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Relationships Between Total Quality Management Components and Employee Performance in Higher Education Institutions[1]

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Abstract

Higher education institutions are the foundation of society. They are also the key to progressing toward a perfect culture that connects the past with the future. The provision of good service by institutions is the cornerstone of all talents and individual or collective achievements. Therefore, prioritizing and implementing all quality management systems are crucial for positioning a business among large organizations worldwide. Learning new practices from international institutions and adapting to these innovations is vital for the success and long-term stability of the organization.

[1] Produced from the Master's Thesis completed by Omar Abdulsattar Kamel Sandel ARAB

This study sought to promote knowledge about how comprehensive quality management concepts might be more effectively utilized to improve the performance of academic and administrative staff at universities. At this moment, the purpose of this research is to investigate the impact of overall quality management on employee performance in higher education institutions. For this objective, data were collected from 400 Samarra University employees using an online survey. The dependent variable in the study is employee performance, whereas the independent variables are TQM and its sub-variables, Leadership, Continuous Improvement, and Employee Involvement. The study included descriptive, reliability, and validity analyses, as well as factor analysis, correlation analysis, and regression analysis.

The results show a statistically significant direct association between leadership, continuous improvement, employee engagement, and employee performance. Total quality management in higher education, including the sub-dimensions of leadership, continuous improvement, and employee involvement, has a significant and positive impact on employee performance. Consequently, all hypotheses were accepted.

Keywords: Total Quality Management, Employee Performance, Higher Education

Yükseköğretim Kurumlarında Toplam Kalite Yönetimi Bileşenleri ile Çalışan Performansı Arasındaki İlişkiler

Öz

Yüksek öğretim kurumları, toplumun temelidir. Ayrıca, geçmişle gelecek arasında bağ kuran kusursuz bir kültüre doğru ilerlemesinin anahtarıdır. Kurumların sunacağı iyi bir hizmet, tüm yeteneklerin ve bireysel veya kolektif başarıların temel taşıdır. Bu nedenle, tüm kalite yönetim sistemlerini önceliklendirmek ve uygulamak, bir işletmeyi dünya çapında büyük organizasyonlar arasına yönlendirecektir. Örgütün başarısı ve uzun vadeli istikrarı için uluslararası kurumlardan yeni uygulamalar öğrenmek ve bu yeniliklere uyum sağlamak hayati önem taşımaktadır.

Bu çalışma, kapsamlı kalite yönetimi kavramlarının üniversitedeki akademik ve idari personelin performansını artırmak için nasıl daha etkili bir şekilde kullanılabileceği konusunda bilgi yaymayı amaçlamaktadır. Bu aşamada, araştırmanın amacı yükseköğretim kurumlarında toplam kalite yönetiminin çalışan performansı üzerindeki etkisini incelemektir. Bu amaçla, 400 Samarra Üniversitesi çalışanından çevrimiçi anket aracılığıyla veri toplanmıştır. Çalışmada bağımlı değişken çalışan performansı, bağımsız değişkenler ise toplam kalite yönetimi ve onun alt değişkenleri olan liderlik, sürekli iyileştirme ve çalışan katılımıdır. Çalışma, tanımlayıcı istatistik,

güvenilirlik ve geçerlilik analizlerinin yanı sıra faktör analizi, korelasyon analizi ve regresyon analizini de içermektedir.

Sonuçlar, liderlik, sürekli iyileştirme, çalışan katılımı ve çalışan performansı arasında istatistiksel olarak anlamlı bir doğrudan ilişki olduğunu göstermektedir. Yükseköğretimde toplam kalite yönetimi, liderlik, sürekli iyileştirme ve çalışan katılımı alt boyutları da dahil olmak üzere, çalışan performansı üzerinde önemli ve olumlu bir etkiye sahiptir. Sonuç olarak, tüm hipotezler kabul edilmiştir.

Anahtar Kelimeler: Toplam Kalite Yönetimi, Çalışan Performansı, Yüksek Öğretim.

Giriş

Performance is defined as successfully completing the correct task as determined by practicality (Cascio, 1991). The term "efficiency" is derived from the phrases "labor effectiveness" and "real achievement," which characterize how far an individual achieves their professional objectives. The quality and quantity of results that a clerk achieves while completing his job duties are indicators of his success (Mulyani et al., 2019: 71). Employees are essential to the business. The labor of employees determines whether the entity succeeds or fails. As a result, firms invest a considerable amount of their revenues in staff development (Hameed & Abdul, 2011: 224). Productivity is a broad, diverse concept that is inextricably linked to a system's critical principles (Abbas & Yaqoob, 2009: 269). The personnel, as one of the organization's assets, is critical to achieving those goals effectively. In

employee development, a staff member's efficiency is critical to achieving staff efficiency and the firm's continued profitability. Improving the productivity of these employees benefits both the company and the individuals themselves. As a result, exceptional performance may lead to improved staff career advancement (Mulyani et al., 2019: 69). Learning enhances worker performance by delivering instantaneous gains in the expertise, talents, and skills required to complete job-related tasks, resulting in greater staff dedication to corporate goals (S. Sharma & Taneja, 2018: 140). What a person does and does not do in the workplace determines its efficiency. Worker ability includes achievement advantage and quantity, attendance at work, accommodating and cooperative behavior, and outcome perseverance (Marewo et al., 2020: 161).

A worker's action is defined as the "outstanding performance of duties by selected members and examined by an authority figure or workmate, to predetermined appropriate guidelines, while systematically and successfully maximizing available assets within a dynamic situation" (Tinofirei, 2011: 28). Poor academic performance can be ascribed to a variety of circumstances, including high anxiety levels (Awotinde, 2021: 13). Desire affects staff efficiency because motivated employees might work longer hours and perform better (Marewo et al., 2020: 161). Competence has numerous properties, such as quantity, excellence, and interpersonal influence. Excellence is described as the closeness of measuring findings to genuine worth, quantity as how much is produced from an item, and social effect as an opportunity for individuals to form a belief in equal respect and collaboration with colleagues (Bernardin & Russell, 2006). Practical

responsibility and spontaneous action have been linked to contextual success. Employees that do their jobs at an average to great level differentiate themselves as creative workers in businesses. Agencies could acknowledge equal performance on the job and in the workplace, as well as offer possibilities for advancement (Ullah, 2015: 307).

Quality is defined as everything that influences the character of objects, and it is frequently used as a synonym for "good" or "wonderful". In absolute terms, quality as a function denotes the excellence of a product or service. The daily definition of quality is typically tied to the intrinsic attributes of the product or service, whereas excellence is described as possessing all of the traits that comprise it (Flores-molina, 2011: 20). Quality, in general, refers to a standard of excellence or how well something meets its intended purpose. At its most basic, product or service quality is defined as meeting particular requirements, being free of faults or contaminants, or simply matching consumer expectations (Jones et al., 2007: 138).

According to Kumar et al. (2016: 142), quality entails adherence to the purpose. Quality can be defined as the level of customer satisfaction or as adherence to specifications or principles. Meeting the standards or rules is what quality entails. Quality is defined as a standard of excellence.

Employee performance is a significant factor in determining a company's competitive advantage. As a result, corporations and, of course, higher education institutions seeking success should prioritize improving employee performance. With this knowledge, TQM was examined and investigated as a factor influencing employee

performance in the study. As a result, TQM was identified as a variable that influences performance in all dimensions. It is recommended that higher education institutions that seek to improve employee performance concentrate on TQM.

1. Definitions of Quality and Total Quality Management

The phrase has a variety of connotations depending on the industry in which it is used, such as health, education, or other professions. The concept of quality is ambiguous, causing people to hold differing views on the quality of a product, its software, or whether a service is excellent or terrible. In fact, an individual's opinions, perspectives, market forces, and consumer demands all influence how this phrase is used (Aldaweesh, 2018: 12). Quality is defined as everything that influences the nature of items and is frequently associated with phrases such as "good" or "excellent." Quality, in its most fundamental meaning, indicates a product's or service's superiority. Quality is typically defined as the intrinsic characteristics of a product or service, with excellence reflecting the full embodiment of those distinguishing characteristics (Flores-Molina, 2011: 20). A measure of excellence or how effectively something fulfills its intended purpose is broadly how quality is defined. The quality of a product or service can be most simply described as adhering to standards, being free of defects or impurities, or merely satisfying consumer expectations (Jones et al., 2007: 138).

Some of the definitions are the following (Kumar et al., 2016: 142).

- Quality refers to suitability for a specific aim.

- Quality can be described as client satisfaction.
- Quality can be defined as adhering to specifications or concepts.
- Quality means meeting standards or rules.
- Quality is a state of perfection.

Total Quality Management is described as the managerial logic and organizational tactics that maximize an organization's human and physical resources in order to achieve its goals (Gözaçan Borahan and Ziarati 2002:914). Pioneers of Total Quality Management such as Deming, Crosby, Juran, Feigenbaum, Ishikawa, and others have produced compelling ideas in the field of business quality management that have resulted in a significant change in raising the standard of customer service (Neyestani, 2018: 1). TQM is defined as a systematic strategy for continuously optimizing all system workflows with full employee participation, resulting in outstanding outputs that meet people's needs (Baig et al., 2015:1). TQM is a contemporary, broad concept that utilizes a holistic management approach or system, focusing on implementing essential changes across all aspects of the organization, including mindsets, viewpoints, managerial development, and leadership strategies (Mahmoud & Aloqlah, 2021: 188).

TQM is a related activity or process in an organization's internal environment that helps to achieve high-quality improvement. It's a cutting-edge method for expanding the firm. The approach is widely utilized around the world. It states that desired goals can be achieved with minimal changes to an organization's culture, practices, and behaviors (Aldaweesh, 2018: 11). Excellence is a structure and set of

elements that serve as the foundation of a continuously developing workplace. The four cornerstones of all explanations of excellence are continuous process improvement, human perspective, statistical methodology, and market emphasis (Flores-molina, 2011: 29).

2. Dimensions of Total Quality Management

It is necessary to characterize the quality aspects briefly, and to a lesser extent, identifying the quality component for educational institutions (Owlia & Aspinwall, 1996). These components are as follows:

According to Hasham and Hasham (2018: 362), leadership is defined as a creative process that aims to uncover the essential competencies and beliefs of an organization, communicate and demonstrate them, and inspire others to trust and behave accordingly within the institution.

When full employee involvement and assistance are combined, a realistic style of executive action in universities becomes conceivable. This includes defining job specifications for staff in charge of education and research standards, as well as specifying leadership duties for organizational factors such as policy, strategy, processes, and procedures relating to quality empowerment initiatives. Furthermore, using data, information, intelligence, and knowledge from the institution's internal environment is critical for making informed decisions in this setting (Osseo-Asare et al. 2005: 163). According to Zairi and Leonard (1996: 19), the leader's responsibilities under Total Quality Management will include unquestionable leadership, blatant customer-centeredness, employee education, acknowledging and rewarding

employee involvement, quality-related internal and external communication, and the accessibility of superior processes and instruments.

The degree to which workers participate in choices pertaining to their jobs and workplace is known as employee involvement. If firms base their remuneration methods on these distinctions, workers' job satisfaction can improve. When employees' efforts, ideas, experiences, and knowledge are valued, organizations develop a positive mindset (Bayraktar et al., 2017: 1). However, some employees, despite agreeing with TQM concepts, may avoid from making personal contributions due to a lack of awareness and motivation. This challenge is particularly severe in higher education, as faculty members must evaluate the data seriously. To effectively adopt TQM, everyone must be completely engaged and dedicated to the process (Sherr & Gregory Lozier, 1991: 55). Employee participation is defined as each employee contributing to the company's success while also being treated as a unique human being rather than a piece of machinery. According to both management and staff, everyone who works for the company helps to keep it running. Finding the best employee involvement strategies to achieve particular business goals is the aim. In a company, there are four key components to employee empowerment and involvement: delegating tasks, giving training, keeping lines of communication open and soliciting feedback, and awarding rewards (Apostolou, 2000: 2).

According to Bessant et al. (1994: 18), continuous improvement is a progressive, ongoing process of innovation that involves the entire organization. Continuous improvement at academic institutions requires recognizing and addressing the demands of stakeholders such

as teachers, students, employees, the board of regents, accreditation authorities, and community members. This includes reassessing program success and overall quality initiatives. Implementing and sustaining continuous improvement projects in educational environments is difficult but necessary. It is critical to underline that continuous improvement is a mindset based on the concept that there is always a better approach, making it a continual journey rather than a single method (Evans & Lindsay, 2002: 60). Providing resources, improving facilities and lab equipment, improving teaching techniques, and emphasizing the practical aspects of education are all crucial components of ongoing academic advancement. A lot of academic staff members view conferences, working with other universities, reading literature, subscribing to international journals, having outside speakers, attending conferences, and so on as essential components of the process of continuous improvement (Aldaweesh, 2018: 132-133).

3. Employee Performance

Performance is defined as successfully completing the correct task, as judged by practicality (Cascio, 1991). Performance is a multifaceted concept, and one can distinguish a process element of effectiveness, i.e., acts responsibilities, from a desired outcome on a fundamental level (Pradhan & Jena, 2017: 3). The term "efficiency" is derived from the phrases "labor effectiveness" and "real achievement," which describe the extent to which an individual achieves their professional goals. The quality and quantity of results a clerk achieves while performing his job duties is an example of his success (Mulyani et al., 2019: 71).

Employees are essential to the business. The labor of employees determines whether the entity succeeds or fails. As a result, firms invest a considerable amount of their revenues in staff development (Hameed & Abdul, 2011: 224). Productivity is a big, diverse entity that is closely related to a system's critical principles (Abbas & Yaqoob, 2009: 269). The staff, a component of the organization's assets, plays an important role in the effective achievement of those objectives. In the improvement of employees, the efficiency of a staff member in a firm is essential to achieve staff efficiency and the firm's continuous prosperity. Improving the productivity of these employees benefits not just the company, but also the employees themselves. As a result, outstanding work may lead to increased staff career development (Mulyani et al., 2019: 69). Learning improves workers' performance by providing instantaneous increases in expertise, talents, and skills required to do job-related tasks, resulting in more staff dedication to corporate demands (S. Sharma & Taneja, 2018: 140).

Workplace productivity is influenced by both the actions and inactions of an individual. Employee capability includes factors such as performance effectiveness and volume, attendance, a supportive and collaborative attitude, and persistence in achieving results (Marewo et al., 2020: 161). "The exceptional execution of responsibilities by designated individuals, assessed by a supervisor or colleague, according to established guidelines, while effectively and efficiently utilizing available resources in a changing environment" is how employees are defined (Tinofirei, 2011: 28).

Poor performance among academic professionals can be attributed to a range of factors, including extensive anxiety scales

(Awotinde, 2021:13). Desire has an impact on staff efficiency because when people are motivated, they can work longer hours and perform better (Marewo et al., 2020: 161). Several characteristics define competence, including quality, quantity, and social impact. Quality refers to how closely measurement results align with the true value, quantity pertains to the amount produced from a resource, and social impact provides individuals with the chance to build mutual respect and collaboration among peers (Bernardin & Russell, 2006). Practical responsibilities and spontaneous behavior have both been connected to contextual success. It is a distinguishing feature of creative workers in organizations when employees accomplish their duties at an average to excellent level. Agencies could recognize equitable performance in both the job and the surroundings of workforce members, as well as provide opportunities for promotion (Ullah, 2015: 307).

4. The Impact of Total Quality Management on Employee Performance

TQM is founded on the belief that workers, groups, and entities may always improve their performance (Kanji, 2012: 2). Reliable data on the functioning of the TQM approach is necessary for executive leadership to manage it effectively, and this information should be accessible continuously rather than relying on an extensive evaluation of the Quality Management System before determining when to intervene and take action (Hoyle, 2017). The primary goals of TQM implementation are to measure, identify performance concerns, and set guidelines for improved performance; without evaluation, there can be no assessment, and hence no true difference in efficiency can be detected (Zairi, 1992: 178). The Qatari Ministry of Interior examined how overall

quality management approaches affect employee productivity. Key priorities identified include customer service, employee engagement, continuous improvement, leadership, and operational management. The results indicate that overall quality management systems enhance employee performance through the exchange of information, which supports the strategic plan aimed at boosting worker efficiency (Saffar & Obeidat, 2020: 77).

A study revealed that TQM methods significantly affect employee performance in Turkish public hospitals. Factors such as commitment from top management, a focus on customer needs, individual leadership, continuous improvement, and workflow management contribute to this impact. Additionally, training plays a crucial role in the connection between TQM elements and employee performance (Abukhader & Onbaşıoğlu, 2021: 521). TQM procedures were found to have a substantial correlation with employees' work-related attitudes, such as involvement, job satisfaction, professional fulfillment, and organizational loyalty. TQM actions also improve employee engagement, promote performance, recognize workers' vital role in attaining organizational goals, and regard them as valuable assets (Dedy et al., 2016: 2).

According to Pulakos (2014:12) the benefits of performance standards include sharing key performance indicators and targets. The following advice can be given to managers in this regard:

- Help managers understand why an individual was assessed in a specific way by displaying varying efficiency levels.
- Ensure fairness by establishing a job-relevant framework for personnel evaluations.

5. Methodology

5.1. Method of The Research

In this study, the questionnaire technique was used for data collection. The study collected 400 questionnaire responses that were examined. Google forms were used to collect information for online surveys. Data on Total Quality Management and its impact on higher education achievement were acquired from current university employees. The questionnaire contains questions for each dimension of overall quality management, as well as four questions related to the employee performance axis, for a total of 24 complete questions. Respondents' responses were scored using a five-point Likert scale: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; and 5 = Strongly Agree. The data from the questionnaire was then evaluated with the SPSS program, and analytical exams were performed to validate the study hypothesis.

The necessary authority to conduct the surveys was granted by a decision issued by Karabuk University's Ethics Committee of Social and Human Sciences Researches on September 29, 2022, and numbered 2022/07-01.

The survey form was prepared by scanning and examining relevant literature and applicable scale studies. Berrish (2016) scale was used as the total quality management scale in higher education. According to Berrish (2016), there are three parts to TQM in higher education. As a result, these factors were utilized to name the total quality management sub-dimensions. So, 7 items were chosen for leadership, 5 for continuous improvement, and 8 for employee

involvement on the TQM scale. Most previous scientists and academics have widely used the selected survey and set of questions, including Berrish (2016), Khoja (2016), Al-Ghanboosi (2002), Ahmed & Ali (2012), Bon & Mustafa (2013), Pradesh (2017), A. Zwain (2012), Sherr & Gregory Lozier (1991), Bayraktar et al. (2008), and Al-omoush, Alrahahleh and Alabaddi (2015).

The Employee Performance scale was first developed by Kirkman and Rosen (1999). Later, the scale was adapted by Sigler and Pearson (2000) and Çöl (2008). In this study, the form adapted by Çöl (2008) as 4 questions was used.

5.2. Hypothesis of the Research and Research Problem

Numerous articles, books, and theses highlight the origin of this hypothesis, as referenced by authors such as Ali & Shastri (2010), Nadali Najafabadi et al. (2008), Al-Najjar & Jawad (2019), Al-Qayoudhi et al. (2017), Tribus (2010), and Aly & Akpovi (2001).

Some concerns were raised in this study, however the major topic is "Does total quality management have an effect on employee performance?" Other queries are as follows:

- What function does total quality management play in higher education?
- Can the characteristics of overall quality management create a paradigm shift in higher education?

Many studies have been undertaken on the mechanism of adopting comprehensive quality management, as well as its obstacles

and implementation strategies, which served as an important source for the hypothesis.

(H1) Total quality management in higher education has a significant and positive effect on employee performance.

(H1a) Leadership in higher education has a significant and positive effect on employee performance.

(H1b) Continuous improvement in higher education has a significant and positive effect on employee performance.

(H1c) Employee involvement in higher education has a significant and positive effect on employee performance.

5.3. Population and Sample

Samarra University is a public university in Iraq that was founded at the beginning of 2012 and presently has nine faculties. The College of Applied Sciences was established in 2011, the College of Education in 2000, the Colleges of Archeology and Islamic Sciences in 2010, and the College of Engineering in 2012. In 2020, the College of Administration and Economics, the College of Agriculture, the College of Arts, and the College of Physical Education and Sports Sciences were also founded. In less than a year, the university has made remarkable progress by working tirelessly to improve the educational process while focusing on scientific and knowledge aspects within quality standards, attracting competencies, and maintaining open communication with the Ministry of Higher Education and all stakeholders.

The researcher readily selected a sample of documentation and pedagogical people from the entire Academic Facility at Samarra University in Iraq. The total The Academic Facility employs 500 lecturers (teaching staff) and 600 administrative staff members. So, the current research study has a population of 1100 employees. The institution's website provided access to 500 people's corporate e-mail addresses, and the surveys were distributed electronically. 400 hired hands and teachers completed surveys. According to Sekaran (2003), 384 data points obtained for a research with a universe number of 1,000,000 or above have the potential to represent the universe at an advanced level. Based on this information, the survey data gathered for this study has a high potential to reflect the universe.

6. Statistical Analysis

6.1. Findings on Demographic Factors

Starting with gender, it is clear that at Samarra University, the majority of respondents (70.5%) were male, while the remaining (29.5%) were female. According to the age distribution of the participants, the highest rate (33%) is between the ages of 26-33 and the lowest rate (1.3%) is 51 years old and abov. In terms of academic qualifications, the majority of Samarra University respondents (55.8%) held a bachelor's degree, while the least (5.0%) held another degree. According to their status, the majority of respondents (65.5%) were managerial staff, while the minority (34.5%) were academics.

6.2. Reliability Analysis

According to Sekaran (2019), Cronbach's alpha analysis is used to determine the consistency and dependability of a variable. A

Cronbach's alpha score close to 1.00 suggests exceptional input solidity; one less than 0.70 is deemed undesirable, while one greater than 0.80 is considered acceptable (Sekaran, 2019).

Employee performance, the dependent variable, has a Cronbach's alpha coefficient of 0.812. The independent variables' Cronbach's alpha coefficients are 0.805 for effective leadership, 0.887 for staff involvement, and 0.835 for continual development. The Cronbach's alpha coefficients for each independent variable indicates positive outcomes. For Samarra University, all measurements showed strong reliabilities of Cronbach's alpha, ranging from 0.805 to 0.887. All elements were kept after taking into account the previously indicated acceptable values, especially since Samarra University employees' performance levels were regularly 0.812.

6.3. Factor Analysis

Due to Principal Components Analysis, only 24 items will be used in the Effect research (PCA). According to, factor analysis results KMO measure is 0.947, which is regarded as outstanding (sig.0.000). It suggests that gaining identification during this inspection is sufficient for the case investigation to resume. In Bartlett's test, the current inquiry must reject the null hypothesis of uncorrelated variables or a non-identity grid. In the event that the correlation matrix is deemed non-identity, the significance level is set at 0.000. Consequently, the factors considered in this study reveal definite connections. This result is not significant enough to refute the hypothesis, indicating that a factor analysis should be carried out.

Table 1: Factor Analysis Results

Variables	Component			
	1	2	3	4
Leadership				
The university's top leadership implements a strategy plan to attain quality in every sector.	0.647			
The institution has adopted the quality standard as the duty of all sectors and individuals participating in the institution.	0.643			
The management of the university proposes goals for continual development and encourages staff to get involved.	0.751			
At the university, ways to connect to the markets need to be provided to explore concerns, comments, and ideas about the value quality of learners.	0.647			
The University offers competent scientific and technological groups that can assess and surpass the demands and wants of the marketplace.	0.686			
Decisions taken by upper management rely on data and trends or on the feedback of employees and learners.	0.704			
Do a fundamental shift in upper leadership to incorporate quality into the organization's processes and activities.	0.671			
Continuous improvement				
Educational institution staff are furnished with essential resources and tasked with improving quality.		0.754		
For preventing errors, there is a precise and well-defined strategy.		0.789		
The institution has statistical methodologies and instruments for testing and measuring the proficiency of graduates.		0.792		
Develop methods and tools to consistently enhance the quality of the institution's academic achievements and the ability of its graduates.		0.784		
Employees are trained to be mindful of possibilities and improvement aims.		0.763		
Employee involvement				
Participate in effective quality choices with teaching staff.			0.763	
Employees and instructors have the authority to handle important graduate-related issues.			0.743	
Participate in the resolution of major issues at the institution with Lecturers and other employees.			0.757	
The institution has an effective mechanism in place to encourage Staff to engage (both financially and morally).			0.731	
Individuals who demonstrate innovation are rewarded by the university mechanism.			0.752	
While performing their duties, the administration attempts to alleviate professors' and workforce members' anxieties.			0.749	
Promote contact channels and improve connections between professors and employees, as well as top management.			0.734	
There are effective initiatives that assist employees in becoming acquainted with the goals and mechanics of how the institution operates.			0.751	
Employee performance				
I finish my responsibilities on schedule.				0.818
My objectives are met or exceeded.				0.811
I ensure that the items meet or surpass the quality requirements.				0.781

When an issue arises, I am fast to reply.				0.791
Variance Explained (%)	42.901	6.280	5.305	4.408
Total Variance Explained (%) (Cumulative)	58.895			
KMO and Bartlett's Test	0.947			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				
Bartlett's Test of Sphericity	4824.014, p <.000			
Extraction Method: Principal Component Analysis. Normalization	Rotation Method: Varimax with Kaiser			

Considering the Kaiser criterion, investigators should use a few factors equal to the amount of Eigenvalues in the correlation matrix that are greater than one. Table 1 reveals that four components were larger than one, indicating that all measured variables can be divided into four categories. The four factors combined can explain 58.895% of the total variance.

The Eigenvalues assigned to each factor represent the variance explained by that linear component and are expressed as a percentage of the overall differences stated. Four composite factors explain 10% of the variation. Table 1's rotating part matrix demonstrates that all 24 elements will be divided into four components.

Factor analysis requires common variance values and factor loads of at least 40% (Field, 2000: 434). Factor analysis was used in accordance with this information.

6.4. Pearson Correlation Analysis

The findings revealed the following correlations between the independent factors and the dependent variable: Leadership (r=0.607), Continuous Improvement (r=0.696), and Employee Involvement (r=0.761).

Table 2: Pearson's Correlation Analysis of Independent Variables

	Leadership	Continuous Improvement	Employee Involvement	Employee Performance
Leadership	1			
Continuous Improvement	.660**	1		
Employee Involvement	.639**	.757**	1	
Employee Performance	.607**	.696**	.761**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3: Pearson's Correlation Analysis of Dependent Variables

	TQM	Employee Performance
TQM	1	
Employee Performance	.776**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 clarifies the results of correlation. The research was primarily conducted to test the dependability of the relationship between total quality management and employee performance (r=0.776). Overall, all the criteria in the Samarra University case showed a substantial positive association.

6.5. Findings from the Relationship of Variables Hypothesis Testing

According to the data in Table 4, in the Samarra University case, there is a statistically significant association between Leadership, Continuous Improvement, Employee Involvement, and Employee Performance at the significance level of (p = 0.05). The results show that the correlation coefficient (R) is 0.789, the R2 is 0.623, and the value test (F) is 217.923. Therefore, the hypothesis is accepted.

Table 4: Multiple Regression Analysis

Variables	B	T	Sig.	R	R2	F	Sig.
TQM	.511	3.803	.000				
Leadership	.155	3.223	.001				
Continuous Improvement	.215	4.427	.000	.789	.623	217.923	.000
Employee Involvement	.511	10.224	.000				
a. Dependent Variable: Employee Performance							

Table 4 below highlights the study findings based on the results of the multiple regression analysis. TQM has a favorable and significant effect on employee performance (β=0.511, p<0.01).

Leadership has a favorable and significant effect on employee performance (β=0.155, p < 0.01). Continuous improvement has a favorable and significant impact on employee performance (β=0.215, p < 0.01). Employee involvement has a favorable and significant impact on employee performance (β=0.511, p < 0.01).

As a result, a one-unit increase in the university's TQM enhances employee performance by 0.511 units. A one-unit boost in leadership at the institution increases employee performance by 0.155 units. A one-unit increase in the university's Continuous Improvement enhances employee performance by 0.215 units. A one-unit increase in employee involvement at the university boosts employee performance by 0.511 units. Therefore, hypotheses H1, H1a, H1b, and H1c were accepted.

Conclusions and Recommendations

Important institutions in any country, universities play a significant role in economic growth, reflecting the government's appreciation for education and knowledge as tools against ignorance for future generations. Thus, when considering Total Quality Management within the academic context, it indicates that students either have a poor or excellent reputation in the university academic sector.

Recently, the concept of comprehensive quality management has emerged in the academic sector as a foundation and prerequisite for enhancing the environment of academia and showcasing it in the best possible way, improving the ranking of institutions, and delivering high-quality outcomes. The implementation of comprehensive quality management in academic processes, through leadership, continuous improvement, and employee involvement, contributes to increasing morale among faculty members and higher education staff.

The subject research's findings indicated that the certificate from Samarra University illustrates that total quality management is an approach that aligns with the university's strategic direction, including aspects of leadership. A high level of employee involvement among university members was revealed by the data. An effective system implemented by the institution to promote participation and reward individuals displaying creativity was one of the most notable signs of staff engagement. Various statistical methods were used to analyze the data, and the study's hypotheses were evaluated. The research yielded several findings, with the most significant being the

use of correlation analysis to assess the strength of the relationship between each independent variable and the dependent variable.

According to the findings obtained in this research, leadership, continuous improvement and employee involvement, which are dimensions of total quality management, positively affect employee performance. These results are parallel to previous studies (Saffar & Obeidat, 2020; Dedy vd., 2016) in the literature.

In conclusion, all factors at Samarra University showed a positive correlation. The research question was explored, leading to the discovery that employee performance in higher education is positively impacted by leadership, continuous improvement, and employee involvement. Therefore, to enhance employee performance in higher education, it is essential to strengthen the study variables (effective leadership, continuous improvement, and employee involvement). University administrators should be mindful of this.

The implications of this study's findings are both logical and practical. The following recommendations can be given to managers in this regard. Education should be improved by emphasizing scientific and economic factors for growth. Training programs, workshops and seminars should be implemented to train staff on global quality management. An environment should be created within educational institutions that encourages employee participation and provides incentives and motivation to share ideas, suggestions and initiatives. In addition, a financing strategy is essential for senior management to secure the necessary knowledge and skills training, as financial constraints may arise. It is important to find a balance between

quantitative growth and quality to ensure that the increase in enrollment does not negatively affect educational standards. In addition, universities should take into account the needs of society and the labor market when developing their admission processes. However, it is vital to stay up to date with developments in university management and scientific research, and to focus on improvements, administrative procedures and top rankings in global rankings while investing heavily in infrastructure.

The following suggestions can be made for future studies that will contribute to the literature. A second model for comprehensive quality management could be developed to compare results and implement necessary adjustments. Additionally, the focus of this study was the University of Samarra. It is recommended that this approach be implemented in other institutions to facilitate deeper understanding and allow for comparisons. Additionally, more empirical research with larger sample sizes and geographical diversity could help validate the findings. Future studies could investigate how TQM principles such as improvement, teamwork, and employee participation can increase employee motivation and thus performance. Furthermore, new research could focus on leadership and employee training related to TQM.

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