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The mediating effect of quality audit in supporting the relationship between quality management and the ISO standard

الاثر الوسيط لتدقيق الجودة في دعم العلاقة بين إدارة الجودة ومواصفة الايزو

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Abstract

This research paper aims to investigate the relationship between Total Quality Management and ISO specification through a quality audit by identifying ISO specifications in the pursuit of continuous improvement, in addition to exposure to the importance of total quality and the stages of its application, and to identify the responsibility of the quality auditor and the presentation of the stages to be followed in the quality audit.

The study concluded that obtaining the ISO certification does not replace the quality management system, which represents the point of view of the stakeholders because it is a continuous improvement. In addition, the Total Quality Management System is based on documented specifications that describe the periodic audit from the customer's point of view and concern themselves with continuous updating based on the improvements produced by the Total Quality Program.

Keywords : Total Quality Management, ISO, Quality Auditor, Continuous Improvement.

ملخص

تهدف الورقة البحثية إلى دراسة العلاقة بين إدارة الجودة الشاملة ومواصفة الأيزو من خلال تدقيق الجودة بالتعرف على مواصفات الأيزو في إطار السعي لتحقيق التحسين المستمر، إضافة إلى التعرض لأهمية الجودة الشاملة ومراحل تطبيقها، والتعرف على مسؤولية مدقق الجودة وعرض الخطوات التي يتم إتباعها في تدقيق الجودة.

توصلت الدراسة إلى أن الحصول على شهادة الأيزو لا يغني عن نظام إدارة الجودة التي تمثل وجهة نظر أصحاب المصلحة حيث تهتم بالتحسين المستمر. نظام إدارة الجودة الشاملة يقوم على مواصفات موثقة تمثل من وجهة نظر العميل التدقيق الدوري وتهتم بالتحديث المستمر وفقاً للتحسينات التي افرزها برنامج الجودة الشاملة.

الكلمات المفتاحية: إدارة الجودة الشاملة، الأيزو، مدقق الجودة، تحسين مستمر.

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1. INTRODUCTION

The nature of the quality audit requires the development of a concept for the audit process within the framework of the relationship between total quality management and the ISO qualification process. The process includes many elements, the most important of which is defining its nature, scope, objectives, those responsible for doing it, the timing of its implementation, whether it is mandatory or optional, the standards and standards that are associated with it, and identifying the beneficiaries of it. and related reports.

The International Organization for Standardization (ISO), which focuses on equality and similarity, is considered a standard that explains that the quality systems in an organization are similar or identical to previously recognized specifications, in addition to the fact that the objectives of this organization, which was established in 1946, are consistent with the objectives set by the Various institutions of any kind are the first letters of the definition of the International Organization for Standardization, which was established in 1946.

The audit profession depends on verifying and examining the validity of the data on which it depends in making decisions that will achieve the objectives of the institutions. Without effective quality systems, institutions find it very difficult to achieve their goals. In light of this need, auditing affects most institutions.

In the same context, the ISO specification is addressed as typical standards for quality systems in any institution, through which it tries to determine the extent to which the practices applied in these institutions conform to the specific and recognized standards and specifications.

The problem of the study: In the context of the impact relationship between total quality management and ISO qualification by working on the application of quality audit in the context of the pursuit of continuous improvement, the main question is as follows:

What is the impact of adopting total quality management on ISO qualification processes by applying quality audit? The problem of the study: In the context of the impact relationship between total quality management and ISO qualification by working on the application of quality audit in the context of the pursuit of continuous improvement, the main question is as follows:

What is the impact of adopting total quality management on ISO

qualification processes by applying quality audit?

Study hypotheses:

-The application of the total quality management approach contributes to facilitating the ISO qualification processes.

- The institution can obtain the ISO certificate without adopting the entrance of total quality management.

The philosophy of total quality management can be adopted without obtaining an ISO certificate.

The ISO standard consists of models for total quality management systems.

Study Objectives: This study attempts to achieve a set of objectives represented in the following:

Clarify the steps for obtaining an ISO certificate;

Presentation of the stages of the implementation of total quality management;

Explain the relationship of total quality management with the ISO standard.

- Presenting the steps that are followed in auditing the quality systems of institutions.

The importance of the study: the importance of this study is highlighted through the convergence of concepts and the overlap between the terms of quality management, quality auditing, and qualification of the ISO standard.

Study Methodology: To achieve the objectives of the study, the descriptive analytical approach will be adopted to find out the elements related to the subject of the study, and to analyze and interpret the information according to the requirements of the study.

2. International Organization for Standardization (ISO)

2.1. ISO Specifications: The three letters of the ISO (ISO) originates from the Greek word ISOS and mean equal or similar, and therefore it is considered a standard that explains that the quality systems in an organization are similar or identical to previously recognized specifications, in addition to that these three letters are compatible with the letters The first of the definition of the International Organization for Standardization.

The headquarters and management of the International Organization for Standardization are located in Switzerland, and its members include national institutions concerned with standards and the standardization of measurement standards and specifications.

ISO is also a partner of the International Electrotechnical Commission

(IEC) where they together serve as a comprehensive system to manage the development of international consensus agreement that leads to agreements on international quality standards.

Both organizations are non-governmental and have no membership at the United Nations level. In parallel, they maintain technical relations with a group of specialized bodies of the United Nations, and nearly 900 major technical and specialized subsidiary bodies which succeed it. a unified system of the two organizations by publishing nearly 800 new international standards every year (Practice, 1992, p. 16).

2.1.1. Multiple names for ISO: For ISO 9000, EN 29000, and BS 5750, there are different names that explain the content and each in a different group of countries, and they are qualitative standards for the quality management system for me an institution, where ISO has authorized all countries to publish their local specifications corresponding to the ISO 9000 specification and gives it a local name, provided that it is not inferior to ISO 9000 in qualification needs. The name BS 5750 represents the British standard of the quality system (PRATT, 1995, p. 31), and the British Department of Trade and Industry (DTI) is inspired by it and is committed to its conformity, the names BS 5750 and ISO 9000 are the same, while the name EN 29000 matches and corresponds to ISO 9000, which is the name approved by the European Union (Searstone, 1991, pp. 249-254).

2.2. Steps to Obtain ISO Certificate: Here we mention a set of steps and requirements that need to be completed and implemented to obtain ISO Certificate, namely:

The management of the establishment must be convinced of the need to apply the quality management approach to achieve its objectives.

- Provides a conviction at the senior management level of the administration of the need to obtain the ISO certificate.

Provide guidance to clarify quality audit work, which includes practices and procedures that ensure access to activate the quality system for ISO 9000 specification.

2.3. Benefits of obtaining ISO certification: Commitment to the implementation of ISO 9000 standard creates an atmosphere of harmony in work, creates effective external and internal relations, enables correct management decisions and an environment that enables continuous improvement, cost reduction and performance development. In general, the

implementation of the ISO 9000 quality system brings many major benefits represented by (Chemers, 1997, p. 58):

2.3.1. Harmonious performance at the organizational level: Quality system planning enables the use of appropriate methods and effective quality control within the organization and is a great necessity for organizations that are large in size or have large many branches where their sectors supply each other.

2.3.2. Closer relationships between suppliers and customers: The quality system provides a common basis for talking about quality issues that have a global impact between customers and suppliers, either within the organization between a group of 'interests some of which are a resource for the company units at a certain stage for other interests.

2.3.3. Reinforcement of customer confidence: customers aspire to feel secure in the institution's ability to develop insofar as it implements its quality commitments, and the level of confidence increases if it is registered as having an ISO 9000 certificate. Customers are not satisfied with the promises of quality implementation as they have to ensure its implementation by a neutral third party (Saadi, 2016, p. 113).

2.3.4. Continuous improvement: The control and correction procedures set out at the level of the ISO 9000 specification make it possible to reduce and avoid the appearance of discrepancies and errors instead of going to identify them after they have appeared, and there is no doubt that this contributes to a continuous improvement of the quality and practices of the establishment in general.

2.4. Principles of the ISO 9000 standard: From the ISO 9000/2005 standard there are eight principles of quality management at the level of any organization, whatever its nature (Rabia KHELIF, 2009, p. 4).
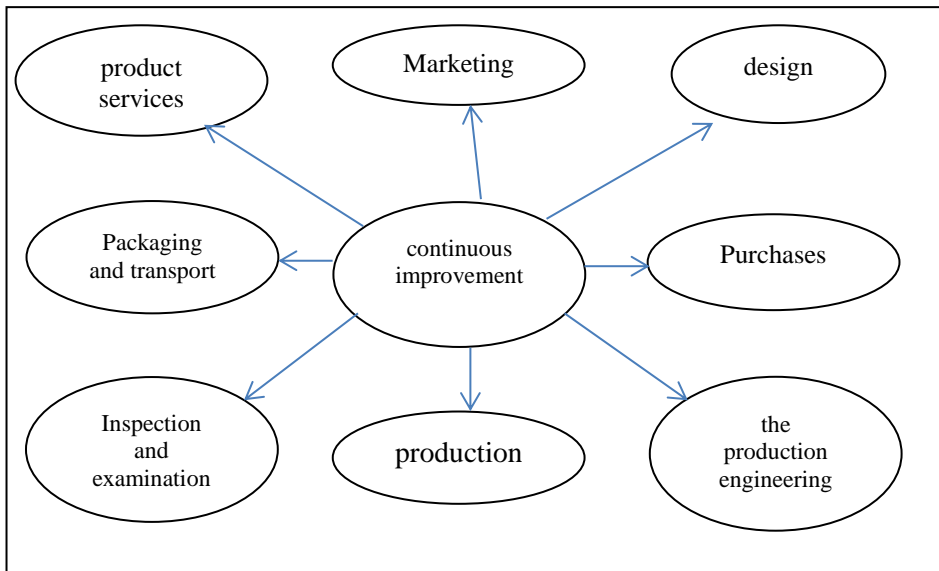
Fig.1. Principles of the 2005 9000 Standard
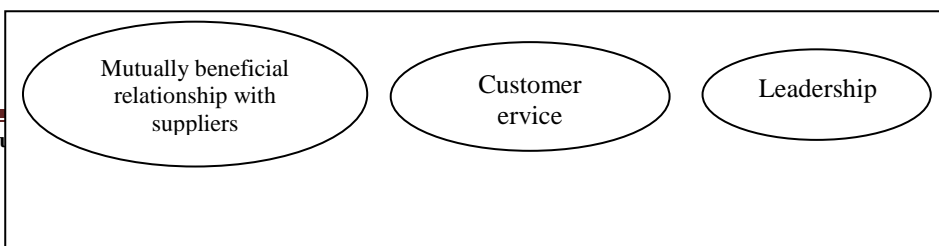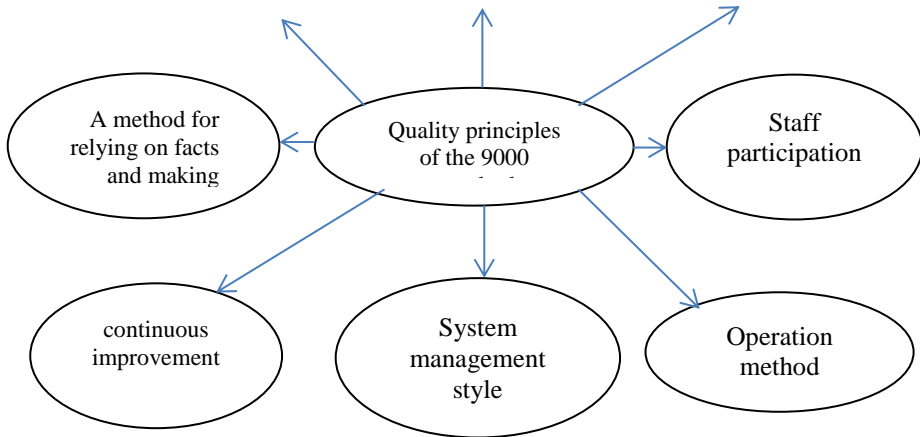
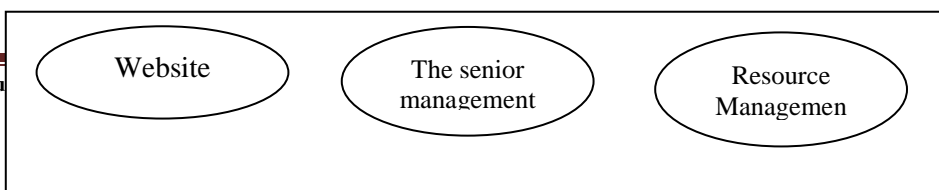**Source:** (Nabil Hashem Al-Araji, 2015, p. 50)

Figure 02: Quality control elements in industrial or commercial establishments
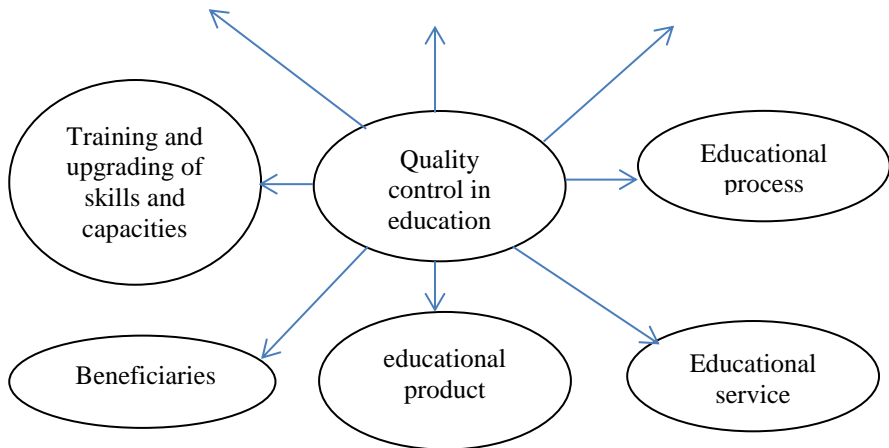

Source: (Nabil Hashem Al-Araji, 2015, p. 51)

It can be seen from figure (1-2) that the elements of quality control in service or industrial establishments, according to Nabil Hashem Al-Araji, include eight elements.

Figure 03: Elements of Quality Control in an Educational Institution

Source: (Nabil Hashem Al-Araji, 2015, p. 51)

It should be noted that the elements of quality control in the educational institution include eight elements, because the elements of quality control vary according to the nature of the institution, whether it is commercial, service or industrial.

3. Total quality management

3.1. The concept of total quality management: Definitions of total quality management have emerged, defined as "the commitment of the top management of the organization and the commitment of its workers to rationalize the enterprise so that 'it is able to meet the needs, wants and expectations of customers or what exceeds these needs, wants and expectations' (Thunks, 1995, p. 32), and defined as 'the efforts undertaken by the organization to continuous improvement of products, services and procedures" (Philip Kotler, 2000, p. 18), as it has been defined from three approaches "the first focuses on customers and their satisfaction, as it has been defined as the participation and commitment of management and employees in the rationalization of work Meeting customer expectations or what exceeds their expectations, while the second focuses on end results represented in the prevention of errors and the 'improvement continuity of work and products, and the third focuses on quality means and tools, including statistical tools, construction methods and others" (Ciampa, 1992, p. 43).

And it has been defined as "total quality management has been defined as a new way of thinking in relation to the management of institutions" (Chorn, 1991, pp. 31-35), and it has been defined as "a culture that reinforces the concept of total commitment to the satisfaction of clients or service recipients through continuous improvement and creativity in all aspects of work" (Slack, 1992, p. 11).

The United States Department of Defense has defined it as "a philosophy and at the same time a set of guiding principles which represent the basis of a developing organization. Total quality management is the application of quantitative methods and resources to improve the quality of the services provided" (Defense, 1990, p. 11).

If we adopt the words that make up the concept of total quality management, then quality management is defined as (Besterfield, 1992, p. 31):

Management: Management is a science and an art, showing how to deal with matters, guide employees, and control their practices.

Quality: The level of perfection that a service or product provides.

Comprehensive: the participation of all employees and workers of all levels of management and occupation.

And since total quality management works on the participation and contribution of all employees and workers in the different phases and stages of the production process and decision-making and works on focusing on external and internal consumers, which considers as the basis of the production process (Stevenson, 1999, p. 52).

2.3 The Importance of Total Quality Management: Total Quality Management attempts to create a culture based on the contribution of the organization's personnel to achieve the customer's needs at the lowest cost. This system aims to reduce costs, increase profits and satisfy customer satisfaction (Shami, 1999, p. 51).

Institutions were able to achieve results after adopting the Total Quality Management approach, such as a reduction in dropouts, and a reduction in cases of progression of sick leave (Al-Khalaf, 1997, p. 146).

The importance of total quality management lies in the fact that it seeks to change more than it sees it as a rigorously written method, the application of which by the organization makes it possible to change the practices of the

employees, which explains the vision of the organization as it began to its tasks comprehensively (Al-Azzawi, 2005, p. 55).

3.3. TQM Application Stages: The stages through which the TQM concept goes are explained below:

3.3.1. Review: this includes verifying that the standards of a service or product conform to objective standards. The examination is related to technical practices and does not concern intermediary services so many heads of establishments pointed out the difficulty of examining all products (Gouda, 2008, p. 8).

3.3.2 Quality Control: In an attempt to solve the problem of not relying solely on the examination stage. The development of the verification phase occurred in what has been called statistical process control (SPC). The first thing that seemed to focus on statistical quality control happened in America before the start of World War II.

3.3.3 Quality Assurance: This means the occurrence of deviations and protection against the occurrence of quality-related issues. Achieving quality is no longer limited to the final service or the final product, but rather to the production processes. Quality assurance includes the activation of procedures to create security.

3.4. Components of Total Quality Management: Total Quality Management is built on many components, where an application comes from the arrangement and organization between the different components, and we refer to them as follows:

3.4.1 Customer Orientation: The organization plans its products and services based on the identification of target customers (Yahdia, 2003, p. 8) .With regard to customer orientation, the British Quality Organization has defined total quality management as "a management philosophy through which the organization achieves each of the customer's needs." The consumer and his goals together" (Hammoud, 2000, p. 74),

The product or service should not be prepared based on the expectation that these services and products can be delivered to customer acceptance and satisfaction, as this contradicts the total quality management approach, as getting to know the customers allows the organization to obtain many benefits (Al-Mahyawi, 2005, p. 150).

3.4.2. Senior Management's Commitment to Quality: Raymond, Director of the Baldrige Quality Award, stated that the philosophy of Total Quality

Management stems from the desire and responsibility of the leaders of any organization, and Deming repeated and confirmed that quality stems from the commitment of the institution's board of directors (Crawford, 1997, p. 118), the commitment and support of management to activate total quality management helps to emphasize the morale of employees and to focus on their responsibilities and give their recommendations and ideas (Oakland, 1993, pp. 36-38).

3.4.3 Strategic planning for quality: It includes long-term planning related to the state of the institution in the area of quality (Al-Azzawi, 2005, p. 57). With regard to strategic planning for quality, it is a known policy in which details are known about the ways and methods of achieving and dealing with the objectives of the institution and how to achieve them (and others) (others, 2008, p. 198), follow developments and standards related to quality assessment, establish long-term strategies to ensure the quality of products and services, as well as monitoring and audit of the results of the application of these strategies (Muhammad al-Tarawana, 2002, p. 21).

3.4.4. Administrative leadership styles: It is considered the basis of the administrative process In its absence, the organizational structure is unable to achieve the objectives that the organization seeks to achieve (Chemers, 1997, p. 97), and the leadership is seen as the task that the leader carries in the management of the institution When he seeks to influence the workers and motivate them to work to achieve the goals of the institution through participatory practices (Al-Qahtani, 2010, p. 38), and it can be considered as the level of social influence from which the manager seeks to obtain the voluntary participation of the workers.

3.4.5. Continuous improvement: Quality is of great importance for competitive plans, whether at the level of international competition or at the level of local institutions, (Ahmed Sayed Mustafa, 2002, p. 68), although Continuous improvement involves continuous transformations whose repercussions can be seen in the short term, it can lead to good additions in the long term (Obeidat, 2010, p. 255).

3.4.6.Culture of Quality: It is known that the culture of the organization is a set of principles that explain the daily activities and practices of its employees, while the culture of quality represents a set of principles and values that seek to create an atmosphere that allows the establishment and development of quality concepts (Asaad, 2006, p. 146).

3.4.7.Creation of the Quality Office: The question assumes the creation of a department or a department related to total quality, and tries to achieve harmony and alignment between the offices and the centers of the institution related to the field of training and education required for the implementation and realization of total quality management and how to achieve the strategies and objectives associated with its realization (Al-Mahyawi, 2005, p. 160).

4. Audit relationship, ISO and total quality management

1.4 Quality management system and ISO: The question generally arises whether obtaining the ISO certificate makes it possible to dispense with entry into total quality management, and the answer to this question is that the institution can obtain the ISO certificate independently of the one it may have adopted. the entrance to total quality management.

Table 1: TQM and ISO relationship

(ISO (BS 5750 / ISO 9000	Total Quality Management (TQM)
The quality system is based on **.**documented specifications	1. Quality management from a global perspective
Represents quality management from the customer's perspective**.**	2. Represents quality management from the perspective of the **.**supplier
The periodic audit concerns the continuous updating according to the improvements produced by the total quality program	3. It is Interested in continuous improvement**.**
Focuses on operating methods and procedures, i.e. mainly on the technical dimension	4. It is interested in the human social dimension and articulates it with the artistic system (more complex concepts**.(**
It can be applied to specific sectors or divisions and not necessarily to the level of the organization as a whole**.**	5. It includes all sectors, departments, sections, and work teams
Responsibility of the department or quality control department	6.Responsibility for all sectors, departments, sections, and work teams

Source: (Ahmed Sayed Mustafa, 2002, pp. 201-203)

It can be seen from the table above that TQM and the ISO specification have a relationship based on which each can be considered to complement and help each other in implementation. The organization can obtain ISO certification without adopting the TQM approach, and the philosophy of TQM can also be adopted without obtaining an ISO certificate.

4.2. Audit responsibility and practice requirements: The external audit process can be considered one of the main pillars on which the international capital market system is based, as indicated in one of the reports of the General Oversight Board of the Securities and Exchange Commission, The Public Oversight Board of the Securities Exchange Commission in the United States of America clarified in Including the important position of the audit profession (Lotfy, 2004, p. 237).

The following figure represents the steps involved in the quality audit process.

Table 2: Steps to follow in the quality audit

First step: verification of non-compliance	This step detects deviations in quality systems
Step Two: Continuous Improvement Audit	The auditor uses their experience to advise management on the most effective methods of operating management systems
Third step: successful audit	This step examines large-scale organizational information and structures, such as management's relationships with external shareholders**.**
The fourth step **:**Total Quality Audit	Il comprend les étapes 1, 2, 3 et examine les moteurs organisationnels avec un ensemble complet d'informations et une meilleure structuration de mesures précises pour toutes les opérations**.**

Source: (Lotfy, 2004, p. 244)

Although the steps described in the table can currently be considered outside the realm of traditional external audit. However, the many types of services provided by the owners of the auditing profession have added a great addition to the concept of adding value to the services provided to clients.

The control system applied constitutes the minimum level of a set of tools and mandatory specifications for the audit profession, although it is possible based on the extension of the scope of service provided by the audit profession. audit and the growth of the tasks and responsibilities entrusted to them.

4.3. ISO Series and Auditor: The ISO Series specification is comprised of a list of quality management standards proclaimed by the International Organization for Standardization which defines a minimum level of scope related to the needs of quality management systems for use in contractual situations

4.4. Auditor and total quality management: With the strong involvement of quality auditors in auditing activities, the role of ISO 9000 becomes clear in its ability to support and assist auditors in identifying, identifying and auditing issues that would affect the quality management system at the level of any organization (Lotfy, 2004, p. 243).

It is clear that auditing is one of the methods to increase the levels of effective use of quality management systems such as the ISO 9000 system. This is not only related to the fact that auditing is applied as a method to confirm full commitment with many recognized practices and specifications at all stages and stages of the application of the production, management and service process. It is also linked to the fact that the audit contributes to the development of the institution by providing tools for development and renewal.

5. CONCLUSION

By studying the relationship between the quality management system and the qualification to obtain the ISO certificate, it became clear that obtaining the ISO certificate does not replace the quality management system, because the latter, from a perspective global, represents the viewpoint of stakeholders as it is concerned with continuous improvement and combines it with the technical system to include all departments, sections and work teams The quality system is based on documented

specifications which represent from the point from the point of view of the customer the periodic audit and is concerned with the continuous update according to the improvements produced by the total quality program. review of nonconformities. This step detects deviations in quality systems through continuous improvement auditing, where the auditor uses their experience to advise management on the most effective and efficient methods to operate the management systems, then the information and data will be reviewed in detail as a transaction Managing the organization with shareholders to achieve a successful audit, the audit of Total Quality examines organizational motives by looking at a set of factors for complete information and better structuring of accurate metrics for all operations practiced by the organization.

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