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Research Article

E-government Project Implementation Challenges in the Ministry of Higher Education and Scientific Research in Jordan

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Abstract: The study aimed at revealing the challenges that face the implementation of e-government in the Ministry of Higher Education and Scientific Research in Jordan and proposing prominent mechanisms to overcome them. The study sample which included randomly selected 175 employees adopted the analytic descriptive approach and used a questionnaire for data collection. The results unveiled major challenges that face the implementation of e-government; the first was the financial challenges followed by human resources challenges then the administrative challenges, while technical challenges were the last. The results concluded that the futuristic perspectives to overcome these obstacles are looking for funding to the e-government project at the kingdom's level. Based on the results, a set of recommendations were derived hoping the concerned entities get benefit of them.

Keywords: Challenges, e-government, e-services, ministry of higher education and scientific research

INTRODUCTION

Today, rapid and successive changes are taking place in the world, which resulted in significant and diverse challenges that created more pressure and produced a lot of challenges for organizations and governments to confront, with imposing new modern methods to cope with these challenges, which obliged the government bodies to adopt strategies and modern approaches that are concerned with taking the maximum benefit from the information technology and communication revolution to provide services more efficiently (Turban *et al*., 2008).

That can be achieved through the conversion of its electronic processes to what is known as "the e-government", which means more precisely: the application and use of the so-called Information and Communication Technology "ICT" in the government bodies and investing it effectively in facilitating government services and in the consolidation of the relations with the public, or it can be defined as receiving the information and interacting with them via the Internet, in addition to the remote access to various aspects of government services (Al-Hinnawi, 2010) in order to make public services available at the level of government departments through the use of electronic means in the performance of businesses (Waer, 2011).

In this context, the Jordanian government was keen to keep pace with the electronics, information and communications era, so the Jordanian government has paid great attention to the shift in the transactions of the e-government, in regard to the great benefits provided by the concepts of the transactions of the e-government to the national economy, as His Majesty King Abdullah II has provided great interest in the e-government program. His Majesty has announced the program in 1999 and he assigned the Ministry of Communication and information Technology to implement it. The program aims to promote the delivery of services electronically using various communication and information technology means, to work as a central point for coordinating the efforts of various ministries and institutions and to develop plans to ensure the provision of the government services and transactions electronically and to provide them with the necessary standards and expertise (E-government Report-Jordan, 2013). However, note that there are challenges that prevent the application of this program. Hence, this study was proposed to reveal the challenges facing the implementation of e-government program in the Ministry of Higher Education and Scientific Research of Jordan and to suggest mechanisms to overcome those challenges.

THE CONCEPT OF E-GOVERNMENT PROGRAM

E-government is defined as: the electronic transactions between the various government agencies of information technology and it is also the ability to transact the relations with citizens and businesses. This technology can serve a versatile group in order to achieve important goals; that are: improving the delivery of government services to citizens, improving the interaction with business and industry sectors and

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empowering the citizens through access to information or through a more efficient government management, in addition to reducing corruption and increasing transparency (World Bank, 2013).

It is defined as: the interaction between the government, citizens and businesses. It is achieved through internal processes to streamline and improve services between the government and business men in a democratic way (Abdel Kader *et al*., 2012). Also it is: the Innovation of government services by new ways to integrate and combine information and to provide the opportunity to access them through a website (Kettl, 2002). In this study, it can be defined as: the organization of the government management in a communicational and informational pattern that is responsible of the delivery of public services in an electronic and integrated way using modern means of communication to citizens, private sector institutions and civil society organizations so that they provide an added real value that can be felt by the beneficiaries. In addition to that, it contributes to the formation of interactive relationships with citizens-individuals, institutions and organizations, through the provision of non-traditional services that are appropriate in regard to their privacies, needs, desires and aspirations in a short time and with high efficiency. The dimensions of the e-government include the following (Lam, 2013; Lotfi, 2007; Al-Zein and Nqmari, 2013).

Online services: These are governmental organizations that provide services to citizens through the Internet.

E-management: A set of electronic communication networks through which data and documents are transmitted to streamline the workflow procedures within government organizations, which is reflected on the speed and efficiency of services.

E-commerce: It is the process of paying for services, provided to citizens such as paying of telephone bills, paying for getting birth certificate, paying of traffic fines, subscribing for government bidding.

Jordan e-government program: Jordan e-government program can be summarized through the following points (E-government Report-Jordan, 2013).

Vision: A fundamental and active participant in the economic and social development through the use of communication and information technology to enable the easy access to government information and services for all users, regardless of their geographic location, economic status or artistic abilities.

Message: Enhancing the provision of services electronically using various means of communication and technology and working as a central point for coordinating the efforts of various ministries and institutions, in addition to developing plans to provide government services and transactions electronically and to strengthen them with the necessary standards and expertise.

Objectives: Improving the level of service delivery, increasing the productivity and efficiency of the public sector, providing better services for individuals and businesses, increasing the returns on investment, providing the information required with high accuracy in a timely manner, developing the skills and achievements, providing the needed infrastructure and technology to deliver services electronically and improving the level of information security and protection.

Cornerstones: The program plays the role of the controller and the motivator of the application of the e-government transactions and reduces centralism in their application as much as possible, in coordination with government agencies. The program work is based on the following main pillars: the institutionalism, the laws and regulations, the infrastructure of communication and information technology and the business management.

E-services: These are services that are limited to one government point only, so that the service begins and ends in the same point. The development of these services is the responsibility of the government institutions, where the e-government program helps these institutions to define their services and to provide their technical assistance and the follow-up in coordination with these institutions to develop the delivery of electronic services for all the categories of the society. The follow-up procedures are applied on the vertical services within the national plan of the e-government program. An example of this type of services: the Unified Logging Service in universities (.Jo) and the electronic services provided by the Greater Amman Municipality.

The national plan of the program: The National Plan has emerged from the program strategy and was endorsed by the Prime Ministry in 2006. The aim of the national plan of the e-government program is to follow-up the vertical electronic services at the national level and to provide technical and advisory support for all the phases of the project and the necessary training for the government institutions and departments to increase the technical readiness and preparation for the provision of electronic services in the broader term.

Technical restructuring: A structural framework for e-government technology was developed within a range of regulations, standards and models that make up the whole technical structure reference model of the Jordanian e-government. This form includes several

groups: the central environment of the e-government (Central Platform), the framework of the structural reference of the government institutions (Reference Architecture), the framework of interoperability (Interoperability Framework-GEFI), the model of governance (Governance Model) and a set of standards and measures (Standards and Guidelines).

Obstacles to the application of the e-government program: Regarding the importance and size of the project, its scope of change, the dimensions of the its provided services and the multilateralism of its beneficiaries, many obstacles arise in the way of its implementation. Given the magnitude of the e-government project, the constraints are considerable. Obstacles facing the application of the e-government program can be summed up briefly in the following points (Yarkndi and Al-Sayegh, 2009).

Administrative obstacles: A lot of administrative leaderships are still ignorant regarding the subject of the e-government and some of them do not even know the term used for that. It is important to clarify the concept of the e-government, provide the required intellectual background in organizations, increase the efficiency of leaders and increase the awareness of individuals of new knowledge used in modern technology for the liberation of the movement of information and services in order to overcome the physical limitations and obstacles that are present in the systems that use papers and in the conventional systems.

Human obstacles: The establishment of such a project carries a lot of changes at the level of organizations, departments and citizens, in addition to the redistribution of tasks and powers, which requires a change in administrative leaderships, career centers and new disciplines that are needed. That can be achieved by the introduction of partial changes slowly without causing great damage to workers and avoiding the resistance to change.

Financial obstacles: Represented by the great need for financial resources to provide a special information technology at the level of the entire state.

Security obstacles: Information security is one of the most important obstacles that face the implementation of the e-government program, as there are many ways to hack IT system and the consequent loss of privacy and confidentiality of beneficiaries.

Other obstacles: Is the organizational culture that glorifies the paperwork by some officials and the weakness of the culture of participation in the data and information between government agencies.

Problem and questions of the study: The e-government program is based on the idea of investing the communication and information technologies, providing the preparation needed by the human race and connecting citizens to government institutions, businesses and community institutions using a standard electronic approach that allows various transactions between all the parties using the required level of ease and speed, which saves time, effort and costs.

The REACH initiative established in 1999, aimed at producing the emerging information technology in Jordan and enhancing their competitiveness in the global and regional markets and government support. By observing the performance of the e-government, you can note that it did not reach the desired level; as the current system is no more than a preliminary application that works by digitizing and automating some services. This requires studying and analyzing the e-government initiative to demonstrate its challenges and ambitions. Hence, the problem of the study can be represented by the answers to the following questions:

- What are the most important technical challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan?
- What are the most important human challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan?
- What are the most important administrative challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan?
- What are the most important financial challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan?
- What are the future prospects in regard with overcoming the challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan?

Objective of the study: The study aimed to reveal the challenges facing the implementation of the e-government in the Ministry of Higher Education and Scientific Research and to propose the most prominent mechanisms to overcome those challenges.

The importance of the study:

The theoretical aspect: The importance of this study stems from the importance of the topic it covers. This study is expected to contribute to highlight the important and appropriate role to promote the application of the e-government in educational institutions and the addition of a new scientific field to the scientific Arab knowledge.

The practical aspect: The study proposes some perceptions and ways to meet the challenges and overcome them. It ends up by suggesting appropriate recommendations.

LITERATURE REVIEW

Many studies were carried out previously-both in the Arab and foreign countries-in the field of e-government. The following are some of them.

Rumi (2006) study aimed to identify the level of awareness of the concept of the e-government among managers of the higher management in the northern governorates of the Hashemite Kingdom of Jordan. The researcher used the descriptive analytical method and the study sample consisted of (140) managers. The results of the study showed that the level of the awareness of the concept of e-government is high, while negative behaviors were found in two aspects; information security and the expected technical difficulties.

Rifai (2009) study aimed to reveal the ways of implementing the e-government program in the Iraqi government sector. The study sample consisted of 66 individuals; and the descriptive method was used to achieve the objectives of the study. Results of the study showed: a lack in the theoretical framework of the e-government in terms of its ability to measure the contribution of institutions in the society.

Rizzi (2012) study aimed to identify the importance of the application of the e-government system in government institutions in the Gaza Strip and to find out the reasons and obstacles that limit the application of the system and the methods that may be used to overcome them. A simple random sample of (30) individuals was selected. The researcher has used the descriptive analytical approach. The most important results found by the study: there are some requirements needed for the application of the e-government program; some of them are absent with different proportions. Also, it was found that in order to establish a strong e-government, these requirements and components must be provided.

Study population and study sample: The study population consisted of all the employees in the Ministry of Higher Education and Scientific Research in 2013, totaling 232 employees. The study sample consisted of 175 employees (from the retrieved questionnaires) selected randomly and Table 1 shows the frequencies and percentages of the study sample by variables of years of experience and job title.

METHODOLOGY

The researcher used the descriptive analytical method, using a questionnaire as a tool for data collection, as it is the most appropriate research method in describing the phenomenon in question.

Study tool: The study tool was developed consisting of two parts. Part I: is composed defining data that further include: years of experience and job title. The second part of the study tool is composed of (49) paragraphs in (4) areas; these areas include technical challenges, human challenges, management challenges and financial challenges. The third part is composed of an open-ended question about future aspirations to overcome the challenges that prevent the application of e-government in the Ministry of Higher Education and Scientific Research. A five-graded scale of Likert is used (very high, high, moderate, low and very low) for the grades (1, 2, 3, 4 and 5), respectively.

Table 1: Frequencies and percentages by the variables of the study

Variables	Categories	Frequency	(%)
Number of years of experience	Less than 5 years	18	10.3
	5-10 years	50	28.6
	11 years or more	107	61.1
Job title	Manager	9	5.1
	Director of department	29	16.6
	Other	137	78.3
Total		175	100.0

Table 2: The internal consistency coefficient Cronbach alpha

Areas	The internal consistency
Technical challenges	0.81
Human challenges	0.84
Administrative obstacles	0.78
Financial obstacles	0.79
The overall obstacles	0.88

The validity of the tool: To verify the validity of the tool, it was presented to a committee of arbitrators who specialize in management and computer information systems, totaling (6) arbitrators in Balqa Applied University and the University of Jordan. The observations of the arbitrators are taken into consideration with regard to the modifications, deletions and additions and rephrasing.

The stability of the study tool: To ensure the stability of the tool, the internal consistency was calculated on a sample composed of (30) employees other than the study sample by Cronbach's alpha equation and the Table 2 shows these coefficients. These ratios are considered suitable for the purposes of this study.

RESULTS OF THE STUDY

To answer this question, averages and standard deviations of the challenges that prevent the application of the e-government in the Ministry of Higher Education and Scientific Research of Jordan were calculated. Table 3 illustrates this.

Table 3 shows that the arithmetic averages ranged between (3.74-4.20), where financial challenges came in the first rank with the highest average (4.20), followed by human challenges with a mean of (3.93), followed in third place by administrative challenges with an average of (3.85), while technical challenges

Table 3: Averages and standard deviations of the challenges that prevent the application of the e-government in the Ministry of Higher Education and Scientific Research of Jordan arranged in descending order according to the arithmetic averages

Rank	No.	Area	Avg.	S.D.	Grade
1	4	Financial challenges	4.20	0.307	High
2	2	Human challenges	3.93	0.462	High
3	3	Administrative obstacles	3.85	0.424	High
4	1	Technical obstacles	3.74	0.511	High
		The overall obstacles	3.90	0.363	High

S.D.: Standard deviation; Avg. Average

Table 4: Averages and standard deviations for the paragraphs of the technical challenges that prevent the application of the e-government in the Ministry of Higher Education and Scientific Research of Jordan arranged in descending order according to the arithmetic averages

Rank	No.	Paragraphs	Avg.	S.D.	Grade
1	1	Weakness of technological readiness (individuals, businesses and government)	4.18	0.676	High
1	8	The uncertainty of ensuring the confidentiality of information when using electronic techniques	4.18	0.786	High
3	11	The inability of staffing large numbers of customers at the same time on the network	4.14	0.912	High
4	2	Weakness of standardized specifications for the e-government project	3.96	0.991	High
5	5	Weakness of the environmental infrastructure to be transformed to the e-government system in the departments that accommodate the pressures of work	3.91	1.019	High
6	4	Weakness of information base to provide the necessary data and information to decision makers	3.65	1.144	Moderate
7	7	Weakness of the effectiveness of the knowledge base to provide services efficiently to the beneficiaries	3.61	1.178	Moderate
7	10	Not keeping up with work devices and techniques of the technical developments that facilitate the application of e-government	3.61	1.174	Moderate
9	13	Not using new technologies to engage different categories of the society	3.57	1.266	Moderate
10	6	The lack of a back-up system that can avoid hardware failures associated with implementing the e-government system	3.55	1.128	Moderate
11	12	Increasing intrusions, hacking and exploitation of information and others	3.54	1.272	Moderate
12	3	Weakness of the network that links the government agencies and bodies to coordinate their work	3.53	1.124	Moderate
13	9	Difficulty in abolishing the paper archiving system and replacing it with an electronic archiving system	3.51	1.295	Moderate
14	14	Lack of diversity in communicating with the beneficiaries (the internet, mail, phone, etc.)	3.49	1.286	Moderate
		Technical challenges as a whole	3.74	0.511	High

S.D.: Standard deviation; Avg. Average

came in the last place with an average of (3.74). The arithmetic average of the overall challenges is (3.90).

The first question: What are the most important technical challenges that prevent the application of the e-government in the Ministry of Higher Education and Scientific Research of Jordan?

To answer this question, averages and standard deviations of the technical challenges that prevent the application of the e-government in the Ministry of Higher Education and Scientific Research of Jordan were calculated. Table 4 illustrates this.

Table 4 shows that the averages ranged between (3.49-4.18), where paragraphs (1 and 8) "Weakness of technological readiness (individuals, businesses and government)" and "The uncertainty of ensuring the confidentiality of information when using electronic techniques" came in the first place with the highest average (4.18), while paragraph (14) "Lack of diversity in communicating with the beneficiaries (the Internet, mail, phone, etc.)" came in the last place, with an average of (3.49) and the average of the technical challenges as a whole was found to be (3.74).

The second question: What are the most important human challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan?

To answer this question, averages and standard deviations for the human challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan were calculated. Table 5 illustrates this.

Table 5 shows that averages ranged (3.59-4.42) and paragraph (20), "weakness of the system of incentives and rewards that encourages the employees to make use of the e-government services" came in the first place the highest average (4.42). Paragraph (23), "Poor expertise in encryption of electronic information and saving them privately and safely" came last, with an average of (3.59) and the arithmetic average of this area as a whole was found to be (3.93).

The third question: What are the most important administrative challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan?

To answer this question, averages and standard deviations for the administrative challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan, were calculated. Table 6 illustrates this.

Table 5: Averages and standard deviations for the paragraphs of the human challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan arranged in a descending order according to the arithmetic averages

Rank	No.	Paragraphs	Avg.	S.D.	Grade
1	20	Weakness of the system of incentives and rewards that encourages the employees to make use of the e-government services	4.42	0.783	High
2	15	Poor support of intellectual creativity through specialized projects (the support of the digital Arabic content)	4.29	0.710	High
3	18	Unwillingness to use technological techniques due to the low level of confidence in the government and is transactions	4.23	0.933	High
4	16	Negative perception regarding the application of e-government in terms of causing a reduction in the human role	4.05	0.899	High
5	19	The reluctance of businesses to hire national employees to implement the e-government programs and projects	3.99	0.881	High
6	22	Lack of awareness of individuals and institutions in general and leaders in particular, regarding the importance of the change into e-government	3.93	0.947	High
7	25	Weakness of the promotion of the investment of human capital working in e-government services	3.74	1.178	High
8	21	Poor provision of the skills to workers that ensure their integration in their new jobs	3.73	1.084	High
9	17	Scarcity of experts who are specialized in the working mechanisms of e-government	3.64	1.155	Moderate
10	24	Poor attraction and recruitment system and poor conditions of employment needed for the efficiency of the e-businesses	3.63	1.152	Moderate
11	23	Poor expertise in encryption of electronic information and saving them privately and safely	3.59	1.269	Moderate
		Human challenges as a whole	3.93	0.462	High

S.D.: Standard deviation; Avg. Average

Table 6: Averages and standard deviations for the paragraphs of the administrative challenges that prevent the application of e-government in the Ministry of Higher Education and Scientific Research of Jordan arranged in a descending order according to the arithmetical averages

Rank	No.	Paragraphs	Avg.	S.D.	Grade
1	34	Not validating electronic signature, electronic fingerprint and electronic documents that are designed to facilitate transactions	4.24	0.750	High
2	28	Poor participation of employees in the decision-making regarding the use of electronic processes	4.23	0.572	High
2	35	Absence of strategic planning for the conversion into e-government project	4.23	0.786	High
4	39	Poor supervision and follow-up in light of fighting against administrative corruption	4.04	0.840	High
5	31	Poor development of administrative leaderships to deal with the rapid changes in the e-government techniques	4.00	0.959	High
6	30	Poor regulatory procedures necessary to determine the new jobs that are consistent with e-government	3.95	0.940	High
7	26	Poor organizing work procedures due to the presence of multiple surveillance bodies, overlapping authorities and the devolution of authorities	3.91	1.007	High
8	33	Lack of coordination between government parties in all stages of e-government services design and implementation	3.74	1.178	High
8	40	Absence of a legal framework that regulates the e-government transactions and its relations with citizens in a way that ensures protection of their rights	3.74	0.692	High
10	36	Poor legislative environment that can integrate communication and information technology in e-services	3.71	0.736	High
11	32	Lack of conviction and support of the senior leadership to the e-government project	3.65	1.134	Moderate
12	38	The absence of programs in the global development plan in areas of knowledge in general and in electronic knowledge in particular	3.63	1.243	Moderate
13	27	The inappropriateness of the current job description in the e-government project	3.57	1.142	Moderate
13	29	Insufficient changing in the administrative structure to make it fit with the concept of transparency	3.57	1.142	Moderate
15	37	Poor cooperation with the major international companies (Microsoft, Oracle, Cisco)	3.52	1.277	Moderate
		Administrative challenges as a whole	3.85	0.424	High

S.D.: Standard deviation; Avg. Average

Table 6 shows that averages ranged between (3.52-4.24), where paragraph (34), "Not validating electronic signature, electronic fingerprint and electronic documents that are designed to facilitate transactions" came in the first place with the highest average (4.24), while paragraph (37), "Weak cooperation with the major international companies (Microsoft, Oracle, Cisco)" came in the last place, with an average of (3.52) and the arithmetic average of the administrative challenges as a whole was found to be (3.85).

The fourth question: What are the most important financial challenges that prevent the application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan?

To answer this question, averages and standard deviations of the financial challenges that prevent the application of e-government in the Ministry of Higher Education and Scientific Research of Jordan were calculated. Table 7 illustrates this.

Table 7 shows that the averages ranged between (3.66-4.37), where paragraph (41) "Lack of financial support for projects at the national level" came in the first rank with the highest average (4.37), while paragraph (49), "High overall operating costs and low returns" came last, with an average of (3.66) and the arithmetic average of the financial challenges as a whole was found to be (4.20).

The fifth question: What are the future prospects in regard with overcoming the challenges that prevent the

Table 7: Averages and standard deviations for the paragraphs of the financial challenges that prevent the application of e-government in the Ministry of Higher Education and Scientific Research of Jordan arranged in descending order according to the arithmetical averages

Rank	No.	Paragraphs	Avg.	S.D.	Grade
1	41	Lack of financial support for projects at the national level	4.37	0.681	High
2	44	Poor material and moral incentives given to those in charge of the project	4.36	0.662	High
2	46	The limited role of the private sector in the (financial/in-kind) contribution to support the public sector in the project	4.36	0.704	High
4	42	Poor financial allocations for the training of personnel on the use of electronic technology	4.34	0.701	High
5	48	The high cost of using the international network of information among different bodies	4.27	0.805	High
6	43	Poor financial allocations for creating custom websites	4.19	0.692	High
7	45	Weak financial support allocated to researches and studies in the field of information technology	4.14	0.973	High
8	47	Limited political support and funding for the team responsible of the implementation of the e-government initiative	4.07	0.891	High
9	49	High overall operating costs and low returns	3.66	1.234	Moderate
		Financial challenges as a whole	4.20	0.307	High

S.D.: Standard deviation; Avg. Average

Table 8: Frequencies and percentages for future prospects in regard with overcoming the challenges that prevent the application of e-government in the Ministry of Higher Education and Scientific Research of Jordan arranged in a descending order

Rank		Frequency	(%)
1	Searching for sources of financial support for the e-government project at the national level	44	20.1
2	Creating the right incentives for institutions of the public and private sectors, civil society institutions and individuals	40	18.3
3	Adoption of strategic planning when planning for e-government project	31	14.2
4	Promoting the investment of the human capital working in areas related to the digital community	22	10.0
5	The involvement of all government parties in all the stages of the designing services and the implementation of e-government	18	8.2
6	Adoption of the best global practices to reach the level needed for the implementation of the integrated e-government	18	8.2
7	Public policy adjustment by updating laws and legislation	17	7.8
8	Developing and employment of new technologies to involve various types and categories of the society to ensure the comprehensiveness of electronic services	10	4.6
9	The establishment of a comprehensive network of community centers, particularly in underprivileged areas of development	10	4.6
10	Taking the necessary measures to ensure the effectiveness of e-government services to encourage the investment and development	9	4.1
	Total	219	100.0

application of the e-government program in the Ministry of Higher Education and Scientific Research of Jordan?

To answer this question, frequencies and percentages for future prospects in regard with overcoming the challenges that prevent the application of e-government in the Ministry of Higher Education and Scientific Research of Jordan. Table 8 illustrates this.

Table 8 shows that "Searching for sources of financial support for the e-government project at the national level" came first the highest frequency that equals (44) and with a percentage of (20.1), while "Taking the necessary measures to ensure the effectiveness of e-government services to encourage the investment and development" came last with the lowest frequency that equals (9) and a percentage of (4.1).

CONCLUSION

- The e-government resulted from multiple transformations; where the communication and information technology had the biggest part. It performs the same traditional functions of the government, but using a standard electronic style.
- The e-government is a huge national project that requires the clarity of vision and the accuracy of planning and preparation. It also requires government commitment at the highest levels.
- Several objectives can be achieved through the application of this endeavor, which are concentrated on reducing the administrative complexities and to strengthen transparency, speed and ease of transactions.
- The implementation of this project requires the provision of a basic infrastructure for carrying out a series of requirements, such as the provision of a network of communications and computers, in addition to the widespread use of the internet, the development of specialized legislations in this area, the human element and other qualifications.
- There are various benefits and advantages that can be generated by the application of e-government in educational institutions in digital uses, as it improves the levels of organization, leadership,

human resources, financial transactions, planning and decision-making.

- Among the most important challenges that impair the implementation of the project in addition to the lack of financial resources, human, administrative and technical challenges.
- The most important technical challenges are related to the poor technological readiness and the lack of ensuring the confidentiality of information when using electronic techniques.
- The most important human challenges are mainly related to the poor incentives and rewarding system and the lack of support and encouragement of the intellectual creativity.
- The most important administrative challenges are mainly related to the lack of validation of the electronic signatures and fingerprints and the poor participation of employees in the decision-making process.
- The most important challenges are related to the weakness of the financial support necessary for projects.
- The challenges can be overcome by the application of the e-government project, through searching for sources of financial support for e-government at the national level and finding the suitable incentives.

RECOMMENDATIONS

- Strengthening the political support in the funding needed for the implementation of the e-government project, through putting the project as a priority in the strategic financial plans.
- Maintaining the privacy of personal information and transactions collected by institutions, to build confidence; through the development of technologies and means of protecting the privacy and confidentiality.
- Governmental educational institutions should try to empower citizens and teach them to make them able to use electronic technologies, through the development of curricula and teaching techniques that are consistent with the requirements of the electronic era. It also requires increasing the awareness and education of citizens regarding the use of e-government.
- Re-designing work processes, using the clear vision of those in charge of the project, the specialized and effective leadership and the qualified and well trained human element. Additionally, it requires the appropriate regulatory environment that is capable of accommodating any changes.
- Development of the legislative environment to integrate information and communication technology in e-services.
- Improve the system of incentives and rewards to encourage employees to make use of e-government services.
- Development and improvement of technological readiness of individuals, businesses and government.

REFERENCES

Abdel Kader, B., L. Naseema and M. AL-Zahra, 2012. The challenges of the conversion to e-government in Algeria. Proceeding of the 5th International Scientific Forum-the Virtual Economy and its Reflection on International Economies. University of Saida, Algeria.

Al-Hinnawi, M., 2010. Safe strategy for e-government. Proceeding of the 6th Conference of the Saudi Association of Libraries and Information, King Saud University, Riyadh.

Al-Zein, M. and S. Nqmari, 2013. The theoretical framework of e-government. Proceeding of the Conference of the Demands of the Establishment of E-Government in Algeria-the Study of the Experiences of Some Countries. Saad Dahlab University, Blida.

E-Government Report- Jordan, 2013. E-Government Program. Retrieved from: http://www.jordan.gov.jo (Accessed on: 6/5/2013).

Kettl, D., 2002. The Transformation of Governance. John Hopkins University Press, U.S.A.

Lam, C., 2013. Embarking: The Need to Understand the Boundary and Focus Before 2004. Retrieved from: http:// www.monstermarketplace.com/ search (Accessed on: November 4, 2013).

Lotfi, A., 2007. New public management and e-government. Proceeding of the 6th Conference on E-Government-the Arab Organization for Administrative Development, Dubai.

Rifai, S., 2009. E-government and ways of implementing it: A strategic entrance. J. Econ. North Afr., 7(1): 306-324.

Rizzi, D., 2012. E-government and the constraints that prevent its application: An empirical study on governmental institutions in the Gaza strip. J. Islam. Univ., Econ. Admin. Stud., 20(1): 189-227.

Rumi, A., 2006. Assessment of the level of awareness of senior management managers regarding the concept of e-government and the trend towards its application requirements: A field study in the northern governorates of the Hashemite Kingdom of Jordan. M.A. Thesis, Al Al-Bayt University, Jordan.

Turban, E., D. Leidner and J. Wetherb, 2008. Information Technology for Management: Organizations in the Digital Economy. 5th Edn., Prentice Hall, USA.

Waer, W., 2011. The role of e-government in improving the quality of government services. The International Forum on Total Quality Management in the Government Services Sector, University of Mentouri-Constantinople, Algeria.

World Bank, 2013. Definition of E-government. Retrieved from: http://web.worldbank.org (Accessed on: December 10, 2013).

Yarkndi, A. and N. Al-Sayegh, 2009. The conversion from the traditional functioning to the electronic functioning. Proceeding of the Workshop on the Arab Organization for Administrative Development, Tunisia.