Electronic Government in Iran: A Case Study

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This article is an attempt to review the functions, uses, and advantages of electronic Government in Iran. A three level model evaluation for electronic Government was introduced in this study and was used to assess what stage of development Iranian electronic Government has reached. In this research, thirty one (31) governmental administrative websites were visited and evaluated including ministries and some governmental bodies and organizations. The three-stage model included dissemination of information, communication, and services. The result shows that though Iran has made some attempts, it has not been able to pass primary stage, and has not made a considerable attempt to reach higher levels of advancement. In other words, the websites of ministries and governmental organizations mainly limited themselves to dissemination of information.

Key words: Electronic Government, ICTs, online services, stages of development, Iran.

INTRODUCTION

The last two decades marked a great change in the way the human race communicate with one another. Although, new communication technologies have not changed everything, all the same, we should acknowledge that we no longer live like our ancestors. One of the fields which have been deeply affected by recent developments in new communication technologies is the way Governments manage their everyday activities. Information and communication technologies (ICTs) have been used in governmental organizations since the beginning of the computer era. For example, one of the first large-scale applications of computers was during the presidential election in the United States in 1954. Since then, governmental information systems have evolved in parallel with those of organizations in the private sector [1]. Yet, it was the last two decades that marked advent of electronic Government (EG) as a great change in the way the formal and bureaucratic interaction takes place.

EG is about effective government, whereby ICT is used to modernize government services and make them accessible, responsive, transparent, and citizens centered. It is about transforming relationships within government, and between government and its citizens and the economy at large. A main challenge is to prepare policy makers to take the lead and to influence their thinking on the future role and shape of government. EG may be viewed as a business strategy to enhance performance, service, and accountability of public institutions. It is less about managing technology, more about promoting service innovation and institutional transformation. It should be driven by a vision of a desirable future government. It offers fundamentally new options for outsourcing, decentralization, and redefining the role of government. It supports the Country’s economic competitiveness and public service reform agendas. It put much of the “wish list” of a citizen-centric, integrated, and transparent government within the reach of the people [2 p67].

EG include myriad tools and applications from fax machines and mainframe computing to social media and open government strategies. In addition, EG does not refer to technological artifacts only, but also to the social and organizational aspects and elements around those artifacts; EG is a socio-technical phenomenon [3]. Citizen
assessments of EG will be influenced by how effective the internet becomes at delivering services and information. The public has a bottom-line orientation that evaluates the costs and benefits of EG. If government performs better and costs less money, citizens will become far less cynical about the public sector and more confident about government in general. Positive performance in the electronic area may even carry over to attitudes about traditional government [4].

The role of government and public sector employees in EG is very important; traditionally, it covers the supply side of the system. However, the preparation of citizens, business organizations, and other users to adopt an EG system is also important and has significant implications. The input of users may become even more important in the development of more sophisticated and extended EG systems. By investigating their service needs, it may be possible to learn about the impacts of EG systems [5]. Governments are also facing rising expectations for demonstrable results and enhanced responsiveness, from citizens and businesses. Their clients and employees understand how business enterprises constantly improve services, and they have come to expect and even demand similar information, services, and support from government. This is particularly the case for middle income developing countries where e-business has been spreading. Moreover, multinationals are setting the standards for service through their global services, client support, as well as their own service requirements from local governments. Citizens are increasingly mobile and they are expected to be connected to government information, services, and assistance anytime and everywhere. These developments make government clients in developing countries even more impatient in dealing with slow and multiple bureaucracies, even for simple services [2]. EG cannot proceed to advanced phases of service innovation and transformation without modernizing and integrating many back-office functions. For example, citizen-centered service delivery involves breaking up silos, integrating across agencies, innovating new ways of doing business, and creating a service focused culture. Continuing increase in the value and responsiveness of services at the front-end, at affordable cost, is not possible without reinventing and consolidating the back-end processes. Consolidation and integration of back-end business processes across agencies also free up resources for additional service innovation. This leads to a better and responsive front-end with smaller and smarter back-end [2].

EG in Different Contexts

The advantages of adopting EG are so important that no government in today’s world neglect the idea of virtualizing services. For a variety of reasons, public agencies at all levels are pressed to respond to growing challenges. EG provides powerful tools and new opportunities to address both old and new public sector challenges. The use of ICTs can significantly improve the range and quality of public services to citizens and businesses while making government more efficient, effective, responsive, transparent, and accountable [2].

The latest report of the Division for Public Administration and Development Management (DPADM) from UN Department of Economic and Social Affairs (UNDESA) has ranked the advancement and current situation of EG for different countries (see Table 1). Based on this report, South Korea has proved to be the most efficient in this respect.

From Table 1, Iran is ranked 100 among 192 countries. Comparing with the fact that more than 60 percent of Iranians are now internet users, one can elicit that Iran has not used its possibilities to virtualize public services. Also, the report in Table 1 makes it clear that Iran is among the retarded governments in adopting EG policies in Asia [6].

Countries like France, New Zealand, Japan, Austria, Germany, and the USA set the year 2005 as the implementation date for the online provision of suitable services, Canada planned to reach this stage one year earlier. In some countries, considerable funds were made available for this purpose. The Ministry of Local Government in the UK made an overall total of £675 million (i.e. approx. EUR 1 billion) available (from 2005–06) to local communities to enable local EG to be implemented throughout the country [7]. At the European level, since 2001 the European Commission has conducted a benchmarking project that measures the availability and sophistication of 20 basic public services for citizens and businesses. This benchmark establishes the foundations for the progressive and planned modernization of pan-EU EG comparison [1].

Along with the other Nordic countries, Finland ranks among the leading information societies. Since the mid 1990s, it has committed itself to information society policy along with measures aimed at improving competitiveness, streamlining public administration and preventing the increase of public expenditure. Finland is a country in which the role of local government has for a long time been essential to the functioning of society. There are 444 local authorities with considerable political and economic autonomy and some 300 joint municipal authorities. To show the importance of local government in Finland, suffice it to say that it accounts for nearly two-thirds of all public expenditure, and employs over 410,000 people, which is about 20 per cent of the employed workforce [8].

The Netherlands is one of the smaller countries in Europe with just over 16 million inhabitants. It is a fairly
Table 1. Country Level EG Data, United Nation’s 2012 Report.

<table>
<thead>
<tr>
<th>Country</th>
<th>EG 2012</th>
<th>Rank 2012</th>
<th>Rank 2010</th>
<th>Rank Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Republic of Korea</td>
<td>0.9283</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.9125</td>
<td>2</td>
<td>5</td>
<td>+3 ▲</td>
</tr>
<tr>
<td>United Kingdom of Great Britain and Northern Ireland</td>
<td>0.8960</td>
<td>3</td>
<td>4</td>
<td>+1 ▲</td>
</tr>
<tr>
<td>Denmark</td>
<td>0.8889</td>
<td>4</td>
<td>7</td>
<td>+3 ▲</td>
</tr>
<tr>
<td>United States of America</td>
<td>0.8687</td>
<td>5</td>
<td>2</td>
<td>-3 ▼</td>
</tr>
<tr>
<td>France</td>
<td>0.8635</td>
<td>6</td>
<td>10</td>
<td>+4 ▲</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.8599</td>
<td>7</td>
<td>12</td>
<td>+5 ▲</td>
</tr>
<tr>
<td>Norway</td>
<td>0.8593</td>
<td>8</td>
<td>6</td>
<td>-2 ▼</td>
</tr>
<tr>
<td>Finland</td>
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<td>9</td>
<td>19</td>
<td>+10 ▲</td>
</tr>
<tr>
<td>Singapore</td>
<td>0.8474</td>
<td>10</td>
<td>11</td>
<td>+1 ▲</td>
</tr>
<tr>
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<td>11</td>
<td>3</td>
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<td>Liechtenstein</td>
<td>0.8264</td>
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</tr>
<tr>
<td>Switzerland</td>
<td>0.8134</td>
<td>15</td>
<td>18</td>
<td>+3 ▲</td>
</tr>
<tr>
<td>Israel</td>
<td>0.8100</td>
<td>16</td>
<td>26</td>
<td>+10 ▲</td>
</tr>
<tr>
<td>Germany</td>
<td>0.8079</td>
<td>17</td>
<td>15</td>
<td>-2 ▼</td>
</tr>
<tr>
<td>Japan</td>
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<td>-1 ▼</td>
</tr>
<tr>
<td>Luxembourg</td>
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</tr>
<tr>
<td>Estonia</td>
<td>0.7987</td>
<td>20</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

Source: UN Department of Economic and Social Affairs (UNDESA).

Prosperous and industrious country with a well-educated population and a relatively strong position in world trade, finance and electronics. The banking system is highly developed with almost everyone over 18 years of age having a bank account, there is a dense network of automated teller machines and the use of internet banking is spreading rapidly. Finally, internet penetration is relatively high, over 60 percent and still growing, with an increasing proportion of these connections being broadband (about 40 per cent in 2003). As such, factors are supposed to offer a good breeding ground for EG, it should come as no surprise that the Netherlands was among the first countries to seriously take up the challenge to modernize government and to introduce electronic service delivery (ESD), both in national plans and on the local level [9].

In Kazakhstan around 1997, a state program was adopted to incorporate information technology (IT) into the general education system, so as to create IT network within the international education space. In 2007, the provision of computers to schools had reached one computer for every 21 pupils compared with one for every 62 in 2001. The transactional phase of EG development will allow citizens to pay for using public services via governmental portal. AIC (Agency for Informatization and Communications) is in the process to implement a payment scheme based on existing electronic transactional (payment) system of second-tier banks. GoK (Government of Kazakhstan) is committed to build a transparent information society that presupposes gradual increase of the portal users in number. It means this will eventually transfer public services delivery only in electronic form. As a move to this, AIC plans to provide 900 different kinds of services that are to be exhibited on the portal in 2009 [10].

 Zambia has been implementing EG model of government for close to 3 years now. This is because EG has been identified and adopted as one of the most efficient vehicles for appropriate, transparent and inclusive/participatory decision making. Zambia has shown a higher propensity to indigenous knowledge systems which are full of inefficiencies, a lot of red tape in
public service delivery, and prone to corrupt and inefficient practices. The adoption of e-Governance promises a sharp paradigm shift where public institutions will be more responsive and transparent, promote efficient public-private partnerships (PPP), and empower citizens by making knowledge and other resources more directly accessible [11].

In 2002, Iran prepared a detailed report named TAKFA (Barnameye Tose-e va Karborde Fanavaie Etela’at) in which it was predicted that most of the government bodies would try to virtualize their services as soon as possible. But, based on the reports by UN bodies, Iran has failed in the recent years to meet the average standards of EG. In 2008, Supreme Council of Information released a report in which the council criticized the government for poor advancement in employing new communication technologies for administration purposes. Lack of constant evaluations by a reliable institute makes evaluation of EG in Iran very difficult.

Literature Review: Researching EG

EG entails more than the evolutionary process of systems and technologies, as it results from organisational, institutional, and administrative practices too. In addition, a broad definition of EG should consider elements other than websites and the use of internet. They are clearly an important component and good examples of current EG initiatives, but they are not the only ones [3]. Understanding the concept of EG is a first important step towards assessing the success of EG initiatives, but it is not the only necessary one. It is also essential to have measures that help managers and researchers to know if these IT initiatives have accomplished their stated goals and objectives [3]. EG started as a practitioner field of investigation, basically convening practitioners trying to meet the new challenges of the internet medium by implementing EG systems and offering new services creatively. Based initially on empirical insights from practice, the first EG conferences were practitioner-oriented with some invited academic keynotes. Rapidly, more academia-oriented conferences emerged, and the body of EG-related knowledge grew rapidly [1]. The research on EG took off with the commercialization and rise of the internet in the mid-1990s. The Internet became a viable tool for businesses to reach more customers and essentially made it more accessible to a broader array of individuals. Emerging in a new millennium, many scholars touted some of the promises of EG to be revolutionary having the ability to change both the nature of government operations and the way the citizens interact with their government. We now know that EG as envisioned during this period has not lived up to expectations, but it still resonates given the broad and continued discussion on the topic and its continued application throughout the world [12].

EG success is represented by the achievement of the initiatives’ stated goals, but not only in terms of activities, but also in terms of processes, outputs, and outcomes, which together represent a much broader set of success measures [3]. At the academic level as well, many models have been proposed to understand the maturity of EG and to capture different stages of e-services development. Initial stages in these models are very similar in their concentration on the availability of governmental information, on the possibility of downloading forms for initiating an administrative process (e.g., identity card renewal), and on the possibility of handling this process partly or fully online in a transactional bi-directional mode [1].

Five-stage maturity model (see Figure 1) for benchmarking EG projects in the European Union is a practical model which has been employed by many researchers since its introduction. In this model the last two stages are in range of full online availability [13]. Gil-Garcia and Martinez [14] provide another practical model of evaluating EG. This model (see Figure 2) has 7 stages
in which every stages is more sophisticated and effective than previous stages:

**Initial Presence**: The most basic stage focuses on sorting government information and organizing its presentation through Web pages, mostly developed by single government agencies.

**Extended Presence**: In this stage, citizens have access to dynamic and specialized information that is updated through a great number of official government websites.

**Interactive Presence**: This stage is when governments begin to take advantage of the internet's potential as a useful way to interact with citizens, businesses, and other stakeholders. A government-wide portal normally serves as the initial page where people can find links to the different ministries, secretariats, departments, etc.

**Transactional Presence**: In this stage, citizens have the option of carrying out secure transactions to complete government procedures using government websites.

**Vertical Integration**: This stage involves the virtual and/or physical integration of government organizations that are responsible for a common function or serve similar clients across the different levels of government.

**Horizontal Integration**: To obtain all the potential of information technologies in government from a citizen perspective, horizontal integration between different government services, agencies, and policy domains is crucial.

**Total Integration**: This is the most advanced stage of this classification. Since citizens typically do not understand the complex organization of government, a totally integrated presence describes when a government provides all services through a single portal that works like an integrated window, a unique window, or a vestibule.

The mentioned models and many other unmentioned models of EG evaluation have been designed to cover many stages of development. As we needed a model that is best suitable for Iranian EG, we designed our own simple three stages model. The indicators and sub-indicators used in this evaluation are extracted from McMillan [15], Kiousis [16] and Smith [17]. Indicators in different categories and the various sub-indicators are classified in three stages: information, communication and interaction, and services.

The categorization of indicators in this research paper is more similar to those of McMillan [15] in the four – part model of cyber interaction. In this model, McMillan has used media features to evaluate the notion of interaction in cyberspace, that is, “interaction” based on the number and types of features that made interaction communication possible [15 p277]. The other inspiring work for our modeling which is Smith [17], evaluates five websites of New Zealand government, and categorizes them in a range from relatively simple passive site to interactive database, and classifies his evaluation criteria in two categories as information content and ease-of-use criteria.

**METHOD**

Based on the three stages defined, a data sheet was prepared. The researchers visited websites the way a simple citizen does and tried to find if one indicator existed or not. At the first level (information), there were 10 indicators with 47 sub-indicators, at the second level (communication), there were 4 indicators with 14 sub-indicators and at the third level (services), there were 2 indicators with 5 sub-indicators. Hence, in total, 66 sub-indicators were studied and used to evaluate the websites.

The statistical society of this research included all Iranian executive governmental websites. However, access to 31 websites was possible, including 16 ministries, and 15 governmental organizations under executive sector of the state. Among the ministries websites; Ministry of Jihad-e-Agriculture, Ministry of Industries and Mines, Ministry of Economic Affairs and Finance, Ministry of Commerce, Ministry of Foreign Affairs, Ministry of Science, Research & Technology, Ministry of Petroleum, Ministry of Energy, Ministry of Health and Medical Education, Ministry of Interior, Ministry of Information and Communications, Ministry of Road and Transportation, and finally Ministry of Culture and Islamic Guidance were all studied.

The websites of Ministry of Housing and Urban Development, Ministry of Justice, and Ministry of Intelligence were not active when the research was carried out. The newly established Ministry of Welfare and Social Security has no website as at time of this study and access to the website of the Ministry of Defense and Armed Forces Logistics required password which the researchers do not know and are not authorized to know.

The websites of Presidency, Government Spokesman, Atomic Energy Organization of Iran, Department of Environment of Iran, Iran Drug Control Headquarters, State Welfare Organization, Management and Programming Organization, The Organization of Participative Affairs of Women, Central Bank, Center for Dialogue Among Civilizations, The Physical Training Organization, The Center of Strategic Studies, Youth National Organization, and The Persian Academy, were also evaluated.

**RESULTS**

A). First level - information criteria: These groups of criteria which are related to the first level of EG have 10 main indicators and some sub-indicators as follows:

1. The amount of information: The amounts of information have two indicators; the general amount of information and the speed of downloading information of the home pages. Here, the former was calculated in
terms of kilobytes and the latter by 56.6 KB/S (KiloBits/Second). It means that the former can download about 5-6 kilobits of information, the highest amount of information was that of ministry of industries and mines which was 469 kilobytes, and the atomic energy organization of Iran had lowest amount on its home page. The average speed of first page downloading was 22.61 seconds. The shortest downloading time was that of Centre for Dialogue among Civilizations with less than one second and the longest time was that of Ministry of Industries and Mines with 68 seconds.

2. Bias of the website: This indicator examined the bias of websites based on six sub-indicators:

i) Introducing the mission and goals of the website as well as content, services and information: Only 4 out of 31 examined sites (about 13%) had this item on their homepages.

ii) Availability of information about the target user: Only two sites, Ministry of Petroleum and the Department of Environment of Iran had information about the target user, while other sites did not specify target users.

iii) Having news box: 74% (23 sites) lack any news boxes, meaning that these sites do not inform their permanent users of the changes in the information and services offered by the organization.

iv) How to use the website: None of the studied cases had such an item.

v) Copyright: 11 sites did not have any copyright items. That is, in 35% of the governmental sites the responsibilities about information were not clear.

vi) Privacy policy: None of the sites ensured the users that their private information would remain confidential. This finding indicates that the privacy of users was not a major priority for the website officials.

3. The nature and content of the information: Content analysis of 31 evaluated websites indicated that few websites have used the common content which is expected from governmental websites:

i) The number of news items: The highest number of news items belonged to the website of Medical Council with 803 news items. The other high rank sites are those of the Center for Dialogue of Civilizations, with 125 news items, and Ministry of Energy with 110 news items. But even for these websites, most of the news were outdated and hence had no news value. For 15 websites the numbers of news items are less than 10. However, 7 websites lacked any news items even about their own daily routines.

ii) The number of proceedings: Only 6% (2 two bodies) posted proceedings of their organizations on their websites. These two were Management and Planning Organization, and Ministry of Industries and Mines. The website of Medical Council had the item but its link was not active.

iii) The number of official documents available on the website: 10% (3 websites) had these documents available for download. They were Presidential website, Management and Planning Organization and Department of Environment.

iv) Budget: Only one site (Central Bank of IRI) had this item.

v) The number of annual report: 42% (13 websites) had this information available.

vi) The number of bills and regulatory items: 58% (18 websites) had no documents about laws and legal instructions concerning their interaction with the users.

vii) Announcing tender or auction on the website: our examination indicated that 50% of the websites did not have any items in this regard. Among those 15 websites that had the item, all but one (Ministry of Road and Transportation) announced merely their own organization or ministry tenders. For the Ministry of Petroleum users could access information based on some identification methods. The Ministry of Road and Transportation has gathered the auctions and tenders published in highly circulated newspapers in another website. In this website, the tenders and auctions were classified and one could search to find necessary information about a certain case. On this website, users could register and have access to the tenders or auctions, and by filling some form(s), they could take part in a certain tender or auction. But, on this website the electronic files had to be filled in paper format.

viii) Managers directory: 7 out of 31 governmental websites had information about the managers of the organization.

ix) Organizational chart, task description and organizational information: 16 cases had this item on their websites.

x) Commercials, propaganda, political, and cultural notification: Only one website (Medical Council) had commercials and political and cultural promotions. The highest numbers of political and cultural propaganda items were on Presidency website (55 items) and the second in rank was the website of Government Spokesman. These are analytically justifiable because these institutions are political in nature. There are 4 promotions on the website of Iran Drug Control Headquarters which promote better health behavior.

xi) The annual program of the organization: Only the websites of Ministry of Road and Transportation, Ministry of Cooperatives, and Presidency had announced their programs.

xii) Employment: Only the Ministries of Petroleum as well as that of Economic Affairs and Finance had job opportunity items.

xiii) Future plans, projects and research: 20% (6 websites) had introduced their programs on their websites.

4. Multimedia: According to the data collected and the results, the examined and evaluated governmental websites did not take advantage of multimedia. No
website had voice data and only two (Ministry of Foreign Affairs and Ministry of Culture and Islamic Guidance) had pictorial data.

5. The number of links: 6 out of 31 evaluated websites did not have any links to their dependent organizations. The average of links among all evaluated websites was 15 links, but the highest was that of the Ministry of Energy with 320 links. The average number of other organizations' links in the governmental websites was 13.05 websites. The highest number of this kind of links was that of Ministry of Culture and Islamic Guidance with 81 links. 15 of the examined websites had no links to other governmental organizations, 20 websites out of 31 examined did not have any links to civil sites. In this regard, the highest number belonged to Ministry of Petroleum with 3 links. The Physical Training Organization had the highest number of links (37 links) to non-governmental websites related to its field (sports), but there were no links to non-governmental websites in 24 of the examined websites. The numbers of links to judiciary and legislator bodies were 3 links which were seen in the websites of The Physical Training Organization as well as that of the Ministry of Petroleum. The average number of links to these two fields in general, was less than one. The highest number of links to the media was seen on the website of the Center of Strategic Studies (521 links). 15 websites including that of Government Spokesman had no links to media websites. 12 websites had some links to international websites. Surprisingly, there were no such links on the websites of Ministry of Foreign Affairs, Ministry of Science, Research and Technology, Presidency, and Center for Dialogue among Civilizations.

6. Latest Update: The last updating for the studied websites was examined using Bobby online software. Accordingly, 25 out of the 31 evaluated websites had no clear date indicating the last update. In some, the date of posting a short news item was introduced and considered by the website as a kind of updating.

7. Archive: The archive indicator with three sub-indicators revealed that only 5 websites had archives to store the information related to the organization. The oldest content on these websites was that of Central Bank of Iran. None of the websites had chronologically classified archive.

8. Access facility: This indicator, with two sub-indicators, determined how fast and easy the user could find and access the URL of a given government institution. Our examination indicated that 6 addresses (URLs) were difficult, 16 were moderate and 9 were easy and fast to access. Therefore, 25 websites were easy to access and have no serious problem to the user in access. The other indicator was metadata; 7 websites did not have any metadata.

9. Home page characteristics: 9 out of the 31 websites had their first page devoted to the news. 10 websites had options related to access information or services where the 12 remaining websites have a combination of both news and information or services options.

10. The possibility of searching: 28 out of the 31 examined governmental websites have the possibility of web searching through search engines on their first pages. The search items of two websites were not active at the time of evaluation.

B) Second level - information and interaction criteria:

At this level, the communication capabilities of the websites were examined:

1. The possibility of contact: 20 websites provided no telephone number, and 21 websites did not have any ministry or organizational address on their home page or other pages. This indicated that many government authorities still do not take communication seriously. Therefore, the websites will not help citizens to contact the corresponding authority. 54% (17 websites) of the websites have email address by which citizens could make contacts. Therefore, we can conclude that interactivity, which is one of the main goals of internet communication, was not considered important by government officials which has a result makes them to function poorly.

2. Feedback: There was no possibility for feedback for 22 of the examined government websites. As such, there is no possibility for the users (citizens) to make any comments about the activities or services offered by the government. 26 websites did not allow users to make any criticism, suggestions or complaints. 77% (24 websites) lacked any public poll on ministries or organization's activities, and 84% (26 websites) did not have any poll about the website, its services or its content. Accordingly, it is possible to conclude that the officials harbor no intention get comments or remarks from the citizens and users. Only one website (Department of Environment of Iran) has a request for users to write comments about the events.

3. Choosing a mode: This criterion with 3 sub-indicators, considered the user's right to personalize information and services. In this regard, the Iranian governmental websites offered few options for the users. Women Participation Centre was the only governmental website that provided the possibility of changing the speed. Four websites including Central Bank of Iran, Youth National Organization, Ministry of Cooperatives, and Ministry of Energy allows users to necessarily print the material available on the website. 35% (11 websites) offered their
material merely in Persian language.

4. Transacting opinions: Only the websites of Department of Environment of Iran, State Welfare Organization, and Iran Drug Control Headquarters made it possible for the users to interact with each other and with the governmental organization through electronic forum. The website of Ministry of Economic Affairs and Finance has a chat room but it was not active at the time of evaluation. With regard to these, 27 websites did not have electronic forum, and no active chat room was seen. Hence, the ministries and governmental organizations had not given any chance to the citizens to have dialogue with each other, or with government officials.

C) Third level - Exchange and Services: The final stage of EG is that of giving and receiving services via the internet which includes 2 indicators and 5 sub-indicators:

1. Access to goods and services: Only 3 out of the 31 governmental websites offered online services to the citizens. These three were still far from electronic exchange and transaction. Two websites had “services” items but they were inactive. The Ministry of Communication and Telecommunications had facilitated paying bills for water, electricity and telephone charges through its electronic services.

2. Availability of forms: Only 5 out of 31 evaluated websites had forms on their websites, which users could fill in, if needed. Among the evaluated websites, the Ministry of Jihad-e-Agriculture have 19 forms, which is the highest and the Ministry of Industries and Mines is second with 10 forms. However, it should be noted that the availability of such forms does not mean that they are usable. That is, the forms have to be printed, filled, and after filling mailed or personally delivered to the corresponding authority.

DISCUSSIONS

The results of examining first level indicators revealed that most of the contents of Iranian governmental websites were devoted to news, organizational charts, task description and organizational information, information regarding authorities (mostly in form of CV, official reports of their visits and speeches).

Organization charts and tasks can inform citizens about administrative structure and help them to work with governmental bodies more efficiently. Presenting laws and regulations makes citizens familiar with their rights by introducing the responsibilities of the government and public sector. However based on the findings of this research, the evaluated websites are not successful in doing this. The evaluated websites are not even satisfactory at the first level of EG. In other words, evaluating further shows that the evaluated websites does not exceed the first level. During this study, the researchers found that users will have lots of problems achieving the targeted information they seek for in the websites.

Conclusion

For a growing number of tough economic and social problems in knowledge societies, success increasingly depends on communication, information, and innovation [2]. The more rapid the pace of change, and the more novel the challenges, the greater is the need for information and innovation and for knowledge-based learning and adaptive organizations. Increasingly, governments are called upon to manage complex programs requiring complex administrative technologies and partnerships among multiple organizations, at all levels of government, and between public, for-profit, and non-profit sectors [2]. In Iran, establishment of EG is a promise that related organizations are now trying to fulfill as fast as possible. But, as seen in this research, the Iranian EG is in initial phase of its development, though the time spent on the process has been long, however, some aspects of the process have not been properly fulfilled. As mentioned earlier, establishing and advancing EG needs e-readiness which means Iranian authorities should think of empowering their electronic infrastructures. An overview of what has been done shows that the process of establishing EG in Iran has had some obstacles which hindered the attempts to reach the final goal (that is offering most of the services). This of course is a short term aim and Iran must immediately manage to plan for higher stages, as soon as it gets to the third stage described in this paper.

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