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Dr Vincent W Ho

Akademika Nusa Internasional (Association of Social Sciences and Humanities) is a platform that thrives to support the worldwide scholarly community to analyze the role played by the multidisciplinary innovations for the betterment of human societies. It also encourages academicians, practitioners, scientists, and scholars from various disciplines to come together and share their ideas about how they can make all the disciplines interact in an innovative way and to sort out the way to minimize the effect of challenges faced by the society. All the research work presented in this conference is truly exceptional, promising, and effective. These researches are designed to target the challenges that are faced by various sub-domains of the social sciences and applied sciences.

I would like to thank our honorable scientific and review committee for giving their precious time to the review process covering the papers presented in this conference. I am also highly obliged to the participants for being a part of our efforts to promote knowledge sharing and learning. We as scholars make an integral part of the leading educated class of the society that is responsible for benefitting the society with their knowledge. Let's get over all sorts of discrimination and take a look at the wider picture. Let's work together for the welfare of humanity for making the world a harmonious place to live and making it flourish in every aspect. Stay blessed.

Thank you.

Dr Vincent W Ho
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The Principles of Total Quality Management in Jordanian Universities

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Abstract. This study aims at identifying to what extent the principles of total quality management are applied at the Jordanian universities. The study population includes all the department heads at the Jordanian universities for the academic year (2017/ 2018). The study sample is chosen by using the stratified random method. To achieve the objectives of the study, the researcher developed the study tool. Both the validity and reliability of the tool are verified. The researcher distributed the tool over the sample of the study and carried out the relative statistical processing. The results show that the standards of total quality management applied at the Jordanian universities is not satisfactory enough. The results also, show that there are no statistically significant differences at the (0.05=α) level attributes to (gender, specialization, and years of experience). Accordingly, the researcher recommends to hold training courses and field workshops to activate the standards of total quality management

Keywords— Jordanian Universities, Stratified Random, Quality Management

INTRODUCTION

Higher education has been the subject to a great interest at various levels as well as continuous improvement worldwide to satisfy the needs of the individuals, the society and the era in which we live that is characterized by science and technology. Higher education is viewed as an important tool in developing societies according to the role it plays in preparing well qualified human resources in different fields as well as preparing professional intellectual leaders for the different education levels. This interest is expected to increase supported by the increasing criticism of poor quality standards in the education. UNESCO reports (2002) indicate that developed countries suffer more than developing countries from the poor levels of quality in education which results in poor educational product and poor interaction between academic institutions and the society (Majid & Zyadat, 2008). It is also known that universities and quality are closely related, therefore the target group involved this process whether they are the students, parents, the ministry of education, the ministry of higher education, and/ or the government are eager to identify strong, middle, and weak universities according to the quality standards applied in the them. The hierarchical or cluster organization shows strong universities first, then less strong ones and so on. The university which is ranked first or among the strong ones is labeled as a university which applies high quality standards in the academic and administration perspectives (Abu Khalaf, 2004). Hence, the use of quality management at academic institutions is one of the major educational issues of interest to universities in both developed and developing countries to increase the efficiency of these universities and improve the quality of education in them (Shehata, 2012).Due to the importance of using Total Quality Management at international universities, the researcher noticed that it is highly recommended to use these standards to improve academic proficiency of Jordanian universities. The researcher also noticed through the previous literature that many scholars investigated the use of TQM at public institutions in Jordan, but none has been conducted at academic institutions. Hence the current study.

RESEARCH QUESTIONS

This study seeks to answer the following questions:

1. To what extent the TQM is applied at Jordanian universities?
2. Are there any statistically significant differences at the level of (0.05 = α) in the application of TQM at Jordanian universities according to gender, years of experience, and specialization?

RESEARCH OBJECTIVES

1. To explore to what extent the TQM is applied at Jordanian universities.
2. To identify the statistical significant differences at the level of (0.05 = α) in the application of TQM at Jordanian universities according to gender, years of experience, and specialization.

SIGNIFICANCE OF THE STUDY

This study is novel because it is an attempt to clarify the importance of administrative improvement to TQM at the Jordanian universities. It helps the employees at the academic field to improve their administrative and educational practices. Therefore, the researcher has noticed the importance of conducting this study to identify to what extent the TQM is applied at the Jordanian Universities tobe used by the employees of these universities, namely, the chancellor, deans, heads of departments, and faculty members.

DEFINITIONS OF TERMS

Total Quality Management (TQM): is a modern management philosophy that takes the form of a comprehensive management approach or system that is based on making positive changes to everything within the organization in order to

improve and develop all the components of the organization to achieve the highest quality of its outputs (goods and services) With the aim of achieving the highest degree of satisfaction among the beneficiaries, by satisfying their needs and desires, according to what they expect (Al-Sha'ar, 2008).

Limitations of The Study:

The outcomes of this study are limited to the Jordanian Private Universities from the point of view of the Department heads at these universities in the academic year 2017-2018. It is also limited to the objectivity and truthfulness of the respondents to the study instruments.

Conceptual Framework:

The TQM is an economic concept first introduced in the first half of the last century due to the economic competition among the industrial countries. This concept was introduced to monitor the quality of the product and attain the costumers' confidence (Meslim, 2015).

Total Quality Management at Higher Education Institutions:

The TQM is rooted back to the 2nd world war as a result to the massive competition between the Japanese and the American industry which helped in the emergence and the distribution of this administrative method. This method becomes an aspectof modern administration not only in the industrial sector but also in all human activities (Abu Anaser, 2008). The concept of TQM has been viewed in different ways by many scholars according to the aims as well as the organizations in which this concept is used (Muslim 2015). The TQM calls for continuous development of administrative processes through revising, analyzing, and searching for the best procedures to enhance performance and reduce the time requires for that by terminating all unnecessary tasks and missions needed for the demand or the process to reduce the cost and improve quality. This means that TQM represents a systematic approach to ensure the progress of different activities in any organization to achieve the desired objectives to avoid any expected problems through enhancing the ideal organizational administrative behavior by using the human and material resources efficiently (Alteti, 2011).

Aluleimat, 2004 indicates that a misunderstanding as well as a confusion of the TQM and the concept of quality exist among many individuals though many differences between the two concepts appear clearly. Quality is only concerned with the expected standards and characteristics of the product and the accompanied processes and activities through which these standards are achieved. On the contrary, the TQM is interested in all the activities fulfilled by the employees responsible for facilitating the institution which includes, planning, performance, following up, and evaluation to improve quality and maintain it. The TQM in the academic field is a new concept, because it was first introduced in the 1980s. in the 1990s this concept started to appear in the Arabic publications due to many national and international variables as well as the need to draw the attention to the importance of adopting this philosophy in the academic institutions to improve the quality of education.(Dawood 2014).

TQM in the Higher Education Institutions:

TQM is viewed as a modern approach in education which has been used in a large scale to improve administration in the academic institutions through creating deep confidence about quality as well as establishing a solid base for values and principle that acknowledge each individual in the institution about the importance of quality (Mujahid& Bdeir, 2006). Different views appeared about the TQM in education; Alsaood 2003 states that " TQM represents the institution ability to provide high quality services through which it can meet the demands and needs of its customers, the students". Alhneidi 2008 argues that TQM is the ability of the educational institution to achieve the needs of the society and its total satisfaction about the product, the graduates.

Application of the principles of Total Quality Management in Jordanian Universities:

The Accreditation Council, which was established in Jordan in 2005, aims at improving the quality of higher education. The council, which used to follow the ministry of Higher Education, plays a vital role in the academic field in Jordan, therefore it was upgraded to be an independent commission The Council has set clear standards for each of teaching staff, laboratory supervisors, buildings, academic facilities, teaching rooms, stands, specialized laboratories, labs, libraries, playgrounds, health clinics, public facilities, teaching aids and devices. And the axes of general accreditation for postgraduate studies and calculation of absorptive capacity (Ahmed and Hussein, 2009).

Majid and Al-ziaddat (2008) pointed out that the objectives of the Accreditation:

Council were identified as follows:1. Establish the foundations and criteria for the accreditation and development of higher education institutions in accordance with the general policy of higher education.
2. Monitor the performance of higher education institutions and ensure their commitment to the foundations and standards.
3. Ensure that institutions of higher education achieve their objectives.
4. To harmonize the educational process with the requirements of the market and economic development plans.
5. Continuing to improve the quality of higher education.

The process of applying TQM in five basic stages as referred to by (Al-Tai, and Abadi, 2008):

First: the stage of the management's conviction and adoption of the philosophy ofTQM: At this stage, the management of the institution decides to apply the TQM system. In this sense, the senior managers of the institution start to

receive specialized training programs on the concept of the system and its importance and requirements and the principles on which it is based.

Second: Planning stage:

The detailed plans for implementation and the permanent structure and the resources necessary to implement the system. Third: the evaluation stage: The evaluation process often begins with some important questions which, considering the answer, can create the appropriate ground for starting the application of TQM. Fourth: Implementation stage: At this stage, the individuals who will be entrusted with the implementation process will be selected and trained in the latest training methods related to TQM.Fifth: the stage of exchange and dissemination of experiences: At this stage is to invest experiences and successes achieved through the application of TQM.

Methodology of the study:

The researcher used the descriptive analysis research methodology to reveal the degree of application of the principles of TQM in Jordanian private universities

Population of the Study:

The study population consisted of the heads of the academic departments in Jordanian private universities (229) head of academic department (Ministry of Higher Education and Scientific Research, 2016). The sample of the study was chosen in random stratified form of the population. (122) head of department (53%) of the total population.

Study instrument:

The researcher used a questionnaire to measure the degree of application of the principles of TQM in Jordanian private universities from the point of view of the heads of the academic departments. The tool was developed through reviewing the theoretical literature and previous studies and was formulated in the form of a questionnaire consisting of (45) questions distributed over five dimintions : (Vision and Mission, Operations Management, Continuous Improvement, Customer Satisfaction, Feedback). The response to the study instrument is based on the fivedimensional Likert scale, with each of its paragraphs being given one of its five degrees (very large, large, medium, few, very few), which represents digitally (5, 4, 3, 2, 1) The following scale has been adopted for analyzing the results:
From 1.00 to 2.33 low
From 2.34 to 3.67 averageFrom 3.68 to 5.00 high

Tool Validation:

The questionnaire was presented in its initial form to (11) arbitrators who are specialized in the field of management and economics in Jordanian universities. They were asked to determine the relevance of the paragraphs to the fields specified in the appendix and the clarity of the paragraphs and their linguistic integrity to measure the degree of application of the principles of TQM in Jordanian universities as well as any proposed amendments, and to propose paragraphs as they deem necessary. After the re-examination, the proposed amendments made by the arbitrators in their recommendations were made in a precise manner that balanced the contents of the resolution in their paragraphs. The amendments represented the rewording of some paragraphs and areas and the addition of some other paragraphs. In the light of the amendments, the final form of the questionnaire became 45 paragraphs.

Stability of the tool:

To verify the stability of the study instrument, the test-retest was verified by applying the tool and re-applied two weeks later to a group outside the study sample consisting of (15) academic head of department. Therefore, Pearson correlation coefficient was calculated between their estimates Both times. The coefficient of consistency was calculated in the internal consistency method according to the Cronbach's alpha formula. Table (1) shows the coefficient of internal consistency according to the Cronbach's alpha equation and the regression coefficients for the domains and instrument as a whole.

Table (1)
Cronbach's alpha consistency coefficient and repeatability of the fields and the total score

the field	Repetition stability	Internal consistency
Vision, mission and goals	0.91	0.88
Operations Management	0.95	0.78
continuous improvement	0.88	0.91
Satisfaction of beneficiaries	0.78	0.94
Asesment	0.89	0.91
Grand total	0.87	

Results and discussion of the study:

The first question: "What is the degree of application of the principles of TQM in Jordanian private universities from the point of view of the heads of academic departments?" To answer this question, the statistical averages and standard deviations

of the degree of application of the principles of TQM in Jordanian private universities were extracted from the point of view of the heads of academic departments. Table (2) illustrates this.

Table (2)

Computational averages and standard deviations of the degree of application of the principles of TQM in private Jordanian universities from the point of view of the heads of the academic departments in descending order according to the arithmetic averages

Rank	Number	Field	Average	Standard Deviation	Degree
1	1	Vision, mission and goals	3.67	.782	Medium
2	4	Operations Management	3.56	.808	Medium
3	2	continuous improvement	3.51	.799	Medium
4	3	Satisfaction of beneficiaries	3.48	.789	Medium
5	5	Asesment	3.37	.870	Medium
		Total	3.51	.760	Medium

Table (2) shows that the calculation averages ranged between (3.37-3.67). The field of vision, mission and goals ranked first with the highest mean (3.67), while the evaluation field came in last rank with an average of 3.37, The instrument average (3.51). Table (2) shows that the total arithmetic mean for the domains of the degree of application of TQM principles in private Jordanian universities from the point of view of the heads of the academic departments was medium, with an average of 3.51. The mathematical averages ranged between 3.37-3.67 (5), based on the tool used in this study, and the researcher refutes the recent application of TQM standards in the light of international standards in Jordanian universities in general and private Jordanian universities in particular, and they need a new organizational culture that includes understanding, Change Which is intended to be applied to public universities in Jordan to serve as a guide for the human behavior of all employees and to use the principle of centralization in decision-making, which leads to non-deviation from routine.The arithmetical averages and the standard deviations of the estimates of the individuals of the study sample were calculated according to the paragraphs of each field separately, as follows:

The first field: vision, mission and goals

Table (3)

The arithmetical averages and standard deviations of the field of vision, mission, and objectives are ranked descending by arithmetical averages

Rank	Number	Field	Average	Standard deviation	Degree
1	7	Aspire to be at the forefront	3.89	.850	High
2	8	Seeks to be an integral part of society	3.81	.888	High
3	1	The vision, mission and objectives of the University emanate from the global standards of TQM	3.78	.924	High
4	3	Be careful to craft a message based on excellence	3.65	.949	Medium
5	6	Total quality is a slogan	3.64	.956	Medium
6	2	The University provides a clear and specific vision	3.60	.892	Medium
7	4	The goals of the university are formulated in a manner that is easy to apply and measure	3.56	.908	Medium
8	9	Characterized by the adoption of the principles of total quality	3.54	.972	Medium
9	5	Objectives are flexible and adjustable	3.53	.941	Medium
		Vision, mission and objectives as a whole	3.67	.782	Medium

Table (3) shows that the arithmetic averages ranged between 3.53 - 3.89. Paragraph (7), which states, " Aspire to be at the forefront ", came first with an average of 3.89, while paragraph (5) "The targets are flexible and adjustable" at the last rank with an average of (3.53). The arithmetic mean for the field as a whole was 3.67. Thismay be since the objectives of the mission and the visibility of its programs were clear and precise.

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Field Two: Operations Management

Table (4)

The arithmetical averages and standard deviations of the operations management area are ranked descending by arithmetical averages

Rank	Number	Field	Average	st.divation	Degree
1	10	Focusing on process quality and results	3.61	.850	Medium
2	16	The level of quality achieved at the university compares with the level of quality achieved by competitors in other universities	3.58	.938	Medium
3	11	Processes are designed to meet the needs and satisfaction of beneficiaries	3.57	.861	Medium
4	12	It is keen to prevent errors in operations by adopting the philosophy of total quality during implementation	3.53	.929	Medium
5	15	Methods (measurement and analysis) are used to assess the level of quality achieved in all processes	3.46	.916	Medium
6	13	Provides a high degree of flexibility and speed during operations	3.42	.963	Medium
7	14	Reduce the cost of managing operations efficiently and effectively	3.39	.960	Medium
		Operations management as a whole	3.51	.799	Medium

Table (4) shows that the arithmetic averages ranged between 3.39-3.61. Paragraph (10), which states "Concentrating on the quality of operations and results", ranked first with an average of 3.61. Which read "reduce the cost of managing operations efficiently and effectively" at the last rank with an average of (3.39). The arithmetic average of the field was 3.51. This may be attributed to the fact that universities are seeking to achieve the quality and design of all processes, with the aim of providing results without error, by measuring their steps and procedures continuously and systematically, as well as comparing the level of quality achieved in the university with the level of quality achieved by competitors in other universities, For this comparison, in a way that will meet the needs and desires of the beneficiaries.

<u>The third field: continuous improvement</u>

Table (5)

The arithmetical averages and standard deviations of the domains of continuous improvement are ranked descending by arithmetical averages

Rank	No.	Field	averages	St. deviation	Degree
10	26	Consider continuous improvement in work as part of quality requirements	.878	3.78	Medium
1	17	Emphasizes the continuous improvement of the quality of operations	.876	3.69	Medium
2	18	Form work teams to coordinate continuous improvement processes at the university	.853	3.63	Medium
3	19	Define the objectives of improvement (physical and human) in an action plan	.933	3.56	Medium
4	20	Open channels of communication to employees in the field of improvement	.966	3.51	Medium
4	21	Consistently improve the quality of services and performance	.954	3.51	Medium
6	23	The reference comparison method is used to continuously improve service quality	1.006	3.37	Medium
7	25	There is a mechanism that allows feedback to be used to improve quality effectively and continuously	.962	3.36	Medium
8	24	Provides the means to support the continuous improvement of the quality of its operations	.970	3.30	Medium
9	22	Provide adequate funding for the implementation of quality improvement programs at the University	1.137	3.12	Medium
		Continuous improvement as a whole	.789	3.48	Medium

Table (5) shows that the calculation averages ranged from (3.78 to 3.12). Paragraph (26), which states that "the continuous improvement in work is considered part of the quality requirements" is ranked first, with an average of (3.78) , While paragraph (22), which provides "sufficient funding for the implementation of programs on quality improvement in the university", came last with an average of 3.12. The arithmetic mean for the field was 3.48.

The fourth field: Beneficiary satisfaction

Table (6)

The arithmetical averages and standard deviations of the areas of beneficiary satisfaction are ranked descending by arithmetical averages

Rank	No.	Field	averages	St. deviation	Degree
1	27	Focus on the beneficiary (student) as the main focus of the educational process at the university	3.70	.853	High
2	28	Keep pace with the requirements of the times through the study plans	3.63	.880	Medium
3	32	Follow Complaints of beneficiaries	3.63	.895	Medium
4	31	The main objective of the university's senior management is to achieve the satisfaction of the beneficiaries	3.57	.933	Medium
5	30	Conducts studies to provide the requirements of renewable beneficiaries	3.53	.903	Medium
6	29	Conducts studies to identify the requirements of renewable beneficiaries	3.51	.935	Medium
6	33	Provide appropriate solutions to complaints of beneficiaries	3.51	.948	Medium
8	35	Focus on programs that achieve user satisfaction	3.47	.935	Medium
9	34	Continuously seeks to reduce the gap between the expectations of beneficiaries about the quality of services and the actual quality provided to them	3.46	.935	Medium
		Satisfaction of beneficiaries as a whole	3.56	.808	Medium

Table (6) shows that the mathematical averages ranged between (3.46-3.70). Paragraph (27), which states: "The focus on the beneficiary (student) as the main axis of the educational process in the university" ranked first with an average of (3.70) Paragraph (34), which reads: "continuously reduce the gap between the expectations of beneficiaries about the quality of services and the actual quality provided to them" at the last rank with an average of (3.46). The arithmetic mean for the field as a whole was 3.56. This is due to the conviction of those who implement the TQM standards, which generated the desire and enthusiasm in the work, thus creating the conditions for the faculty members to perform their work and meet their personal needs, and to find cooperation and harmony between them and them to form a cooperative team with loyalty and belonging.

Fifth field: Assessment

Table (7)

The arithmetical averages and the standard deviations of the fields of the calendar field are arranged in descending order according to the arithmetic averages

Rank	No.	Field	averages	St. deviation	Degree
1	36	Adopts the principle of quality (for evaluation and self-control) in the university	3.52	.836	Medium
2	37	Continuation of the process (follow-up and evaluation) to achieve the objectives	3.47	.828	Medium
2	39	Describe the criteria for the assesment for all employees	3.47	.922	Medium
4	38	There isspecific criteria that show the degree of achievement that has been achieved	3.44	.914	Medium
5	41	The assesment is used to improve quality	3.37	.958	Medium
6	42	Responds to complaints of beneficiaries to a high degree	3.34	1.064	Medium
7	40	Facilitate mechanisms for transparent assessments	3.32	1.055	Medium
8	43	Adopts a system that provides employees with information on the degree (efficiency, achievement and achievement of goals)	3.29	1.065	Medium
8	44	The University provides a system to control and review the quality of the evaluation procedures	3.29	1.003	Medium
10	45	Take care of objectivity in the process of continuous assessment	3.22	1.082	Medium
		Assessment as a whole	3.37	.870	Medium

Table (7) shows that the mathematical averages ranged between (3.22-3.52). Paragraph (36), which states that "the principle of quality (for self-assessment and self-control) in the university" is ranked first with an average of (3.52) Paragraph (45), which reads "objectively in the evaluation process", came last with an average of 3.22. The arithmetic average of the field as a whole was 3.37. This may be due to the difficulty in changing the set of values and beliefs prevailing among staff to adopt an integrated monitoring and evaluation system that includes preventive, continuous and final control at the same time; therefore, it is necessary to adopt advanced tools for continuous follow-up and self-evaluation of work performance throughout the preparation stages, The strategy of inspection and reduce the role of direct supervision and strengthen the role of support, example and model.

The results of this study were agreed with the study (judge and client, 2011), which found that the average management opinions of the degree of application of the concepts of quality management in students' affairs in the Jordanian universities were medium. The results of this study differed with the study of Badrakhan (2013), where the results of the study showed that the extent of applying the quality and quality assurance standards at Amman National University is very high.

The second question: "Are there significant differences at the level of significance (0.05 = α) in the degree of application of the principles of TQM in Jordanian private universities from the point of view of the heads of the academic departments according to gender variables, years of experience, specialization?"

To answer this question, the statistical averages and standard deviations of the degree of application of the principles of TQM in Jordanian universities were extracted from the point of view of the heads of academic departments according to gender variables, years of experience, specialization, and Table 8.

Table (8)

Computational averages and standard deviations of the degree of application of the principles of TQM in Jordanian universities from the point of view of the heads of academic departments according to gender variables, years of experience, specialization

Overall Grade	Assement	Satisfaction of beneficiaries	continuous improvement	Operations Management	Vision Mission objectives		GENDER	
3.52	3.39	3.56	3.49	3.52	3.66	A	MALE	GENDER
.759	.868	.810	.784	.804	.768	ST		
3.47	3.24	3.57	3.45	3.38	3.70	A	FEMALE	
.791	.904	.817	.854	.767	.914	ST		
3.56	3.43	3.60	3.47	3.58	3.76	A	SCI.	SPECIALIZATION
.774	.876	.833	.793	.856	.791	ST		
3.48	3.33	3.52	3.49	3.45	3.60	A	HUMITIES	
.751	.866	.791	.790	.752	.771	ST		
3.82	3.76	3.85	3.81	3.81	3.90	A	LESS THAN5 YEARS	YEARS OF EXP.
.538	.654	.526	.567	.535	.572	ST		
3.55	3.41	3.59	3.51	3.55	3.72	A	5-10 YEARS	
.734	.800	.810	.823	.791	.723	ST		
3.24	3.04	3.31	3.21	3.24	3.44	A	more than 10 YS	
.840	.965	.908	.806	.889	.920	ST		

A=AVERGE ST= St. deviation

Table 8 shows an apparent discrepancy in the arithmetical averages and standard deviations of the degree of application of the principles of TQM in Jordanian private universities from the point of view of the heads of academic departments due to the different categories of sex variables, years of experience, specialization.

There were no statistically significant differences (α = 0.05) due to the effect of gender, specialization, years of experience in all fields. , And this may be due to the fact that these standards are adopted by international organizations of standards and specifications and have no influential relationship to the responses of heads of departments male or female, specialization or years of experience and that heads of departments in the universities receive equal duties and duties within the law of universities without regard to the variable.

RECOMMENDATIONS

Based on the results of this study, the researcher recommended the following:

- The private universities should adopt a clear and specific development strategy to implement the concepts and standards of TQM in order to improve their performance and improve the quality of services in them.
- Activation of the system of monitoring, evaluation and follow-up field in the Jordanian private universities, where the results showed that the degree of application of this standard was medium.
- Strengthening the infrastructure of the universities with equipment and services that help to raise the quality level, and spread the culture of total quality in universities, and the definition of technical methods and stages of implementation.

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