

## Barriers Facing Total Quality Management Principles Implementation at Princess Alia University College / Al-Balqa Applied University from Teaching Staff Perspective

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### Article Info

#### Article History

Received:  
June 27,2020

Accepted:  
September 12 ,2020

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#### Keywords

Total Quality Management, barriers of Implementing Total Quality Management, Higher Education, Al-Balqa Applied University

#### DOI:

10.5281/zenodo.4302273

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### Abstract

*The study aimed to identify principles of total quality management implementation barriers in (organizational, leadership, university administration, educational process, scientific research and local community) dimensions in Princess Alia University College from college's teaching staff perspective. It also aimed to find out if there are statistically significant differences between study sample estimates means for most important barriers that face total quality management principles in ( the organizational, leadership, university administration, educational process, scientific research and local community) in Princess Alia University College due to gender or academic rank variables. The study sample consisted of 97 teaching staff,, 92 were used for the purposes of analyzing study results. The study concluded several results, the most important of which is there are barriers related to total quality management implementation in the college in question. The barriers ranked as follows: barriers in educational process dimension, barriers in leadership dimension, barriers in scientific research dimension, , barriers in university administration dimension, , barriers in local community dimension, and organizational barriers. The study also showed that there are no statistically significant differences in identifying barriers in TQM in Princess Alia University College due to gender, while the study showed that there are statistically significant differences in recognizing barriers of TQM due to academic rank variable.*

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### 1. Introduction

Organizations in general, including various educational institutions such as universities, research and information centers, face a large wave of challenges related to lack of material resources, costs increase, low productivity level, in addition to organizational process , scientific research difficulties and other challenges that have become imperative to face and to control.

So, the adoption of total quality management approach by a large number of higher education institutions as management philosophy based on continuous improvement to meet local, and regional community needs in education and scientific research fields of to overcome problems, and barriers that prevent higher education institutions from achieving the required competitiveness locally and internationally .

However, total quality management principles implementation faced number of barriers in different aspects., The current study is trying to focus on how to find out these barriers and provide the necessary recommendations for university management to develop appropriate solutions to these barrier and challenges.

#### The study importance :

The study importance stems from the theoretical aspect because it deals with a topic that represents a modern management approach and philosophy, that is total quality and its implementation in university education. The study importance also emerged by identifying the most prominent problems and barriers that face Princess Alia University College administration in its efforts to implement Total Quality Management principles in many fields and an attempt to analyze these barriers in order to avoid or reduce them in the future, and to find appropriate solutions to ensure university and college goals achievement, and to enhance knowledge production and develop educational outcomes that serve the community by developing and improving educational process quality in a way that enhances competitiveness opportunities within higher education quality standards in the Hashemite Kingdom of Jordan, the regional and international environment, which suffer from great challenge represented in fighting Corona pandemic.

The study importance also emerged through the results and recommendations that will be revealed by this study, which would provide a clear vision for decision maker at Princess Alia University College regarding the most important problems or barriers that face total quality management principles implementation.

The study importance is evident because it is a field study that investigates perspectives regarding strengths and weaknesses in the college under study, which enables the college to use the study in identifying the most appropriate method for total quality management principles implementation.

### **Study Objectives**

The general aim of this study is to identify the most important barriers and problems facing total quality management principles implementation at Princess Alia University College, and this aim can be expressed as follows:

1- Identifying total quality management principles implementation barriers in (organizational process, leadership, university administration, educational process, scientific research and local community) at Princess Alia University College from teaching staff perspectives.

2- To find out if there are statistically significant differences between study sample estimates mean of the most important barriers that face total quality management principles implementation in (organizational process, leadership, university administration, educational process, scientific research and local community) dimensions in Princess Alia University College due to gender or academic rank variables.

### **Problem Statement :**

The problem statement is determined by the following main question:

**What are the total quality management principles implementation barriers at Princess Alia University College from teaching staff perspective?**

**This main question is divided into the following sub-questions:**

1- Are there statistically significant differences between study sample estimates means of barriers that face TQM principles implementation in a number of dimensions due to gender variable?

2- Are there statistically significant differences between study sample estimates means of barriers that face TQM principles implementation in a number of fields due to academic rank variable?

### **Previous studies:**

#### **Arab Studies:**

Armadiello, et al (2019). (Study titled: Total quality management implementation barriers at Prince Sattam bin Abdulaziz University in light of some variables.

The study aimed to identify total quality management implementation barriers at Prince Sattam bin Abdulaziz University, as well as to know college teaching staff barriers. The study sample consisted of 203 college teaching staff at the university. The study concluded that there are TQM implementation barriers, the most important one of which is the leadership and organizational fields (poor moral incentives), educational barriers. In addition to local community service aspects barriers.

**Abu Sa'a et al., (2019)** study titled: Total Quality Management implementation barriers in Palestine Technical University from college teaching staff perspective.

The study aimed to investigate total Quality Management implementation barriers and to identify college teaching staff perspective towards total quality management implementation barriers in the university, amounting 255 subjects. The study sample consisted of 76 college teaching staff. The study showed that total quality management implementation barriers level in the university was high. The most important of such barriers are many bureaucratic barriers in administrative work, poor human relations and lack of awareness of total quality culture. The study recommended the necessity of providing adequate financial support to implement the principles of total quality management, activate democratic pattern and communicate total quality culture among college teaching staff at the university.

Al-Dhiabat, Bassam and Al-Dhiabat, Murad (2018) titled: total quality management implementation barriers in private Jordanian universities.

The study aimed to identify total quality management implementation level in private Jordanian universities and to identify deans and department heads attitudes to total quality management implementation barriers.

The study population consisted of all deans and heads of academic departments in 17 private universities. The study sample consisted of 254 deans and heads of an academic department. The study concluded that there are barriers that limit total quality management implementation. Such barriers were represented by barriers related to higher management, human resources, financial resources, organizational culture and educational technologies. The study also showed that there is a medium interest to total quality management principles implementation. The study recommended the necessity to adopt organizational development approach, provide appropriate

climate for total quality management implementation and to diversificate funding sources in the sample universities.

**Mahmoud, (2018):** study titled : total quality achievement barriers in Education, College of Alexandria University, from college teaching staff perspective.

The study aimed to identify total quality achievement barriers in Education College of Alexandria University, from college teaching staff perspective. It also aimed to identify the differences in college teaching staff opinions regarding total quality achievement barriers in Education College of Alexandria University, due to personal and functional variables (gender, academic degree and specialization) .The study found that there are barriers in achieving total quality management, the most important of which are barriers related to university administration, teaching and learning barriers, community service barriers and personal barriers related to college teaching staff. The study also showed that there are no statistically significant differences towards barriers of TQM implementation due to personal, and functional variables ( (Gender, degree, specialization), The study recommended reviewing activities and building an administrative system that depends on Total Quality Management implementation in all its aspects, reviewing and updating plans and curricula, and the necessity of providing material and human resources necessary to implement total quality management curricula in addition to the necessity to hold seminars and training courses to communicate quality culture , as well as developing a system for evaluating college teaching staff, and paying attention to variables related to community service

**Aref, (2015) study titled :**Total quality management implementation barriers at Sulaymaniyah Technical University.

The study aimed to identify the barriers and problems facing University of Sulaymaniyah colleges in implementing TQM approach from the college teaching staff 'perspective. The study population consists of all 314 college teaching staff, and the study sample consisted of 80 college teaching staff. The study concluded a number of results, the most important of which are: poor financial support to adopt the philosophy of total quality management, poor incentive system and communication system, and lack of participation of college teaching staff in developing quality systems, in addition to lack of interest in training courses for academic leaders .The study recommended the need to allocate sufficient funds to support quality management approach implementation , in addition to develop a quality policy with the participation of college teaching staff and providing them with positive incentives. The study also recommended the need to communicate quality culture and to establish quality training programs for college teaching staff.

**Al-Nuaimi, (2015) study:** titled : quality management implementation barriers at Imam Muhammad bin Saud Islamic University from college teaching staff perspective.

The study aimed to identify quality management implementation barriers at Imam Muhammad bin Saud Islamic University in the Kingdom of Saudi Arabia, as well as to identify the estimation degree of barriers importance to TQM at the university.

The study population consisted of 92 college teaching staff at the university. The study results showed that there are total quality management principles implementation barriers with a medium degree. The study showed that there are differences in assessing the importance of barriers to total quality management in the study sample. The study recommended to pay attention for university infrastructures and to communicate quality culture, enhancing scientific research and to activate university role in communication with local community

### **Studies in English**

**Boating, J (2014)** study aimed to identify barriers that face total quality management system in some higher education institutions in Ghana, as well as to study and analyze the national system for quality assurance. The study sample consisted of 93 teaching staff and employees from nine colleges in one private university. The study showed that there are several barriers facing total quality management system, the most prominent of which are: administrative decisions, communicating quality culture, lack of training and experience among research sample.

**Trullen, J., & Rodriguze, S. (2013) study** showed that one of the most important principals for total quality management approach implementation success is to cause cultural and behavioral change within educational institution, and to cause change in college teaching staff and the importance of analyzing college teaching staff opinions regarding the barriers because they are the most capable element in identifying those barriers and how to deal with them.

**Venkatraman 2007** study aimed to develop a model for total quality management that is based on continuous improvement in educational process as an effective way to implement total quality management curricula and

the problems it faces in the field of higher education. The study also aimed to analyze the principles of total quality management in higher education by studying some important factors such as educational practices, the most prominent barriers for total quality, and analyzing the return on investment due to the application of TQM. The study concluded by adopting Deming's weale: Plan –Do -Check- Act Quality Framework for implementing continuous improvements in higher education programs.

### **Theoretical Framework**

#### **Total quality management concept in higher education**

Abu Al-Khair(2016)definestotal quality management as a total effective and continuous developmental approach for administrative processes represented in preparing, planning, organizing, implementing, monitoring and evaluating to raise the quality level of administrative and technical performance of university administration and employees to the levels that meet its beneficiaries needs inside and outside the university (college).

It is also defined as a modern management style based on exerted efforts by all employees of university institutions aiming to improve higher education performance and to raise its outputs efficiency in line with the changes imposed by the global competitive environment based on knowledge and quality (Tuahria, 2018).

The two researchers agree with (Rumman, ,2014 30), who defines quality in higher education field as the ability to achieve excellence and perfection in educational system performance that exceeds the basic limit set for and to the maximum of its capabilities and resources that meet transformation needs in the advanced society which enable the system to keep pace with age spirit, face its challenges, and help educational institutions to respond quickly to global and societal changes and challenges.

#### **Total quality management importance in higher educationfield:**

The two researchers agree with (Sarayra and Al-Assaf, 2008. Al-Najjar et al, 2015) that quality importance in higher education lies in the total quality management system and approach universality, in addition to total quality management system for all fields and the procedures carried by philosophy of total quality management that works on optimal use of available resources and development of future administrative leaderships through its focus on teamwork and quality workshops.

#### **Total quality management implementation barriers**

Al-Harbi,( 2019) defines these barriers as deficiencies and weaknesses, as well as problems and challenges that could prevent achieving quality and academic accreditation in the college.

The researchers define it operationally as: all the influences that prevent total quality management implementation in Princess Alia University College, whether internal or external and affects the efficiency and effectiveness of college system in (leadership, university administration, organizational aspects, educational process, scientific research, and local community service ( fields .

#### **General barriers for implementing TQM in educational institutions: (Muhammad, 2018)**

1- Change Resistance either from college teaching staff, or college.

2-Adopting methods of total quality management that are inconsistent with the privacy of educational institution.

3-Lack of top management commitment.

4-Employees non-participation in planning and total quality management implementation.

#### **Study methodology: method and procedures**

##### **Study methodology**

This study is based on the use of descriptive and analytical approach due to its flexibility in providing data and facts regarding the problem under processrepresented by total quality management principles implementation barriers at Princess Alai University College from college teaching staff perspective.

##### **Study Population and Sample:**

The study population consists of all college teaching staff at Princess AliaUniversity College, amounting (120) teaching staff, .The study sample consisted of 97 teaching staff , 92 subjects were used.

##### **Study tool:**

A questionnaire was developed for study purposes included six variables to measure TQM, implementation barriers .The questionnaire was introduced to specialized referees, it was approved and distributed to study sample.

The questionnaire consists of two parts, the first includes personal variables, (gender and academic rank). While the second part includes six variables to measure TQM implementation barriers, namely:

- 1- University administration field barriers
- 2- Barriers related to leadership field
- 3- Educational process field barriers
- 4- Scientific research field barriers

5- Organizational barriers

6- Barriers related to local community

#### Statistical Standard

Likert's five-point scale was adopted to correct the study tools, by giving each of its paragraphs one score out of its five degrees (strongly agree, agree, neutral, disagree, strongly disagree) represented digitally as follows (5, 4, 3, 2, 1) respectively, The following scale has been adopted for the purposes of analyzing the results

:From 1.00 - 2.33 low

From 2.34 - 3.67 medium

From 3.68 - 5.00 high

The scale was calculated by using the following equation:

Upper limit of scale (5) - lower limit of scale (1) ÷ 4 ÷ Number of required classes

(3( 5-1= 4 ÷ 3 =1.33

1.33 then is added to the end of each category.

#### Study Instrument Reliability:

To ensure study instrument reliability test-retest method was used by applying the scale, and re-applying the same after two weeks to a group a part from the study sample consisting of (30) subjects. Pearson correlation coefficient was calculated for their estimates on both times.

The reliability coefficient was also calculated by internal consistency method according to Cronbach Alpha equation, Table No. (1) Shows the internal consistency coefficient according to the Cronbach Alpha equation and test- retest for all fields. All values were considered appropriate for study purposes.

**Table (1)**  
**Instrument Reliability**

Variables	Test -Re- Test Reliability	Internal Consistency
University administration Field Barriers,	0.93	0.89
Leadership Field Barriers	0.94	0.91
Educational Poces Field Barriers,	0.90	0.91
Barriers Scientific Research Field Barriers	0.92	0.86
Organizational Barriers	0.89	0.88
Local Community Barriers	0.93	0.90
Whole Instrument	0.92	0.94

## Study Sample

Table (2)  
Sample distribution according to Demographic Variables

Variables	Options	Frequency	Percentage%
<b>Rank</b>	Prof.	21	22.8
	Associated Prof	27	29.3
	Assistant Prof	16	17.4
	Lecturer	28	30.4
<b>Gender</b>	Male	53	57.6
	Female	39	42.4
	Total	92	100.0

## Study Results

### The first question: What are the barriersthat face total quality management concepts implementation at Princess Alia University College / Al-Balqa Applied University from academic and administrative perspective?

Means and standard deviations of total quality management conceptsimplementationbarriers at Princess Alia University College / Al-Balqa Applied University were calculated from academic and administrative perspective.

Table 3))  
Means and standard deviations for Barriers Facing Total Quality Mngement Principles implementation at Princess Alia University College / Al-Balqa Applied University from Managerial and Academic Staff Perspective arranged in descending order

No.	Field	Mean	S. Deviation	Level	Rank
3	Educational Poces Field Barriers,	3.64	.970	Medium	1
2	Leadership Field Barriers	3.62	.976	Medium	2
4	Scientific Research Field Barriers	3.59	.777	Medium	3
1	UniversityadministrationField Barriers	3.52	.982	Medium	4
6	Local Community Barriers	3.36	.766	Medium	5
5	Organizational Barriers	3.33	.866	Medium	6
	All Barriers	3.50	.842	Medium	

Table (3) shows that means ranged between (3.33-3.64.).The educational process field barriers ranked thefirst with highest mean (3.64), while organizational barriersranked last with mean (3.33). The barriers meanas a whole was (3.50). The result is consistent with (Philip, et al, 2008), which concluded that there are many administrative barriers and lack of capabilities, in addition to barriers percent was 81% in the aforementioned study, while in this study it was 84.2%.

Means and standard deviations of study sample subjectsestimates for statements of each field were calculated separately, as follows:

### The first field: University administration field barriers

Table (4)

Means and standard deviations of university administration field barriers arranged in descending order according to means

No.	Field	Mean	S. Deviation	Level	Rank
3	Large number of administrative, bureaucratic and legal barriers facing college teaching staff	3.89	1.010	High	1
1	Lack of opportunities for college teaching staff to participate in making decisions at college and university levels	3.64	1.135	Medium	2
6	Lack of training programs in quality and university management skills fields	3.54	1.338	Medium	3
5	Poor human relations prevailing in academic work climate	3.52	1.084	Medium	4
2	Absence of applying modern methods in university management	3.29	1.288	Medium	5

4	Few benefits from modern technology in the field of university administration	3.21	1.403	Medium	6
	Barriers in university administration field	3.52	.982	Medium	

Table (4) shows that means ranged between (3.21-3.89). Statement no. (3), which states “the large number of administrative, bureaucratic and legal barriers facing college teaching staff,” ranked the first with a mean (3.89). While statement no. (4), which states “few benefit from new technology in the field of university administration,” ranked last, with a mean of (3.21) While barriers in university administration field whole mean was (3.52). This study is consistent with Boating, , 2014 study which showed that there are several barriers facing the total quality management system, the most prominent of which are: administrative decisions, quality culture communication, lack of training and experience among sample respondents., The result indicates the need to simplify procedures and even the need to use curricula, and modern administrative methods, foremost of which is Total Quality Management, in particular in light of the Corona pandemic, which imposed a new reality on all educational and non-educational institutions.

### Second :Leadership field Barriers

**Table (5)**

**Means and standard deviations of leadership field barriers arranged in descending order according to mean**

No.	Statements	Mean	S. Deviation	Level	Rank
8	Lack of clarity for selecting academic leaders criteria	4.03	1.124	High	1
12	Changing college policies by changing academic leaders (deans and department heads)	3.84	1.492	High	2
11	Lack of participation of college teaching staff in decisions regarding the implementation of total quality management	3.67	1.018	Medium	3
7	The lack of conviction of some academic leaders in total quality management implementation	3.57	1.189	Medium	4
10	Lack of clarity of the philosophy and principles of total quality among some academic leaders	3.37	1.097	Medium	5
9	Strategies and policies ambiguity for total quality management implementation	3.26	1.004	Medium	6
	Leadership field barriers	3.62	.976	Medium	

Table (5) shows that means ranged between (3.26-4.03). Statement no. (8), which states “Lack of clarity for selecting academic leaders criteria,” ranked the first with mean (4.03). While statement no. (9), which states “Strategies and policies ambiguity for total quality management implementation ” ranked last, with mean of (3.26). While barriers in leadership field whole mean was (3.62). This study is consistent with Aref’s 2015 study, which some of its results is lack of interest in training courses for academic leaders. The clarity of quality policies with the existent of barriers can be considered evidence of the influence of other factors.

### Third : Education Process Field Barriers

**Table (6)**

**Means and standard deviations of educationprocee field barriers arranged in descending order according to mean**

No.	Statements	Mean	S. Deviation	Level	Rank
14	Students' dependence on traditional methods and university textbooks in obtaining knowledge and the absence of critical thinking	4.26	.724	High	1
15	Failure to develop libraries in line with scientific and technological changes	3.77	1.120	High	2
13	Increasing the number of students inside classrooms to reduce chances of	3.66	1.243	Medium	3

	using new methods of teaching and learning				
18	Dependence on traditional methods of evaluation	3.62	1.382	Medium	4
16	Quality circles are not formed to discuss work problems in departments and divisions	3.46	1.262	Medium	5
17	Lack of reviewing academic courses and developing applied practical part	3.13	1.224	Medium	6
19	Lack of educational means available for use by college teaching staff	3.57	1.320	Medium	
	Barriers in educational process	3.64	.970	Medium	

Table (6) shows that means ranged between (3.57-4.26). Statement no.( 14), which states “Students' dependence on traditional methods and university textbooks in obtaining knowledge and the absence of critical thinking ” ranked the first with a mean (4.26). While statement no. (19), which states “Lack of educational means available for use by college teaching staff” ranked last, with a mean of (3.57). While barriers in educational process whole mean was (3.64). This study is consistent with -Thiabat, 2018 study , which concluded that there are barriers that limit of TQM implementation, represented by barriers related to top management, human resources, financial resources, organizational culture and educational technologies. This refer to the need to adopt modern teaching methods, which depend on thinking and creativity, that has become an urgent need with spread of Corona virus epidemic, which the college may have started to gradually adopt through application of e-learning process and what it requires of developing new teaching methods

#### Fourth : Scientific Research field Barriers

**Table (7)**  
Means and standard deviations of scientific research field barriers arranged in descending order according to mean

No.	Statements	Mean	S. Deviation	Level	Rank
24	Many college teaching staff have poor proficiency in foreign languages	4.21	.778	High	1
22	Publishing difficulty and high costs in international journals	3.79	1.064	High	2
23	Lack of interest in scientific research results and recommendations	3.51	.978	Medium	3
21	Difficulty in international conferences	3.49	1.104	Medium	4
25	Weak incentives provided to college teaching staff to conduct scientific research	3.33	1.028	Medium	5
20	Poor research capabilities available from laboratories, computers and databases	3.18	1.048	Medium	6
	Scientific research field barriers	3.59	.777	Medium	

Table (7) shows that means ranged between (3.18-4.21). Statement no.(24), which states “Many college teaching staff have poor proficiency in foreign languages” ranked the first with a mean (4.21). While statement no. (20), which states “Poor research capabilities available from laboratories, computers and databases” ranked last, with a mean of (3.18). Scientific research field barriers whole mean was (3.59). This result can be explained that most of teaching staff are graduates from Arabic universities, in addition that most academic programs in the college are taught in Arabic.

#### Fifth :Organizational Barriers

**Table (8): Means and standard deviations of Organizational field barriers arranged in descending order according to mean**

No.	Statements	Mean	S. Deviation	Level	Rank
26	Poor material and moral incentives to implement total quality management	3.73	.827	High	1



32	The length of college teaching staff promotion procedures	3.70	1.024	High	2
27	Lack of equal opportunities among college teaching staff	3.51	1.200	Medium	3
28	Poor communication channels between departments, college and university administration	3.23	1.268	Medium	4
33	Lack of objective standards to measure college teaching staff performance	3.20	.917	Medium	5
30	The college is not interested in assuring, disseminating and culturing quality for the educational process benefit	3.14	.909	Medium	6
31	Lack of job description clarity that defines responsibilities and employees duties	3.13	1.141	Medium	7
29	Lack of confidence in college teaching staff	2.99	1.011	Medium	8
	Organizational barriers	3.33	.866		

Table (8) shows that means ranged between (2.99-3.73). Statement no.( 26), which states “poor material and moral incentives to implement total quality management” ranked the first with a mean (3.73). While statement no. (29), which states “Lack of confidence in college teaching staff” ranked last, with a mean of (3.99). Organizational fieldbarriers whole mean was (3.33).. The study agrees with Aref’s study, 2015. Which concluded weak financial support to adopt the philosophy of total quality management, poor incentive system and communication system, as well as the study agrees with Trullen, J., & Rodriguze, S. (2013), which recommended the need for change in teaching staff. And the importance of analyzing teaching staff opinions of regarding the barriers because they are the most capable elements in identifying those barriers and how to deal with. Therefore material and moral incentives must be linked with effective total quality management implementation.

#### Sixth : Local Community Barriers

**Table (9)**  
**Means and standard deviations of local community field barriers arranged in descending order according to mean**

No.	Statements	Mean	S. Deviation	Level	Rank
37	Lack of clear mechanisms to address needs and problems of local community	3.68	.983	High	1
39	Non clear satisfaction of internal and external customers measurement standards	3.67	.772	Medium	2
40	Lack of information received from beneficiaries regarding educational outcomes quality	3.49	.845	Medium	3
38	Lack of linking university programs with development plans in the local community	3.30	.911	Medium	4
35	Poor contact with employment institutions to know their needs	3.29	.884	Medium	5
34	Poor relationship between the university and the labor market	3.17	.979	Medium	6
36	Lack of continuous education programs	2.87	.928	Medium	7
	Barriers related to the local community	3.36	.766	Medium	

Table (9) shows that means ranged between (2.87-3.68). Statement no.( 37), which states “Lack of clear mechanisms to address needs and problems of local community” ranked the first with a mean (3.68). While

statement no. (36), which states “Lack of continuous education programs” ranked last, with a mean of (3.99). Local Community field barriers whole mean was (3.36).. The study agrees with Al-Muraqa, et al. 2019 study. And the Al-Nuaimi, 2015 study. The two studies concluded that there are barriers related to the local community, they recommended activating the university’s role in communicate with the local community. This indicates that there is a need to communicate with the local community and investigating its needs for the purpose of developing educational process outputs to meet those needs.

**Second question: There are no statistically significant differences at ( $\alpha = 0.05$ ) in total quality management concepts implementation barriers at Princess Alia University College / Al-Balqa Applied University from the academic and administrative perspective due to ( rank and gender) variables**

To answer this question, means and standard deviations of total quality management concepts implementation barriers at princess Alia University College / Al-Balqa Applied University were calculated from academics and administrators perspective according to rank and gender variables. The table below shows that.

Table 10))

Means and standard deviations of total quality management concepts implementation barriers at Princess Alia University College / Al-Balqa Applied University from academics and administrators perspectives according rank and sex variables

		Mean	S. Deviation	Number
Rank	Prof.	3.08	.854	21
	Associated Prof	3.33	.849	27
	Assistant Prof	3.55	.830	16
	Lecturer	3.94	.635	28
Sex	Male	3.37	.881	53
	Female	3.67	.765	39

Table (10) shows clear variation means, and standard deviations of total quality management concepts implementation barriers in Princess Alia University College / Al-Balqa Applied University from academics and administrators perspective due rank and gender.

**Table (10) shows an apparent variation in the arithmetic averages and standard deviations of the difficulties facing the application of the concepts of total quality management in Princess High University College / Al-Balqa Applied University from the viewpoint of academics and administrators due to the different categories of the variables of rank and gender..)**

Table (110

Two-way analysis of variance of the effect of rank and gender on total quality management concepts barriers at Princess Alia University College / Al-Balqa Applied University from academics and administrators perspective

Source	Sum of Squares	Df	Mean Square	F	Sig.
Rank	9.015	3	3.005	4.881	.003
Sex	.995	1	.995	1.617	.207
Error	53.558	87	.616		
Total	64.585	91			
Corrected Total					

Table (11) shows the following:

- There are statistically significant differences ( $\alpha = 0.05$ ) due to rank, where F value = 4.881 with a statistical significance of 0.003. To show the significant differences between means Post Hoc Comparisons was used by Scheffe test as shown in table (12)

- There are no statistically significant differences ( $\alpha = 0.05$ ) due to gender, as F-value = 1.617, with a statistical significance of 0.207. This study is in agreement with Mahmoud’s study, 2018, which showed that there are no statistically significant differences in TQM implementation barriers due to gender variable,. This can be attributed to similarity of academic work nature regardless of the gender variable.

Table 12))

**Post Hoc Comparison of Schaffetest of the impact of rank on total quality management concepts barriers at Princess Alia University College / Al-Balqa Applied University from academics and administrators perspective**

	Mean	Prof.	Associated Prof	Assistant Prof	Lecturer
Prof.	3.08				
Associated Prof	3.33	.25			
Assistant Prof	3.55	.47	.22		
Lecturer	3.94	.86*	.62*	40	

Table (12) shows that there are statistically significant differences at ( $\alpha = 0.05$ ) level between lecturer and an assistant professor on one hand and professor and an associated professor on the other hand, and the differences are in favor of lecturer. This study differs with Mahmoud's study, 2018, which concluded that there are no statistically significant differences for barriers facing TQM implementation due to academic rank, The result can be considered logic because barriers facing academic ranks : Professor and Associated Professor are naturally less than barriers and problems facing assistant professor and lecturer due to practical experience that tends in favor for professor and associated professor

#### **Recommendations:**

Based on the study results discussed in the previous part of the research, the study recommends the following: 1- Providing college teaching staff with opportunity to participate in decision-making at college and university levels, and to involve them in training programs in implementing total quality approach.

Communicating quality culture and clarifying the philosophy of total quality for college teaching staff and administrative leaders.

3-Developing methods of cognitive achievement in line with big changes, especially in light of the Corona pandemic, and trying to develop e- learning process in a way that encourages creativity and critical thinking among students, and developing libraries in line with scientific and technological changes.

4-Developing college teaching staff in the field of foreign languages by providing opportunities for academic , research exchange, and contributing to the costs of publishing in international magazines due to its high cost

5-Clarifying the promotion procedures and reducing the time for considering promotion requests submitted by college teaching staff.

6-Investigating local community needs of and adhering to principles of social responsibility, and looking at the needs of the labor market in light of the scientific and technological developments and the necessities of the new reality regionally and globally.

7-Conducting more studies and researches on modern management , leadership methods and implementation ways in different university's colleges, and there is a need to adopt scientific research outputs in all areas that contribute efficiently and effectively to academic performance.

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