Standards of Online and Smart Services for Academic Institutions in UAE

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Abstract: Electronic management considered important tool for businesses to interact and communicate outside its borders. Using the web and new technologies of electronic communication facilitates the basis of Electronic management.

This research provides a theoretical definition and concepts of E-management and its usage in academic institutions, by focusing on the role of E-management in achieving efficiency and effective performance of academic organizations within a smart services in different management transactions. Also, it will provides recommendations to show the importanceof using total quality in E-studies as well as studying the methods of evaluating the students feedback and reviews on converting to online smart services.

Keywords: Higher Education Institutes, Total Quality management, Product dimensions, Service Dimensions, Quality dimensions, Information Technology Quality, Electronic Management, E-Applications, E-Management

INTRODUCTION

The modern science of management in academic institutionsadopts the approach of innovation and creativity in bringing radical changes in the concept of management activities and the transformation from traditional management to modern management depending on information and communication technologies. The fast development of information technology has contributed the ability of academic organizations to innovate through the basic improvements of business and management strategies, the spread of PCs and local networks in the second half of the eighties causes qualitative transfer in the nature of the relationship between information technology and user, and this was followed by the spread of the Internet in the second half of the nineties, and this is the main difference between traditional management applications and online smart applications.

The new concept of electronic studies show the importance of organizing various transactions and services, and restructuring it electronically to get rid of the routine in the common services and public

functions to link the needs of students and the various institutions of society through advanced information and communication technologies that are becoming available and is working to provide the basic infrastructure in the different countries plans. The improvements in understanding quality needs is considered the main factor to attract academic institutions to rush into convert to online services.

In fact, the ability of institutions to improve quality and innovation causes a direct impact on their competitiveness and performance, since successful organizations distinguished by using technology and production of leading products, and its internal ability to put development plans, and to attain an effective mechanism to meet customers' demands. So how can universities benefit from the results of E- management applications? And what is the effect that done to achieve quality?

This study discusses the electronic management applications in support of achieving the total quality of governmental and private higher educational institutions management by highlighting the role of these applications in the development of realizing the total quality, and to facilitate the preparation of procedures and documents relating to quality. We will discuss in this research the following: The first axis deals with the methodology of the study, and the second axis focus on the concepts and perspectives variables of the study, and the third deals with electronic management and achieve quality, while the fourth relates to quality through electronic management, and final Axis includes the most important conclusions and recommendations.

THE SUBJECT

Study Methodology

The Problem of the Study

Modern universities are facing large and rapid changes which reflect the new business requirements that reflect fast response that can be done through using the electronic management applications, and its integration with information systems, and its knowledge, as a force for the organization to obtain an achievement of quality improvement and sustainability in the context of competition, survival and development. The problem of this study derives from the following question: what is the impact of electronic management in the activation and development to achieve quality in private and public academic business through the electronic management applications?

Learning Objectives of the Study

The basic objectives of this study can be summed up as the following:
1) Identifying the concept of E-management and its importance in managing academic institutions.
2) Learning the improvement of quality concept and the important points to achieve it.
3) Learning the relationship between E-management and the achievement of quality management, considering it one of the supporting tools to increase the efficiency, effectiveness and sustainability of academic institutions.

The Importance of the Study

The concept of electronic management does not only affect the changes in the transactions methods, services, and public benefits to customers, but also in re-engineering the structural activities and the

administrative processes which support the quality that most of the universities seek to achieve. The administration's intention is to achieve the target that represents an advanced model depends on the use of advanced technologies and information to get transformational change not only a temporary or simple changes to the already existing business.

The importance of the study comes from the importance of the changes that happened to the institutions and communities and how electronic management applications expand the quality and support it.

CONCEPTS

Concepts Electronic management

The beginnings of electronic management

Today's world of modern technology in the field of information and communication is the world of data and information that can be found automatically. Traditional organizations that exist according traditional principles turned into an enterprise network, and the written documents transferred to digital images, this resulted the construction of online curriculum by adopting the method of work across the network (1).

Most of people believed that the concepts of electronic management and its beginnings has established with the spread of internet in the mid of nineties, but it is more correct to say that the history of administrative applications back was established before that, the transformation administrative work that depends on information and communication technology and its spread has occurred through the spread of internet, first goal is customer service in addition to the increasing of internal efficiency of the organizations, this was resulted by e-commerce associated with various electronic exchanges related with commercial activities. The academic institution's functions, in all sectors and opportunities become effected by modern technologies of information and communication, specially the Internet (2).

The best way to explain the importance of electronic management system is to identify the way in which the institutions were working before the application of electronic management, so we can know the required system through comparing old model with modern model. Table (1) will illustrate the organizational characteristics for both models (3).

Electronic management concepts

Online Enterprise Resource Management and employ them properly became one of the features of improvement and as a basic component in evaluating academic organizations and their ability to continue and improve. The growing progress in the use of modern technology and IT applications and the evolution of institutions and the multiplicity of places of work and clients, both within the organization or external dealers. The two factors considered electronic curriculum components that bear the characteristics of administration of the planning, implementation and follow-up and optimal exploitation of resources of modern technology that relies on computers, Internet environment and Online Knowledge Management.

E-schools is more than just a Website on the Internet serve online education. It has become commonly used, such as e-libraries, electronic democracy, E-evaluation…etc. The term e-studies is a form of e-business, which refers to the processes and structures that are consistent with the supply of electronic education to students and businesses. In other words, it can be defined as electronic administration as

Table 1
Comparison between Old and Modern Management System

Characteristics	Old model	Modern model
Universities	Pyramid structure with fixed and known gradients to improve work.	Availability of Internet and the creation of institutional infrastructure on the basis of cooperation
Method	Dealing with the event after it's happen.	Dealing with the event before occurring it, and find innovative way for working.
Resources	Depending on assets	Depending on intellectual capital and flexible working methods
Services	Offered in traditional methods and through papers.	Offered by renewal methods of information and communication technology.
Scope of work	Locally	Internationally
Time to response	Months because of the difficulties in adjustments.	Hours, and very easy continues follow up.
Level of bureaucracy	High	Low
Strategy	Management is the most important.	Customer is the most important.
Leadership	Authoritarian	Advisory

representing smart application in services, which leads to interaction and communication between the institutions and students, and between the faculty and business in order to simplify and improve the aspects of internal democracy and the interrelationship between the operations management business with each other electronically linked with citizens and business (4). It's an administration based on the use of computers and networks, Intranet and extranet that offer different online applications to support and enhance getting information and services and relating it to students and academic institutions in the community in transparently and effective ways (5). In other hand, some people define the electronic management as an economic activity that deliver public services electronically and integrated way to students and faculty that add real value-added felt by beneficiaries from it, It also helps to create relations with between students and the institution, by providing them with the services that match their privacy and their needs and desires (6).

The electronic management represents a concept and a unique model of information and public services. Electronic management use advanced information and communication for the delivery of services to customers, and to promote and enhance the development opportunities of administrative and economic reform, as it can help e-schools institutions especially private medium and small-sized institutions to moving on over the network to get services and needs. This means that, electronic management offer opportunities to develop the potential and capabilities and skills of institutions, and its clients and customers, enabling them to achieve higher levels of productivity and to support better performance. And finally achieve the learning and training to increase innovation and creativity of the community in order to enable it to compete and presence in a fast-changing world (7).

And finally can define the concept of e-management as the responsible management for the provision of electronic information and services in digital way to customers and business institutions that are able to communicate electronically.

Characteristics and objectives of e-schools

The philosophy of e-service in academic institutions are linked to the actual management as a source of information and services. Customers, businesses, and various institutions are treated as dealers wish to benefit from this information and services. This represents a fundamental change in the culture of the implementation of services and administrative transactions and the look of customers and business toward it. The strategic goal of e-administration is to support and simplify the administrative services for all parties involved: students,faculty, and management, the use of information and communication technology helps connect the three parties together and enhance the activities and processes (8).

Targets based on internal processes invisible to customers, is to facilitate the speed, transparency, and the possibility of accountability, efficiency and effectiveness of operations and procedures for performance management activities. While the targets of the external electronic administration is to achieve the needs and expectations of the society through simplifying interaction and dealing with electronic services (9). There is an important point to talk about, which is that the investment in the electronic educational establishment must provide tangible revenue, whether in the form of reducing the cost and increasing efficiency and productivity or improving the services offered to the community.

In institutions there is various channels that must be managed to deliver services and information. Although, the continued delivery of information and services by traditional methods such as using the telephone, fax or manual methods, but the main aim is to improve the quality of services. Which requires the presence of goals of this administration is to improve services for customers, and improve the productivity and efficiency of institutions, and promote the legal system and its application, and finally the promotion of good governance (10).

The advantages to establish e-management can be identified as following:

- Create additional of communications between customers and businesses, and other organizations of the community.

- Provide information to customers at their countries.

- Marketing of products and services locally and internationally.

- Attracting investment by identifying investment opportunities.

- Reducing the costs of services, activities, and its transactions.

- Simplifying transactions and administrative procedures to eliminate bureaucracy.

- Expansion in the use of information technology to bridge the digital divide with the communities.

- Development and professional training and continuous learning.

THE DIMENSIONS OF ELECTRONIC ADMINISTRATION

Historical Dimensions

Dimensions selected for study	Dale et al. (1994)	Saraph et al. (1989)	Flynn et al. (1994)	Ahire et al. (1996)
Top management support	Commitment and leadership of the chief executive officer Planning and organization	Role of divisional top management and quality policy	Top management support	Top management commitment
Customer relationship	Culture change		Customer involvement	Customer focus
Supplier relationship	Culture change	Supplier quality management	Supplier involvement	Supplier quality management
Workforce management	Culture change Education and training Teamwork	Training Employee relations	Workforce management	Employee empowerment Employee training
Employee attitudes and behavior	Involvement		Quality improvement rewards	Employee involvement
Product design process		Product/service design	Product design	Design quality management
Process flow management	Use of tools and techniques	Process management / operating procedures	Process management	SPC usage
Quality data and reporting	Measurement and feedback	Quality data and reporting	Feedback	Internal quality information usage
Role of the quality department		Role of the quality department		

The Dimensions

The vision of electronic management clarified through the development of a strategy that aimed a full update to the form of the academic institution in the future and redefine its way of dealing with students, and this occur through the development of a new work structure for all internal transactions between the businesses and the allowance for administration to take effective steps to deal with the expected problems in advance, Instead of waiting for their occurrence and then search for a solution to it. Generally, the electronic management strategy allows to work according to the economies of scale, and the occurrence of conformity in the work of all departments, and provide individuals with services, as well as solving the bureaucratic problems that cost organizations a lot of time and money. A lot of researchers agree that there are three basic dimensions of electronic administration, which contribute to provide more accurate and comprehensive concept for the mission and objectives and mechanisms, these dimensions consist of students dimension, business dimension and the dimension of nation. The following will discuss each dimension: (12).

Students dimension

What the students wants from the institution? For sure, they wants the institution to work in the same way or better than the way that it works by government institutions, such as the payment services, and the enroll process of the classes and courses, managing term schedules, and other universities services... etc. online. This means that the customer asks for immediate and adequate delivery of services offered by academic institutions all the time during each day of the week, wherever found. So, the customer gets rid of any restrictions prohibiting them to get the services by using information and communication technology in its different types and levels.

Business dimension

This dimension talks about how the administration enhance in improving the business and providing advantages to it. These institutions used electronic portals among each other, to achieve a lot of gains in term of reducing costs, and improving productivity, and inventory control. These advantages are achieved also when conducting business between government institutions and businesses that leads to reduce the routine by simplifying the procedures, and helping businesses to achieve competitive advantages, this is done through the development of infrastructure business to ensure their effectiveness and if they are affordable for every business in terms of ease, speed and accessible on the network. The delivery of public services through an effective and integrated e-government source creates better opportunities for business and government to participate to achieve benefits and rewards. These benefits and rewards also lead to reduce transactional costs, and facilitate business procedures, and to promote the relations and government cooperation with business and citizens that depend on the services and benefits of government in their lives.

The dimension of nation

The government can change the perception of customers related to bad quality of public service provided and their suffering to get these services, it can also restore the public's trust by following new policies to meet their needs and solve their problems, so this facilitate the way of living. E-government work to integrate the techniques of management of citizen relations through information technology, telecommunications, and all of a species networks as well as the rules and data warehouses. Since the electronic management based mainly on the principle of interaction, the student finds himself able to participate in decision-making, and to review the performance and instructions with electronic institutions, since he has the right to access information files from his own computer, he get also the solutions of the cases that he wonder about in an instant or short time to response.

The impact of electronic administration on various aspects of institutions

For electronic management many effects that cannot be overlooked or condoned, this was confirmed by most of studies related to the domain of administrative and information and its impact on the overall aspects of life which increased the level of operational services. Here are some impacts:

(i) Impact on productivity of the institutions: Many studies have confirmed recently that electronic management applications affect a main impact on the growth of institutions, especially when

entering these applications is followed by administrative changes. Several studies show that the production rate was as high as possible in the institutions that use the electronic management applications. Also, these studies have shown that using IT without being accompanied by a re-distribution and the improvement of administration and management will not lead to a significant increase in production, thus, the maximum benefit from the electronic management is achieved only when accompanied by new strategies, new structures, and new business.

(ii) The impact on the workforce: E-administration effect in entering new requirements regarding the workforce. Increasing the wages for employees who work in this occupations was one of these changes. In additional to that use of information technology in other sectors through the use of equipment and software which are more complex and sophisticated than those were used before, this make these sectors need experienced and qualified labor, so it must train these labors continuously to be updated with the evolution of communication hardware and software.

(iii) The impact on product development: The rapid changes in e-governance applications, the multiple uses of these applications in production lines leads to leads use smaller and more flexible units of production, and this trend was followed by other trends towards the supply of the elements of production from outside the institution, as well as decreasing all production units. E-administration have in achieving new mechanisms in production, This administration applications helps small-sized institutions to act as large institutions, and helps large institutions to act as small one. The most important aspects of this phenomenon is known as on-demand production and large-sized, where they used programs and networks linking mechanism to link production centers by demand requests. Many organizations use the Internet to increase sales through the continuous improvement of production depending on the experience and researches published on the Internet, which are used in coordinating and designing the product, reducing the cost of project management, reducing the cost of inventory management, and providing effective training for employees.

(iv) Impact on the marketing operations: Nowadays many students in many countries around the world are able to access the Internet to look at the specifications for different and specialized courses they want to buy, the Internet has become a place to shop through, which students trade-offs between many of the online institutions, then learn through internet. Almost, the payments done through network. E-commerce has affected a significant impact on the prices of various courses. Some software has appeared on the internet to facilitate learning approaches. This software access the Internet in many locations in a fast way, to search for the best price and the best specifications of requested field to the buyer. (14)

Problems of e-management application

Recent researches proved that number of international academic schools face some problems during the transformation process to use modern management system. Often, administrative obstacles arise when these institutions continue to rely on the same technical systems and administrative strategies without periodically review. The following are common features of many of the problematic application of electronic management:

1. Overall development in the application of electronic management is associated with Social and economic and political compositions.

2. Weak relationship between the programs of electronic management and development of administrative and policy changes lead to underachieving the desired efficiency in the application of this administration.

3. Electronic management procedures considered complementary tools not alternatives for the traditional tools.

4. There is a divide that cannot be overlooked among the departments of institutions.

5. Clear deficiencies in customer awareness campaigns, on the availability of administrative services on the internet.

6. The belief that the availability of services directly over the Internet achieve savings in cost and an increase in efficiency in most cases, but no statistical evidence that support this belief.

In order not to remain in the field of academic theorizing, we will talk about reality and the prospects of e-governance in developing countries and its positive and negative consequences. To measure the encouraging environment for the application of electronic management, a measurement standard includes physical factors such as the effects of communications infrastructure, and other factors that are non-physical describes the economic, social and behavioral level of society, including the social and technological factors. Most developing countries have not been successful in the computerization of administrative applications in the last decades of the last century, they use the computer as a high-speed printer and for the preparation of statistical tables. We can say that the electronic revolution has not achieved in the developing countries, what it has achieved for developed countries.

The problem of reaching to information in these countries, is a twofold problem. First is the problem of secrecy on information, the spread of general concepts that make any information no matter how insignificant is secrecy, because of that legislation and laws system that do not differentiate between secret information and normal information that should be disclosed for the purposes of research and study and knowledge and to evaluate the performance and the control, to fight against financial and administrative corruption. Second, lack of information and not giving it the importance that it deserve.

Overall Quality

The concept of quality and its Contribution

Traditionally the concept of quality has been linked with productivity so we must get rid of the defects and errors in product. While others define quality as the ability of the product to meet the needs of citizens at the lowest cost possible. The quality appear in the overall properties and characteristics that work to meet the specific needs of the citizen, so we can say that the quality is the viability of the product to achieve individual's satisfaction within the limits of the possibilities of the institution. (16)

There is dimensions for quality we can identify it through the degree of quality for a school compared with other, so the school can be good in one dimension and on average or weak on another dimension, and these dimensions in performance are associated with the basic characteristics of the school, And the ratio of matching between the actual specifications achieved in the school with the previously established criteria,

and the economic life of the institution, and the time period need to perform the service without failure during its economic life, and the speed necessary to return the school for service after its damage. (17)

The increasing attention in improving the quality leads to move from the focus on academic institution specifications and the importance of its production to meet the student's needs, to considering Quality as the result of good performance of the various functions of the organization and its marketing, production, and financial activities. Quality include strategic and organizational, commercial, financial and human dimensions, leading to the emergence of what is known as total quality associated with all the functions of the institution not only the academic.

Total Quality represents a continuous adjustment of the internal culture with the expectations of the customer through the control of the functions of the organization and working methods, it is characterized by two dimensions (18):

- The **economic dimension** associated with the reduction of costs to achieve quality.
- The **social dimension** associated with the motivation of employees and how to satisfy the customers.

This rapid panorama enables assessing three main contributions:

First Contribution: It contributed to a rethink about the strategies and operations of the organization through customer orientation, this efforts help institutions to find credibility with the customer matching the main and general objectives of the institution, this credibility give a positive outlook for this business because it's able to do a real renewal of the methods in the field of organization, it also allows reaching good levels of returns on investments in a lot of times.

Second Contribution: This process has accelerated the development of loyalty and obligation of individuals and increase the level of sense of responsibility they have, moreover, the competitiveness between the institutions have become more betting on the academic service factor, and the relationship's quality between the institution representatives and customers, since quality efforts play a very important role in learning for many of the competitive factors in the institutions, the quality is considered now one of the most important motives that affect the performance of institutions.

Third Contribution: Institutions have formed new kinds of values beyond the concepts of achieving satisfaction, especially relative to the development of new management practices, which lead to a new relationship between the institution and the customer, Some activities are attribution from the customer to institution within the logic of the partnership beyond the traditional business relationship based on the exchange between the supplier and the customer, this requires the organization of the institution, according to the need of the customer who do want only the reduction in costs but he also focus on the quality of the service provided for him. (19)

The most important basics: the quality itself is not a goal, but it's a mean to achieve continuous satisfaction of the customer from all that services served. The management of the total quality exceed the stage of Philosophy and the applications that monitor and emphasize the quality. It has become a strategy that rely on the changes of beliefs and the cultural values of the institution by using the participation of all the individuals and directing them toward excellence in performance and work properly from the first time. The management of overall quality defined as an application or a series of processes related with each other that lead to attain greater value result.

Total quality have six main basics. (20)

1. Focusing on the customer
2. Focusing on both processes and results.
3. Prevention of mistakes against examination.
4. Training and developing the expertise of labor force.
5. Decision making according to facts.
6. Feedback

The concept of total quality management is the concept that requires different changes in all the levels of the institution, starting from its mission through its culture and organizational design, to obtain the a new look business institution which is characterized by performance since the work is done in true way from its inception until completion, as well as focusing on the role of the institution at the level of financial, human, information and knowledge resources and it's various tasks and functions.

E-MANAGEMENT AND THE ACHIEVEMENT OF TOTAL QUALITY

E-application is the tools that enables the description, analysis and sharing of information in order to make the necessary improvements, which leads to consider these applications as a powerful tool to extend the concept of quality which remains constant in its goals and the ways to achieve it. (21)

Considering the students as the most important thing in the institution

The students is the only asset which is owned by the organization, and achieving the satisfaction and loyalty makes the institutions continue and succeed, since the satisfied customer with the curriculum and services of the organization will be ready to come back again and pay the money to get the same product or service again. Understanding the customer to the level of quality of the service provided depends on the method that the institution use to provide this service and consequences of receiving this service. Therefore, one of the factorsthat can characterize the institution is the ability of the institution to identify the requirements of its customers and meet those needs on a regular basis. E-applications enhance students' position in the institution so that these applications enable them to identify themselves and their needs, which is very important in achieving quality. Where educational services can be provided via Internet, and display products or services that was demanded by students. Add to that they can call forwarding centers or contact the institution directly via e-mail, in the case of dissatisfaction or to answer questions that he is wondering about related to the product or service.

There is new tools for knowledge management comes from the Internet and information technology and the data related with customers, integrated the customer with his own information, which can manage and enrich the knowledge that enables the information to be updated and continually improved.

Maximizing the quality system

Electronic management applications enables the customers to access new and effective tools, such as continuous guidance on the situation of the deal associated with a specific product or service, which lead to access the information and provide it on time of flowing the process on the personal computer to the

same customer, and communicate toward the situation of the status of administrative procedures, and facilitate the possibilities of improvement. These applications also enable the deployment of new developments that may benefit the customers according to the characteristics they want. And provide tools for new services that can be accessed directly through network. Also, this technology enable the creation of an interactive relationship with customers that will allow them to know the new reactions and to provide what is new to them, and to explain and clarify things they might wonder about. (22)

The supply chain and Quality Management

Many organizations have found that reaching to the higher level of competition passes through raising the efficiency and effectiveness of academic curriculum and services offered to enhance the students experience, since it represents the creation process of the internal practices related to achieving specific materials of the work components, as well as transactions done by schools in order to supply education on the market in a more effective way. The management of the supply chain which is associated with developments in the field of information technology and communication is one of the basic points to achieve and improve the level of quality on the final outcome for the institution, leading to performance and efficiency improvement through cost reduction and getting resources in an appropriate time.

Customer relationship management in achieving quality

In light of competition and the presence of infinite alternatives for customers, the solution to the problem of integrating activities with marketing and sales and support, to distinguish the organization through its dealings with customers and work to preserve them and convert their desires to buy into real sales, it lies in a huge group of technological methods, that is called customer relationship management and includes many operations, and the main objective is to create cooperation between service activities for sales and marketing.

Achieving quality and electronic administration

Several Arabic academic institution applied the electronic management, including the Egypt, Bahrain, Jordan and UAE, and it provide services related to personal documents, housing, academic records, health, curriculum, payment, libraries, and other services. And a study was done by the economic committee of the Arabic states on the implementation of electronic management in Arab countries in 2007 through a questionnaire that was distributed to approximately 3000 institutions, the rate of answers was about 18% (about 540 answer), the result of this study which show us the relation between electronic management and total quality was as the following: (23)

CONCLUSION

IT has a key role to play in the process of applying TQM in an academic institution and can affect all TQM dimensions identified in this paper. The theme of the relationship between IT and TQM is mainly positive, since IT can act as an enabler of many of the TQM facets.

However, the possible problems that they can generate, such as loss of job satisfaction, deskilling workers and reduced process flexibility should be considered and planned. As IT is being implemented in some schools for the first time, their general impact on TQM has still to be analyzed.

There are strong indications that relatively few academic schools are capable of debating the issues and exploiting the opportunities. Therefore, studying these implications is an important aim of future research and needs to be studied jointly by MIS and quality management specialists. For example, a key challenge facing quality professionals is to develop appropriate process designs and effective process controls in business transactions conducted with digital pieces of data and at the same understand the business risk in these transactions.

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