

A Review on Local E-Government And Informaiton Quality

Phramaha Wattana Losanta^{1*}, S. N. Deshmukh²

^{1,2}Dept. of C.S. and I.T., Dr. B. A. M. U. Aurangabad, India

Corresponding Author: wattana_cyber@hotmail.com, Tel.: +919155782567

DOI: <https://doi.org/10.26438/ijcse/v7i5.564568> | Available online at: www.ijcseonline.org

Accepted: 20/May/2019, Published: 31/May/2019

Abstract— In this paper we analyze the E-Government and their various aspects. E-Government is the use of information and communication technologies (ICTs). It improves the communication into public sector organizations. Electronic government means all government facilities make useful for all. We can say that easy and corruption free facilities for all the citizens. E-Government is used in most of the countries because of its various advantages. Because of Fast growth in Internet and information technology, many governments all over the world have changing their services from the habitual to electronic. Primarily E-Government facilitates to decrease expensive cost in construction of infrastructure but it implements large savings towards government's performance. Citizens can increase of the governmental services from anywhere and anytime. E-Government is measured as a tool for simple administration of government activities. The advantages of this review paper could be useful to those who want to learn about e-Government and its outcome especially the government officials dealing with e-Government strategy and implementation.

Keywords— e-Government, electronic, information, communication, technology.

I. INTRODUCTION

E-Government is the use of information and communication technologies (ICTs) to improve the activities of public sector organizations. Electronic government or e-Government is means to increase citizen's convenience and accessibility of government services and information as much as government's access to citizens to revolutionize their work, and change rules of doing business.

Considering faster global growth of the internet and Information Technology, governments have been prompted to replace their traditional service delivery method with electronic ones. Quality of the delivered e-Government services is an emerging determinant to the success or failure of e-Government service delivery to its citizenry. Research into the determinants of assessing quality of the delivered e-Government services has become research imperative since research in this area is still in its infancy and much of the existing research is largely centered on quality of online e-services. As a result, few attempts have been made to identify parameters that can be used in assessing quality of deliver e-Government services in the back office environment.

Due to the rapid global growth in the Internet and information technology, many governments around the world have transformed their services from the traditional to electronic means of service delivery.

Using the Internet, the governments are able to offer convenient and faster access to services and information. Internet service helps governments to increase effectiveness and efficiency in service delivery. Different authors have made attempt at defining e-Government. Irani et al. [1]; Premkumat et at. [2], Heeks and Bailur [3]; Seifert and Chung [4] have all noted that e-Government is used to improve access to government as well as government's access to citizens using current network technologies. For purposes of this study, e-Government is rendered to conform to the definition given by Jeong [5]. He describes e-Government as the digital interactions between a government and citizens (G2C), government and businesses/Commerce (G2B), government and employees (G2E), and also between government and governments / agencies (G2G). This perspective allows to the fact that domains involved require quantity, quality and satisfactory e-Government services to whoever is receiving the services.

E-Government initially began as an intra-governmental communication tool. Initially the government organizations developed websites with information, then developed to online transactions - which made the citizens to engage in online participation that connect citizens and decision-makers. E-government represents a fundamental change in the whole public sector structure, values, culture and the ways of conducting business by utilizing the potential of ICT as a tool in the government agency. The Internet is indeed the

most powerful and popular means of delivering the services to the customers or citizens. Hence, Web sites have been employed as a platform for delivering a wide range of government services electronically. E-government websites help citizens to gain information on government processes and services and hence participating in democratic processes from anywhere at any time [6].

E-Government improves the efficiency and effectiveness all government operations, with citizens, as well as with other organizations. E-government applications include online payment of tax, bills, filling and submission of applications for several purposes; e-voting etc. e-Government gives citizens more control on interaction with the government; citizens can avail of the governmental services from anywhere and anytime. E-Government is considered as a tool for easy administration of government activities. Its success depends on its vast usage and management of its infrastructure. Utilization of e-government will provide benefits to the management philosophy of governments. Thus the citizens can collaboratively participate in decision making [7].

Initially E-Government help to reduce great cost in building infrastructure but gradually it implement results in vast savings towards government's activities [8].

II. RELATED WORK

Fassnacht and Koese [9] developed a broad hierarchical quality model for e-service that consists of three dimensions: e-service delivery quality (information quality, ease of use, attractiveness of selection and technical quality); outcome quality (functional benefit, reliability and emotional benefit) and environment quality (graphics quality and clarity of layout). Whereas, Rowley [10] proposed a framework that includes website features, security, communication, information, accessibility, delivery, reliability, customer support, responsiveness, and personalization. Halariset al. [11] model for assessing quality of e-government services consists of four layers: back office performance layer (including factors from quality models for traditional government services); website technical performance layer (website performance, such as reliability and security); website quality layer (interface and usability); and user's overall satisfaction layer.

Esteves and Joseph [12] suggested a three-dimensional ex-post framework for the assessment of e-government initiatives. The three dimensions are e-government maturity level, stakeholders, and assessment levels. The assessment levels consider the technological, strategic, organizational, operational, service, and economic aspects. Jansen et al [13] proposed a Contextual Benchmark Method (CBM) that is based on the Modeling Approach for Designing Information Systems framework (MADIS) by Essink's. CBM consists of three levels and five aspects. The first level is the group of organizations involved in the benchmarking (benchmark partners). The second level is the

individual organization that is involved in the benchmarking exercise (organization). The third level is the e-government services that are analyzed (service). Whereas, the five aspects are goal (CBM is an organized set of elements and relationships between them, focused on achieving a set of organizational goals) respondents, indicators, methods and infrastructure. On the other hand, few researchers adopted ISO/IEC 9126 to evaluate e-service quality such as (Behkamal et al.) [14] And (Chutimaskul et al.) [15]. Behkamal et al.

There are six quality proposed

- 1) *functionality* i.e. suitability, accuracy, interoperability, security, traceability;
- 2) *reliability* (maturity, fault tolerance, recoverability, availability);
- 3) *usability* (understandability, learnability, operability, attractiveness, customizability, navigability);
- 4) *efficiency* (time behavior, resource utilization);
- 5) *maintainability* (analyzability, changeability, stability, testability);
- 6) *Portability* (adaptability) [16].

Magoutas and Mentzas [17] proposed SALT (Self Adaptive quality monitoring) model to monitor user satisfaction and the quality of e-government services. Jaeger and Bertot [18] argued that any attempt to create user-centered e-government services must account for a number of essential elements. These elements range from basic issues related to the ability to use e-government. To build trust and to tie e-government to established social and institution requirements such as access needs, information, service needs, technology, information, technology literacy, government literacy; availability of appropriate content and services, usability and functionality.

Meeting user expectations need information for that social institutions providing access to e-government. Trust, e-government 2.0, lifelong e-government usage these understand how users actually use e-government. Pazalos et al [19] proposed and validated a structured methodology for assessing and improving e-services developed in digital cities. The proposed methodology assesses the various types of value generated by an e-service and also the relationship among them. Hence to allow a more structured evaluation, a deeper understanding of value generation process is as follows.

A. Information Quality

The following two main feature of information quality was derived to go with the definition of quality of information.

1) Content

This includes details which are relevant for user utilization. Considering that the information provided should aim at serving the citizens efficiently and effectively, it should be

accurate and without contradicting details, it should be complete and should have integrity. The content should not be duplicated. The content should be relevant in order to meet the information needs of the users. Information should also be intuitive.

2) *Acceptable*

Information should be noticeable, with most important information able to make awareness of the users. If the information is presentable users will be able to easily access the content. Information should be in the proper format and organized in a way easy to recognize [20].

B. E-Government or e-governance

The analysis of e-Government is relatively wide and different. Generally define e-government as the make use of of information and communication technologies (ICT) to transform government by making it more accessible, effective and accountable. Generally we discover four or five steps of e-government improvement explained as follows:

- 1) *information existing on-line*
- 2) *one way interaction*
- 3) *two - way interaction*
- 4) *complete online transaction, with delivery and payment*

In more comprehensive view, understanding of ICT scheme may refer to thin and wide areas of e-Government. In first case, "e-Government in small" is linked with implementation of administrative processes, within domain of e-Administration. Mostly defined, electronic government can include all information and communication technology (ICT) to maintain government operations, engage citizens, and provide government services. Thus, broader approach embrace the entire range of governance and administrative scheme including e-services, e-democracy, e-voting, e-justice and in several way even e-education or e-healthcare. Noticeably, e-government is much more than collecting the information, downloading files or making online transaction.

III. STATEMENT OF THE PROBLEM

Before E-Government citizens cannot access the government facility easily. Traditional services are requiring more time to access any government facility. Development of country is moving very slowly. Maximum paper works are used to provide government facility. Management is too lengthy.

IV. METHODOLOGY

We have reviewed the literature of e-government, published in different journals and conference proceeding from year 2005 to 2018. A review should also account for a reasonable quantity and quality of relevant literature where these reasonable and logical literatures review should appear from a

logical conceptual structuring of the existing research Also, a review should assist theory development, close areas where an excess of research exists, and uncover areas where research is needed [21].

A. Research Approach

In literature review process, Webster and Watson (2002) recommend a structured approach by which the searching of material would begin from leading journals in the field. Hence, we discovered the most recent version of the e-Government. Reference Library (EGRL) in 2016. The most recent version was the EGRL 12.0 (of July 2016) which contains 8181 peer reviewed references in the study domains of e-government. The EGRL aims at capture and incorporate into one source the majority of English language and peer-reviewed academic papers in e-government. [22]

After investigating information obtained from the literature review and the semi structured interview responses, obtained from participants in the selected ministries which have established fairly successful e-Government systems, different indicators which would act as a guide to implementers of e-Government services were revealed [23].

For the track of inclusion and accuracy in the search we have used the following criteria,

For inclusion, we have adopted the broad definition of e-government that defines e-government as the use of Information and Communication Technologies (ICTs) by public administration.

Therefore, searching for articles relevant to the study of the e-government in that context, the keywords were selected: IT, government, public administration, public sector, public organizations, public institutions and e-government [24].

B. e-government assessment

To discover e-government assessment, need to inspect how assessment is accomplished in the e-government literature. For this purpose, we choose a little set of papers. The Government Information Quarterly journal (GIQ), in the first stage, we choose all papers published in different journals includes the term "e-government assessment" in their title; the result is a set of 10 articles. In the second step, we selected those papers that were published recently (2016-2017) and that found related to assessment in e-government research.

IV. DISCUSSION

This paper suggests various aspects about e-governance Technology their application used in e-governance. Information and communication technologies (ICTs) use in e-governance with their various advantages. Government organization can think the aspect of reliability, content, ease of use and self-service when propose the skilled service on the Web site.

E-government make use of web technology for many aspects so that e-government is available online information accessible to as many people as possible related to ability in order to equal access and opportunity for all.

V. CONCLUSIONS

E-Government providing all user friendly facility with easy accessing government services to the citizens. This involves quality of the services delivered through the e-Government systems. Any time any where user can access services of e-Government systems. This is most useful thing in e-Government system. This includes information availability, usability and privacy of the services.

E-government let for government transparency. Government transparency is essential because it allows the public to be learned about what the government is working on as well as the policy they are trying to employ. Easy tasks may be simple to achieve through electronic government access.

ACKNOWLEDGEMENT

The Authors gratefully acknowledge the authorities of Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (MS), India, for providing the infrastructure for this research work.

REFERENCES

- [1] Zahir Irani, Peter E.D. Love, Ali Montazemi, "e-government: Past, present and future", European Journal of Information Systems, pp.103-105, 2007.
- [2] Premkumar, G., Alfred T. Ho, and Pallavi Chakraborty, "E-government evolution: an evaluation of local online services", International Journal of Electronic Business 4, no. 2, pp.177-190, 2006.
- [3] Hongxiu, L., Reima, S. (2009), "A Proposed Scale for measuring E-service Quality", International Journal of u- and e-service, Science and Technology, 2, 1.
- [4] Seifter, J., and J. Chung. "Using e-government to reinforce government-citizen relationships." Social Science Computer Reviews 27, pp.3-23, 2008.
- [5] Jensen, Michael C., William H. Mackling, "Theory of the Firm: Managing Behavior, Agency Cost, and Ownership Structure" , Journal of Financial Economics, Volume 3, 1976.
- [6] Mintzberg, Henry, "Managerial Work: Analysis from Observation, Management Science", volume 18, October 1971.
- [7] Rogers W'O Okot-Uma, "Electronic Governance: Re-inventing Good Governance", Commonwealth Secretariat London.
- [8] Fassnacht, Martin, Ibrahim Koese, "Quality of electronic services: Conceptualizing and testing a hierarchical model." Journal of service research , 19-37, 2006.
- [9] Christos Halaris, Magoutas B., Papadomichelaki X., and Mentzas G. , "Classification and synthesis of quality approaches in e-government services", Emerald Group Publishing Limited, Vol. 17 No. 4, pp. 378-401, 2007.
- [10] Esteves, José, Rhoda C. Joseph, "A comprehensive framework for the assessment of eGovernment projects.", Government information quarterly, vol. 25, issue. 1, PP.118-132, 2008.
- [11] Jansen, Jurjen, Sjoerd de Vries, Paul van Schaik, "The contextual benchmark method: Benchmarking e-government services." Government Information Quarterly, vol. 27, issue. 3, pp. 213-219, 2010.
- [12] Rowley, Jennifer, "An analysis of the e-service literature: towards a research agenda" , Internet research, Vol.16, Issue. 3, pp.339-359, 2006.
- [13] Behkamal, Behshid, Mohsen Kahani, Mohammad Kazem Akbari, "Customizing ISO 9126 quality model for evaluation of B2B applications", Information and software technology, Vol.51, Issue. 3, pp. 599-609, 2009.
- [14] Chutimaskul, Wichian, Suree Funilkul, Vithida Chongsuphajaisiddhi, "The quality framework of e-government development", In Proceedings of the 2nd international conference on Theory and practice of electronic governance ACM, pp. 105-109., 2008.
- [15] Behkamal, Behshid, Mohsen Kahani, and Mohammad Kazem Akbari, "Customizing ISO 9126 quality model for evaluation of B2B applications", Information and software technology Vol.51, Issue. 3, pp.599-609, 2009.
- [16] Chutimaskul, Wichian, Suree Funilkul, and Vithida Chongsuphajaisiddhi, "The quality framework of e-government development", In Proceedings of the 2nd international conference on Theory and practice of electronic governance ACM, pp. 105-109, 2008.
- [17] Magoutas, Babis, Kay-Uwe Schmidt, Gregoris Mentzas, Ljiljana Stojanovic, "An adaptive e-questionnaire for measuring user perceived portal quality", International Journal of Human-Computer Studies, Vol.68, Issue.10, pp.729-745, 2010.
- [18] Bertot, John C., Paul T. Jaeger, and Justin M. Grimes. "Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies", Government information quarterly, Vol.27, Issue.3, pp.264-271, 2010.
- [19] Pazalos, Konstantinos, Euripidis Loukis, and Vassilios Nikolopoulos, "A structured methodology for assessing and improving e-services in digital cities", Telematics and Informatics, Vol.29, Issue.1, pp.123-136, 2012.
- [20] Joseph S. Nye Jr. John D. Donahue, "Governance in a Globalization World" , Visions of Governance For the 21st century Brookings Institution Press.
- [21] Kettl, D. F., "The Transformation of Governance", John Hopkins University Press, U.S.A. 2002.
- [22] Heeks, Richard, and Savita Bailur, "Analyzing e-government research: Perspectives, philosophies, theories, methods, and practice", Government information quarterly, Vol.24, Issue.2, pp.243-265, 2007.
- [23] Leitner, C., "eGovernment in Europe: The State of Affairs", European Institute of Public Administration, Maastricht, the Netherlands, 2003.
- [24] Michiel Backus, "E-Governance and Developing Countries", Introduction and examples, Research Report, Vol.3, April.2001.

Authors Profile

Phramaha Wattana Losanta, pursued Master of Science in (I.T) from Eastern Asia University, Thailand, in Year-2010. He is currently pursuing Ph.D. in the subject of Computer Science from Department of Computer Science and IT,



Dr. B. A. M. U. Aurangabad.

S. N. Deshmukh, Professor, M.E.,(CSE)

Ph.D. Currently working as Professor in

Department of Computer Science and IT,

Dr. Babasaheb Ambedkar Marathwada

University, Aurangabad and having

experience of around Twenty Two years

in teaching for post graduate (M. Tech,

M.Sc. and MCA) and graduate courses (B.E., B. Tech.) and

also have an experience of software development using

.NET, Oracle, J2EE, XML, Java Scripts, PHP and MySQL.

He has also received the appreciation from University for

development of Administration software. He has also

conducted more than 10 workshops on above technology.

