The Obstacles of Applying Electronic Administration in Tafila Technical University (TTU) from the Faculty Staff Members' Perspectives

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Abstract

This study aimed at recognizing the obstacle of applying electronic administration in Tafila Technical University from the faculty staff members' perspectives. The population of the study consisted of the faculty staff members (216) for the academic year 2013/2014. The sample consisted of (130) faculty staff members chosen by random and stratified way. For achieving the aim of the study, an instrument was developed including (33) items distributed into four domains. The results indicated that the degree of the obstacles of applying electronic administration was high .the human obstacles domain came in the first rank with mean of (4.40) and standard deviation of (0.382). The financial obstacles domain came secondly with mean of (4.24) and standard deviation of (0.360), followed by technical obstacles domain with mean of (4.16) and standard deviation of (0.253). Whereas, the organizational obstacles domain came in the fourth rank with mean of (3.75) and standard deviation of (0.463). The results also showed that there are statistically significant differences from the faculty staff members perspectives for the obstacles of applying electronic administration attributed to the academic rank in the human, financial, and organizational obstacles domains and for the favor of associate professor and higher. The results also indicated that there are no statistically significant differences attributed to the variable of faculty.

Keywords: obstacles, technology, administration

Introduction

That haste and development of technology in the cognitive explosion of the 21st century contributed in creating many changes in the administrative work style and its proficiency and efficiency for achieving its requirements effectively, which less cost and quickly.

In the light of the hasty changes and progress of technology in using information technicality, communication, great speed, quick application of administrative works by internet, all these contributed in changing the meanings of administrative process which makes it necessary to shift from traditional administrative style in achieving works to electronic administrative style. Yasien(2005), ghamidi(2009).

The electronic administration is considered as one of the most prominent of administrative applications appeared in the 21st century in developing the establishments performance by raising the proficiency of human resources, improving performance, and reducing the administrative burdens (Najim,2004)

The importance of electronic administration offers a lot of advantages, namely; the quickly provision of data and information, efficiency, high accuracy, and simplifies administrative procedures within the establishments. It also has positive effect on the level of services provided to beneficiaries, and to get rid of slow and routine in the performance of administrative work.

Accuracy and objectivity are also guaranteed in completion of the work within the establishment, and to get rid of risks of dealing with papers which are exposed to damage and loss. In addition to the ease of communication between different departments of an establishment. (Dosari 2007, salmi and Sulaiti 2007).

In spite of these advantages offered by the electronic administration, there are obstacles that limit the application of electronic administration such as:

1-Organizational obstacles, including the nature of organizational structure and the lack of systems and legislations of electronic transaction and the firm central administration and others (Zahrani 2007).

2- Financial and technical obstacles, including the lack of availability of laboratories to apply, weak and slow internet services and the insufficient security to protect the user from the penetration of the network, frequent breakdowns of regulations , lack of maintenance, lack of financial resources, the high cost of the devices and the internet, communications and others (Jamal 2009).

3- Human obstacles, including human nature, the culture of closed doors, the lack of confidence in the protection and confidentiality and security of personal transaction, lack of incentives for the faculty staff members, and the weakness of some of the faculty staff members in English language (Radwan 2004).

Many studies had been conducted and the results showed that there are obstacles that limit the application of electronic administration, including the study of Bishri (2011) which aimed to detect the application of electronic administration in the department of Umm Al Qura University in Mecca from the perspectives of administrators and the faculty staff members at the university. The study sample consisted of (441) administrators and faculty staff members. The most prominent results were the impediments relating to English language skills weakness , financial impediments, and that the degree of using electronic administration was moderately.

Amiri (2008) conducted a study aimed to identify the extent of requirements of using electronic administration in Saudi Arabia universities – empirical study on Umm Al Qura University in Saudi Arabia.

The study sample consisted of deans, vice deans, and chair persons of departments with a number of (190) individuals, The results indicated that the degree of availability of laws and legislations necessary to apply the electronic administration at the university was a low degree, as well as the availability of financial incentives to employees, in addition to the lack of availability of security and protection of information.

The study of Hazmi (2002), aimed to identify the administrative, humanitarian, and technical obstacles that limit the use of computers in administrative work. The study included all the employees in Madina area with a number of (525)individuals. The results showed that there are administrative obstacles that limit the use of computers in administrative work such as ; the poor organizational structure and the lack of specialized training courses for the employees in the field of computer.

Kassab (2011) conducted a study aimed to detect the relationship between organizational variables and the application of electronic administration in Palestinian universities. The sample consisted of (161) faculty staff members. The results indicated that there is a lack in legislations and laws needed for applying electronic administration as well as lack of employees training for applying electronic administration.

The study conducted by Hadrami (2008), aimed to investigate the nature of applying electronic administration in Islamic sciences institutes relating to Sultan Qaboos Center for Islamic culture in Sultanate of Oman.

The sample consisted of (68) individuals working in the Islamic institutes. The results showed that there are obstacles limit the application of electronic administration, such as: the nature of administration system, financial and human obstacles.

Seresht (2009) conducted a study to detect the effectiveness of applying the electronic administration in Iranian universities. The sample consisted of (239) faculty members and administrators. The study found that there are administrative obstacles limit the application of electronic administration especially human obstacles related to the lack of awareness for the importance of electronic administration.

Through the review of previous studies, most of them confirmed that, there are financial, human, organizational, or technical obstacles that limit the applying of electronic administration.

This study tries to detect the obstacles that limit the application of electronic administration in Tafila Technical University.

The Problem and Questions of the Study

The problem of the study is to detect the obstacles that limit the application of the electronic administration in Tafila Technical University by answering the following questions:

The first question: What is the degree of the obstacles that limit the application of electronic administration in Tafila Technical University from the faculty staff members perspectives?

The second question: Are there any statistically significant differences at the level of ($\alpha \leq 0.05$)
for the degree of obstacles that limit the application of electronic administration in Tafila Technical University from the faculty staff members attributed to the variables of the faculty and academic rank?

- Aim of the Study

The study aims to detect the obstacles that limit the application of electronic administration in Tafila Technical University.

- Importance of the Study

The study could be useful for officials at the university to modernize and develop the administrative work and the importance of applying electronic administration for improving the efficiency and effectiveness of administrative performance.

- The results of this study may contribute in providing information about the obstacles that limit the application of electronic administration for officials to find appropriate solutions to these obstacles or to reduce them.

- Procedural Definitions

- Obstacles: difficulties and constraints that limit the application of electronic administration either to be organizational, human, financial or technical obstacles which appear through the responses of the sample study on the questionnaire prepared for the purpose.
- Electronic administration : the completion of a business and administrative work and activities by using electronic means and systems. (Yassin 2005).
- Tafila Technical University: a state Jordanian university established in 2005.
Comprising of five scientific and humanity faculties of.
- A faculty staff member:

Anyone who is officially appointed to teach in Tafila Technical University and to be a holder of PHD or master degree during the second semester 2013/2014.

- Limits of the Study

This study is limited to the faculty staff members in the academic year 2013/2014 upon the Psychometric characteristics of the tool introduced for this study.

Study Procedures

- Methodology of the study: a survey of descriptive approach was used since it is fit for this study.

- Population of the Study

The study population consisted of all faculty staff members in TTU for the academic year 2013/2014 with a total of (216) faculty staff members, upon information taken from the directorate of human resources in the university.

- Sample of the Study

The sample consisted of (130) faculty staff members which forms a ratio of 60% from the total number chosen in a stratified random way according to the study variables and table (1) indicates that.

Table 1: Distribution of the Study Sample Regarding the Intersection of the Study Levels

Faculty	Academic rank	number	total
Scientific	Assistant professor or less	46	62
	Associate professor or over	16	
humanity	Assistant professor or less	44	68
	Associate professor or over	24	
Total			130

- Study Tool

After reviewing the previous studies – such as Ghamdi (2009), Hazmi (2002) , Amiri(2008) and Kassab(2011) , a tool was developed consisting of two parts:

The first part includes information relating to the study individuals.

The second part includes a tool for measuring the degree of obstacles that limit the application of electronic administration including (33) items distributed on four domains as follows:

- Organizational obstacles domain which includes (9) items.
- Technical obstacles domain which includes (11) items.
- Human obstacles domain which includes (8) items.
- Financial obstacles domain which includes (5) items.

The items of the study tool were graded according to Likert quintet Scale.

- Validity of the Tool

The validity of the tool was checked by experienced referees in education.

Some modifications were taken into account and finally all the items(33) were adopted with a ratio of 80% which is fit for the study.

- Reliability of the Tool

Test –re-test and internal consistency (Cranach's Alpha) were used.

The tool was distributed on (20) faculty staff members of the study population and who are out of the sample to answer it. After two weeks the tool was distributed on the same faculty staff members to answer it. The results appear in table (2).

Table 2: The Values of Coefficient by Test- Re-Test and Internal Consisting (Cronbach Alpha)

Tool	domain	Test-re-test	Internal consistency (Cronbach Alpha)
The obstacles that limit the application of electronic administration in TTU	Organizational obstacles	0.80	0.81
	Technical obstacles	0.83	0.80
	Human obstacles	0.84	0.78
	Financial obstacles	0.81	0.79
	The tool as a whole	0.82	0.84

It is clear that the results of the values of coefficient for test-re-test which came between (0.80-0.84) and for the internal consistency (Cranach Alpha) which came between (0.78 -0.81) and for the tool as a whole (0.82-0.84)which means that it is successively are appropriate for the purpose of the study.

- Statistical Methods

For answering question no.1 and question no.2 means and standard deviations were used.

- Standard of judgment: The following standard was adopted on obstacles that limit the application of electronic administration in TTU from the faculty staff members perspectives based on the following means:

1- Mean which comes between (1 – 2.33) is low.
2- Mean which comes between (2.34 – 3.66) is medium.

3- Mean which comes between (3.67 and above) is high.

Results and Discussion

The results of the first question: (What is the degree of obstacles that limit the application of electronic administration in TTU from the faculty member's perspectives?

For answering this question, means, standard deviations, rank and the degree for each domain were computed as table (3) shows:

Table 3: Means, Standard Deviations, Rank, and Degree of Obstacles for Each Domain Arranged Descendingly

Domain	mean	Standard deviation	Rank	degree
Human obstacles	4.40	0.382	1	high
Financial obstacles	4.24	0.360	2	high
Technical obstacles	4.16	0.253	3	high
Organizational obstacles	3.75	0.463	4	high
Domains as a whole	4.14	0.299	-	high

Table (3) shows that all the domains came with a high degree with a whole mean of (4.14) and standard deviation of (0.299). The domain of human obstacles came in the first rank with mean of (4.40) and standard deviation of (0.382). The financial obstacles domain came in the second rank with mean of (4.24) and standard deviation of (0.360), followed by technical obstacles domain with mean of (4.16) and standard deviation of (0.253) . Whereas, the organizational obstacles domain came in the fourth rank with mean of (3.75) and standard deviation of (0.463). It is noticed that the human obstacles came first and this could be attributed to the fact that the workers are those who apply the electronic administration, in addition that all the other domains depend firstly and eventually on this domain from the faculty staff members estimation.

The results of the study meet with the results of the study of Al-Hadrami (2008) which indicated that there are human obstacles for applying the electronic administration.

According to the second domain (financial obstacles), the results could be attributed to the fact that the finance for all the state sectors is less than what is required. The results meet with the results of the study of Al-Bishri (2011) which indicated that one of the obstacles of applying electronic administration is the financial obstacles.

Regarding the last domain (organizational obstacles), the results could be attributed to the considerable technical abilities that employees own in comparison with other domains.

Means, standard deviation, rank, and degree of each item for each domain were computed as follows:
A- Organizational obstacles domain items results could be noticed in table (4).

Table 4: Means, Standard Deviations, Rank, and Degree of the Organizational Obstacles Domain Items Arranged Descending

Item no.	item	mean	Standard deviation	rank	degree
1	Lack of proper planning for the transition process towards electronic administration.	4.09	0.785	1	high
5	Lack of necessary legislations needed for the application of electronic administration.	4.01	1.053	2	high
6	Poor of awareness for the importance of applying electronic administration	3.90	0.551	3	high
9	Fear on confidential information when applying electronic administration.	3.87	1.068	4	high
8	Poor coordination between administrative centers in the university.	3.81	0.882	5	high
2	Centralization in the departments of the university.	3.80	0.711	6	high
4	Routine administrative procedures by the departments of the university.	3.61	0.860	7	medium
7	Slow response of presidency for the demands of change.	3.44	0.829	8	medium
3	Vagueness of the future vision for applying electronic administration.	3.26	1.079	9	medium

The results in table (4) indicate that the items (1, 5, 6, 9, 8, 2) came with a high degree, and the other items came with a medium degree .

Item number (1) which says (Lack of proper planning for the transition process towards electronic administration) came in the first rank with mean of (4.09) and standard deviation of (0.785), whereas; item number (3) which says (Vagueness of the future vision for applying electronic administration) came in the last rank with mean of (3.26) and standard deviation of (1.079). This could be attributed to the understanding of proper planning by the faculty staff members who are aware of that proper planning for the transition towards electronic administration is considered one of the most important factor in applying electronic administration, in addition that, they are in need for using this technology in their academic work.

The results meet with the study conducted by Kassab (2011) which concluded that the lack of legislations limit the application of electronic administration. The study of Hazmi (2002) also indicated that there are organizational and administrative obstacles that limit the application of electronic administration.

B-Technical obstacles domain items results were computed and table 5 indicates that.

Table 5: Means, Standard Deviations, Rank, and Degree for the Responses of Faculty Members for the Items of Technical Obstacles Domain Arranged Descendingly

Item no.	item	mean	Standard deviation	rank	degree
13	Weak technical support for electronic devices.	4.60	0.656	1	high
11	Lack of accurate and integrated databases.	4.60	0.580	2	high
10	Poor level of infrastructure required for applying electronic administration.	4.18	0.464	3	High
20	Weak communication service in the university.	4.13	0.428	4	high
17	Dearth of back-up system in the event of a defect in the electronic system.	4.12	0.331	5	high
16	Lack of security system to protect the database relating to the transactions of the university.	4.09	0.291	6	high
18	Laboratory design in the university is not appropriate for applying electronic administration.	4.06	0.390	7	high
15	Lack of necessary indicatives that provide directions for the application of electronic administration.	4.06	0.520	8	high
14	Weak electronic link between the university deans and departments.	4.03	0.431	9	high
19	Ease of hacking the internet in the university.	4.00	0.433	10	high
12	insufficient computers proficiency in the university.	3.92	0.443	11	high

Table (5) indicates that all the items of the domain were high. Item (13) which states (weak technical support for electronic devices) came in the first rank with mean of (4.60) and standard deviation of (0.656). Perhaps the reason for this may due to the slow of technicians in preparing the electronic devices.

Whereas, item (12) which states (insufficient computers proficiency in the university) came in the last rank with mean of (3.92) and standard deviation of (0.443). This could be due to the fact that the university is new since it was established in (2005).

C- Human obstacles domain items results were computed as table (6) indicates that.

Table 6: Means, Standard Deviations, Rank, and the Degree for the Responses of the Faculty Staff Members for the Items of Human Obstacles Domain Arranged Descendingly

Item no.	Items	mean	Standard deviation	rank	degree
25	Weak English language skills of some employees	4.89	0.358	1	high
23	Departments and deans fear for increased administrative tasks	4.72	0.760	2	high
21	Weak acceptance for the idea of electronic administration from some employees for fear of losing their position careers.	4.50	0.773	3	high
28	Employees fear of losing or hacking of some of data .	4.49	0.812	4	high
26	Poor preparation and training of employees in using electronic technology.	4.40	0.862	5	high
27	Lack of specialized personnel in the electronic administration in the university.	4.27	0.515	6	high
22	Lack of sufficient knowledge in electronic administration technology.	3.98	0.450	7	high
24	Lack of specialized employees in the maintenance of automated computers.	3.92	0.567	8	high

Table (6) indicates that all the items of human obstacles domain came high. Item (25) which states (weak English language skills of some employees) came in the first rank with mean of (4.89) and standard deviation of (0.358), whereas, item (24) which states (lack of specialized employees in the maintenance of automated computers) came in the last rank with mean of (3.92) and standard deviation of (0.567). This could be attributed to the inherent weakness in English language of all instructional levels. Actually, the weakness in English language is considered as one of the obstacles of applying electronic administration since it is considered as the main factor in using this technology.

The results meet with the study results of Bishri (2011) and Seresht (2009) which indicated that weakness in English language causes a constraint in applying electronic administration. In addition that human obstacles that limit the application of electronic administration.

D- Financial obstacles domain items results were computed as table (7) shows that:

Table 7: Means, Standard Deviations, Rank, and Degree for the Responses of Faculty Staff Members for the Items of Financial Obstacles Domain Arranged Descendingly

Item no	Item	Mean	Standard deviation	rank	degree
33	Dearth of financial incentives for distinguished workers in the area of electronic work	4.56	0.585	1	high
30	Poor budget allocated for the purchase of protective information systems.	4.52	0.686	2	high
29	High prices of some electronic equipments and programs.	4.07	0.443	3	high
32	Weak financial support allocated for research and studies in the field of information technology.	4.04	0.327	4	high
31	Poor budget allocated for programs design and automated computer applications.	3.98	0.413	5	high

Table (7) indicates that all the items of this domain were high.

Item (33) which states (Dearth of financial incentives for distinguished workers in the area of electronic work) came in the first rank with mean of (4.56) and standard deviation of (0.585), whereas item (31) which states (Poor budget allocated for programs design and automated computer applications) came in the last rank with mean of (3.98) and standard deviation of (0.413).

This could be attributed to the fact that incentives encourage workers to develop and improve their works. The results of this domain meet with the study results of Amiri (2008) which concluded that the lack of financial incentives cause constraints in applying electronic administration.

Question number two:

Are there any statistically significant differences at the level of ($\infty \leq 0.05$) for the degree of obstacles of electronic administration in TTU from the faculty staff members perspectives attributed to the variables of academic rank and faculty?

For answering this question (MANOVA) multi analysis of variance was used since organizational obstacles, human obstacles, financial obstacles, and technical obstacles are independent variables, whereas, academic rank and faculty are dependent variables. Table (8) indicates the results of means and standard deviations of the study domains according to the variable of academic rank and faculty.

Table 8: Means and Standard Deviations for the Degree of Applying Electronic Administration in TTU According to Academic Rank and Faculty

rank domain	Assistant professor and less		Associate professor and over	
	mean	Standard deviation	mean	Standard deviation
Organizational obstacles	3.70	0.466	3.88	0.427
Technical obstacles	4.14	0.239	4.21	0.275
Human obstacles	4.33	0.403	4.53	0.286
Financial obstacles	4.18	0.381	4.37	0.266

Table (8) indicates that there are differences in the means of the study domains according to the academic rank. For examining the differences significance in these means, the multi analysis of variances (MANOVA) was used and table (9) indicates that.

Table 9: Multi Analysis of Variances (MANOVA) for the Responses of the Study Sample Individuals for the Degree of Applying Electronic Administration According to the Variables of Academic Rank and Faculty

variable	test	Value of test	F	Freedom degree	Level of significant
Rank	Hotilg test	0.090	2.755	4	0.031
Faculty	Hotileg test	0.030	0.911	4	0.460
Rank*faculty	Wolke test	0.097	2.588	4	0.460

Table (9) shows that there are statistically significant differences in the domains of the study as a whole attributed to the variable of academic rank where Hotilg test value was (0.090) and F (2.755) with statistically significant difference at the level of ($\propto \leq 0.05$) , whereas, there are no statistically significant differences for the variable of faculty or the interaction between academic rank and faculty.

For recognizing of what domains are there statistically significant differences attributed to the variable of academic rank, analysis of variance (ANOVA) was used as table (10) shows.

Table 10: Analysis of Variance for the Degree of Obstacles in Applying Electronic Administration According to the Variable of Academic Rank

variable	domains	Total of squares	Freedom degree	Mean of squares	F	Level of significant
Academic rank	Organizational obstacles	1.042	1	1.042	5.128	0.025
	Technical obstacles	0.130	1	0.130	2.048	0.155
	Human obstacles	1.201	1	1.201	8.678	0.004
	Financial obstacles	1.081	1	1.081	8.817	0.004

Table (10) indicates that there are statistically significant differences in organizational, human, and financial domains attributed to the variable of academic rank for value which computed as (5.128, 8.678, 8.817) successively which is statistically significant at the level of significance ($\infty \leq 0.05$).

for the favor of associate professor with means of (3.88, 4.53, 4.37) and standard deviations of (0.427, 0.286, 0.266) successively as table (8) indicated.

This could be due to the fact that the associated professors have more experience in the administrative work as deans, chair persons or directors of centers which enable them to be aware of the obstacles of applying the electronic administration than assistant professors.

Recommendations

Depending on the results, the study recommends the following

- Drawing up a strategic plan for the transition of traditional administration to electronic administration.
- Conducting similar studies to investigate the views of administrators in the university regarding the obstacles of applying electronic administration.
- Holding training courses for all workers on applying electronic administration.

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