

# The Possibility of Applying Total Quality Management at the Higher Institute of Science and Technology – SUSA

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**Abstract:-** In this study, an attempt was made to determine the possibility of applying total quality management in the Higher Institute of Science and Technology (SUSA) and to explain what needs to be done to create high-quality and qualified education and educational institutions in individuals and regions. Institutional aspects of education management. Within this framework, a number of domains from different sources are defined, different characteristics are highlighted, and efforts to improve the understanding of quality are discussed. The management model will enable educational institutions to survive under the conditions of global competition, cooperation should be developed in the form of innovation, modernity, liberalism, openness, development, change and catch-up. Quality is most clearly defined as customer satisfaction. In educational institutions, especially educational administrators, lecturers, teaching assistants, students, parents and educational institutions, the purpose is to improve the quality of lecturers as an overall environmental education.

**Keywords:-** Total Quality Management; High Institute; Administrative Performance.

## I. INTRODUCTION

The philosophy of quality management began to make its way into service institutions, as is the case in banks and companies, and finally non-profit institutions and some government institutions such as health and educational services. In the nineties, higher education institutions began to apply quality management, and multiple awards were placed in Japan, Europe, the United States, and Australia, including the European Quality Award in the European continent, the Deming Award in Japan, and the Malcolm Baldrige Award in the United States of America.

One of the most pressing issues of our time is the declining quality of higher education. This challenge has been highlighted at educational conferences worldwide, including a UNESCO conference on education at the start of this century, which urged governments and institutions to address it. Total quality comes as a contemporary developmental trend to represent a pivotal framework in most

countries of the world, due to the crisis experienced by educational institutions as a result of their weak ability to respond quickly and successively to societal and global changes and the challenges required for development that necessitate a change in the way educational institutions deal with society's problems in a manner that achieves efficiency and potency.

Accordingly, many leaders in higher education institutions believe that the application of total quality management is to ensure that these institutions will perform their work better and that the recipients of higher education will receive the best services.

It should be noted that higher education institutions are considered among the first institutions that should implement total quality management in order to obtain the best outputs. Therefore, its application is one of the most important entry points that can help higher education institutions in Libya in developing their performance and upgrading their services to the required level, given the lack of studies. Which dealt with the issue of total quality management in higher education institutions in Libya. I decided to conduct this study on the institution in which I work, which is the Higher Institute of Science and Technology- Susa.

### A. Research Problem

Although the Libyan state pays great attention to the total quality system, its application on the ground still does not exceed attempts by some higher education institutions.

Accordingly, the application of the total quality system has become an urgent imperative for university institutions and technical and technical education institutions, especially after the increase in the number of unemployed graduates of technical higher institutes as a result of the non-conformity of their outputs with the labor market, as well as the conformity of the content of study programs in most institutions of higher institutes in Libya.

Accordingly, it is necessary to reconsider the inputs of the higher institutes and the extent to which they meet the comprehensive quality standards, including suitable classrooms, qualified professors, and curricula that are compatible with the needs of community institutions, as well

as the type and methods of teaching and evaluation adopted by the technical institutes, especially the Higher Institute of Science and Technology, Susa,

### B. The Subject of the Study.

- Knowing the extent to which the requirements for the application of total quality management are available at the Higher Institute of Science and Technology, Susa.
- Provide some recommendations that would contribute to improving the quality of the institute under study.

### C. The Importance of Studying

The importance of this study is evident from the lack of studies on the quality of higher education. A chapter that will open the way for further studies on this topic by applying on Other institutions, therefore, this study represents an academic addition in this field And enrich the library with such studies. This study also benefits officials and decision makers in higher education institutions to adopt a more modern vision of higher education. 3- In addition, the study will show the importance of the approach to total quality management in improving and developing the higher education system.

## II. STUDY METHODOLOGY

The analytical descriptive approach was followed on which the study relied in order to achieve its objectives.

### ➤ The Limits of the Study

- Objective limits: This study focused on the availability of requirements application of quality management in institutions.
- Time limits: The study was conducted during the academic year 2022-2023
- Spatial limits: The study was conducted around the Higher Institute of Science and Technology, Sousse

## III. PREVIOUS STUDY

### A. The Study of (Maher Jesry et al 2022)

"Exploring the value of a risk-management quality-assurance model to support delivery of quality higher education in the conflict-affected northwest of Syria" This study reviewed quality management strategies, policies, and practices at two higher education institutions in northwest Syria, an area that has avoided regime conflict. The goal was to explore the potential benefits of a risk management approach to quality assurance—one that emphasizes context to help mitigate risks compromising quality education. The study utilized a mixed methods approach, including 14 semi-structured interviews with senior staff and administrators, a survey of 120 2019-2020 graduates, and an analysis of administrative papers. The findings showed that a risk management strategy could enable the institutions to more effectively develop plans, regulations, and procedures.

### B. The Study of (Al-Harbi, M. 2022)

*The total quality management (TQM) model proposed for the management of Educational Institutions in Kuwait.* The study examines the challenges faced by the education system in achieving and improving the quality of education in order to achieve excellence in pre-university educational institutions in Kuwait and examines the frame of reference of factors affecting the management of pre-university education in general. The criteria for measuring educational performance and the research question were identified by confronting the challenges faced by pre-university education administration in Kuwait, and the research question was identified by answering the question "How is it possible?" Elaborate Can pre-university educational institutions in Kuwait achieve excellence in educational management quality through an integrated quality model?

The study followed the descriptive approach and compared the approved quality models in terms of methodology, mechanisms, benchmarking tools and performance measurements. The study addressed the conceptual framework; the factors affecting the governance of educational institutions; the criteria used to assess the results of education; the assessment of educational effectiveness and efficiency and administrative effectiveness; the concept of overall quality management; qualitative assurance and control; culture of quality within education; and several international quality models. they were discussed and a number of conclusions were reached qualified human resources with expertise in improving all aspects of educational systems all models agreed on the process of evolution and performance improvement as a must recommendations included:

Spread a culture of total quality issue regular bulletins in the area of modern management provide management with developments surrounding them in the area of educational quality build a clear institutional strategy add transparency via work reports and large-scale stakeholder engagement.

### C. The Study of (Ludmila N. Larina, 2015)

This essay addresses the crucial issue of overseas students' education. The planning and management of educational and other procedures that are crucial to education were done in accordance with the key tenets of the Total Quality Management System (TQM). For educational activity to be successful, new forms and methods must be developed. Additionally, new connections between various concerns must be made, and effective administration of all processes must be understood. The TQM components related to the cycle of "Plan-Do-Check-Action" (PDCA) define the procedure of organization in the educational process for foreign students. The results of instructional objectives and the performance of the educational system as a whole are improved by innovative services, methodologies, and forms of education, information technology, and professional development.

*D. Study of (Ishtawa, A.2016)*

The theoretical study included the importance of the efficiency of the university professor's performance and the concept of quality management Comprehensive study, and ways to apply it in the higher education sector, and the descriptive approach was chosen in its style The survey was appropriate for this study, and some sources and references were used Some statistical tests for processing data. Through the information obtained, it was reached To some conclusions, including the courage of the faculty member in making the decision and not being afraid From failing and defending his point of view, I got the highest percentage of points of view the student obtained a paragraph on criticism of knowledge through analytical studies in the light of theories modern higher percentage from the point of view of female students as well as from the recommendations of the continuous assessment Steps to apply total quality management in higher education and scientific research. Developing the teaching competency of the university professor in a professional manner would raise the opportunities. The success of the educational process in achieving its set goals by following appropriate standards and principles with different disciplines in the field of promotions of faculty members and holding panel discussions It deals with teaching issues, its difficulties, and how to deal with students according to the perspective of total quality management.

#### IV. THE CONCEPT OF QUALITY AND ITS HISTORICAL DEVELOPMENT

The concept of total quality management is one of the modern management concepts that many international organizations have begun to apply to improve and develop the quality of their services and production and help in facing major challenges and achieving public satisfaction. This new style of success (Azla, 2009). Interest has increased in recent decades in using the concept of total quality management, for its prominent role in achieving the goals of many economic organizations, and the Japanese administration had a clear role in that from the early eighties and late nineties of the last century (Hamouda, 2002). Although there are many attempts to define total quality management and clarify its main principles, there is no unified definition in theory so far. There are many definitions, and in order to provide a better understanding of the true meaning of the concept, it is preferable to divide the terms. Management means every individual because every individual in the organization, regardless of his position, is responsible for his powers. It also means developing and maintaining the organization's potential for continuous quality improvement (Taher et al, 2023). As for quality, it is usually measured in relation to something else, and when compared to another similar country, a value is placed to determine the existing quality. And this thinking differs from another person and from one organization to another, and as a result of this great discrepancy, it was necessary to define quality in a way that is acceptable in the industry, and for this reason, quality is the way in which the product or service meets the expectations of the organization's customers. It means that everything and everyone in the organization is involved in the improvement

project (Melinda, 2007). Total quality management is “developing and maintaining the capabilities of the organization in order to improve quality, on an ongoing basis, and to meet and exceed the requirements of the beneficiary (Al-Lawzi, 2003) and in this context Barfield et al. It is an administrative direction in the organization that focuses on quality depending on the participation of all employees in the organization with the aim of achieving the client's goals in the long term. Steven Cohn and Ronald Brand gave a more comprehensive definition of total quality, as they defined it as “the development and maintenance of the organization's capabilities in order to improve quality continuously.” Fulfilling the requirements of the beneficiary and exceeding them, as well as searching for quality and applying it in any aspect of the work, starting with identifying the needs of the beneficiary by knowing the extent of the beneficiary's satisfaction with the services or products provided to him (Alsayed, 2005).

Total quality management is an administrative philosophy practiced by various organizations to achieve continuous improvement. It involves an ongoing cycle of understanding customer requirements, meeting those requirements, measuring performance, and pursuing further enhancements to reach higher quality levels. (Khalil, 2016). Spanbauer,(1995) defines total quality management as a philosophy that puts systems and processes in a position to meet and exceed customer expectations.

As for the overall quality management in higher education Many administrators in higher education institutions see the practices of applying total quality management as a way to reassure that these institutions perform their work better and that higher education clients receive good service (Sadiq et al, 2001) and therefore many higher education institutions have committed In the framework of higher education institutions seeking to improve the quality of their educational services to maintain their competitiveness, in the past ten years, many universities have resorted to the application of total quality management.

According to (Vazzana ,et al, 1997) total quality management is widely practiced globally in higher education, as many universities have created programs or courses related to total quality management to be in line with international requirements.

#### A. *The Possibility of Applying Total Quality Management at the Higher Institute of Science and Technology, Susa*

The application of total quality management requires all of the following:

- Supporting decentralization in order to achieve greater efficiency in the performance of tasks, and the spread of a kind of satisfaction with work among workers, which pushes them to exert more efforts to achieve goals.
- Managing time in a scientific and sound way, which requires rationalizing time management in the institution by planning, organizing and controlling time in a scientific manner so that no educational waste occurs when real application and implementation of TQM processes.

- Participation in management as an administrative method to achieve quality, and participation takes place among all stakeholders in education, whether they are inside or outside the educational institution.
- Continuous training in order to master the training steps and to facilitate the implementation of this new approach. Joseph Derby presented an applied approach in the form of stages of total quality management in which participants learn skills that enable them to work effectively. These stages are:

- *Zero Stage*

In this stage, managers decide whether or not they will benefit from comprehensive improvements from the application of quality management, and this is the decision-making stage.

- *The First Stage (Planning And Formulation)*

In which the vision and objectives of the higher education system are formulated.

The proposed strategies and policies, and this stage requires spreading the spirit and concepts of total quality at all levels within the system, selecting some members to participate in the development processes, and transforming the hierarchy of the system into a team spirit.

- *The Second Stage (Evaluation and Assessment)*

It includes self-evaluation of the performance of individuals and the organizational assessment of the system, along with conducting a comprehensive survey to satisfy the beneficiary customers, who are primarily students, the local environment and the institute in general.

- *The Third Stage (Application)*

It is the stage of implementing the philosophy of total quality management within the system at all administrative levels, accompanied by specific training initiatives appropriately for all individuals and with the support of senior management in order to improve the desired quality processes or areas.

- *The Fourth Stage (Exchange and Dissemination of Experiences:*

It depends on the dissemination of experiences upon success in the application of total quality management. Total quality experts assume that the timetable for implementing the total quality program ranges between (9-15) months.

In order to judge the success of the application of quality management in the various organizations, awards were set for the organizations whose programs succeed in improving the overall quality as criteria for the success of the application and implementation, as the institutions are granted international certificates in this regard. These awards focused on success in statistical control as a means to improve quality, and among these awards:

- The Deming Prize, which was awarded for the first time in 1951.

- The Malcolm National Award for Quality: which was awarded for the first time in 1987 by the National Institute of Standards and Technology in the United States of America.
- ISO 9000 The application of total quality management requires a comprehensive review of the conditions of the system by quality experts in cooperation with representatives of all departments of workers in the educational system. This is followed by the application of tools that are related to the improvement cycle that takes place in a circular phase that takes place through:
  - ✓ Determine: conducting sub-steps represented in defining objectives, defining human resources, then forming a work team, defining roles and responsibilities, and determining the time required for implementation.
  - ✓ Analyze: it means using quantitative measures to find out the main causes of problems.
  - ✓ Correct: It means selecting good alternatives from all team members, then planning, implementing and evaluating them.
  - ✓ Prevent: It is to avoid repeating dealing with things with old ideas, by proposing preventive steps.

In confirmation of the above, it is stated in the objectives of the strategic plan (2012-2017) of the Quality Assurance Center for Educational and Training Institutions in Libya, which are:

- Continuing to spread the culture of quality, continuous development and evaluation, and providing guides, technical and training assistance
- Establishing and applying the foundations and standards of total quality, amending and developing them.
- Encouraging the spirit of competition between educational and training institutions that have not achieved the required levels of quality in the elements to be approved.
- Preparing the national framework for academic qualifications in higher education to ensure its consistency and compatibility with the academic qualifications awarded by the corresponding institutions outside Libya.
- Providing advice and guidance to educational and training institutions that have not achieved the required levels of quality in the elements required for accreditation.

*B. Developing electronic management in the administrative, financial and service works of the institute:*

The success of total quality management in the educational system depends on the availability of a new organizational structure capable of absorbing the concepts of quality and then using them properly while carrying out improvement and development processes in order to improve the quality of the product, which is the student, and to achieve success in the application and implementation of total quality, a new integrated unit for quality management must be designed Able to face challenges and correct application through the following elements:

- Full commitment by senior management to a sound leadership style.
- Focusing on the product (customer), which is the student.



- Focus on the facts.
- Pay attention to continuous improvements.
- Collective participation in work.

related to the quality of e-learning in higher education institutions.

## V. CONCLUSION

By reviewing some previous studies and the extent of the possibility of applying total quality management in our institution in accordance with modern management concepts and the factors affecting the institution as it is a social institution and has an administrative system, in addition to the role of knowledge, information technology and technological innovations in renewing and modernizing higher education, and working to develop performance and address all standards and concepts local and international, measuring the productive efficiency of the institution, the administrative effectiveness of employees, the performance evaluation process, and concepts of total quality management, as well as the important role of human resources, given that they are the most important elements in the system, and that this element must be highly qualified in terms of knowledge and efficiency in order to achieve the improvement of all elements of educational systems. In addition to building the capacity for continuous development and improvement, while preparing training programs that give them the ability to innovate, produce knowledge, and manage it.

Previous studies that were discussed in the research also showed the extent of institutions' interest in the systems and principles of total quality management in education.

We also note that there is agreement in all models on the process of development and improving performance as an inevitable matter that requires the provision of modern educational and administrative methods in addition to encouraging free and independent thought.

## RECOMMENDATIONS

- Emphasizing the importance of continuous evaluation of the application of total quality management and working to achieve better quality in the work of higher education institutions.
- Urging the Ministry of Technical and Technical Education to finance and support higher education institutions in order to implement total quality management in its affiliated institutions.
- Work on cooperation between educational institutions that implement total quality management, through the exchange of experiences and the development of a mechanism capable of bringing about future development according to the concept of total quality management.
- Preparing training programs in various fields of methodology and vocational education for faculty members in all institutions of higher education.
- Holding workshops dealing with teaching issues and difficulties, how to deal with students, defining the concept of total quality management, and spreading awareness among workers of its importance and the benefits of its application.

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