HOW TO ARCHITECT THE RURAL REGIONS INTO SMART SOCIETY

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Abstract

This research explains semantic publishing of information technology awareness in rural areas among electronic government readiness in Republic of Iraq. However, this paper will attempt at reviewing the literature that pertain to this topic in general. At the same time an attempt at reviewing three countries models in India, Brazil, and Taiwan will be made. This is so because, these countries are trying to develop and enhance Electronic Government (EG) project through a publish information system in rural areas of their various countries. This study explains and attempt at proposing a new project in Iraq. The proposal is towards publishing Information Technology (IT) over all governorates in the whole of Iraq. Its main objective is to publish IT in Iraq as a whole. Finally, it aims at decreasing the challenges and issues in different countries with regard to the aforementioned topic. This study will also benefits Iraq by getting to share experiences from other countries. The experiences acquired will help in overcoming the anticipated problems or barriers that may be encountered in the process of applying IT kiosks project in Iraq or any country. At present most developing countries around the world are not using IT kiosk in most of the rural areas, therefore this study is timely.

Keywords: Information Technology (IT), Sementic, Electronic Government (EG), IT kiosks, and Electronic Service (E-S)

Introduction

Information Technology kiosk mean a small physical structure (often including a computer and a display screen) that displays information for people walking by. Kiosks are commonly place near the entrances of shopping malls in North America where they provide shoppers with directions. Kiosks are also used at trade shows and professional conferences [20].

Anyway, There are many studies that studied information kiosks or internet kiosks [15][16][17]. In 2001 there is a study that explained the development of EG project and it was identified as one of the ways of improving the growth of electronic service at public sector in more than 185 nations around the world [8]. Most developing nations were getting rears sets at the global EG ranking. The reason of that status is because those nations were providing very limited services to their citizens. Currently, some of these nations work towards supporting their Electronic Services (E-Services) and standing at information technology and government infrastructure to create or increase their E-Services activity to the citizens any time anywhere. EG project is a giant project which need to have many requirements as IT, financial, and management support to reach at the probably position. One side of it is to satisfy the citizen through E-Service and electronic information whenever the citizens need them anywhere [1]. Currently, EG mean in general way as the use of information communication technology in the public agencies to enhance its process and improve the delivery of services. Some researchers have mentioned the role of EG in improving and increasing the efficiency and effectiveness of public administration action. Furthermore, there are other positive points for EG; it is an important tool in the improvement of transparency in management, and reduces corruption in most public offices. It also helps in decreasing information cost, as well as decrees human resorts capital [4].

EG is a new opportunity to make public agencies in various countries around the world to face the challenges and in the electronic information and communication technology generation [2].

Literature Review

Many studies have been conducted to explore factors influencing Information System usage in various countries around the world [3-7] [8]. Specifically, on EG services, there are relatively few studies that conceder on the impacts of these services on the public agencies or the citizens themselves, especially in developing nations [2]. There are scarcity of the researches that conceder on long term sustainability of EG project [2].

In Iraq there are a few studies that related to electronic system (E-S) [9] and EG readiness[8].

However, in the literature review section there are many studies related to same filed [2] one study in India it carry out the EG project in rural area, them approval that the service was high, usage the information tools over time was low, and the poorest level of people were not using the services and the information system tools. Furthermore, missing of renew a content and interactivity led to the letdown of a community based EG project in South Africa within 12 months, despite its primary success. Heeks (2002) has mentioned of many cases of total or partial failure of Information technology initiatives in developing nations [19]. Researchers have discussed that most of these projects not succeed either totally or partially upon 'design-actuality' or 'design-reality' gaps, long-term sustainability troubles or weakness of commitment on the branch of political leadership and also public managers [2]. However, there are many theories have been sophisticated to help and support the understand these failures at EG project in developing nations. There are a small number of data-driven studies focused on the publishing IT awareness in rural areas among electronic government readiness [2] in developing nations.

India: Kiosk-based EG for rural India.
Drishtee Project:

In India there is a unique program called Drishtee the duty of this program is to publish the information technology in rural ears, however this program is the solution for many problems of poverty and help those isolated by distance and scarcity of resources [15].

Gyandoot Project

There is another study related to Gyandoot. Gyandoot emphasized the technology tools used to accomplish it includes an intranet published in 20 towns internet kiosks. The portal is run to support all Internet services and information. The cost of Gyandoot computed about US$57,000. This project (information kiosk) is successfully achieved. The Legislature decided to publish information kiosks overall the area [18]. The privet sector and the public sector worked together and integrated the effort to bring the IT to the rural ears and the remote villages. The citizen how live at that area can get the benefit from these kiosks to let the opportunity available to the rural citizens to dealing with IT and make the live more easily by internet kiosks. The process is as following it uses the laptop to access to internet during wireless modems. The gandoot project import the IT to the poorest citizens in Madhya Pradesh in India. During this project, the internet Kodiaks allowing the citizens to access to information and services , furthermore ,during this internet kiosks the citizen can achieve the transaction via internet, and No need to travel for a days from their far

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villages to government office to achieve it [15].

Brazil
Bahia Province project

Citizen Service Centers in Bahia Province. Providing service kiosks in convenient locations like shopping centers, allowing the public to transact government business [15].

Project Rede Govereno.

Allows citizens to use ATM-style kiosks to access government online portals and services [15].

Taiwan
Information kiosk-model

Similarly, this study also in Taiwan. There is same project regarding to information kiosk-model and at each kiosk computer can access to the internet as a public phone in general.

The process to use this computer in the public kiosk the citizen should to get IC card from the Manager .the information technology used in that kiosk was free until the end of 2001.

The needs to help from the local citizen to taking care of the equipment furthermore, the mangers of this kiosks provided space, power and workers the government in that time archived about 20 kiosks included: "community service centers, libraries, schools, civil organizations, tourist centers, district halls, and national parks" [17]. The information kioske implementation among EG was discussed in previous studies. Any ways in currently day there are many governments concentrated and discussed the implement of information kiosks in different countries around the word. Previous study suggest that the citizen nay be he or she will not use this kiosks (internet kiosks) even it is available to public use but the successful of impalement and usage of this project is depend on the citizen itself and about the awareness of IT the citizens in the villages. Therefore, it was used theory named Unified Theory of Acceptance and Use of Technology (UTAUT), to determinants of citizen use behavior regarding information kiosks and the moderating effects of age and gender differences on the relationships between the determinants and behavioral intention use in other hand. Data collected among internet kiosks in Taiwan and used 244 respondents any way it used the Structural Equation Modeling (SEM) techniques were examined and tested model of study furthermore, the results in some measure support the applicability of the UTAUT among information kiosks. Finally, the finding of this study provides many pointes for practice, adoption, development, and implementation for information kiosk. "Additional

research efforts should be conducted to validate the proposed model and findings in other settings" [16].

Types of services EG services

There are four types of the services deliver during EG as follow:

Government to Citizen

In this type the government allowed a lot of electronic services it can do it online to her citizen if them inside or outside the country: like renew the license or birth/death –marriage certificate, etc.

Government to Business

The government works with the Business sector (privet sector) and some of the electronic services supplying from privet sector.
This type allowed from small and middle enterprise to growth up and the services are allowed from this type in this applications form registering for new business searching for opportunity to work. Employer in this case there are data sharing, the government allowed to foreign trade companies like banks to work and the government give this facilitate to the business side [10].

Government to Employee

During this type the government allowed services only for here employees and the serves like training and developing them skills [10].

Government to Government

According to this type the government have two levels for services the first one (first level) between the government as a center and local government and in this second level between Governments it's self [10].

Background of Iraq

Iraq land hosted one of the oldest cultures in the world. In Iraq, there are many committees can be found like Arabs, Kurds, Assyran, Turkmen and many other minorities [8]. Erbil is the center station of Kurdistan Iraq [8]. Furthermore, Baghdad is the capital city of Iraq, the total area about (437,072) sq km and the population about 28,221,180 [8].
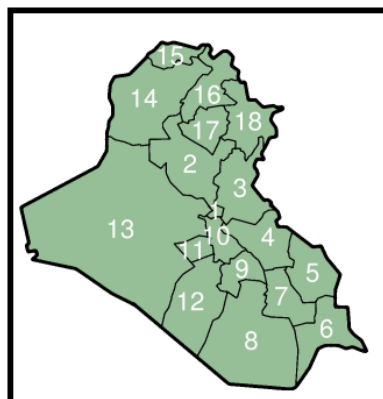
Figure 1: the governorates in Iraq.

EG readiness in Iraq

Ministry Of Science and Technology (MOST) and (ICCI) Commission for Computers and Informatics worked together to linking the ten public administration agencies with WBBN Wireless network which situate as the backbone to integrated electronic government and MIS [8]. EG is still at a primary stage in Iraq. Government agencies still waiting for a main investment to secure the administration, reengineering, licensed soft copy and training of the planned EG project. There are many benefits of implementing and use EG in Iraq: EG will aid boost good governance, transparency and accountability amid the agencies. This labor would help to construct the trust among the citizens in Iraq. The EG will reduce cost and save time; that will be efficient on government budget. Furthermore, the business sector will enhance and tenacious communication with all levels of Government and Society as well [8].furthermore, there are four online applications in Iraq as following: E-government, E-business, E-education, and E-employment as shows in figure 2.
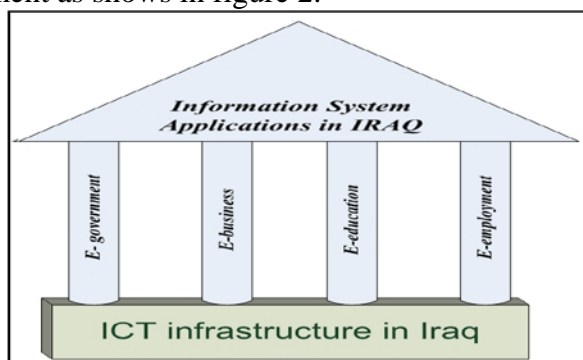

Figure2: Information System in Iraq [8].

The implementation of EG will help the citizen to access to government services web on a ubiquitous basis. Iraq EG readiness was ranked at number 103 in 2004. In 2005, the raking coming down to number 118. The ranking goes further down in 2008 to number 151[8] as shows in figure 3.

Table 1: Iraq's EG READINESS ranking in the world [8].

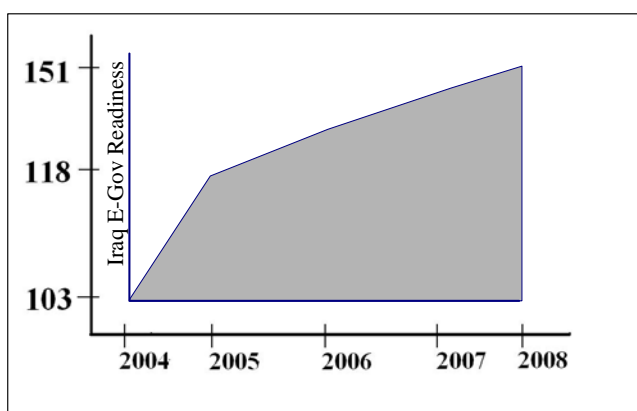| year	Iraq E-G readiness ranking in the would
2004	103
2005	118
2006	-
2007	-
2008	151

Figure 3: Iraq's E-G readiness ranking in the world [8].

Distributed strategy of information kiosks in Iraq

In this study we suppose a new way to publish IT awareness mange EG readiness in Iraq as a sample of developing countries. This project proposes to enhance rural live by provide the citizen information and communication service by usage the computer and internet kiosks in all over Iraq. Any way we recommended to distribute and keep the kiosks in the schools building for 3 reasons the first one is to keep the body of kiosk and equipments safely, second reasons is to knows many people's at the rural area and non rural area the currently place of kiosk and they can go to it directly. Third the managers of the kiosk will be the teachers from those schools; in this case we will reduce the kiosk project cost. This study assume to distribute the internet kiosks for each one governorate, however in same internet kiosks, this kiosks provide many service as; primary computer skills, IT awareness course to the public, and also the employee has experience to fixed any problem in citizen's computer in that ears. Furthermore, in our internet kiosks we use a satellite communication technology to provide

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internet connectivity to that kiosk. Initially, we propose to distribute the kiosks equally overall Iraq as 2 kiosks for each governorate.

Iraq = 18 Governorates.

2 X 18 = 36 kiosks in wholly Iraq.

Upon the up algorithm we have to distributing 36 kiosks around all governorates in Iraq. In this study we focus on semantic application of information technology to arrange the environment and increase the IT awareness for citizen anywhere in Iraq among EG readiness.

Finding

Kiosk provides the security, efficiency, and fewer efforts to the citizen how life in rural area and non rural area.

This research will construct and develop (Government to Citizen) services regarding to EG project in Iraq, and developing countries as well. The purpose of this IT kiosk is to help the citizen to get the benefit from currently technology in the world. And we can assume that this step is the first step to aid the citizen to get the awareness of technology and EG in Iraq. Furthermore by using these IT kiosks the citizen will save the time because by this kiosks will avoid the citizen to go to the office. There is another more benefit from this kiosks; it will save the life of the citizen: for example if the citizens want to achieve formal transaction, he or she has to go to the center of city and hand the entire document and so on. But if the government used this proposal and do it will save the time and money to the citizen and comeback again. Using the internet and web application will help to decrease the traffic in Iraq.

Future work

For future work, Iraq and any country attempt to enhance information system specially EG project in one hand and publishing IT awareness in rural area in other hand. Iraq's society waiting for more applications to be applied. Currently, strongly recommend launching Electronic-Census and publish information kiosks specifically in Iraq and in general in developing countries (how did not lunching Internet kiosk) for many reason like security issue for the citizen and also this application will decrees the effort, corruption, time and money to the employees in first hand and citizen from anther hand.

Conclusion

As shows earlier in literature review section that providing EG services and IT awareness during information kiosks in rural area in the world and governorates in Iraq it will help to publish the E-service and also E-information in all the parts overall of Iraq, A carefully designed semantic delivery during the internet kiosks may also be helpful the citizen to keep

them near thus houses and everyone knows about the security issue in Iraq also, saving money, time, and effort, improving citizen computer skills and IT awareness. Increase the transparency. In same time it this internet kiosks will reduce the frailer of EG project and it will setup the citizen overall Iraq to initially use EG application by easy way.

More benefits it will reducing the corruption chance in government offices by using this internet kiosks to get the information and services.

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Appendix A. Web sites related to information used in Iraq at public sectors.

www.iraqipresidency.net	Iraqi Presidency.
www.na-iraqi.com	Iraqi Nation Assembly.
www.iptraffic.org	Iraqi Traffic Police.
www.moediraq.com	Ministry of Education.
www.uruklink.net/iqlaw/	Iraqi Official Gazette.
www.iraqi-justice.org	Ministry of Justice.
www.iraqelectric.org	Ministry of Electricity.
www.iraqi-mwr.org/payv/	Ministry of Water Resources.
www.moiiraq.com	Ministry of Interior.
www.cultureiraq.org	Ministry of Culture.
www.iraqmofa.net/	Ministry of Foreign Affairs.
www.uruklink.net/oil/	Ministry of Oil.
www.motiraq.org	Ministry of Trade.
www.healthiraq.org	Ministry of Health.
www.iraqimoc.net	Ministry of Communications.
www.cbiraq.org/cb1.htm	Central Bank of Iraq.