

## ARTICLE

# Total Quality Management at Algerian Higher Education Institutions to Promote Our Roles in Comprehensive Development

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### ABSTRACT

The aims this study to know the reality of the role for Total Quality Management (TQM) to need of Algerian Higher Education Institutions(AHEI) in apply the Total Quality Management (TQM) to promote the Comprehensive Development (CD), and this approach to enhance their roles in the comprehensive development, the efficiency of the training process, global changes and their needs to adopt a new educational policy in line with the global transformation competition, and the requirements of sustainable development, in this study was used a questionnaire composed of (75) items distributed on (08) areas, This is for confirmation the need to adopt philosophy of Total Quality Management (TQM) as a strategy imposed by the nature and the stage experienced for Algerian Higher Education Institutions(AHEI), And deal with the nature of the changes and challenges imposed by certain factors such as Globalization and the knowledge revolution, through all this inevitably to apply the Total Quality Management (TQM) in our Algerian Higher Education Institutions(AHEI).

## 1. Introduction

Most studies have unanimously stated that Miracle of the Japanese quality in the last two centuries has evolved in various fields, and is the result of the intellectual production of many researchers such as (Deming, Feigenbaum,; Juran, Crosby, Taguchi, Ishikawa, And others) <sup>[1]</sup>. Japanese companies have been able to outperform US and European institutions in many areas of productivity and service for continually improving, One of the most important mechanisms used by these institutions, we find (The Seven Basic Quality Tools,; and

The seven magnificent), The philosophy of Total Quality Management (TQM) has become the cornerstone for development and improvement of operations in Japanese companies Since the beginning of the seventies of the last century, and this is resulted a providing services and products of the best quality and lowest costs.

The challenges of higher education in many countries such as Algerian Higher Education Institutions (AHEI), Among which the low quality of its outputs and the lack of adaptation of these outputs to needs of labor market, high cost, and the high percentage of the unemployed. All this requires the institutions of Algerian Higher Education

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Institutions (AHEI), strive to improve efficiency of the education, and this latter can only be achieved before adopting the comprehensive programs for development and modernization, through ensuring the educational institutions overcome their problems and weaknesses, and to provide the educational service with high grade and quality. Total Quality Management (TQM) is one of the most important modern concepts for strategies emerged as well as result of global competition for given the great success of this approach in the industrial field, this has created a strong tendency to apply in the educational institutions, especially in higher education in many countries like Algerian Higher Education Institutions (AHEI). The evaluation of higher education at the World Level has become based on Total Quality Management (TQM) standards, this is the last in education institutions is one of the most pressing issues<sup>[2]</sup>.

In a world characterized by intense competition between institutions and penetrate markets, attract competencies capable of ensuring quality and achieve the Comprehensive Development. Higher education institutions give the efforts for developing the human resources knowledge, culture and skills in all disciplines to improve the quality and performance and the requirements of at all levels to achieve the comprehensive sustainable development, Algerian Higher Education Institutions (AHEI) have witnessed several different developments as well as result of quantitative development in universities, in terms of the basic structures, numbers of students in our faculty, number of University disciplines and Type of course material provided<sup>[3]</sup>. This is what the Ministry of Higher Education and Scientific Research has been doing since 2004, by adopting new system education (LMD) to improve the outcomes of Algerian Higher Education Institutions (AHEI), which sustainable development achieved, and this through first and second meetings held in May and June (2008) also recommended, the first one, entitled Interim Results after four years of application of the new system education (LMD), The second is inevitably apply Total Quality Management (TQM) in Algerian Higher Education Institutions (AHEI), and this through between reality and requirements<sup>[4]</sup>.

## **2. Total Quality Management (TQM) in Algerian Higher Education Institutions (AHEI)**

Higher education is one of the most important fields which quality attracts the attention of all sectors of society, this is because has a direct relationship between the quality of higher education growth in general for the society and particular for the economic, That's for universities are fac-

tories of manpower that underpin society in development prosperity, The concept of quality in higher education was defined in the UNESCO Education Conference in Paris October (1998): It is a multi-dimensional concept should include all the functions of education and activities<sup>[5]</sup>.

Najjar (2002) introduced some concepts of quality management in higher education institutions including:<sup>[6]</sup>

(1) It is a strategy for change that starts from the environment and ends with a program of continuous improvements to satisfy students and the community.

(2) Is the effectiveness for achieving the best educational services, research and advisory at the lowest cost and highest quality.

(3) Integrated approach applied in all branches levels of the university to provide management teams and opportunity to satisfy for our beneficiaries.

The quality of higher education in Algeria through establishing the full conviction of the leadership of university institution when adopting the quality management method to make it at the forefront of leadership team strategies and work to spread this conviction among other partners full understanding and commitment<sup>[7]</sup>. Also determine objectives clear and precise until it is put detailed plans for implementation and determine the permanent structure necessary for the application of the procedures and resources for this system quality of the educational process and promote organizational culture's quality and regulatory climate for the educational institutions so that individuals feel free to share their ideas participate in problem-solving and decision-making, This is through considering Total Quality Management (TQM) its basic rule of work that conforms to principles model and conceptual framework that governs the work at university and gives the meaning of the university system and its general formula<sup>[8]</sup>. Compatibility between the objectives and approaches not separate educational curricula for specific objectives but must be strengthened by linking trends and policies of educational institutions<sup>[9]</sup>.

The identification of appropriate learning strategies to adopt consensus educational plans and keep pace with the modern technological developments for developing the necessary skills work.

Here, Total Quality Management (TQM) is focused on the requirements of the labor market by making of the educational process to open its social and economic environment and always working to make the contents of the educational programs keep pace with the requirements and make it keep pace with the rapid challenges of the market<sup>[10]</sup>. The continuous development and improvement to apply the Total Quality Management (TQM) concepts in Algerian Higher Education Institutions (AHEI) is dependent upon

the outputs of the educational process and commitment to quantitative concept of the product (graduate), but continues continuity research on best methods approaches that ensure its continuity and competition (lifelong learning).

### 3. The Present Study

The network of Algerian Higher Education Institutions (AHEI) includes; (106) higher education institutions distributed in 48 states: (50) universities, (13) university centers, (20) national high schools, (10) high schools and (11) high schools.

However, many researchers and experts They see the institutions of higher education in Algeria suffer from many problems disadvantages that hinder its growth and development limit its efficiency and effectiveness, including: <sup>[11]</sup>

(1) Low quality of the university training as well as result of the Interests to quantity on quality which negatively affected of the education quality.

(2) Weak evaluation criteria and quality.

(3) Weak educational curricula that despite presented of recent reform attempts but are not line with the standards of market economy competition.

(4) The weakness of the process of supervision and the Authoritarian of culture education

(5) Poor spending on higher education and Lack of funding sources.

The aim of this study knowing for the need to apply the Total Quality Management (TQM) in Algerian Higher Education Institutions (AHEI), this approach to enhance the role of higher education institutions through overall development, The issue of Total Quality Management (TQM) in higher education is concerns all their educational institutions in all countries and Algeria, such as those countries it aims to be successful competitors for our University graduates, and also the importance of this study through The Total Quality Management (TQM) is characterized to modernity leading and improvement of the performance for Algerian Higher Education Institutions (AHEI), Increasing demand by interested parties for our institutions to give its quality of education services, We also find the topic coincided with the efforts by leaders of Algerian higher education to put legislation and appropriate mechanisms for implementation system of the Total Quality Management (TQM) in our Algerian Universities, Presentation and discussion for concepts and ideas related of system Total Quality Management (TQM) in our Algerian Universities, which is considered a new entry for literature of Algerian Higher Education Institutions (AHEI), Other reasons require the application of quality in institutions of higher education and its quality has become an imperative

necessity imposed by the problems arising from the bureaucratic system and need to modify the culture of institutions to suit the quality assurance method, and to create a regulatory culture consistent with its concepts, and optimal investment of the resources available. Total quality management in the Algerian higher education institutions for the continuous development of the university's mission and objectives and to make improvements in the educational process in an orderly manner by constantly analyzing the data and making the Requirements for the overall development of country, this through several factors: the quality of management in universities and planning (academic programmes and curriculum); the quality of teaching and implementation of offered services (educational techniques, classrooms and labs, equipment); the quality of resource support: methodological and personnel (academic staff, academic books; teaching aids; task-books, etc.). These elements of quality management in Algerian universities can be presented in Figure 1. <sup>[12]</sup>

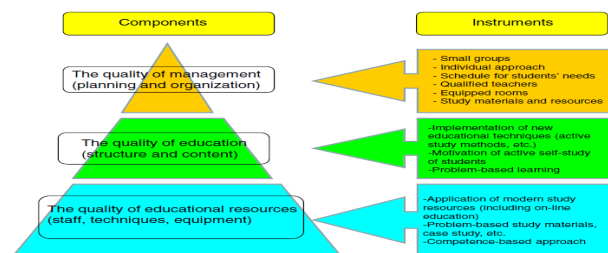


Figure 1. The elements of quality management in Algerian universities

### 3. Methodology

#### 3.1 Participants

The sample of this study was selected University Teaching Staff was selected from Setif 2 University, Total number of samples involved in this study was 300; (100 Females and 200 Males), the aged 30-45 years (mean = 35.9, SD = 5.6) took part in the study. The Teaching experience between 02 - 10 years (mean = 5 years, SD = 5.6).

#### 3.2 Measurement

All constructs have been adapted, with slight modifications regarding the existing literature. The measurement of the constructs has been achieved via a seven-point Likert scale ranging from "1 – strongly disagree" to "7 – strongly agree". For the constructs a Scale consists of a (50 questions) was used to serve the objectives of this study according to those variables identified in the figure1, focusing on (quality of management in universities and planning (academic programmers and curriculum); the

quality of teaching and implementation of offered services (educational techniques, classrooms and labs, equipment); the quality of resource support: methodological and personnel (academic staff, academic books; teaching aids; task-books). All this in order to increase the competencies of University Teaching Staff from Setif 2 University, as the quality assurance standards require University Teaching Staff in the institution of high levels of professional competence, which helps to: - assist in the opening up of universities to our social and economic surroundings and change the vision that not many businesses still consider the industry to universities as institutions geared to the production of education only.. - Achieve the quality of higher education beneficiaries .The collection of responses was made using printed versions of the questionnaire manually distributed to University Teaching Staff from Setif 2 University.

## 4. Results

We used partial least squares (PLS) to estimate the research model through Smart PLS 3.0 M3 software <sup>[13]</sup>. In the next subsection we estimate the measurement model and the structural model.

### 4.1 Measurement Model

To measure all variables related to the study model that was previously illustrated in Figure1 was evaluated based on internal consistency, reliability, convergent validity, and discriminant validity. In what concerns internal consistency, we used Cronbach's Alpha (CA) and composite reliability (CR), and both should be higher than 0.7 <sup>[14]</sup>. Based on Table 1 we can conclude that the CA and CR are higher than 0.7, which reveals that our constructs have internal consistency <sup>[15]</sup>. Hence, We found from the results that the reliability of the scale indicator was good. According to <sup>[16]</sup>, the average variance extracted (AVE) was used to assess the validity and convergence of the scale items, the Results of AVE Suggest greater than 0.500. What we observe in Table 1 we see that all Results constructs an AVE greater than 0.500, and we can conclude that all structures of the variables of this study model that all constructs have convergent validity. To assess the discriminatory validity of the study scale, We have adopted three measures: 1) the square root of AVE should be higher than the correlations between constructs (please see Table 1); 2) the loadings should be larger than the cross-loadings (please see Table 2) According to <sup>[17]</sup>, the Heterotrait-monotrait ratio of correlations (HTMT) should be lower than 0.900 (please see Table 2). Finally, it can be concluded that most items of the scale that all constructs have discriminant validity.

**Table 1.** structures statistics of the study model

	QM	(AP)	ET	CD achieve	UTSS	NB
Quality Management (QM)	<b>0.852</b>					
Academic Programmers (AP)	0.734	<b>0.8 43</b>				
Educational Techniques (ET)	0.563	0.556	<b>0.8 48</b>			
CD achieve	0.523	0.439	0.557	<b>0.925</b>		
UTS satisfaction (UTSS)	0.640	0.681	0.541	0.519	<b>0.8 69</b>	
Net benefits (NB)	0.618	0.699	0.671	0.538	0.770	<b>0.8 31</b>
Mean	4.277	5.079	4.442	4.293	4.954	4.659
Standard deviation (SD)	0.343	1.140	1.240	1.406	1.268	1.164
Cronbach's alpha	0.897	0.916	0.910	0.903	0.854	0.861
Composite reliability (CR)	0.934	0.920	0.933	0.939	0.911	0.906

**Notes:** CD; Comprehensive Development, UTS; University Teaching Staff. (Correlation, Cronbach's alpha, Composite reliability (CR) and average variance extracted (AVE).

**Table 2.** Heterotrait-monotrait ratio of correlations (HTMT)

	QM	(AP)	ET	TQM-CD	UTSS	NB
Quality Management (QM)						
Academic Programmers (AP)	0.824					
Educational Techniques (ET)	0.629	0.6 20				
TQM to achieve CD	0.601	0.512	0.6 21			
UTS satisfaction (UTSS)	0.759	0.776	0.642	0.6 06		
Net benefits (NB)	0.693	0.763	0.716	0.668	0.8 72	

## 5. Discussion

This study aimed at presenting and validating of Total quality management at Algerian higher education institutions to promote our roles in Comprehensive development a model TQM- CD success. From a research perspective, this study represents a contribution to IS theory by finding that quality of management in universities (QM) and Academic Programmers (AP) and Educational Techniques (ET) and this through establish the full conviction of leadership of the university institution when adopting the method of quality management and make it forefront of the leadership team strategies work to spread this conviction among other partner's full understanding and commitment. In fact, most experts and specialists in the quality of thought believe that the success of the implementation of the quality system in higher education institutions depends primarily and as well as preliminary, basic and preliminary step on the need to make important and comprehensive changes in various areas of our higher education system <sup>[18]</sup>. With the results of our study as a matter of strategic direction, educational technology, organizational structures, shared values and effective leadership patterns, the project of applying the quality system in higher education institutions should be seen as a regulatory change legislator that requires tight management, ie, striving and preparing well to lead this change <sup>[19]</sup>. In view of this, and given the critical importance of the change management approach in the success of the implementation of the quality assurance system in higher education institutions, especially in the resistances side, thinking to develop an organizational vision for the quality of management in higher education institutions based on the inputs of the needs of the inter-



nal and external beneficiaries and their surroundings and reasoning systems and procedures for the development of performance Continuing to reach higher education institutions to the following basic objectives: (education - appropriate knowledge - research - development and quality - community service, citizenship - permanent development of differential capacity building) <sup>[20, 21]</sup>.

## 6. Conclusion

Despite the development of the Algerian universities in terms of administrative, organizational, academic and pedagogical, they are still far from advanced international classifications, which makes them forced to adopt effective strategies that allow them to achieve the desired continuous development, through the practical and scientific application of modern management principles such as total quality management and empowerment Administrative and Continuing Education Continuous training of employees. Therefore, the Algerian higher education institutions should strive with full force and determination to implement the quality assurance strategy in line with the reality and specificity of university education in Algeria because of the positive results of this model reflected on the output of the university. From this we find many researchers believe that our universities should adopt the principle of quality assurance and continuous improvement because the majority of developing countries that have adopted the quantum strategy at the expense of the educational quality process led to a lack of competencies in educational management, and the emergence of features of weakness in the productivity of university workers, which confirms the need to A good system of evaluation as well as globalization and the resulting economic, political, social and cultural practices imposed on institutions of higher education many changes to meet the expectations of beneficiaries, and strive to ensure clarity and transparency of academic learning programs and access to Advanced centers within the list of distinguished international universities, in addition to changing the pattern of organizational culture and administrative prevailing in educational institutions, and the need to make improvements in the educational process, in an orderly manner through the analysis of data continuously to achieve excellence, while investing the potential and energies of all individuals involved in the educational process, The application of quality has imperative necessity imposed by the problems arising from the bureaucratic system and the need to modify the institutions culture to suit the quality assurance method, and to create an organizational culture consistent with its concepts, and optimum investment of available resources, and this reached the researchers in this study to confirm the

need to apply total quality management in Algerian higher education institutions, In order to continuously develop the mission of the university and its objectives and make improvements in the educational process orderly manner by constantly analyzing the data and make it compatible with the requirements of the overall development of the country, and all this will necessarily lead to the availability of The fruits of optimal financial capabilities of human capacities, and raise the competencies of employees in field of higher education as well as the quality assurance standards require workers among the high levels professionalism in Algerian universities.

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