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Evaluating university performance in light of total quality management: A comparative field study

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Abstract
This study aims to understand and evaluate the university's performance in the face of technological advancements and challenges encountered by higher education institutions. The Total Quality Management (TQM) framework was utilized to analyze various aspects of academic and administrative performance.
The study represents an attempt to shed light on the quality of academic performance, contributing to a deeper understanding of challenges and directing efforts towards sustainable improvements in student experience and education quality.
The study reflects a comprehensive understanding of university performance quality, emphasizing the importance of achieving excellence amidst technological changes and modern challenges.
The research employed a comprehensive analysis of performance using the Total Quality Management framework, utilizing a diverse set of research methods and techniques. The study applied both quantitative and qualitative analyses to examine various aspects of university performance and provide a comprehensive picture.
The results indicated high satisfaction among students with the academic curriculum and significant alignment between faculty opinions and student appreciation. The study also observed strong support for university leadership and comprehensive endorsement of the roles of libraries and information sources.
The study concluded with several recommendations, including curriculum improvement, enhancing communication between faculty and students, and supporting facilities and office services.

Keywords: Evaluating -university performance - total quality management (TQM) - comparative field study

Introduction
Currently, institutions of higher education are facing intellectual pressures and challenges due to rapid advancements in communication systems and technology. There have been radical developments in the fields of information technology and technology revolution, contributing to sudden and rapid transformations on both local and global scales. This is primarily attributed to the growing reliance on modern technology as a key to achieving excellence and quality in their comprehensive sense, symbolizing the ability to achieve goals in the right way (Saffar *et al*. 2020, 48) [28].
Therefore, there has been a global interest in the performance of university institutions and the pursuit of its enhancement through the adoption of modern administrative methods, particularly Total Quality Management (TQM). TQM has become the optimal approach to achieving excellence, accreditation, and the application of global standards. The interest in the issue of total quality has increased in the educational field to the extent that intellectuals are beginning to refer to the era of total quality as one of the key foundations for new managerial models. These models aim to keep pace with international and local transformations and adapt to them (Abbas *et al*. 2020, 59) [1].
Total Quality Management (TQM) in universities primarily focuses on the assessment of academic performance with the aim of improvement and development. The importance of studies related to the evaluation of academic performance is increasing as they are considered a fundamental means to determine the extent to which the university achieves its desired goals. These studies provide diverse data and information about the strengths and weaknesses in academic performance, ensuring the highest levels of quality and compliance with global standards.

This approach aims to prepare distinguished graduates who meet the needs of the local, regional, and international job markets, contributing to the country's economic development and enhancing its competitiveness in the global market (Correia *et al*. 2020, 36) [9].

Striving for excellence in academic performance requires a comprehensive understanding of the strengths and weaknesses in each element of this performance. It is important to work on enhancing strengths and addressing and correcting weaknesses. To achieve this, Iraqi universities must compare themselves with international universities, identifying their strengths that distinguish them from others, in addition to pinpointing weaknesses that need improvement. The current study represents a first step in encouraging this type of comparative research between Iraqi universities and international ones (Seyfried *et al*. 2020, 49) [31].

Research Problem: In the context of enhancing the quality of academic performance, this research poses several crucial questions

1. To what extent is the University of Anbar committed to implementing Total Quality Management?
2. To what extent is Manouba University committed to implementing Total Quality Management?
3. Are there tangible differences in the academic performance of the two universities within the framework of implementing Total Quality Management?
4. What is the degree Student satisfaction with teaching quality academic performance in the studied universities?
5. How available are the requirements of Total Quality Management in the local universities under study?

Research Objectives

1. Describe and evaluate the reality of the University of Anbar by measuring its performance and commitment to implementing Total Quality Management to understand potential challenges and opportunities.
2. Describe and evaluate the reality of Manouba University by measuring its performance and commitment to implementing Total Quality Management for comparison and learning from different experiences.
3. Measure the overall satisfaction with academic performance in the University of Anbar and Manouba University to understand students' evaluation of the services provided.
4. Identify the relationship between the evaluation of academic performance within the framework TQM and the availability of TQM requirements at the university under review in order to derive improvement measures
5. Present a proposed model for assessing academic performance in Iraqi universities, especially the University of Anbar, within the framework of implementing Total Quality Management, contributing to the development of quality strategies and improvement of educational performance.

Research hypothesis

1. There is a statistically significant difference between two studied universities regarding the assessment of academic performance in the application of Total Quality Management standards.
2. There are statistically significant differences between the two studied universities regarding Overall student satisfaction with teaching quality academic performance.
3. There is a statistically significant correlational relationship between the evaluation of academic performance within the framework of Total Quality Management and the students' satisfaction with the quality of academic performance at the University of Anbar.

Significance of the Study

This study provides fundamental contributions at both the academic and applied levels in the field of evaluating academic performance through the analysis of the impact of Total Quality Management. The academic significance lies in offering a crucial addition to the understanding of evaluating academic performance through a unique comparative study. The detailed analysis demonstrates the level of correlation between the implementation of Total Quality Management and the performance of universities, enriching academic knowledge and contributing to curriculum development.

Chapter Two: The Theoretical Framework of the Study - Evaluating University Performance in the Context of Implementing Total Quality Management

Introduction: The multiple calls for enhancing the quality of education and implementing Total Quality Management have increased, highlighting the necessity of clear mechanisms for evaluating higher education institutions. This evaluation aims to identify strengths, weaknesses, and leverage developmental opportunities. Consequently, the world has witnessed the establishment of specialized institutions to ensure the quality of education, including academic accreditation bodies that externally assess higher education institutions and issue reports on their performance. This assessment aims to improve the quality of teaching and learning, enhance the competitiveness and sustainability of educational institutions. The integration of these types of assessments contributes to achieving high standards for education and learning, increasing their ability to compete and sustain in the global education market (Akour *et al*. 2022, 98) [2].

Concept of Academic Performance Assessment: (Alhadabi *et al*. 2020, 35) [3] defines academic performance assessment as the process of identifying the positive and negative aspects related to the achievement of goals and the performance rate towards achieving them. It is crucial to emphasize that performance evaluation is not an end in itself but is considered a necessary tool for continuous improvement, whether at the individual performance level or the overall performance of the organization, and even at the level of team performance (Shokur Qader *et al*. 2023) [43].

(Aslanpour *et al*. 2020, 78) [6] defines academic performance evaluation as the process aimed at assessing the functional value of university activities and programs using a set of benchmark measures. This evaluation helps in understanding and analyzing the relationships between various elements associated with assessment. It is based on

specific standards applied to all measurable components of university work. Through this evaluation, the university's performance and its ability to achieve its mission and stated goals can be verified fundamentally. It is worth noting that academic evaluation, in general, aims to achieve the following (Christie *et al*. 2023, 93) [8]:

1. Precise determination of the level of academic performance and its alignment with the university's overall goals, assessed through various treatments.
2. Reviewing academic programs, whether degree, research-oriented, or service-oriented, and identifying areas that can be improved or dispensed with.
3. Identifying obstacles hindering the achievement of set goals and plans and working on providing methods to satisfy the institution's needs.
4. Assisting in developing a plan to enhance academic roles in light of feedback results by reinforcing positives and avoiding negatives.
5. Creating a sense among institution employees that they actively participate in its performance and decision-making related to the work path.

Note: In an academic context, "*et al*." is an abbreviation of "*et al*. ia", Latin for "and others", and is used to refer to multiple authors.

(Handoko *et al*. 2019, 58) [14] adds that performance evaluation represents a flexible system that is able to adapt to changes and circumstances surrounding the system. This is achieved by using a variety of standards and tools to compare actual performance with expected performance at various stages of implementation, whether for a specific activity or for the entire organized campaign.

(Menear *et al*. 2019, 34) [20] views performance evaluation in universities as a means to assess the university's ability to achieve its goals and meet expectations within a specified timeframe. It should be emphasized that evaluation should not be seen as an independent stage separate from the educational process stages in university management but should be an integral part of it.

(Namoun *et al*. 2020, 36) [24] adds that the evaluation of academic performance relies on analyzing current academic and administrative performance to identify strengths, weaknesses, deviations, various shortcomings, and diagnose problems that negatively impact performance. This evaluation aims to make appropriate decisions to enhance academic and administrative performance.

(Guo, P *et al*. 2020, 98) [13] emphasizes the importance of achieving the following objectives through Evaluate the school's educational service quality college level:

1. Achieving the upcoming educational goals that should be accomplished through the process of evaluating the quality of educational services.
2. Identifying the stakeholders benefiting from the process of evaluating the quality of educational Services and promotion results the evaluation by focusing on the positive aspects.
3. Identifying the methods that should be available in the educational curricula so that these curricula can meet the needs of the job market.
4. Establishing accurate and clear standards for measuring and assess the quality of educational services. at the college or university level.

Moreira (*et al*. 2022, 54) [22] adds that the procedures for the evaluation process are based on the following steps

1. Defining the evaluation requests and objectives.
2. Identifying the appropriate method for evaluation.
3. Training those involved in the evaluation process and communicating with scientific expertise.
4. Discussing overall evaluation methods to familiarize them with their procedures with university staff.

Obeid Mohamed Rayis (*et al*. 2023, 77) [39] adds that the steps of the evaluation process include

1. Prohibiting evaluation requests and defining their objectives.
2. Determining the appropriate evaluation method.
3. Training those involved in the evaluation process and communicating with scientific expertise.
4. Discussing overall evaluation methods to familiarize them with their procedures with university staff.

(Hosseinzadeh *et al*. 2022, 58) [15] further states that performance evaluation in universities can be considered a means to continuously identify strengths and areas of excellence and improve them. It also helps in identifying weaknesses and shortcomings, addressing them, and ensuring their non-recurrence. Additionally, it assists in developing plans for development, change, and restructuring within the university, rather than being considered a goal in itself.

The scientific significance of university performance evaluation is highly relevant to assessing and analyzing the performance of universities and educational institutions in general. University evaluation contributes to enhancing the quality of higher education and improving the experiences of students, teaching, and research. The scientific importance of this subject can be divided into several main aspects (Susilawati *et al*. 2022, 99) [35]:

1. **Improving the Quality of Education:** University performance evaluation processes can lead to the improvement of the quality of education by analyzing the university's performance and identifying strengths and weaknesses. By understanding the effectiveness of curricula, teaching methods, and student experiences, universities can pinpoint areas that need improvement and development, resulting in a more effective and suitable educational experience for students (Gharbi, M *et al*. 2021) [41].
2. **Promoting Scientific Research:** University evaluation contributes to enhancing scientific research and innovation by identifying research capabilities and assessing the research achievements of academic members. Evaluation can stimulate the research process and promote scientific collaboration, contributing to the development of new and innovative solutions to global challenges (Khalf Khazeal, B., *et al*. 2023, 56) [40].
3. **Ensuring Transparency and Accountability:** University performance evaluation enhances levels of transparency and accountability within educational institutions. By establishing clear and specific performance standards and regularly assessing them, universities can demonstrate their commitment to providing a high-quality educational experience and enhancing trust between the university and the community.
4. **Improving Academic Guidance:** University

performance evaluation can contribute to improving student guidance and directing them towards suitable educational and professional paths. By analyzing student performance and identifying their strengths and weaknesses, academic institutions can provide the necessary academic support and guidance, enhancing their chances of success and achieving their goals.

5. **Performance Evaluation Dimensions (Rehan, *et al.* 2022, 87) [26]**

a) Curriculum Evaluation
b) Faculty Members Evaluation
c) Library and Information Resources Evaluation
d) Physical Facilities Evaluation
e) Student Evaluation

These dimensions cover various aspects of university operations, ensuring a comprehensive assessment of its performance.

Second: Total Quality in Higher Education (Gharbi, *et al.* 2021, 98) [41]:

1. **Introduction:** Total Quality in higher education represents a fundamental concept aimed at improving the overall and integrated quality of higher education, with a focus on providing a distinguished and balanced learning experience for students. This concept relies on the integration of various factors, such as the quality of curricula and teaching, and the provision of a suitable learning environment (Tzafilkou, *et al*. 2022, 43) [36].

Total Quality in higher education has become a vital aspect contributing to academic excellence and the development of students' abilities and skills. It also focuses on the development of Educational programs adapted to labor market requirements and social needs.

Additionally, it aims to enhance communication and collaboration among academic community members, encouraging a culture of research and innovation in universities, thereby contributing to the comprehensive development of communities and nations (Zhang, *et al*. 2022, 68) [37].

In order to ensure the overall quality of higher education, it is necessary to continuous and integrated commitment from university administrations, faculty members, and students. It is also necessary to adopt specific standards and mechanisms to ensure the attainment of the desired goals (Nazardani, *et al*. 2022, 89) [25].

2. Concept of Quality

According to the intermediary lexicon, the term "quality" comes from the word "ajad," meaning to improve something and make it good. Good is the complete opposite of bad, and when something becomes good, it is said to have quality. According to the American Institute of Standards, quality is defined as the aggregation of features and characteristics that enable a product or service to meet specific needs.

Eyvazi *et al*. (2023, p. 47) [11] defined it as conformity to specifications, and Huang *et al*. (2022, p. 56) [16] saw it as suitability for use. Nazardani *et al*. (2022, p. 89) [25] defined it as capabilities and meeting customer expectations. (Fernández 2023, p. 99) [12] considers the concept of quality as complex, varying in definition according to the expectations and needs of individuals benefiting from the services provided by educational institutions.

In fact, determining the quality of service is challenging due to the nature of the service itself and the variation in the concept of quality among different service providers. However, the common definition of service quality focuses on customer satisfaction and efforts made to exceed their expectations (Shi, 2022, p. 67) [32].

According to Huang *et al*. (2022, p. 87) [17], customer perception of quality is the extent to which actual service matches or exceeds service expectations. Mohamed (2023, p. 34) [21] defined it as the match of service specifications with customers' expected requirements. Another study showed that product quality depends on customer perception of this quality, with natural individual differences among customers that can be partly explained by the variation in each person's understanding of the service they receive (Daniel, 2022, p. 76) [10].

Smith *et al*. (2023) [33] add that consumers have become more conscious and concerned about quality, as statistical studies have shown an increase in the percentage of those seeking quality from 30% to 40% in 1979 to 80% to 90% in 1988.

Ma *et al*. (2023, p. 54) [19] argue that the multiple definitions of service quality are attributed to the difficulty of understanding the factors influencing it. Measuring the quality of university services within the quality assurance framework relies on identifying customer expectations regarding the services they anticipate. This helps design services that meet those expectations and evaluate the actual performance of the service by matching it with customer requirements.

3. Comprehensive Quality Concept

Many researchers have exerted effort to define the concept of comprehensive quality. The American Society for Quality provided a definition describing it as the comprehensive features and characteristics of a good or service that meet its requirements or imposed needs. Azizov (2022) [7] interprets the concept of comprehensive quality as focusing on developing an advanced and ambitious system aiming to increase reliance on human participation and improve resource utilization through better system analysis, enhancing collaboration among different departments within the organization, and facilitating problem-solving.

The International Organization for Standardization (ISO) has provided a more inclusive and precise definition of quality, defining it as the comprehensiveness of characteristics of any product or service, manifested in its ability to meet the relevant and implied needs.

As a result of various definitions of comprehensive quality, Savastano *et al*. (2022) [30] classified them into groups based on the underlying basis of the definition.

The philosophical basis defines quality as synonymous with excellence, an intrinsic and perceptible characteristic that is continuous and can be learned and appreciated through experience.

On a product basis, quality is the product's ability to satisfy customers' desires and various needs.

On a manufacturing basis, quality is conformity to technical specifications and producing the product without defects from the first instance.

Based on value, the definition revolves around the balance between price and quality, where a high-quality product aligns with the required specifications for an acceptable cost or price. Solikhin *et al*. (2022) [34] further defined it in this

context. According to Khan, the concepts of quality evolved in Japan starting from the 1950s. However, the successful application of these concepts has been more pronounced in Europe and the United States than in Japan and Asian countries, with lifelong learning culture in Asian countries being a major factor behind this success.

Comprehensive quality represents a continuous and inclusive means that encompasses all elements and individuals within the organization or system. It focuses on preventing hazards and ensuring correct execution of tasks from the first time to guarantee product quality and continuous improvement. Hence, Total Quality Management includes some principles, as stated by Obeid Mohamed *et al*. (2023) [39].

1. **Customer Focus:** Organizations must understand current and future customer needs and meet their expectations. In the case of universities, students are considered customers, in addition to the community and the job market benefiting from university graduates.
2. **Leadership:** Leaders in educational institutions aim to unify vision, goals, and strategies within the educational structure, creating an educational environment contributing to achieving those goals at the lowest possible cost.
3. **Involvement of People:** Effective and fair problem-solving for all participants in the educational process is emphasized, seeking full integration among participants, regardless of their positions.
4. **Process Approach:** This principle focuses on processes, representing the essential difference between concepts of Total Quality Management and quality assurance concepts that only focus on the product and problem-solving when issues arise.
5. **Decision-Making Based on Facts:** This principle emphasizes analyzing data and drawing conclusions for decision-makers, not just collecting data.
6. **Continuous improvement: Continuous improvement should be an ongoing goal** educational institutions.
7. **Independence:** Comprehensive quality management relies on independence.

4. Dimensions of Implementing Total Quality Management in the University (Nabella *et al*., 2022) [23]:

1. **University Leadership**
- Effective university leadership is a fundamental dimension in the successful application of Total Quality Management (TQM). This dimension underscores the significance of committed, visionary, and guiding leadership within the university. Leadership that embraces TQM principles ensures their integration into the university's culture, policies, and practices.

2. **Organizational Structure**
- The university's organizational structure is a crucial dimension for TQM implementation. This involves designing a framework that facilitates communication, collaboration, and the efficient flow of information and responsibilities. An effective structure supports the alignment of university activities with TQM principles.

3. **Procedures and Administrative Systems**
- This dimension highlights the establishment of effective procedures and administrative systems aligned with TQM principles. It involves developing standardized processes, clear workflows, and efficient administrative systems to enhance the quality of educational services and administrative functions within this university.

4. **Human Resources**
- Human resources are a critical dimension in TQM implementation. This involves recruiting, developing, and retaining qualified and motivated faculty and staff. This dimension emphasizes the importance of training programs, professional development, and creating a positive work environment to enhance the capabilities and commitment of the university's human resources.

5. **Physical Resources**
- The dimension of physical resources focuses on the infrastructure, facilities, and technology available within the university. Adequate and well-maintained physical resources are essential for creating an environment that supports effective teaching, learning, and administrative processes aligned with TQM principles.

6. **University-Society Engagement**
- The engagement of the university with the broader society is a significant dimension in TQM implementation. This involves establishing strong connections with the community, industry, and other stakeholders. The university's commitment to societal needs, feedback mechanisms, and responsiveness to external expectations contribute to the successful application of TQM.

These dimensions collectively contribute to the comprehensive application of Total Quality Management in a university setting. By addressing leadership, organizational structure, administrative procedures, human resources, physical resources, and societal engagement, the university can create a holistic approach to quality management that positively impacts its academic and non-academic functions.

5. The Importance of Implementing Total Quality Management in Iraqi Universities (Alzoubi *et al*., 2022, p. 23)

The application of Total Quality Management (TQM) in Iraqi universities is a crucial step towards enhancing academic performance and developing educational services. The significance of implementing TQM can be detailed as follows:

1. **Improvement of Academic and Research Performance**
- Enhances curriculum quality, teaching methodologies, and fosters an educational environment conducive to creativity and scientific research. TQM improves assessment mechanisms and monitoring, leading to the development of postgraduate programs and the enhancement of the quality of scientific research.

2. **Development of Infrastructure and Facilities**
- Improves and develops university infrastructure and facilities to align with quality and excellence requirements. This attracts talented students and academic staff, contributing to the creation of a stimulating and advanced learning environment.

3. **Enhancement of University Governance and Transparency**
- TQM promotes university governance and transparency in decision-making. Consequently, it strengthens trust among various university members and enhances their participation in achieving academic and administrative goals.

4. **Optimization of Resource Utilization and Strategic Planning**
- TQM helps optimize the use of available resources more effectively. This is achieved through the implementation of innovative strategic planning strategies focusing on the long-term goals of the university.

5. **Promotion of Communication and Development of Effective Leadership**
- TQM enhances effective communication among all members of the university community. It also promotes the development of effective leadership that motivates and empowers human resources, contributing to the achievement of the university's vision and goals.

6. **Increase in Global Recognition and Appreciation**
- The adoption Total quality management brings more recognition of Iraqi universities globally. Consequently, Iraqi universities can attract more international students and academic staff.

The implementation of Total Quality Management in Iraqi universities is seen as a transformative approach that positively impacts various aspects of academic and administrative functions, ultimately contributing to the elevation of these institutions on the global stage.

Statistical Analysis and Hypothesis Testing

The Descriptive Statistics of the Academic Curricula The following table illustrates the descriptive statistics of the academic curricula: Table (1) To clarify the descriptive statistics of the academic curricula.

Descriptive Statistics of Academic Curricula The following table illustrates the descriptive statistics of academic curricula:

Table 1: To clarify the descriptive statistics of academic curricula

Statements	Mean	Standard Deviation	Coefficient of Variation (%)	Relative Weight (%)	Agreement Level	Ranking
Develops the curriculum to cater to diverse student interests	4.01	1.146	28.6	80.2	Agree	1
Curricula and course materials are consistently updated	3.89	0.935	24.1	77.8	Agree	2
Alignment between different curricula and course materials	3.89	1.000	25.7	77.8	Agree	2
Ease of access to curricula and course materials	3.60	1.137	31.5	72.1	Agree	4
Cost of curricula and course materials is reasonable	3.80	0.993	26.1	76.1	Agree	3
(Overall Average) Academic Curricula	3.59	0.950	26.4	71.8	Agree	-

(***Source*:** SPSS Program Outputs)

From the previous table, it is evident that the overall average of academic curricula is 3.59, with a relative weight of 71.8%. The averages The relative weight of statements is between 3.60 and 4.01 between 72.1% and 80.2%. These percentages indicate the study sample's agreement with the academic curricula and the overall dimension, as shown in the table above.

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Table 2: For me to assist you further with the English translation or any other questions you may have?

Statement	Mean	Standard Deviation	Difference Coefficient (%)	Relative Weight (%)	Approval Rating	Ranking
Regularity of faculty members in lectures	3.69	0.957	25.9	73.8	Agree	4
There is a correlation between the professor and students	4.01	1.043	26.0	80.2	Agree	1
Faculty members contribute to student activities	3.75	1.079	28.7	75.1	Agree	2
Faculty members have the ability for dialogue	3.73	1.013	27.2	74.6	Agree	3
Faculty members have good communication with students	3.48	1.085	31.2	69.6	Agree	5
(Overall Average) Faculty Members	3.79	0.873	23.1	75.7	Agree	-

***Source*:** From the Outputs of the SPSS Program

The previous table indicates that the overall average of faculty members is 3.79 with a relative weight of 75.7%. The averages statements range between 3.48 and 4.01, with relative weights between 69.6% and 80.2%. These percentages reflect the agreement of the study sample regarding faculty members and the overall dimension, as shown in the table above.

The following table illustrates the descriptive statistics for libraries and information sources: Table (3) for illustrating the descriptive statistics for libraries and information sources

Table 3: For illustrating the descriptive statistics for libraries and information sources

Statements	Mean	Standard Deviation	Difference Coefficient (%)	Relative Weight (%)	Agreement Level	Rank
Availability of libraries with essential information resources to increase efficiency and academic achievement	3.32	1.321	39.8	66.4	Neutral	4
Availability of digital libraries	3.32	1.127	33.9	66.4	Neutral	4
Library staff excels in providing high-quality services to students	3.63	1.066	29.4	72.6	Agree	1
Availability of qualified human cadres for library services and supervision	3.48	1.246	35.8	69.6	Agree	2
Availability of the latest specialized books and references	3.33	1.118	33.5	66.7	Agree	3
(Overall average) Libraries and information resources	3.44	0.853	24.8	68.8	Agree	-

The table above shows that the overall average for the dimension of libraries and information sources is 3.44, with a relative weight of 68.8%. The averages These statements are sufficient between 3.32 and 3.63, have relative weight varying from 66.4% to 72.6%. These percentages indicate the approval of the study sample for the dimension of libraries and information sources and the total dimension, as shown in the table above The descriptive statistics for the students' evaluation are illustrated in the following table: Table (4) for illustrating the students' evaluation

Table 4: For illustrating the students' evaluation

Statements	Mean	Standard Deviation	Difference Coefficient (%)	Relative Weight (%)	Approval Degree	Ranking
Adequacy of time allocated for exams	3.30	1.066	32.3	65.9	Neutral	3
There is a dedicated life for students' contribution to artistic, sports, and environmental activities	3.26	1.170	35.9	65.2	Neutral	4
Students participate in preparing the exam schedule in terms of time and subjects	3.42	1.312	38.4	68.4	Neutral	1
Availability of justice and objectivity in exam methods	3.36	1.248	37.2	67.2	Neutral	2
Ability of exams to cover various aspects of the curriculum and syllabus	3.36	1.088	32.4	67.2	Neutral	2
(Overall Average) Students' Assessment	3.61	0.904	25.0	72.2	Agree	-

It is clear from the previous table that the average rating for general female students was (3.61) with a relative weight of (72.2%), and the averages for the expressions showed between (3.26 - 3.42) the relative weight is (65.2% - 68.4%). This percentage refers to the chart to control the study on the Finnish students' evaluation and dimensions. Aesthetics, as shown in the table below.

Descriptive statistics of university leaders. The following table shows the descriptive statistics of university leaders

Table 5: To illustrate the descriptive statistics of university leaders

Statements	Mean	Standard Deviation	Difference Coefficient (%)	Relative Weight (%)	Approval Grade	Ranking
University leaders possess leadership qualities that align with the requirements of total quality.	3.14	1.081	34.5	62.7	Neutral	4
Faculty members participate in the selection of university leaders.	3.33	1.204	36.1	66.7	Neutral	3
University leaders are committed to solving problems facing academic and administrative units.	3.05	1.094	35.9	61.0	Neutral	5
University leaders value the opinions and suggestions of university employees and address their complaints.	3.41	1.010	29.6	68.1	Agree	2
University leaders focus on providing a conducive academic environment and human relationships within the university for the success of the educational process.	3.43	1.224	35.7	68.6	Agree	1
(Overall Average) University Leaders	3.35	0.853	25.5	67.0	Neutral	-

The table above indicates that The overall mean score for university leadership is 3.35, with a relative weight of 67.0%. The average value of each statement ranges from 3.05 to 3.43, and the relative weight varies from 61.0% to 3.0%. 68.6%. These percentages signify the agreement of the study sample with university leadership and the total dimension, as shown in the table above

The descriptive statistics for procedures and administrative systems are illustrated in the following table.

Table 6: To illustrate the descriptive statistics for procedures and administrative systems.

Statements	Mean	Standard Deviation	Difference Coefficient (%)	Relative Weight (%)	Approval Grade	Ranking
University management ensures that its specialized councils regularly review administrative laws and regulations.	3.10	1.056	34.1	62.0	Neutral	4
The university president delegates authority to college deans and department heads in a manner that enables them to perform their tasks with the best quality.	3.28	1.227	37.4	65.7	Neutral	2
The university has an information system that meets the needs of planning, monitoring, and decision-making.	3.19	1.163	36.5	63.7	Neutral	3
There are rules and procedures stipulated for decision-making in the university council.	3.09	1.334	43.2	61.7	Neutral	5
The university president has the authority to issue necessary directives to improve the learning environment.	3.30	1.177	35.7	65.9	Neutral	1
(Overall Average) Administrative Procedures and Systems	3.54	0.849	24.0	70.7	Agree	-

The previous table indicates that the overall mean for the procedures and administrative systems dimension is 3.54 with a relative weight of 70.7%. Means of presentation Will suffice between 3.09 and 3.30 have relative weight between 61.7% and 65.9%. These percentages reflect the agreement of the study sample on the dimension of procedures and administrative systems, as well as the overall dimension as shown in the table above.

Table 7: Descriptive Statistics for Human Resources are illustrated in the following table

Statements	Mean	Standard Deviation	Difference Coefficient (%)	Relative Weight (%)	Approval Grade	Ranking
The university provides its employees with the necessary information to enable them to perform their duties efficiently.	3.44	1.342	39.0	68.9	Agree	1
Attention is given to complaints and to the university's employees and citizens.	3.42	1.059	31.0	68.4	Agree	2
The university has a plan for training and developing skills for human resources.	3.20	1.177	36.8	64.0	Neutral	3
Human resources at the university are distributed according to the specialized needs of various departments.	3.09	1.185	38.4	61.7	Neutral	4
Training needs for administrative leaders and university employees are identified.	3.20	1.239	38.8	64.0	Neutral	3
(Overall Average) Human Resources	3.36	0.996	29.6	67.2	Agree	-

The previous table indicates The overall mean value of the human resources dimension is 3.36, with a relative weight of 67.2%. The average value of each statement ranges from 3.09 to 3.44, and the relative weight varies from 61.7% to 3.7%. 68.9%. These percentages suggest the study sample's agreement with the Human Resources dimension and the overall dimension as shown in the above table

The descriptive statistics for the Material Resources are illustrated in the following table (Table 8)

Table 8: The descriptive statistics for the Material Resources are illustrated

Statements	Mean	Standard Deviation	Difference Coefficient (%)	Relative Weight (%)	Approval Grade	Ranking
The university provides suitable working conditions, comfortable places, facilities, a healthy climate, and other job requirements.	2.99	1.250	41.8	59.8	Neutral	4
The university supports mechanisms for promoting scientific research.	3.05	1.193	39.1	61.0	Neutral	2
In the institution, employee incentives and rewards are linked to performance levels.	2.98	1.162	39.0	59.5	Neutral	5
The Quality Management Unit alone has sufficient facilities for its activities.	3.10	1.114	35.9	62.0	Neutral	1
The university provides its employees with a health insurance system.	3.01	1.199	39.8	60.2	Neutral	3
(Overall Average) Physical Facilities	3.42	0.956	27.9	68.5	Agree	-

The overall average is the Material Resources Dimensions are 3.42 and relative weight is 68.5%. The averages for the statements ranged between 2.99 and 3.10, The relative weight is within the following range 59.5% to 62.0%. These percentages indicate the agreement of the study sample with the Material Resources dimension and the overall dimension, as shown in the above table.

Hypothesis Testing:

1. There is a statistically significant difference between the two universities in the overall satisfaction level of students regarding the quality of academic performance.

Test of Hypothesis 1: There are statistically significant differences between the two universities in the overall satisfaction level of students regarding the quality of academic performance.

Table 9: Presents the t-test to illustrate the statistical differences between the mean scores of the research groups according to the type of university (University of Anbar - Monoufia Universities) in the overall satisfaction of students regarding the quality of academic performance.

Variables	University of Anbar (n=30)	Mannouba Universities (n=30)	t-Value	Significance Level
Curricula	3.21	3.98	3.91	Function at 0.01
Faculty Members	3.38	4.20	4.76	Function at 0.01
Libraries and Information Resources	3.09	3.80	4.08	Function at 0.01
Student Evaluation	3.26	3.97	3.80	Function at 0.01
Overall Satisfaction of Students	3.24	3.99	5.55	Function at 0.01

The t-value at the significance level (0.05) is 1.98.

From the table above for the statistical differences between the mean scores of the research groups according to the type of university (University of Anbar - Monoufia Universities) in students' overall satisfaction with the quality of academic performance, the following is evident:

- There is a statistically significant difference curriculum between the University of Anbar and Monoufia Universities, with a calculated t-value of 3.91. The mean score for the University of Anbar is 3.21, and for Monoufia Universities, it is 3.98.
- There is a statistically significant difference in faculty members between the University from Anbar and Monoufia Universities, with a calculated t-value of 4.76. The mean score for the University of Anbar is 3.38, and for Monoufia Universities, it is 4.20.
- There are statistically significant differences in libraries

and information resources between the University of Anbar and Monoufia Universities, with a calculated t-value of 4.08. The mean score for the University of Anbar is 3.09, and for Monoufia Universities, it is 4.08.

- There is a statistically significant difference in student evaluations between University of Anbar and Monoufia Universities, with a calculated t-value of 3.80. The mean score for the University of Anbar is 3.21, and for Monoufia Universities, it is 3.98.
- There are statistically significant differences in the overall satisfaction of students regarding the quality of academic performance between the University of Anbar and Monoufia Universities, with a calculated t-value of 5.55. The mean score for the University of Anbar is 3.24, and for Monoufia Universities, it is 3.99.

Testing the Second Hypothesis: There are statistically significant differences between the two universities in terms of evaluating academic performance in applying university performance standards in Total Quality Management.

Table 10: t-test to illustrate the statistical differences between the mean scores of the research groups according to the type of university (University of Anbar - Monoufia Universities) in evaluating academic performance.

Variables	Anbar University (n=30)		Manouba universities (n=30)		T value	Moral significance
	Arithmetic mean	Standard deviation	Arithmetic mean	standard deviation		
University leaders	2.79	0.796	3.92	0.4244	7.94	function at 0.01
Administrative procedures and systems	3.28	0.780	3.80	0.8479	2.83	function at0.01
HR	3.05	0.903	3.68	0.9981	2.94	function at
Material capabilities	3.12	0.988	3.74	0.8193	3.09	0.01
Overall university performance evaluation	3.06	0.673	3.78	0.5291	5.35	function at0.01

The t-value at the significance level (0.05) is 1.98.

From the table above for the statistical differences between the mean scores of the research groups according to the type of university (University of Anbar - Monoufia Universities) in evaluating academic performance, the following is evident:

- There is a statistically significant difference in university leadership between the University of Anbar and Monoufia Universities, with a calculated t-value of 7.94. The mean score for the University of Anbar is 2.79, and for Monoufia Universities, it is 3.92.
- There is a statistically significant difference in procedures and administrative systems between the University of Anbar and Monoufia Universities, with a calculated t-value of 2.83. The mean score for the University of Anbar is 3.28, and for Monoufia Universities, it is 3.80.
- There are statistically significant differences in human resources between countries the University of Anbar and Monoufia Universities, with a calculated t-value of 2.94. The mean score for the University of Anbar is 3.05, and for Monoufia Universities, it is 3.68.
- There is a statistically significant difference material resources between the University of Anbar and Monoufia Universities, with a calculated t-value of 3.09. The mean score for the University of Anbar is 3.12, and for Monoufia Universities, it is 3.74.
- There is a statistically significant difference overall evaluation of academic performance between the University of Anbar and Monoufia Universities, with a calculated t-value of 5.35. The mean score for the University of Anbar is 3.06, and for Monoufia Universities, it is 3.78.

Testing the Third Hypothesis: There is a statistically significant positive correlation between evaluating academic performance in the framework of implementing Total Quality Management and students' satisfaction with the quality of academic performance at the University of Anbar. To test this hypothesis, a simple linear regression analysis was conducted between the reduction of costs and the improvement of competitiveness.

The results are presented in Table (11) to illustrate the results of the simple regression between evaluating academic performance and students' satisfaction with the quality of academic performance at the University of Anbar.

Table 11: Illustrate the results of the simple regression between evaluating academic performance and students' satisfaction with the quality of academic performance at the University of Anbar

Dependent variable: M and student satisfaction score Independent variable: X university performance evaluation						
F Calculated	Moral level	R square	R	Parameter value	Calculated T value	Moral level
121.414	0.000	0.606	0.778	α=0.043	0.131	0.8
				β=0.989	11.019	0.000

The source of this information is the SPSS program outputs, and the table indicates the following findings:

Regression Analysis Results

- The regression analysis showed a statistically significant positive relationship between the independent variable "X: Academic Performance Evaluation" and the dependent variable "M: Students' Satisfaction Level." The linear correlation coefficient (R) was 0.606 at a significance level of 0.000, indicating a significant relationship at a 0.01 significance level. This suggests that the evaluation of academic performance leads to an improvement in students' satisfaction.

Model Significance Test

- The overall significance of the model was confirmed through the F-test, reaching a significance level of 1%. The F-statistic value was 121.414 at a significance level

less than 0.01, confirming the overall model significance at a 0.01 significance level.

Significance Test of the Independent Variable

- The significance of the independent variable was confirmed through a T-test. The T-statistic value was 11.019 at a significance level of 0.000, indicating the significance of the relationship at a 0.01 significance level. The coefficient (B) suggests that for every one-unit increase in academic performance evaluation, there is a corresponding increase of 0.778 units in students' satisfaction.

Model Interpretability

- The interpretability of the model was assessed through the R-squared value, which was 77.8%. This indicates that 77.8% of the variations in the dependent variable can be explained by the independent variable, demonstrating a strong explanatory power of the model.

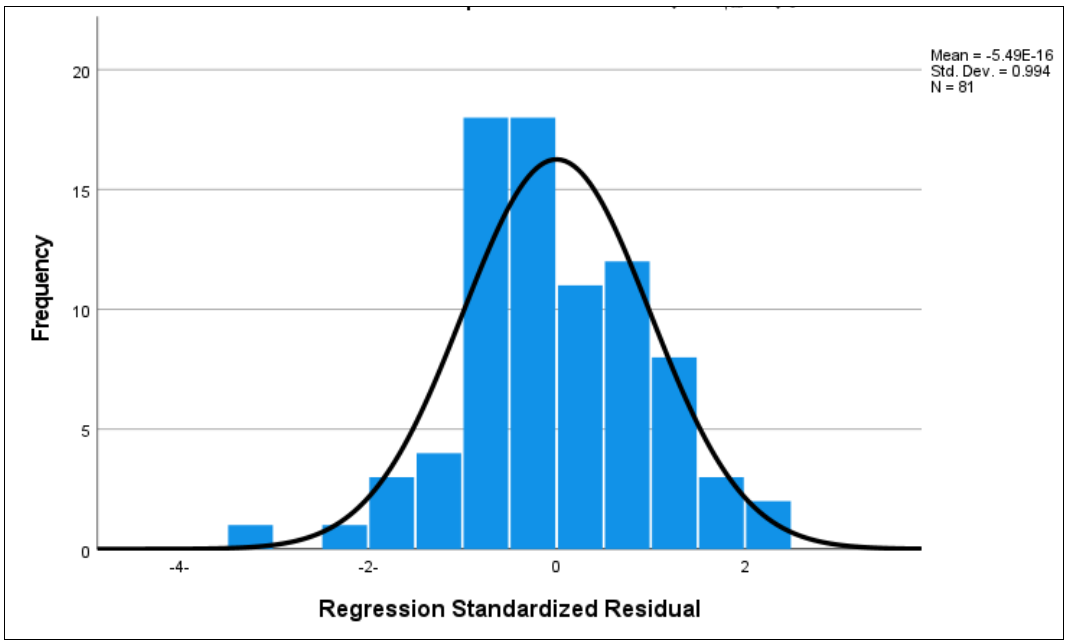

Fig 1: Regression standardized residual

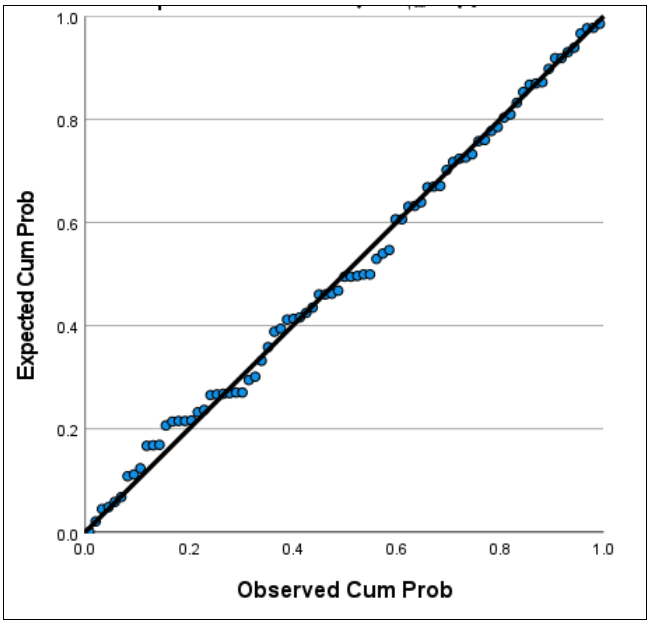

Fig 2: Observed cum prob

Results

1. The results indicate high satisfaction from the study regarding the academic curriculum.
2. There is a high level of agreement between the opinions of faculty members and the students, according to the overall analysis results: 3.44 (with a relative weight of 68.8%).
3. The results demonstrate good support for university leadership, with an overall rating of 3.35 (with a relative weight of 67.0%).
4. The study shows comprehensive endorsement for the role of libraries and information sources.
5. The results highlight strong appreciation from students for the evaluation process, with an overall analysis rating of 3.61 (with a relative weight of 72.2%).

Recommendations

1. It is recommended to develop the curriculum to enhance the students' experience and meet their educational needs.
2. Encourage the enhancement of communication and interaction between faculty members and students to promote the quality of the learning environment.
3. Propose support and enhancement of facilities and office services to promote learning and research.
4. Advocate for improving assessment methods to maximize the benefit from students' experiences.
5. Encourage communication between the administration and students to enhance mutual understanding and improve university services.

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