedures.
- Identification of processes, determination of sequence and interaction of process (process mapping).
- Development of new Standard Operating Procedures (SOPs) for the effectiveness of operation and control.
- Development of Standard Analytical Procedures (SAPs) to ensure the effectiveness of process.

Phase 3

Implementation of Academic Performance, Improvement and Initiatives

- Implement teaching-learning improvement programs.
- Development of curriculum revision mechanism.
- Development of Industry-academia partnership mechanism.
- Development of student feedback mechanism.
- Capacity building and strengthening of quality enhancement cell.
- Strengthening of faculty development cell.
- Implementation of interactive research session for enhancement research productivity.
- Strengthening and functioning of departmental alumni.
- Arrangements for core skill development for students.

Phase 4

Internal Monitoring & Analysis of

Implementation and External Auditing

- In progress; outcomes shall be evaluated on completion.

Implementation of Action Plan

Phase 1

Sensitization and Awareness Development

In this phase, a number of awareness sessions were conducted for all the staff (academic and non-academic) of the institute to sensitize them towards system implementation.

A Steering Committee (SC) was officially notified with the aim to oversee the implementation process, keep make it on track all the time, give technical inputs for implementation, resolve implementation issues, review the implementation progress and to analyze the effectiveness of the implementation . The SC comprised of 16 members representing all the departments (academic and non-academic).

For system implementation an operational level task force (TF) was established; it also had representation from all the departments. The TF has undergone a comprehensive capacity building program of QMS implementation, which included basic and advanced level training on QMS implementation. The purpose of this capacity building program was to fully equip the TF and to mentally prepare them for its implementation.

Phase 2

Organizational Streamlining

After many consultative sessions, the vision, mission and quality policy statements were developed during this phase.

Keeping in view the vision statement, the functions of each department were reviewed and organograms were developed by the TF. After approval of organograms, roles and responsibilities (job descriptions) of the each employee were developed and communicated. JDs were developed after careful analysis of the important facts about a job, such as the individual tasks involved, the methods used to complete the tasks, the purpose and responsibilities of the job, the relationship of the job to other jobs, qualifications consistent with the training requirement. Duplication of tasks was clearly seen during development of Job Descriptions (JD); for clarification of roles and elimination of duplication, such cases were sent to the SC which then decided which task was allocated to which employee. Along with the clarification of the roles and responsibilities, another purpose of JDs development was to provide a sound base for employee accountability and performance management.

After development of JDs, the TF, in the light of the functions of a department, identified processes and their sequences, and accordingly developed process maps for the development of Standard Operating Procedures (SOP); these were developed for the effectiveness of operations, control and continual improvement. Procedures and policies already developed were reviewed

and brought in line with the functions of the departments. For effective monitoring of the procedures, Standard Analytical Procedures (SAP) were also developed which also includes the internal quality assurance auditing procedures.

In view of the large number of administrative staff /non-teaching staff of the institute, a Professional Development Center (PDC) was established with the aim to conduct training need assessments on a continuous basis and to provide concomitant training. The PDC is now fully functional.

A high level committee was formed to obtain feedback from the clients; the committee developed a client feedback form, which has been sent to all the stakeholders and also uploaded on the institute's website. The received responses are analyzed carefully, and approved modifications are then incorporated in the institutional policies on an annual basis.

A comprehensive HRM system has been introduced, and competency criteria have been developed for each post. According to the appraisal policy, performance evaluations are conducted annually on 360 degree performance based method; this has resulted in the induction of more qualified, skilled and experienced personnel.

To procure the highest possible quality goods and services, and to make the procurement process transparent and effective, procurement policy manual and SOPs have been developed by consultant experts, and approved by the top management.

Phase 3

Implementation of Academic Improvement Initiatives

Academic departments have adopted the IRS system proposed by the firm, wherein fortnightly meetings are held at the faculty level, supervised by respective HODs, to enhance their research productivity; these sessions have had a tremendous impact in producing quality research papers. A curriculum revision wing has been established to periodically review the curriculum, in view of latest developments and feedback from industry, alumni and students; SOPs for the smooth functioning of the wing have also been developed in conjunction with the institute's Quality Enhancement Cell.

For students, courses on core skills development have been introduced in departments; also, forms for student feedback have been developed and it has been made mandatory for students to give their feedback at the beginning and end of each semester.

A Career Development Center (CDC) has been established as an interface between alumni and the institute, which has strengthened the ties between academia (institute) and industry. Through the CDC the institute has been able to get real time feedback from the industry on different issues faced by them; the research and development department of the institute has worked on these issues and developed feasible, practical and cost-effective solutions, which have proved to be beneficial to industry.

Benefits of QMS Implementation

The implementation of QMS made it mandatory for the Institute's top level official bodies, including Board of governors, to meet every three months. These meeting were made the basis for wider interaction between all stakeholders.

The developed organizational charts provided support to the management of the institute for planning, budgeting and resource allocation. It also defined the leadership as well as responsibilities, dependencies and relationships throughout the institute. It facilitated the structures of teams with clear responsibilities, titles and lines of authority. It really helped in organizing, categorizing and delegating tasks to achieve specific goals.

Job descriptions were used to explain the roles and responsibilities, necessary skills, trainings and qualification needed by a potential employee. The development of JDs resulted in the elimination of task duplication and also helped in interviewing candidates. JDs were also utilized to orient new employees about the job and to track their performance.

Development of SOPs provided roadmaps to visibly transparent operations of the institute; transparency is an important aspect of good governance, and transparent decision making is critical for the private sector to make sound decisions and investments. Accountability and the rule of law require openness and easy access to information so higher levels of administration, external reviewers, and the

general public can verify performance and compliance to law. The institute has achieved all these through the developed SOPs.

The phases implemented to date have shown a clear change in the governance structure of the institute, in the form of clearer work procedures, convenient handover of work, more attention from the manager on the administrative business flow and in promoting a positive working attitude among the staff.

It is expected that the approaches used after the gap analysis will lead to better evaluation and rectification of the issues. This step of ISO standards implementation will add value to the institution and other organizations as well.

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