Study of Status of ICT Use and Awareness in E - Governance: A Case of Pune Division

Prof Jyoti Kharade	Dr. Gulnar Sharma
Assistant Professor, Research scholar, JDBIMS, SNDT Women's University, Mumbai.	Research Guide, JDBIMS, SNDT Women's University Mumbai.

ABSTRACT *The key problem associated with the high failure rate of e-government projects is the lack of awareness about the potential factors that may help citizens to adopt e-government services. Despite the failure of e-government projects, developing countries like India are also facing a lot of challenges such as lack of a proper ICT infrastructure, lack of awareness about available e-Government services and a lack of citizens' trust in the government as well as the internet, which are basis for e-government project failure. There is very little research done on problems and prospects of ICT in e-Governance in Pune Division and particularly on aspect of present status of e-Governance projects, problems faced related to ICT by implementers in project implementation, barriers and drivers for ICT adoption and ICT access, awareness, usage, expectations and problems of citizens from the existing e-Governance projects.*

The authors highlights that factors like ICT access, awareness and usage amongst the citizens' are important factors in e-Governance Project to make it sustainable and successful.

1. Introduction

According to Wikipedia (2008), the term ICT is the broader term of Information Technology (IT), to explicitly include the field of electronic communication, in addition to IT. The term IT is defined as "the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware." IT deals with the use of electronic computers and computer software to convert, store, protect, process, transmit and retrieve information, securely [1].

ICT is thus used as an umbrella term that includes any communication device or application, encompassing radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning.

Objective of the paper is to study access and usage level of ICT in e-Governance in the citizens in Pune Division.

Hypothesis under study

H1: Place whether it is urban or rural where the Citizens' live has relations with exposure to computer access and use.

H2: There is equal level of awareness between rural and urban citizens' about the e-Governance services.

H3: Various e-Governance services like accessing information, performing online transactions and posting grievances or feedback are used almost to the same extent by the citizens in urban and rural area.

2. E-Government and E-Governance

InfoDev, (2002) defines is "the use of ICT to transform government by making it more accessible, effective, and accountable". [2]

According to Di Maio and others, "E-government is the transformation of public-sector internal and external relationships through Internet-enabled operations and information and communication technologies to optimize government services delivery, constituency participation and internal government processes".[3]

OECD has defined e-government as "the use of information and communication technologies, and particularly internet, as a tool to achieve better government" (OECD, 2003a, 2003b). [4][5]

The National Office of the Information Economy defines e-government as "the use of available and emerging technologies to create seamless, responsive and citizen-focused government for the benefit of all" (NOIE, 2002). [6]

E-governance is to support and simplify governance for e-governance community comprised of citizens, civil society organizations, private companies, government lawmakers and regulators on network (Tapscott and Agnew, 1999). [7]

E-governance involves the use of information and communication technologies (ICTs) to transact the business of government. E-governance promises a full service available 24 hours a day and seven days a week, greater accessibility, the capability to obtain government services without visiting government offices, and reduced service cost. It also contributes to the functioning of democracy by online provision of government information which would otherwise be difficult to obtain or unavailable, and through online debates and plebiscites (Teicher et al., 2002). [8]

The sample data was collected from 2000 citizens, with equal proportion from rural and urban areas from five Districts from Pune Division for analysis. The demographic details of respondents are shown in table 1:

Age	Location	Education
15 years to 30 years		Illiterate
31 years to 40 years	Rural Area	School(1-5)
41 years to 50 years		Middle School(6-8)
	Urban Area	High School(9-12)
51 years to 80 years		Graduate
		Post Graduate

Table1 : Respondents demographic details.

3. Current status of ICT in Pune Division
1. Analysis of ICT (Information and communication Technology) Access
a) Access to computer

It was found that the most of the citizens have access to computer from Home about (90.6%), then through kiosk/ CFC

about (4.4%), then through workplace about (27.5%), from school/College about (24.6%) and last preference is Cyber café about (9.5%). It is seen that maximum preference is from home for access to computer.

b) Access to ICT equipments
It was found that most of the citizens have access to Television about (95.8%), then Personal Computer about (42.9%), then radio about (26.0%), then laptop about (23.6%) and then last mobile about (14.5%). It is seen that television has maximum penetration in the sample area.

c) Access to Internet
It was found that most of the citizens have access to internet from Office / work place about (72.8%), School/College about (68.4%), Kiosk/ CSC (50.6%), Home (39.4%) and cyber café (12.8%).

d)Frequency to access internet
It was found that most of the citizens have access to internet occasionally (79.0%), daily (19.7%), weekly (6.3%) and monthly (1.5%).

e) Type of connectivity
It was found that most of the citizens have internet connectivity through Leased line (98.4%), Mobile (87.6%), wireless (26.9%), DSL (5.6%), Cable (5.6%), ISDN (2.6%) and Analog (0.7%).

2. Analysis of ICT awareness
a)Media for e-Governance awareness
It is found that amongst various media for E-Governance awareness most of the citizens became aware through television (83.1%), pamphlets (67.7%), Street shows (65.1%), hoardings (43.9%), awareness Programmes (39.6%), Friends/ Peers (8.7%), Radio 6.1%, News papers/magazines 2.8%, and via internet 2.1%.

3. Analysis of Hypothesis
(1)Place whether it is urban or rural where the Citizens' live has relations with exposure to computer access and use.

Use Computer		Area		Total
		Urban	Rural	
Yes	Count	627	315	942
	% within Area	62.7%	31.5%	47.1%
No	Count	373	685	1058
	% within Area	37.3%	68.5%	52.9%
Total	Count	1000	1000	2000
	% within Area	100.0%	100.0%	100.0%

Pearson Chi-Square	Value	df	Asymp. Sig. (2-sided)
	195.345	1	.000

There are about 62.7% Urban population and 3.5% Rural population using computer the Chi-Square Tests applied shows that the Pearson Chi-Square value is 195.345 and Degree of freedom is 1 and level of significance is high p value is (0.000) so it shows that there is significant relationship between area where citizens lives and access and use of computer. Hence the hypothesis is accepted.

(3) There is equal level of awareness between rural and urban citizens' about the e-Governance services.

E-Governance Services awareness		Area		Total
		Urban	Rural	
Media	Yes	Count	657	469	1126
		% within Area	65.7%	47.0%	56.4%
	No	Count	343	529	872
		% within Area	34.3%	53.0%	43.6%

Total	Count	1000	998	1998
	% within Area	100.0%	100.0%	100.0%

Pearson Chi-Square	Value	df	Asymp. Sig. (2-sided)
	71.061	1	.000

There are about 65.7% urban population and 47.0% rural population aware about the e-Governance services. The Chi-Square Tests applied shows that the Pearson Chi-Square value is 71.061 and Degree of freedom is 1 and level of significance is high p value is (0.000) so it shows that there is significant relationship between area where citizens lives and awareness about the e-Governance services. Hence the hypothesis is rejected There is different level of awareness between rural and urban citizens' about the e-Governance services. Hence Null hypothesis is accepted

H0: Various e-Governance services like accessing information, performing online transactions and posting grievances or feedback are used almost to the same extent by the citizens in urban and rural area.

Usage of e-Governance Services		Area		Total
		Urban	Rural	
To get Information	Count	512	221	733
	Column %	100.0	100.0	100.0
Get online services	Count	389	127	516
	Column %	76.0	57.5	70.4
Complaints/ Grievances	Count	247	36	283
	Column %	48.2	16.3	38.6
Total	Count	512	221	733
	Column %	100.0	100.0	100.0

Pearson Chi-Square	Value	df	Asymp. Sig. (2-sided)
	33.106	2	.000

Around 76.0% from urban and 57.5% from rural get online services and 48.2% from urban and 16.3% from rural post complaints/ grievances and also post feedback. But the proportion to access information online remains same. The Chi-Square Tests applied shows that the Pearson Chi-Square value is 33.106 and Degree of freedom is 2 and level of significance is high, p value is (0.000) so it shows that there is significant relationship between services used by citizen and place where the citizen lives. Hence the hypothesis is rejected and Null hypothesis is accepted

H0: Various e-Governance services like accessing information, performing online transactions and posting grievances or feedback are used to different extents by the citizens.

4. Conclusion
This study has explored the role of ICT in facilitating service delivery in e-Governance projects in public sector. It has investigated the role of ICT access, awareness in Pune division. All the three hypotheses in this study have been supported. There is a huge variance in the ICT access, awareness and perceptions of citizens regarding service delivery. E-governance should be seen as a means of improving services in the future. E-Governance Projects must be designed taking into consideration requirements of citizens' and increase their confidence and trust in ICT usage for accessing e-Services.

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