The Role of ISO Organization in improving the Higher Education –HE– Management Performance through Specialized Standards

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Abstract

Specialized standards offered by international organizations such as ISO are a group of management tools that higher education institutions can adopt and implement to improve their management performance. Over the past several years, higher education institutions have been increasingly encouraged to provide quality and credible services and programs. In turn, this requires the adoption of specialized standards from independent organizations. The optimal choice for most institutions is the ISO standards as the body has a global reputation for quality standards.

Therefore, this study investigates the role of ISO in enhancing higher education management performance through certified standards. The study adopts a secondary research method based on a qualitative research strategy using an exploratory research design to investigate the topic. A total of 50 empirical research articles were analyzed. The results show that ISO standards enhance management performance by enabling higher education institutions to implement quality management practices.

Keywords: ISO standards, Higher Education Institutions, ISO, Management Performance, Quality Management.

1. Introduction

Quality management is increasingly considered an essential element required for effective and efficient operations within higher education organizations today. The way these organizations focus on quality may vary based on the individual strategies of each organization. However, higher education institutions can focus on quality management by adopting various quality management systems such as those by the International Organization for Standardization (ISO). Organizations from different sectors such as the environment, manufacturing and health among others have implemented various quality management systems to enhance their management performance. Higher education institutions are also adopting these standards.

For example, nearly 12,309 educational institutions have adopted ISO standards across the world (ISO, 2021). These institutions are vital because as centers for the provision of essential skills to millions of people they must have evaluation and measurement mechanisms for various activities to ensure the quality of their services. Thus, higher education institutions need to adopt and implement specialized standards to ensure and improve the quality of their management systems. The adoption of specialized standards in higher education institutions leads to the research question:

What is the role of ISO specialized standards in enhancing the management performance of higher education institutions?

Problem Statement

Education helps people to create societies worth living in and promote a culture based on prosperity, productivity, and reason.   However, pervasive inequities and critical shortages in skills highlight the need to transform the management of educational institutions to respond to existing social and economic challenges. With millions of students worldwide and with thousands of higher education institutions, these institutions need to assess the management of their institution as a whole to address efficiency and quality issues and enhance their abilities in the process. This is where ISO certification seeks to help higher education institutions. The organization offers diverse and specialized standards aimed at benefitting institutions across the world by helping them implement better management practices.

Research Question

The paper answers the following research question:

What is the role of ISO specialized standards in improving the higher education management performance?

Research Objectives

The following are the research objectives of this study:

- Investigate the role that can be played by global organizations in general regarding the Higher Education Institutions Performance Improvement.

- Investigate the role that can be played by ISO Organization regarding the Higher Education Institutions Performance Improvement.

Significance of the Research

A common way through which many higher education institutions improve their management performance entails complying with specialized standards from national bodies. The purpose of adopting the standards is to obtain approval from independent and trustworthy bodies to affirm that the institution is managed efficiently and offers quality services. Besides, institutions acquire standards for various reasons such as to be recognized as elite organizations, to increase their ability to recruit faculty, and to appeal to the market among others (Faria & Mixon, 2022). However, it is vital to understand the role of specialized standards in enhancing the management performance of a higher education institution. In particular, if the adopted standards focus on increasing the marketing appeal of the institution or its ability to recruit talented faculty, the effort may not help the institution to implement high-quality and efficient management processes. One important factor that institutions must understand when seeking standardization concerns the role of the standard in enhancing their management performance in terms of quality and efficiency.

The study findings will contribute to knowledge about the importance of specialized   standards or quality systems in higher education institutions. At a time when numerous higher education institutions focus on consolidating their quality management systems to respond to the demands of quality education clearly and in a flexible way, the study is of interest to institutions that have already implemented specialized standards and those that are still determining the quality management system to implement.

2. Conceptual Framework

Definitions

Higher Education Institutions (HEIs)

Higher Education Institutions (HEIs) encompass a diverse array of formal educational establishments, ranging from universities and colleges to vocational institutes, dedicated to providing advanced learning opportunities beyond the secondary level. HEIs serve as hubs for intellectual inquiry, research endeavors, and academic discourse, offering undergraduate, postgraduate, and often doctoral programs across various disciplines. These institutions play a pivotal role in shaping individuals' intellectual and professional development, fostering critical thinking skills, promoting academic inquiry, and preparing students for specialized roles within society. HEIs typically operate within a structured framework of governance, quality assurance, and accreditation, striving to meet rigorous educational standards while adapting to evolving pedagogical practices and societal demands.

ISO Organization

The International Organization for Standardization (ISO) is a non-governmental and independent global organization with 163 members from various national bodies for standards. The organization work with professionals and experts from the member bodies to develop sustainable and generic management systems focused on establishing standards that enhance efficiency and quality and reduce costs. Additionally, ISO offers world-class pro-active measures and specifications for systems, services, and products to support efficiency, safety, and quality. The ISO-developed standards are essential for facilitating global trade and bringing together bodies specializing in different processes (ISO, 2014). The organization has developed nearly 21,000 standards to date for different sectors (ISO, 2022).
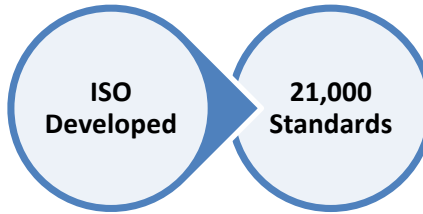
(ISO, 2022)

ISO Standards

As aforementioned, ISO develops different certifications focused on processes, service or product characteristics, or the organizational management system as a whole. These standards are voluntary and any organization, whether small or large, can adopt and implement them. the ISO standards establish a baseline of components of a service, product, or management system irrespective of whether the organization is public or private, small or large, or new or old.

Quality

In higher education practice, quality affects the institution as a whole. The concept of quality manifests itself through continuous service, process, and product improvement through the intervention of higher education stakeholders. Consequently, ensuring quality entails using relevant technology, promoting integrity, promoting clarity, promoting veracity, organizing ideas, being orderly, and ensuring accuracy. The concept of quality in the higher education field can be applied to management performance.

Management performance is useful for managing processes and people. Quality can be associated with achieving objectives (Kohoutek et al., 2017), the relevance of the service or product for users (Suárez et al., 2017), or user satisfaction (Menezes et al., 2018). Based on the ISO 9000:2015 definition, quality refers to the extent to which several features inherent to an organization comply with the requirements (Odeh & Elayyan, 2018). Therefore, higher education institutions need to implement or adopt relevant technical attributes and incorporate them into their management processes to improve the efficiency of their management performance.

Management Performance

The concept of management performance is derived from two other concepts including management and performance. Management refers to interlocking functions used to create corporate policy and organize, plan, control, and direct the resources of an organization to achieve the stated policy objectives (Barney & Hesterly, 2019). Performance refers to the indicators that demonstrate the organizational inefficiencies or efficiencies in terms of financial returns, competencies, and corporate image among others (Beer et al., 2021). Thus, management performance is the ability of the organization to conduct its functions to achieve its corporate objectives. Besides, the quality management practices of an organization result in its effective and efficient performance, which in turn creates growth and success. The performance idea focuses on customer satisfaction, employee retention and attraction, service or product innovation, service or product quality, and user/management relations (Beer et al., 2021). The success of any organization relies on its ability to adapt to the existing environment and manage its operations (Barney & Hesterly, 2019). There is a link between organizational management practices and organizational performance.

3. Contextual Framework

In this section, some of the standards applicable to higher education institutions are described.

ISO 21001:2018

The ISO 21001:2018 is a highly structured standard written based on ISO guidelines for management system standards. The certification considers the organizational context, leadership, planning, operation, support, improvement, and performance evaluation factors in presenting the guidelines for management systems in educational institutions. In particular, the standard requires the institutions to ensure that they meet the needs and expectations of students. It also requires institutions to offer relevant and impactful learning experiences that are aligned with their vision and mission (ISO, 2018). The standard focuses clearly on the needs of education stakeholders such as learners and the beneficiaries of the education service.

ISO/IEC 24751

This standard offers a common model that describes and specifies the preferences and needs of learners and describes

the digital education resources (ISO, 2009). The standard also offers a common information framework that describes the preferences and needs of learners when accessing learning resources digitally. It also offers a common language that describes digital education resources and equates the resources with the preferences and needs of learners.

ISO 29993:2017

This standard focuses on the range of services and service processes by defining a generic reference model for education services. It also specifies diverse components and their implementation (ISO, 2017). It deals with diverse education services including the types of lifelong learning such as in-company training and vocational training. The standard addresses all learning techniques and methods including e-learning, face-to-face or blended learning.

ISO 29991:2020

The standard specifies the guidelines for services focused on language learning. it deals with language learning services targeting language learners and other stakeholders acquiring the services for learners' benefit (ISO, 2020). For any language service, the key features include defining and evaluating learning objectives and interaction with learners. Teaching may occur physically in the classroom, using technology, or through a blended approach.

ISO 29994:2021

The standard defines additional and new dimensions of requirements for distance learning services. Its requirements are beyond ISO 29993 and 29991 in which it focuses on guiding learning service providers in delivering quality learning services (ISO, 2021a). The certification helps institutions to achieve excellence in distance learning services. The standard helps in setting the objectives, aims, and outcomes of learning; offers guidelines for the instructional design of courses; and offers higher education institutions an opportunity to enhance their services and increase educational fairness and opportunities (ISO, 2021a). It also helps institutions enhance employment, attain social and economic benefits, and expand market share. It also supports inclusivity, equity, gender equality, and quality in education.

The application of these standards by higher education institutions will enable them to address challenges, achieve credibility, attain sustainable development, and influence society. It helps institutions to implement effective organizational approaches required for delivering quality services.

4. Literature Review

Organizational Performance in Higher Education

The ability of a higher education institution to adapt to its environment relies on its ability to evaluate its environment and adjust its main activities or processes and gauge its performance against targeted and feasible goals. Performance measures can be relative or absolute (Croucher et al., 2018). Relative measures are those that are compared to specific standards or other comparable aspects in the performance of similar institutions. Absolute measures are those that assess performance based on ideal or previously defined features. As organizations, higher education institutions exist to fulfil specified missions. For example, institutions develop strategies, processes, and structures to realize their objectives, goals, and missions successfully and efficiently (Rimkutė et al., 2015). Thus, effective management of these institutions is essential.

Performance in the higher education context includes all processes, tasks, and actions conducted in institutions including research, teaching, and third mission events, and outcomes and outputs generated from these events (Sarrico, 2022). Measuring performance helps stakeholders determine its level such as high, low, good, or bad (Paudel, 2021). Generally, measuring performance is essential because its outcomes usually demonstrate the conduct of management towards achieving the objectives of the organization. Consequently, in higher education, management performance involves activities in which institutions use performance measures to demonstrate progress towards and achieve the set objectives.

Quality Management Practices and Organizational Performance in Higher Education Institutions

A higher education institution can be compared to a system comprising of parts that are related to each other to achieve specific objectives. These parts may include the environment, processes, inputs, and feedback loops. Any changes in a specific part affect other parts, which necessitates effective coordination of resources and efforts to ensure efficiency and generate the intended objectives (Kromydas, 2017). As social systems, higher education institutions have several subsystems such as management. The management component influences the overall objectives, the selected performance measures, the established standards, and the organizational plan and ensures that the plan is implemented by using resources efficiently to achieve the stated objectives.

Thus, quality management practices are desired in which institutions must meet the required quality standards to support their credibility and the reliability of their services (Hrnčiar & Madzík, 2015). Higher education institutions face diverse challenges today such as competitive approaches, concerns about controlling financing and costs,

internationalization, and urgent and rapid technological changes in education (Laurett & Mendes, 2019). Therefore, institutions have implemented various quality management approaches to improve the quality of their services and to ensure efficiency in their operations owing to their role in developing, promoting, and disseminating knowledge and new ideas (Iqbal et al., 2019). Various strategies have been implemented concerning quality management such as accreditation systems, internal and external evaluation, or quality management models (Huisman & Stensaker, 2022).

Generally, implementing a specific quality management model to meet the mission and objectives of an institution aids in improving its performance in terms of the quality of the offered services or products (Raissi, 2019). Quality management practices enable organizations to achieve their objectives efficiently and effectively while staying competitive. These practices usually include strategies focused on offering desirable products or services and satisfying customers. According to Skarpeta et al. (2019), the main product of higher education institutions is academic programs while their main customers are students. Studies also differentiate between soft and hard quality management practices. In particular, soft practices entail the behavioral aspects of quality management focusing on organizational culture, social aspects, and people while hard practices are the technical components that utilize statistical tools and scientific techniques (Zeng et al., 2017). The separation is based on the consideration of an organization as a social system and a technical system (Botla & Karaca, 2018). It is essential to optimize all of them to gain the benefits of quality management.

Additionally, key processes in higher education usually involve services and administration, research and teaching (Psomas & Antony, 2017). Regarding the effect of quality management on the performance of higher education institutions, studies show that quality management practices result in improved performance (Sila, 2018). the effect of quality on organizational performance can be measured objectively by examining changes a few months or years after implementing quality management or subjectively by examining the perceptions of relevant stakeholders (Sila, 2018). The impact is usually in terms of improvements in product or service quality, financial outcomes, employee engagement, company image, and communication (Absah et al., 2019).

ISO standards and their effect on the performance of higher education institutions

ISO standards are key indicators of quality services and products within organizations including higher education institutions. This view has witnessed numerous institutions adopting various ISO certifications. The performance of

management is essential because it helps in measuring the effect of ISO standards on the performance of top management. Studies examining the effect of ISO certification on management performance demonstrate that ISO implementation affects performance and task completion positively (Psomas, 2013). ISO implementation also results in the internal discipline within the management domain (Psomas, 2013).

Besides, institutions that have implemented ISO standards act with discipline regularly (Celik & Olcer, 2018). Psomas (2013) states that the quality management elements of ISO standards affect organization development and growth positively by helping institutions to focus on collective responsivity, customers, and supporting top management. Kaziliūnas (2010) also demonstrates that ISO certification enhances efficient operations within higher education institutions by enabling management to comply with regulatory and statutory requirements toward achieving the set objectives. Additionally, the quality management elements of the ISO standards ensure that institutions embed quality management processes in their functions and operations.

Role of New Technology in the Implementation of ISO standards

While organizations do not have to use technology when implementing ISO standards, larger organizations usually use new technologies to meet the documentation and enforcement requirements of the standards. Additionally, many organizations find it challenging to retrieve past data about control, monitoring, and activity trends of the implemented standards, particularly at the operation level.

Thus, organizations usually use systems such as ERP systems to implement ISO standards. Studies show that using ERP to facilitate ISO implementation enables organizations to take a holistic approach to the implementation process (Caserio & Trucco, 2018). However, small organizations may find it challenging to use large systems such as the ERP to implement ISO (Caserio & Trucco, 2018). Other studies note the lack of immutability and traceability in ISO standards adoption and suggest the use of blockchain technology to support effective implementation (Muruganandham et al., 2022). Studies also highlight the role of artificial intelligence and the Internet of Things in the implementation of ISO standards to achieve the intended objectives (Muruganandham et al., 2022). Generally, technology is essential in ensuring the effective implementation of ISO standards.

Some Practices Examples for ISO implementation in HEIs

Several higher education institutions have implemented ISO standards. Certainly, I can start with an example of a Higher Education Institution from the USA that implemented ISO standards in its management system and experienced positive effects on organization performance, University of California, Berkeley. As it appears from the abstract of a published article by (Smith et al., 2018) that this case study explores the implementation of ISO standards in the management system of the University of California, Berkeley (UC Berkeley) and examines its impact on organizational performance within the institution. Drawing on interviews with key stakeholders and analysis of internal documents, the study highlights the process of integrating ISO standards into various departments and administrative units at UC Berkeley. Findings indicate that the adoption of ISO standards has led to enhanced efficiency, improved accountability, and streamlined processes across the university. The study also discusses challenges encountered during implementation and offers insights into strategies for successful adoption of ISO standards in higher education settings. Overall, the case study underscores the positive effects of ISO standards on organizational performance in the context of a prominent American higher education institution.

On the other hand, and at the global level, Buraimi University College of Oman adopted the ISO 9001 standard in 2012 (Martin & Thawabieh, 2018). Lessons learned during the adoption include seeking the involvement of all stakeholders in the implementation process including staff. In another study to investigate the implementation of ISO standards, Taib et al. (2018) surveyed the administrative staff of the Northern University of Malaysia and found that implementing ISO requires HE institutions to focus on a process approach by involving the staff from different departments. Top management should also develop a quality culture within the organization and give each staff member a role to play in supporting the culture.

Other studies highlight the importance of teamwork in the successful implementation of ISO standards (Basir et al., 2017). Yoon and Hong (2019) argue that implementing ISO standards in higher education institutions requires significant investments in information, financial, and human resources. Nevertheless, institutions can avoid spending substantial costs when implementing ISO by drawing lessons from faculties such as engineering and architecture that have experience with quality assurance systems in form of accrediting their programs (Yoon & Hong, 2019). Anh et al. (2021) also notes that implementing ISO standards in universities requires applying the ISO system thoroughly through designing, evaluating, reviewing, and updating all processes and activities.

The examined studies demonstrate the importance of ISO standards in enhancing quality management practices within higher education institutions. While most studies identify the role of ISO standards in improving management

performance, they do not demonstrate clearly how the standards improve performance. Thus, there is inadequate research about the way ISO organization improves the management performance of higher education institutions through specialized standards. This study aims to fill this gap by investigating the role of ISO specialized standards in improving the management performance of higher education institutions.

5. Theoretical Framework

Quality Management

The theoretical underpinning of this study is based on the general quality management concepts. Quality management can be considered as a set of management practices that go beyond quality control and a philosophy (Gurumurthy Iyer, 2016). Thus, any quality management model has underlying principles and requirements for its adoption. The framework focuses on the ISO standards and their role in higher education management performance. The framework considers the main principles of ISO standards for HE institutions that focus on improving management performance such as organizational context, leadership, planning, operation, support, students, improved learning, improvement, and performance evaluation. Institutions implementing these principles ensure their management performance is effective and efficient. The analysis will focus mainly on the effect of the standards on management performance.

6. Research Method

Research Design

This study uses an exploratory study design to gain insights into the role of ISO standards in improving HE management performance (Creswell & Poth, 2018). The design is appropriate due to its flexibility and ability to offer in-depth knowledge, which allows the researcher to formulate different questions and use different techniques for data collection and analysis (Johnson, 2019).

Research Strategy

The study focuses on analyzing empirical research articles to answer the research question. Therefore, the study adopts a qualitative research strategy to explore and understand the topic and gain insights into any hidden meanings based on the context of the topic (Hennink et al., 2020).

Research Paradigm

For this study, an interpretive paradigm is adopted to select the required data sources based on the extent to which they address the topic. The main focus of the paradigm is on assessing and understanding the meanings assigned to phenomena (Merriam & Tisdell, 2016).

Research Method

The secondary research method is used in this study in which data sources are collected from peer-reviewed empirical studies. The method is suitable for assessing, critiquing, and synthesizing primary and secondary data to develop new views (Snyder, 2019). It also involves a systematic examination of existing data from journals, libraries, the internet, or textbooks to explore already established patterns and use the insights based on the study context (Largan & Morris, 2019).

Data Sources and Sampling

Purposive sampling was used in this study to select 50 empirical studies as sources of data. The technique requires the researcher to apply personal and sound judgment when selecting the sources of data (Johnson, 2019). Only key data sources were selected to address the study objectives because they had sufficient data regarding the topic and the data was accessible. The study uses empirical research articles only.

Research Approach

An inductive study approach was used in this study to explore the gathered data. The approach was used to inform decisions about the study design and strategy (Saunders et al., 2019). Additionally, the inductive approach is suitable for this study because the study uses an interpretive paradigm (Saunders et al., 2019).

Data Collection

In this study, empirical research articles about the topic are analyzed to explore the role of ISO in improving HE management performance through specialized standards. An internet search on major academic databases including EBSCO, Emerald, ERIC, and Springer was used to find the articles.

Data Analysis

Thematic analysis was used to analyze data in which the articles were examined to identify patterns (Lochmiller, 2021). The analysis involved categorizing concepts based on their similarities and differences before identifying dominant themes.

Analysis Findings

The philosophy of ISO standards for higher education institutions resonates with the main quality management ideas in higher education including improvement and accountability.   Studies demonstrate that quality management systems add value to academic organizations (Tavares et al., 2016). The main principles of ISO standards apply to higher education and can improve management performance by providing generic guidelines that support quality management. For example, the emphasis on stakeholder engagement, leadership, student and stakeholder satisfaction, improvement, support, and performance evaluation (Volkova & Lancmane, 2019) helps institutions to focus on management processes and decision-making procedures that are central to improved management performance.

Thus, ISO Implementation benefit higher education institutions in various ways.

- For example, they assist institutions in harmonizing specifications of education services such as offering standards in quality and efficient operations (ISO, 2019).

- Standards also establish an agreement of approved guidelines and rules that aim to support the optimal achievement of the intended result (ISO, 2014). Students benefit more from standards due to factors such as integration between countries and globalization. Additionally, specialized standards enable institutions to shift their focus from quality teaching practices to improved management performance of the entire institution (Vorobyova et al., 2022).

- ISO standards also improve quality management through enhancing student and staff satisfaction, improved compliance with regulatory and quality requirements, improved facilities, and improved staff competencies (Moturi & Mbithi, 2015).

- Implementation of ISO standards also affects the quality management culture in HE institutions by influencing the institutions to develop value systems that enhance quality (Alberto, 2015). ISO standards emphasize quality management to create a quality culture in management processes that fosters continuous improvement in all essential performance domains (Medic et al., 2016). Implementing the standards instils a quality culture within the management domain and affects daily task management positively.

7. Discussion

The study found that ISO standards enhance the efficiency of management in HE. The finding agrees with studies demonstrating that organizations implementing ISO standards become more efficient in the management domain (Vorobyova et al., 2022). The efficiency of management is critical when evaluating the performance of the management domain of organizations. The study also finds that implementing ISO standards in HE institutions affects management performance and task completion positively (Psomas, 2013). In turn, this means that ISO standards help managers in HE institutions emphasize strong quality policies in their management processes to promote efficiency (Idris, 2019). Efficient management helps organizations address emerging issues and problems effectively, which translates to loyal staff and students. According to Phan et al. (2016), ISO standards help HE institutions enhance their quality outcomes, which results in efficient management and highly satisfied customers.

8. Conclusion

The current study investigated the role of ISO standards in improving management performance in higher education institutions. The findings show that ISO standards play a vital role in improving HE management performance by helping institutions develop efficient management structures or processes. The standards enhance daily workflows through the implementation of extra or new processes. The standards also enable HE institutions to enhance their educational programs and prepare learners for successful careers.

9. Recommendations

The study recommends that:

- Governments should issue legal acts pushing the HE institutions towards implementing the most related standards as an obligatory.

- Higher education institutions should use the new automation systems to improve the performance of implementing the ISO standards in the HE institutions.

- Governments and research laboratories should share and spread the Quality culture in the HE to highlight its

role in improving the management performance.

- Institutions should also emphasize training of staff on using new technology to support effective implementation of ISO standards in HE institutions.

- The ISO certification process must go hand in hand with the academic accreditation process.

- The realism of applying quality specifications in educational institutions and not being satisfied with the form rather than the content. Simply, obtaining quality certificates by arranging papers and meeting the requirements of the regulated specifications without transforming quality into an applied and realistic cultural one, this approach will not be beneficial for those institutions.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Redfame Publishing.

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Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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