ISSN: 2348 - 2117

International Journal of Engineering Technology and Computer Research (IJETCR)
Available Online at www.ijetcr.org
Volume 3; Issue 4; July-August-2015; Page No. 06-11

E-Governance - A challenge for Rajasthan State of India

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Abstract

ICTs stand for information and communication technologies and are defined, for the purposes of this primer, as a "diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information. "These technologies include computers, the Internet, broadcasting technologies (radio and television), and telephony. The emergence of Information and Communication Technology (ICT) has provided means for faster and better communication, retrieval of data and utilization of information to its users. E-Governance is basically the application of ICT to provide government services to the citizens through internet. In developing countries state Rajasthan, where literacy level is very low and even most of the people are living below poverty line, people are not even aware about the benefits of e-Governance activities and people do not use Information and Communication technologies to a much extent, there exist a number of problems to implement e-Governance activities. This research paper highlights the main challenges related to the implementation of e-Governance in Rajasthan.

Keywords**:** Cost, different languages, e-readiness rank, e-Governance, ICT, literacy level, per capita income

I. INTRODUCTION

The term e-Government came into existence with the advent of government websites in late 1990s. e-Governance or „electronic Governance" refers to the use of Information and Communication Technologies (ICTs) to provide citizens and organizations with more convenient access to the government's services and information. In other words, e-Governance involves ICTs, especially the internet, to improve the delivery of government services to citizens, businesses and government agencies. It is not limited to the public sector only but also includes the management and administration of policies and procedures in private sector as well. The use of internet not only delivers the services faster but also brings more transparency between the government and the citizens. But in developing state like Rajasthan, where literacy level is very low and most of the people are living below poverty line, it is very much difficult for the government to provide its services to such citizens via means of internet. Even the e-Readiness Rank of Rajasthan is very low. E-readiness is defined as the ability to use information and communication technologies to develop one's economy and welfare.

II. CHALLENGES FOR E-GOVERNANCE IN RAJASTHAN

There are a large number of obstacles in implementation of e-Governance in Rajasthan. These can be categorized under the following titles: Environmental and Social Challenges, Economical Challenges and Technical Challenges. These challenges are explained below:

A. Environmental and Social Challenges

(i) Different Language: Rajasthan is a state. The diversity of people in context of language is a huge challenge for implementing e-Governance projects as e-Governance applications are written in English language. And also, English may not be understandable by most of the people of Rajasthan. Therefore, it becomes a challenge for the government to write e-Governance applications which are to be implemented for the whole state so that these may be acceptable to the users of a particular language.

(ii) Low Literacy*:* Literacy can be defined as the ability to read and write with understanding in any language. A person who can merely read but cannot write cannot be considered as literate. Any formal education or minimum educational standard is not necessary to be considered literate. Karla is the state having 93.91% literacy rate and it 1st rank in the list of literacy (Table 1). Literacy level of Rajasthan is 67.06 and ranked 33 in the list and Bihar is having literacy level 63.82% and ranked 35 in the list.

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Table1: Literacy rate of selected states of India

S. No.	India/State/Union Territory	Literacy Rate (%)	Rank
1	Kerala	93.91	1
2	Lakshadweep	92.28	2
3	Mizoram	91.58	3
4	Goa	87.40	5
5	Chandigarh	86.43	8
6	Delhi	86.34	9
7	Maharashtra	82.91	12
8	Gujrat	79.31	18
9	Panjab	76.68	21
10	Chhattisgarh	71.64	27
11	Madhya Pradesh	70.63	28
12	Uttar Pradesh	69.32	29
13	Rajasthan	67.06	33
14	Bihar	63.82	35

(Source:http://en.wikipedia.org/wiki/indian_states_ranking_by_literacy_rate)

(iii) Low IT Literacy*:* Much of the Indian people are not literate and those who are literate, they do not have much knowledge about Information Technology (IT). Most of the people in India are not aware about the usage of Information Technology. So, in India, having such low level of IT literacy, how can e-Governance projects be implemented successfully? We can say that IT illiteracy is a major obstacle in implementation of e-Governance in India. So, first of all Indian people must be made aware about the usage of Information Technology. A literate is one who can read any arbitrary book in their native language [s]. Similarly, a computer literate may consider the ability to use and meet the requirements of the Computer Programs. Hence, Computer Literacy is defined as a knowledge and ability to use computers and related technology efficiently, with a range of skills covering levels from elementary use to programming and advanced problem solving. "Digital Literacy" is defined simply as the awareness, skills, understandings etc.

(iv) Recognition of applications: Recognition of the e-Governance facilities by the citizens is another huge challenge. It is a challenge to have all the citizens well aware of the facilities offered by the e-government and have them to trust in it, so that citizens should be ready to accept these facilities.

(v) User friendliness of government websites*:* Users of e-Governance applications are often non-expert users who may not be able to use the applications in a right manner. Such users need guidance to find the right way to perform their transactions. Therefore, government websites must be user friendly so that more and more people can use them easily. Hence, these websites can be more effective. If government websites will be designed in an easier format only then these will be more usable for the users who are not expert users of IT.

(vi) Services are not accessible easily*:* The concept of e-Governance is claiming for increased efficiency and effectiveness of the government, but these goals will be achieved only if the service will be available to the 100% of the citizens. So, every service should be accessible by anybody from anywhere and anytime. Even if the users of Internet are growing but still there is a major part of Indian population which is not able to access e-Governance activities for variety of reasons, e.g. some people may have limited access to Information and Communication Technologies and devices. Therefore, government has to provide internet access through public terminals as a part of their universal access efforts.

(vii) Confidence on technologies provided by government: The implementation of public administration functions via e-Government requires that the user must be confident and comfortable while using the technology. He must also trust that technology that he/she is interacting with. Even the government should provide the measures so that the users can trust the technology provided to them. The government has to make a balance between ensuring that a system prevents fraudulent transactions and the burden that extensive checks can take place on people who are honest.

(viii) Separation: The separation that exists between the individuals, communities and businesses that have access to Information Technology and those that do not have such access. Economic poverty is closely related to the limited information technology resources. People who are living below poverty line cannot afford a computer and internet connection for themselves to take the benefits of the e-Government and other on-line services. Economic poverty is not the only cause of this separation; it may also be caused by the lack of awareness among the people. In India even some of the economically stable people do not know about the scope and services of e-Governance. Indian government has to take some actions to narrower this separation to effectively implement the e-Governance projects.

(ix) Struggle to Change*:* The struggle to change phenomenon can explain much of the hesitation that occurs on the part of the constituents in moving from a paper-based to a web-based system to interact with government. Citizens, employees and businesses can all have their biases with respect to how transactions should be processed. Government entities and public policy administrators cannot ignore the changes that occur as a result of the implementation of the ICT. Education about the value of new system is one step towards reducing some of this struggle.

(x) Population*:* Population of Rajasthan is probably the biggest challenge in implementing e-Governance projects. As population is considered to be an asset to the country but it also offers some other challenges e.g. establishing person identities. There is no unique identity of individuals in India although Indian government is making efforts for providing unique identity to its citizens. Apart from this, measuring the population, keeping the database of all Indian nationals and keeping this database updated and then providing the e-governance services to the whole population are major challenges.

Table2: Population of selected states of India

S. No.	India/State/Union Territory	Population	Growth
1	Kerala	33406,061	4.91
2	Lakshadweep	64,473	6.30
3	Mizoram	1,097,206	23.48
4	Goa	1,458,545	8.23
5	Chandigarh	1,055,450	17.19
6	Delhi	16,387,941	21.21
7	Maharashtra	112,374,333	15.99
8	Gujrat	60,439,692	19.28
9	Panjab	27,743,338	13.89
10	Chhattisgarh	25,545,198	22.61
11	Madhya Pradesh	72,626,809	20.35
12	Uttar Pradesh	199,812,341	20.23
13	Rajasthan	68,548,437	21.31
14	Bihar	104,099,452	25.42

(Source:http://www.census2011.co.in/states.php)

(xi) Lack of integrated services: Most of the e-governance services which are offered by the state are not integrated. Lack of communication between different departments of government may be its major cause. Therefore, the information that resides within one department has no or very little meaning to some other department of the government.

(xii) Lack of awareness in people: Most of the people of Rajasthan are not aware of the benefits of e-Governance services. Even the government does not pay much attention to make the people aware about e-Governance activities. Unawareness is a major challenge in the implementation of e-Governance projects.

B. Economical Challenges

(i) *Cost:* In developing countries like India, cost is one of the most important obstacles in the path of implementation of e-Governance where major part of the population is living below poverty line. Even the politicians do not have interest in implementing e-Governance. A huge amount of money is involved in

implementation, operational and evolutionary maintenance tasks. These costs must be low enough so that to guarantee a good cost/benefit ratio.

(ii) Applications must be transferrable from one platform to another:e-governance applications must be independent from hardware or software platforms. Therefore, these applications can be used at any platform irrespective of the hardware or software and from one platform to the other platform. These applications may also help on possible reuse by other administrators.

(iii) Maintenance of electronic devices*:* As the Information Technology changes very fast and it is very difficult for us to update our existing systems very fast. Regulations of different devices and their different characteristics may vary and the system in use must be capable to handle all the emerging needs. Maintenance is a key factor for long living systems in a rapidly changing technical environment.

(iv) Low per Capita income*:* Per capita income means how much each individual receives, in the terms of money, of the yearly income generated in a country. This refers to what each individual receives if the yearly national income is divided equally among everyone. Per capita income of India is low as compare to the other countries. Therefore, people cannot afford on-line services provided by the government which is a challenge for implementation of e-governance.

Per Capita Net State Domestic Product at Current Prices (2004-05 Series)

Table 2:

S. No.	India/State/Union Territory	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13s
1	Kerala	36276	40419	45700	53046	60226	67652	78387	88527
3	Mizoram	26698	28764	32488	38582	42715	50956	53624	63413
4	Goa	84721	94882	108708	135966	149164	168024	211570	200514
5	Chandigarh	84993	97568	102980	108486	117371	126651	136883	141926
6	Delhi	72208	83275	95241	111756	125936	145129	166883	192587
7	Maharashtra	41965	49831	57760	62234	69765	84858	93748	103991
8	Gujrat	37780	43395	50016	55068	64097	77485	87175	96976
9	Panjab	36199	41883	49380	55315	61805	69582	76895	84526
10	Chhattisgarh	20117	24800	29385	34360	34366	41165	48366	52983
11	Madhya Pradesh	16631	19028	20935	25278	28651	32453	37979	44989
12	Uttar Pradesh	14221	16013	17785	20422	23671	26698	30071	33616
13	Rajasthan	20275	24055	26882	31279	35254	44644	52735	59097
14	Bihar	8223	9967	11051	13728	15457	19111	22582	27202

(Source:Directorate of Economics & Statistics of respective State Governments, and for All-India - Central Statistics Office)

(v) Limited financial resources*:* The Gross Domestic Product (GDP) is one of the measures o national income and a country‟s economy. GDP is defined as the total market value of all final goods and services produced within the state in a given period of time. GDP of a state is the measure of its financial strength. India has limited financial resources so as to implement and maintain the e-Government projects properly.

Table 3:

S. No.	India/State/ Union Territory	2010-11 (Rupees crore)	2011-12 (Rupees crore)	2012-13 (Rupees crore)	2013-14 (Rupees crore)	2010-11% Growth	2011-12% Growth	2012-13% Growth	2013-14% Growth
1	Kerala	263,773	307,906	349,338	396,282	13.70	16.73	13.46	13.14
3	Mizoram	6,388	7,198	8,053	10,297	21.44	12.68	11.88	27.86
4	Goa	33,605	36,025	34,965	48,897	15.38	7.20	-2.94	39.84
5	Chandigarh	20,017	23,211	26,162	29,076	12.98	15.96	12.71	11.13
6	Delhi	252,753	296,957	348,221	404,576	15.20	17.49	17.26	16.18

7	**Maharashtra**	1,035,086	1,199,548	1,372,644	1,476,233	10.70	14.96	14.08	19.53
8	**Gujrat**	521,519	594,563	670,016	765,638	20.93	14.01	14.70	15.50
9	**Panjab**	226,204	256,430	286,809	319,117	14.53	13.36	11.85	11.26
10	**Chhattisgarh**	119,420	132,872	153,621	175,961	20.18	11.26	15.62	14.54
11	**Madhya Pradesh**	263,396	311,670	372,171	450,900	15.53	18.33	19.41	21.15
12	**Uttar Pradesh**	600,164	679,007	768,930	886,410	14.67	13.14	13.24	15.28
13	**Rajasthan**	338,348	403,422	459,215	513,688	27.28	19.23	13.83	11.86
14	**Bihar**	204,289	247,318	313,995	368,337	25.39	21.06	26.96	17.31

(Source: https://en.wikipedia.org/wiki/List_of_Indian_states_by_GDP)

C. Technical challenges

(i) Interoperability*:* Interoperability is the ability of systems and organizations of different qualities to work together. The e-Governance applications must have this characteristic so that the newly developed and existing applications can be implemented together.

(ii) Scale of applications*:* e- Governance projects have to be designed to scale from the day one. e-Governance is supposed to affect every citizen of the country, so e-Governance applications must have the scale to interface with every citizen.

(iii) Multimodal Interaction*:* Multimodal interaction provides the user with multiple modes of interfacing with a system. An e-Government application can be really effective if its users can access it using different devices.

(iv) Privacy and Security*:* A critical obstacle in implementing e-Governance is the privacy and security of an individual‟s personal data that he/she provides to obtain government services. With the implementation of e-government projects, some effective measures must be taken to protect the sensitive personal information of the people. Lack of security standards can limit the development of e-Government projects that contain personal information such as income, medical history etc.

(v) Scope of applications*:* The very first step in creating a good application is to define its scope very well and everything else comes later. The applications which are provided by e-Government, their scope must be known in advance for the accurate implementation of e-Governance projects.

(vi) Tried and tested technologies*:* Technology tends to get out of date very fast. Our government may not be in position to buy new servers every year. So, it is better and safer to use technologies and products which are tried and tested for longer periods of times than using the latest ones.

(vii) Geographical problems*:* Corporate networks reside on reliable and controlled networks. Government networks have to go into all areas which are even unfriendly to live. It is, however, costly to wire up all the villages in the country. So, e-Governance systems must have to use the wireless networks like existing cellular networks to reach the applications into remote areas irrespective of the geographical issues.

(viii) Local language*:* The acceptance of English language in India is very low. The e-governance applications are written in English. That is why e-Governance projects do not get success. Hence, the e-governance applications must be written in local language of the people so that they may be able to use and take advantage of these applications.

III. CONCLUSION

As the usage of Information Technology is growing very fast, Indian government is making many efforts to provide services to its citizens through e-Governance. Although Indian government is spending a lot of money on e-Governance projects but still these projects are not successful in all parts of India. Unawareness in people, local language of the people of a particular area, privacy for the personal data of the people etc. are main challenges which are responsible for the unsuccessful implementation of e-Governance in India. Government must take some actions to make the people aware about the e-Governance activities so that people may take full advantage of these activities and e-Governance projects can be implemented successfully. The participation of people can play a vital role in implementation of e-Governance in Rajasthan

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