GOVERNMENT TO CITIZEN (G2C) E-READINESS OF UTTARAKHAND

Dr. Kunwar Singh Vaisla[1], Dr. Durgesh Pant[2]

[1]*Department of Computer Science & Engineereing, BT Kumaon Institute of Ttechnology*

(Formerly Kumaon Engineering College), Dwarahat – 263653, District – Almora, Uttarakhand

[1]`vaislaks@rediffmail.com`

[2] *School of Computer Science and Information Technology, Uttarakhand Open University,*

Dehradun Campus, Dehradun, Uttarakhand

[2]`durgesh.pant@gmail.com`

Abstract— **This paper aims to clarify the Government To Citizen (G2C) e-Readiness of Uttarakhand State. The overall objectives of this research were to study and critically analyze present functioning of government departments especially with citizen interface and develop blue print guidelines to exploit ICT for efficient and effective governance.**

In order to attain the objectives of the study, the following research methodology was followed. Preliminary investigation about the e-Governance initiatives of the state was checked and the perceptions of the citizens towards the effectiveness of Government to Citizen Strategies in Uttarakhand (G2CSIU) were analyzed.

The findings are very encouraging. Till now the scenario has been that the government has been ready with its side of the infrastructure and services, and last mile connectivity has proved a challenge. However, in this case it appeared the other way round.

Citizens have access to and knowledge about the various technologies and interface solutions that are the citizen-end of the G2C services.

Keywords: **e-Governance, ICT, e-readiness, G2C, e-Administration, e-Citizens and e-Services, e-Society.**

I. INTRODUCTION

The term Governance may be described as the process by which society steers itself. The process includes the interactions among the State, the private enterprise and the civil society, and today these processes are increasingly being conditioned and modified through the influence of information and communication technologies (ICTs). Examples of these shifts in dynamics are exemplified by:

- the use of the Internet by Civil Society, NGOs and professional associations to mobilize opinion and influence decision-making processes that affect them
- the increasing electronic delivery of Government and commercial services and information
- the electronic publication of draft legislation and statements of direction for public feedback on the infrastructure side
- the increased adoption of e-enabled community centres, the liberalization of telecommunication markets and trends towards web-enabled services, mobile telephony and digital television

In this era of ICT, the government can improve its **efficiency**, **accountability** and **transparency** by supporting e-Governance. With the ever-increasing complexities of public administration, the use of IT has become indispensable for effective governance and e-Governance is an emerging trend

which can re-invent the way the Government works. But experience has shown in India that the success of initiatives depends on the political will and commitment of bureaucracy.

The new possibilities offered by ICT in the area of e-Government – e.g. online services, enhanced transparency, civil society participation, e-trade facilitation – are to be closely looked at in this context. By focusing on activities that generate significant savings of public resources, governments have been able to broaden their legitimacy base for e-Governance interventions, while strengthening the principles of democratic governance through enhanced interactivity and engagement with citizen and civil society.

The vision guiding such initiatives is that developing countries like India can and must accelerate the pace of e-Governance and build networked governments. By doing this, they will reap the benefits of government that costs less, delivers more, and is more responsive and accountable. In India, e-Governance started with National Informatics Center's (NICs) efforts at connecting district headquarters through computers in the 1980s and through establishment of pan-India network. The approach over the years has grown out of the same idea. The concept has been dominated by connectivity, networking, technological up-gradation, selective delivery systems for information and services and an array of software solutions.

Most developing countries like India have undertaken only a limited number of e-Governance initiatives due to lack of e-readiness. Many of the e-Governance initiatives fail because there is no proper monitoring. There are two types of e-Governance failures. In some cases there is total failure of an initiative never implemented or in which system is implemented but immediately abandoned for example, Indira Gandhi Conservation Monitoring Center. Alternatively there is the partial failure of an initiative in which major goals are unattained or in which there are significant undesirable outcomes.

For e-Governance to succeed, not only should the designing and implementing agency gear up its act, but on the citizen"s side also, there should be e-readiness in terms of access to and knowledge of ICT interfaces.

E-readiness can be built in following areas:

1. Institutions: A single point for e-Governance strategy - something like a "National e-Governance unit" responsible for following areas:

- Setting up overall e-Governance priorities.
- Development and implementation of framework policies, standards and guidelines.
- Promotion of cross-cutting e-Governance infrastructure and applications.
- Providing consultancy/facilitative impact to individual e-Governance projects.
- Acting as a force for learning about e-Governance.

Institutions covering these responsibilities may already exist but others may need to be created. Each unit would ideally have an e-Governance advisory board including not only government members but also representatives of key civil society institutions.

2. e-Laws: e-Governance requires a range of legislative changes including electronic signatures, computer crime, electronic archiving, data matching, freedom of information, data protection. Regulatory changes are required for host of activities from procurement to service delivery.

3. Motivational leadership: In addition to raising commitment for top level leaders, there is also a need to train others who will be taking a leading role.

Training activities could also include.

- e-Governance training for second tier government and civil society leaders, focusing on building awareness, confidence and commitment to the e- Governance process, allowing them to provide high level inputs and support for e-Governance.
- Leadership training for current e-Governance leaders, focusing on their abilities such as leadership, interpersonal skills, strategic planning and awareness of best practices.

4. Capacity building: Human capacities are typically identified as having three components: knowledge, skills and attitude.

5. Technology: Technological infrastructure must be built for e-Governance. Most of developing countries are a long way short of computing and telecommunication infrastructure.

6. Database System: e-Governance projects will rely to a significant degree on existing data, existing systems and existing process. The database system is already too large and complex; addition of ICT just creates a faster and more expensive complexity. So there is a need to reconstruct and renew the underlying database systems.

e-Governance allows citizens to communicate with the government, participate in government's policy making and citizens to communicate with each other. The e-Governance truly allows citizens to participate in the government decision-making process, reflect their true needs and welfare by utilizing e-Governance as a tool.

II. NEED AND SIGNIFICANCE OF THE STUDY

In early 1990"s most of the states in India started implementing G2C e-Governance initiatives. However, they faced several implementation challenges. They are:

- Infrastructure capacity
- Compatibility with other IT systems/ databases/ platforms
- Scalability of existing applications
- Information exchange mechanisms
- Geo referencing of assets
- Ability to carry out financial transactions

Government of India, as well as government of Uttarakhand has launched several initiatives under the National e-Governance Plan (NeGP) and e-Governance roadmap for G2C sector. The projects have been undertaken with a view to streamline the government"s services to citizens, to increase transparency, to reduce operational costs, to increase accessibility, to increase administrative efficiency and effectiveness.

But it has shown mixed results. Despite the government spending big money and putting in lots of efforts the status on ground is not too flattering. Thus, it was time to investigate further and look into the reasons for failure and way forward.

A. Objectives

The overall objectives of this research were to study and critically analyze present functioning of government departments especially with citizen interface and develop blue print guidelines to exploit ICT for efficient and effective governance.

To address the objectives, research in the following areas was undertaken:

- E-initiatives undertaken and initiated by the central government in the area of G2C.
- Existing system of e-Governance w.r.t. G2C applications in the state of Uttarakhand.
- Awareness levels and perception of citizens towards the existence and effectiveness of G2C e-initiatives in Uttarakhand.

The present paper is based on the findings of the research with respect to the e-readiness (Questionnaire I)

B. Hypothesis

The following four null hypotheses were framed to attain the objectives of the study:

- Educational qualification wise groups of the respondents do not differ in their mean G2CSIU (Awareness of G2C e-Initiative in Uttarakhand) scores.
- There exists no significant difference in the mean G2CSIU scores of gender wise two groups of the respondents.
- Age wise four groups of the respondents do not differ from one another with regard to their mean G2CSIU scores.
- Income wise four groups of the respondents do not differ from one another with regard to their mean G2CSIU scores.

C. Research Methodology

In order to attain the objectives of the study, the following research methodology was followed. Preliminary investigation about the e-Governance initiatives of the state was checked and the perceptions of the citizens towards the effectiveness of Government to Citizen Strategies in Uttarakhand (G2CSIU) were analyzed.

D. Data source

It was decided to use questionnaires as a source of data collection as the target respondents are spread across the State in physically wide-spread geographical locations. It would be logistically and financially extremely unwise to get the data collected through face-to-face interviews.

The Questionnaires on the appreciation of G2C e-Governance initiatives in Uttarakhand were prepared, and reviewed with industry experts and a sample of 15

respondents. Based on the feedback, the questionnaire design was fine-tuned.

The study focused on two aspects – G2C initiatives of the State government, and e-readiness on the part of the citizens.

The first questionnaire focuses on e-readiness on the part of citizens. It seeks questions about:

- Access to technology like landline telephones, Internet, Computers, ATM, Online Banking, Mobile phone, Television etc.
- Knowledge about usage of technology by individuals and the family members
- actual usage by the respondents and the family members
- Present practice of utilizing technology for basic G2C services
- profile of respondents in terms of :
  - Age group
  - Gender
  - Education
  - Profession
  - Income
  - Location

The second questionnaire seeks to know the awareness of and perception of the respondents about various government schemes.

E. Criteria for selecting parameters

The NeGP or the State government does not differentiate between G2C or G2G projects. While selecting the projects to be covered in the study, care was taken to select those Projects which had a common citizen connect.

Similarly, in order to have a broad based study, it was taken care that all sections of the society were represented.

- Locations (Rural/Rural (Hilly), Semi Urban/Semi Urban (Hilly), Urban)
- Gender (Male / Female)
- Age (< 16 years, 16 to 25 years, 26 to 45 years, > 45 years)
- Profession
- Education (Below High School /High school / Intermediate /Graduate / Post Graduate / Technical /Professional / Any other)
- Monthly Income (a) Less than Rs. 20,000 (b) 20,001 - 50,000   (c) 50,001 - 80,000 (d) More than 80, 00)

F. G2CSIU Scale

A scale named „Government to Citizen Strategies in Uttarakhand" G2CSIU was prepared for the study of e-Governance initiatives. The questionnaires contained the feedback of citizens on different e-Governance initiatives of the state covering IT awareness, infrastructure issues, knowledge of government"s G2C strategies and schemes and their perception of the value and impact of these schemes. The survey consisted of two questionnaires. The first questionnaire deals with e-readiness and is the reference point for this paper. It contains 22 statements. All these statements have „Yes" or „No" as an answer. A „Yes" means „1", and a „No" mean „0".

III. THE G2CSIU OF THE STUDY

The sample of the study consisted of 293 respondents. They were Students, General Public, politicians, Government Employees, Service Providers, Bureaucrats, House Wives, teachers, IT professionals and others. Gender and educational qualification wise distribution of these respondents has been mentioned in Table 1.0

TABLE 1

GENDER AND EDUCATIONAL QUALIFICATION WISE DISTRIBUTION OF THE RESPONDENTS FOR CITIZENS" E-READINESS (N=293)

Educational Qualification Wise groups / Gender wise groups	Upto Intermediate	Graduates	Post graduates	Technical	Professional	Any Other qualifications	Total
Male	74	41	36	15	26	0	192
Female	38	17	21	7	14	4	101
Total	112	58	56	22	40	4	293

Gender and age-wise group distribution of these 293 respondents is mentioned in Table 2.0

TABLE 2

GENDER AND AGE WISE DISTRIBUTION OF THE RESPONDENTS FOR CITIZEN"S E-READINESS

Age wise Groups / Gender wise groups	< 16 Yrs.	16-25 Yrs.	26-45 Yrs.	45 Yrs. & above	Total
Male	0	69	71	52	192
Female	4	53	34	10	101
Total	4	122	105	62	293

As mentioned earlier, the sample included Students, General Public, politicians, Government Employees, Service Providers, Bureaucrats, House Wives, teachers, IT professionals and others. The number of these sample respondents has been presented in table 3.0.

TABLE 3

GENDER AND CATEGORY/STATUS WISE DISTRIBUTION OF THE SAMPLE RESPONDENTS FOR E-READINESS OF CITIZENS

Category/ Status wise groups / Gender wise groups	Students	General Public	Govt. Employees	Service providers	IT Professional	Teachers	Others	Total
Male	33	12	16	32	12	11	76	192
Female	32	9	3	13	3	9	32	101
Total	65	21	19	45	15	20	108	293

The sample included respondents from Urban and Rural background. The number of these sample respondents has been presented in Table 4.0

TABLE 4

GENDER AND RESIDENCE WISE DISTRIBUTION OF THE SAMPLE RESPONDENTS FOR E-READINESS OF CITIZENS

Category / Status wise groups / Gender wise groups	Rural	Rural (Hilly)	Semi Urban	Semi Urban (Hilly)	Urban	Total
Male	55	25	21	25	66	192
Female	27	5	12	15	42	101
Total	82	30	33	40	108	293

A. Data Collection Procedure

The relevant data were collected by distribution of the above mentioned questionnaire. Information with regard to gender, age, educational qualification, status / category of the respondents was also made known. The data were collected by personally contacting the respondents, through e-mail and through postal services.

Respondents were from across the State covering the areas places like Almora, Bageshwar, Udham Singh Nagar, Nainital, Chamoli, Deharadun, Hardwar, Rudraprayag etc. district of the state of Uttarakhand. District wise distribution of the sample respondents has been presented in Appendix 2. The data were collected from the beginning to July, 2010.

The rejection /acceptance of a hypothesis is decided and determined on the basis of the significance/insignificance of the relevant statistics of the 0.05 level of significance. The data is statistically analyzed using MS-Excel.

B. Data Analysis

The survey reveals the following with regard to citizen"s readiness to use various e-Governance initiatives:

- More than 92% have access to Television
- More than 90% people have access to Mobile Phone
- 81.2% have access to landline phone (in their locality)
- More than 77.8% families have used ATM
- 59 - 69% have access to or family members have used Internet
- 64.5 – 81.2% have landline telephone in their homes or locality
- 70 - 75% have access to or have used Computer

It clearly indicates that Television, followed by Mobile phone is the biggest connectivity devices. The use of Internet is picking up, but still lags behind.

Overall, the readiness on the part of the citizens seems to be very high. **On an average, 79% plus have access to some or the other electronic device** which can lead to a great success leading towards G2C based initiatives.

The government may use this accessibility to increase its reach. This may ultimately pave the path for the over-all development of the state. Recommendations regarding this are given in the proposed framework.
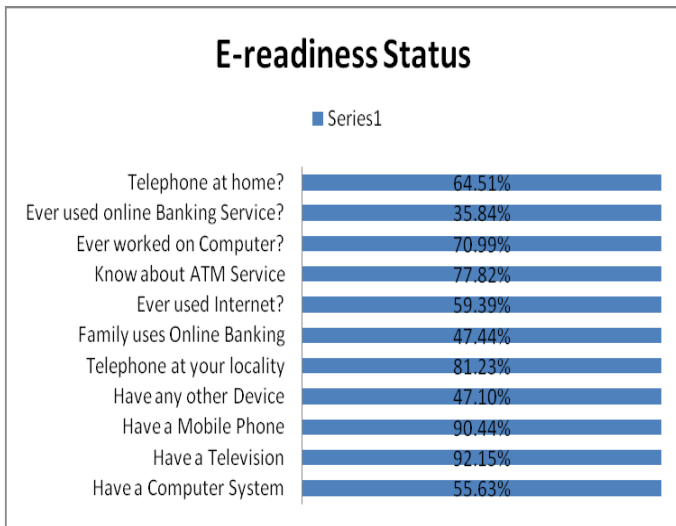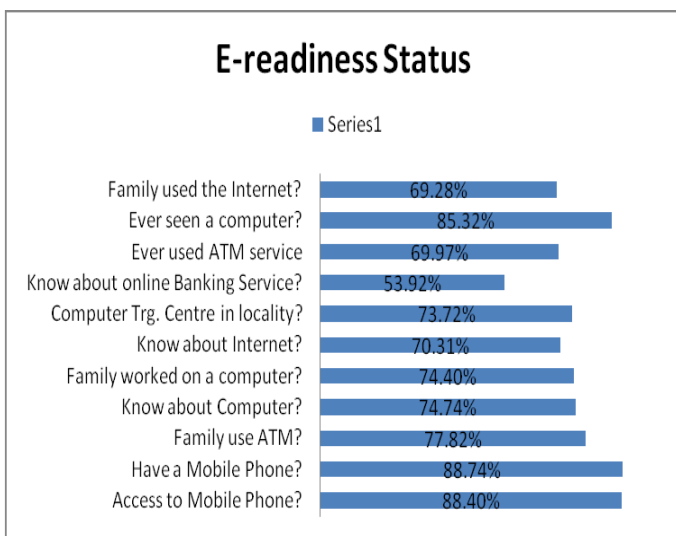
Fig. 1 e-Readiness Status

Fig. 2 e-Readiness Status

IV. RECOMMENDATIONS & CONCLUSION

The findings are very encouraging. Till now the scenario has been that the government has been ready with its side of the infrastructure and services, and last mile connectivity has proved a challenge. However, in this case it appeared the other way round.

Citizens have access to and knowledge about the various technologies and interface solutions that are the citizen-end of the G2C services. They have access to:

- Mobile Phones
- Landline Phones
- Internet
- Citizen Service Centres
- Television Sets
- ATMs
- STD / ISD Booths
- Banks
- Post offices
- Computer Centres

Which means the government has to bother about launching services which use the above as interface? The government could use Television as an aide to educate the citizens about various schemes about which the visibility is extremely low.

It could allow Banks, Post offices, ATMs, and Computer Centres to double up as virtual Citizen Service Centres (CSC). This will not only provide e-employment to women, rural youth and other marginal groups, but also ensure that the services actually reach the last man and be useful and value-adding to the State and its citizens.

The survey has revealed the gap between two sides G (government) and C (citizens). Government devises schemes but efforts are not made to make the citizens aware of these schemes or their benefits. The citizens on their part are technology savvy, adequate technology infrastructure in terms of Telecom Network, ATMs, computer centres, Television etc. also exists, so the „last mile" connectivity is also taken care of.

What is missing is making the citizens aware of the various government schemes. Technology wise, the prevalence and usage by citizens already exists.

The project owners of the Application should also evaluate the best possible technological options to make the G2C application user-friendly, stable, and secure. For this, in view of the already existing technology options available, the government agencies could use Mobiles, STD/ISD operators, Internet Cafes, ATMs and Computer centres.

The government could engage with the telecom companies, Banks and Computer Centre owners in a Public Partnership (PP) model. Once the technological backbone is established and, all the government applications could ride on that.

The Citizen services Centres would provide services across existing applications. This sharing of infrastructure will further reduce cost to both government and the citizens as users.

REFERENCES

[1].   Vaisla Kunwar Singh, Manoj Kumar Bisht, Prof. Durgesh Pant, "Framework of e-Initiatives for Uttarakhand" in International Journal of Innovation Management and Technology (IJIMT); Vol. 2, No. 4, PP 278-285, Aug 2011.

[2].   Vaisla Kunwar Singh, Manoj Kumar Bisht, Prof. Durgesh Pant, "Impact Analysis of e-initiatives in Uttarakhand" in International Journal of Engineering and Technology (IJET); Vol. 3, No. 4, PP 417-424, Aug 2011.

[3].   Vaisla Kunwar Singh, Manoj Kumar Bisht "SWOT Analysis of e-Initiative in Uttarakhand", in International Journal of Computer Applications (IJCA), PP 5-14, V- 12– No.5,Dec. 2010.

[4].   Vaisla Kunwar Singh, "Towards Studying G2C Strategies of Uttarakhand", Ph. D. Thesis, Kumaon University, India, 2011

[5].   Sharma, MK, A strategy for e-Initiatives for Uttarakhand, Ph.D thesis, Kumaun University, India, 2009

[6].   Bhatnagar, Subhas. E-Government: From vision to implementation: A practical guide with case studies. New Delhi: Sage Publications, 2004. 202p.

[7].   e-Governance in Uttarakhand; http://www.varindia.com/e-Governance.asp

[8].   e-Governance Initiative by Uttarakhand Portal, ITDA- e Governance Initiative

[9].   e-Governance: India in-the 21St Century.

[10].   Heeks, R.B. (2001) Understanding e-Governance for Development, i-Government paper no. II, IDPM, University of Manchester.

[11].   Heeks, R.B. (200la) Building e-Governance for Development, i-Government paper no 12, IDPM, University of Manchester.

[12].   http:/www.cddc.vt.edu/digilalgov/gov-menu-html.

[13].   Sharma, MK, 2009, A strategy for e-Initiatives or Uttarakhand, Ph. D. thesis, Kumaun University, India

[14].   Vikas Nath, Building and Sustaining Democratic and Accountable Governance Structures using ICT.