From Governance to E-Governance: A Study of Implementation of E-Governance in the East District of Sikkim

A Dissertation Submitted

To

Sikkim University

In Partial Fulfillment of the Requirement for the

Degree of Master of Philosophy

By

Nimkit Lepcha

Department of Political Science

School of Social Sciences

February, 2020

DECLARATION

I, Nimkit Lepcha, do hereby declare that the research work embodied in the dissertation titled "From Governance to E-Governance: A Study of Implementation of E-Governance in the East District of Sikkim" submitted to Sikkim University for the award degree of Masters of Philosophy, is my original work and it has not been submitted earlier to this or any other University for any degree.

Nimkit Lepcha

Nimkit Lepcha

Registration No: 18/M.Phil/PSC/04

Department of Political Science

School of Social Sciences

सिक्किम विश्वविद्यालय
SIKKIM UNIVERSITY

(भारत के संसद के अधिनियम द्वारा वर्ष 2007 में स्थापित और नैक (एनएएसी) द्वारा वर्ष 2015 में प्रत्यायित केंद्रीय विश्वविद्यालय)
(A central university established by an Act of Parliament of India in 2007 and accredited by NAAC in 2015)

Date: 07/02/2020

CERTIFICATE

This is to certify that Dissertation titled "From Governance to E-Governance: A Study of Implementation of E-Governance in the East District of Sikkim" submitted to the Sikkim University for partial fulfillment of the degree of Master of Philosophy in the Department of Political Science embodies the result of bonafied research work carried out by Ms. Nimkit Lepcha under my guidance and supervision. No part of the Dissertation has been submitted earlier to this or any other University for any degree.

All the assistance and help received during the course of the investigation have been duly acknowledged by her / him.

I recommend this dissertation to be placed before the examiners for evaluation.

07·02·2020

Professor, M.Yasin

Department of Political Science

School of Social Sciences

Sikkim University

Professor
Department of Political Science
School of Social Sciences
SIKKIM UNIVERSITY
6th Mile Samdur, PO Tadong 737102
Gangtok, Sikkim, India

Dr. Durga Prasad Chettri

Head

Department of Political Science

School of Social Sciences

Sikkim University

अध्यक्ष
Head
राजनीति विज्ञान विभाग
Department of Political Science
सिक्किम विश्वविद्यालय
Sikkim University

सिक्किम विश्वविद्यालय
SIKKIM UNIVERSITY

(भारत के संसद के अधिनियम द्वारा वर्ष 2007 में स्थापित और नैक (एनएएसी) द्वारा वर्ष 2015 में प्रत्यायित केंद्रीय विश्वविद्यालय)
(A central university established by an Act of Parliament of India in 2007 and accredited by NAAC in 2015)

Date: 07/02/2020

PLAGIARISM CHECK CERTIFICATE

This is to certify that plagiarism check has been carried out for the following M.Phil Dissertation with the help of **URKUND SOFTWARE** and the result is within the permissible limit as per the norm of Sikkim University.

"From Governance to E-Governance: A Study of Implementation of E-Governance in East District of Sikkim"

Submitted by Nimkit Lepcha under the supervision of Dr. M.Yasin, Professor, Department of Political Science, Schools of Social Sciences, Sikkim University.

Nimkit Lepcha
Nimkit Lepcha

07. 02. 2020
Professor, M.Yasin
Professor
Department of Political Science
School of Social Sciences
SIKKIM UNIVERSITY
6th Mile Samdur, PO Tadong 737102
Gangtok, Sikkim, India

Librarian
Sikkim University
पुस्तकालयाध्यक्ष
LIBRARIAN
केन्द्रीय पुस्तकालय Central Library
सिक्किम विश्वविद्यलय
SIKKIM UNIVERSITY

CONTENTS

Abstract

E-governance is becoming a catchphrase as it aims at providing efficient services to the citizens with the help of Information and Communication Technology. E-governance has been recognized as a vital force for transformational improvement in quality, efficiency and effectiveness of governance. It possesses all the elements of good governance, hence it can be considered as the key to good governance. The advancement in technology has also increased the expectations of the citizens which compelled the every state around the world to adopt it and provide services to the citizens in a more efficient way as possible. India, after realizing the growing importance of e-governance has adopted various steps to initiate policies and programmes to enhance the scope of it. Various studies have been done in this area to study the implementation of e-governance in India and other states.

The present study has focused on the evolution, implementation, challenges and the present state of e-governance in Sikkim particularly focusing on the East District, Sikkim. The study has covered some of the department of Sikkim which has taken the major initiatives in delivering online services which helps in reducing various obstacles while accessing services from the administration. The study is relevant as it brings out the issues, challenges, barriers, impacts and views of citizens and officials responsible for the implementation of e-governance in the district as it was initiated mainly for the betterment of citizens. The study has been conducted in Gangtok and Kaputhang East District, Sikkim following the survey schedule, where the respondents were also given the chance to express their views and suggestions on the proper implementation of e-governance services in the district as well as all over in the state.

The study has been divided into five chapters; the first chapter has outlay the synopsis of the study. The second chapter has discussed the evolution of e-governance in India, the third chapter highlights the evolution of e-governance in Sikkim, the fourth chapter has focused on the implementation of e-governance in the East District, Sikkim and the fifth chapter includes the findings and suggestions.

ACKNOWLEDGEMENTS

LIST OF ABBREVIATIONS

AISES	:	All India School Education Survey
AMTRON	:	Assam Electronic Development Cooperation limited
APSWAN	:	Andhra Pradesh State Wide Area
ARBAS	:	Anudoram Borooah Award Scheme
ASWAN	:	Assam Wide Area Network
CLR	:	Computerization of Land Records
COI	:	Certificate of Identification
CSCS	:	Common Services Centres
CSS	:	Centrally Sponsored Scheme
DAR&PG	:	Department of Administrative Reforms and Public Grievances
DeitY	:	Department of Electronics and Information Technology
DESM&E	:	Department of Economics, Statistics, Monitoring &Evaluation
DISNIC	:	District Information System of the National Informatics Centre
DIT	:	Department of Information Technology
DoLR	:	Department of Land Resources
FARMS	:	File and Record Management
FTP	:	File Transfer Protocol
G2B	:	Government to Business
G2C	:	Government to Citizens
G2E	:	Government to Employees
G2G	:	Government to Government
GISTNIC	:	General Information Service Terminal-National Informatics Centre, India
GOI	:	Government of India
HIMRIS	:	Himachal-Registration Information System
ICT	:	Information and Communication Technology
ICSCS	:	Integrated Citizen Services Centers
IDMS	:	Integrated Depot Management System
IGRS	:	Integrated Grievance Redressal System
INDEA	:	Implementation of India Enterprise Architecture
IT	:	Information Technology
ITES	:	Information Technology Enabled Services

ITS	:	Integrated Transport System
JNNURM	:	Jawahar Lal Nehru Urban Rural Management Scheme
KAVERI	:	Karnataka Valuation and e-registration Project
LANWAN	:	Local Area Network and Wide Area Network
MCA	:	Ministry of Company Affairs
MDM	:	Mid Day Meal
MEDLARS	:	Medical Literature Analysis and Retrieval System
MEITY	:	Ministry of Electronics and Information Technology
MMPs	:	Mission Mode Projects
MSDG	:	Mobile e-governance Service Delivery Gateway
NE	:	North East
NeGp	:	National e-governance Plan
NGOs	:	Non- Governmental Organisation
NIC	:	National Informatics Centre
NIEO	:	New International Economic Order
NICNET	:	National Informatics Centre Network
NLRMP	:	National Land Records Modernization Programme
NPR	:	National Population Register
NSDG	:	National e-governance Service Delivery Gateway
ODA	:	Overseas Development Administration
OMR	:	Optical Mark Recognition
PPP	:	Public Private Partnership
PUF	:	Public Utility Forms
RLBMSP	:	Rani Laxmi Bai Mahila Samman Kosh Portal
RUSA	:	Rashtriya Uchhatar Shiksha Abhiyan
SDCS	:	State Data Centres
SDGS	:	Sustainable Development Goals
SDSAP	:	State Data Sharing and Accessibility Platform
SGSP	:	Sikkim Government Services Portal
SIC	:	State Implementation Consultant
SIKKITEX	:	Sikkim Information Technology Exhibition
SMART	:	Simple Moral Accountable Responsive and Transparency
SRA&ULR	:	Strengthening of Revenue Administration and Updating of Land Records

SSDG	:	State e-governance Service Delivery
SWAN	:	State Wide Area Network
TELNET	:	Telecommunication Network
UID	:	Unique Identification Number
UK-SWAN	:	Uttarakhand State Wide Area Network
UNDP	:	United Nation Development Programmes
UNESCO	:	United Nation Educational, Scientific and Cultural Organisation
UNGA	:	United Nations General Assembly
VHSE	:	Vocational Higher Secondary Education Survey
WB	:	World Bank

List of Tables

List of Figures

Chapter 1

Introduction

Introduction

Governance in general refers to the structures and processes of governing. Similarly good governance is defined to ensure accountability, responsiveness, transparency, empowerment and broad-based participation. Likewise e-governance is defined as the application of information, communication and technology to transform the efficiency, effectiveness, accountability of exchange of information and transaction between agencies, government etc. The concept 'governance' is not new; it is as old as human civilization. The perception of governance has been in the human civilization since the time that the people learned how to live in one community or society through the process of making decisions and implementations of certain laws, rules and policies in order to live orderly and harmoniously in one environment. However, the term good governance has acquired prominence in the context of revitalization of democratic institutions in order to ensure participatory democracy, human development and to attain the goals of globalization (Ali, 2015). The progress of liberalization, privatization, and democracy also led to the emergence of terms like e- governance. It is due to the fact that democracy not only requires governance but also good governance which can lead development and modernization of political, social and economic structures and processes of any organizations including the state. To achieve this e-governance was needed. Electronic governance is about managing knowledge that exists and continues to be generated within the government departments every day. It is the development, deployment and enforcement of the policies, laws and regulations necessary to support the functioning of a digital society (Gupta, 2010). E-governance tends to bring new 'SMART' governance which means Simple, Moral, Accountable, Responsive and Transparency in the functioning of the government and enabling democratization (Borah, 2013). E-governance involves new style of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organizing considered as a wider concept then e-government. It can bring about a change in the way citizens relate to governments and to each other. Its objective is to engage, enable and empower the citizens. E-governance thus meant to understand a

process where government to people and people to government connection regularly takes place and citizens obtain direct access to records, rules and information about entitlement that they need or want in their daily lives.

Evolution of e-governance in India could be traced back to 1970. Initially, it has emerged in the field of defence, economic monitoring, planning and the deployment of information technology for elections, census, tax administration, etc. Meanwhile, Government of India established the department of electronics, followed by National Informatics Centre in 1977. In fact, the government had made great efforts to link all the district headquarters in the decade of 1980s (Nagaraja, 2016). On the other hand the government's intent towards collaborative computing can be traced back to the year 1987 when the planning commission launched its National Informatics Centre Network (NICNET) Programme under which the district and the state as well as central ministers were networked for sharing information in digital mode. Concerted efforts towards e- governance was taken only in the year 1998 with the constitution of National Task Force on Information Technology which directed all the government departments to spend 2-3 percent of their allotted budget for adopting IT.

In 2000, a high powered committee constituted under the chairmanship of cabinet secretary, directed all ministers and departments of the central governments to designate a senior officer as IT manager to act as the focal point for promotion of IT. The Department of Administrative Reforms and Public Grievances (DARPG) came out with a 12 point minimum agenda of e- governance which includes creation of basic Information and Communication Technologies (ICT) infrastructure and training. In May 2006 National e- governance Plan was established to monitor the progress and work of IT. The union government has approved the national e-governance plan (NeGP) comprising of 27 Mission Mode Projects (MMPs), 9 central (MMPs), 11 state (MMPs), and 7 integrated MMPs to boost e-governance initiatives in India. Department of information Technology (DIT) and Department of Administrative reforms and public grievances (DAR & PG) has formulated National e-governance plan (NeGP) with a vision to 'Make all public service accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man'. The smart way forward identified, the needs for e-governance to bring government closer to its citizen (G2C) (Borah, 2013).

The dissemination of services using Information Communication and Technology offers significant benefits in terms of costs, governance and effectiveness, while ICT leads to a transformation in work processes and service delivery. It also lowers transaction costs by enabling transparency and accountability. Some of the benefits of e-services are, fast and convenient, cost effective service delivery, transparency, increased participation by people (Tyagi, 2014).

In the context of Sikkim the concept of 'good governance' can be considered as a part of development process in view of bringing goodness and satisfaction in the state and to the society. It attributes to accountability, both financial and political, transparency, and easy access to information, popular participation in decision-making process, formulation and implementation of policies, responsiveness, efficient delivery system of goods and services, enforcement of rule of law. It also attributes to the combating of corruption, nepotism, red-tapism, favoritism and bureaucratic mismanagement. The state of Sikkim has taken various initiatives in order to ensure good governance in the state like accountability, audit, transparency, decentralization and e-governance etc. E governance as a concept is very favorable for all but the problem lies in the implementation due to various reasons like poverty, lack of proper information, technical illiteracy and lack of necessary infrastructure etc.

The state of Sikkim had set up department of Information Technology in the year 2000, with a vision of better governance through the use of information communication tools, income and employment generation through private sector participation and empowerment of rural communities. Some of the objectives of IT department are empowering citizens and making life easier for them through e-governance, improving productivity in the government departments through computerization and so on. The major services implemented by the state regarding e-governance in the state area establishment of Local Area Network and Wide Area Network (LANWAN), Single window Service System, Website, Sikkim Information Technology Exhibition(SIKITEX), Optical Mark Recognition (OMR) technology, Video surveillance at the Check post.

1.1 Statement of the Problem

In India, e-governance has been gaining importance with a focus on bringing efficiency and transparency in the administrative system using Information Communication and Technology. Likewise Sikkim implemented its own e-governance plan to bring accountability, transparency and efficiency. The application

of Information and communication technology in governance processes is supposed to facilitate the greater access to information of government policies, enhance communication and governing through a truly democratic process of sharing and participation of the citizens. Nevertheless, in Sikkim, the penetration of ICT is relatively better, but the participation of people i.e. the citizens accessing and availing ICT services via e-governance is said to be dismal. Though various initiatives have been taken by the government for the proper implementation of e-governance in the State like single window service system, development of websites of every department, land records computerization, RUSA mPARIVAHAN etc, but it is alleged that it has not reached to the masses properly.

Hence, dwelling on these issues, this research tries to explore and examine the evolution of e-governance in the State. Further this study have try to examine the level of accountability, transparency and efficiency which came through e-governance in the State and tries to trace the issues and challenges faced by the citizens, and the government administration in implementing e-governance in the East District, Sikkim following the survey schedule of two areas Kaputhang and Gangtok one has been taken from urban and one area has been chosen from rural in order to compare the access of e-governance programmes in those areas.

1.2 Review of Literatures

Bevir's (2009), *Key Concepts in Governance*, have describes about the various concepts of governance and one popular concept that has highlighted in the book is that governance enables theorists to explore abstract analysis of the construction of social orders, social coordination, or social practices irrespective of their specific content. It has further provided new ways of thinking about social coordination and patterns of rule as they appear in civil society, political institutions and the international arena. Some of the key concepts of governance here are accountability, bureaucracy, Centre- state relations, etc.

Rajiv and Arora's (2010), *Good Governance Stimuli and Strategies,* is an edited volume which provides ideas on good governance by different writers. The book has also highlighted how there was a shift of focus on governance from government. Countries like India and other developing nations are trying to promote good governance by developing large numbers of institutions and training programmes which shows that the concept of good governance is gaining more priority in this present era. Surinder K. Shukla describes nine characteristics of governance which are

participation, strategic vision, and rule of law, transparency, responsiveness, consensus, equity building, effectiveness and accountability.

Borah's (2013), *Implementation of citizen-centric e-governance projects in Assam,* highlighted the various schemes of e-governance all over India and particularly focused on the implementation of e-governance in Assam. It detailed about Nine Mission Mode projects under central government category which are MCA21, pension, Income tax, Passport, visas and Immigration, central excise, Banking, UID, E-office and Insurance. Assam government has initiated various projects including electoral polls, computerization of land record system etc. Lastly it lays down the significance of e-governance in the state in bringing efficiency in the administrative system. This study is only focused on the state of Assam.

Chettri's (2012), Decentralised Governance and Development in India, highlighted theoretical understanding on decentralization, its advantages and disadvantages, the book contained the details on democratic decentralization in Sikkim and also has highlighted about the initiatives taken by the state to ensure good governance in the state. The book in this study has helps to analysis some of the steps taken up by the state in terms of e-governance.

Dhameja's (2008), Contemporary Debates in Public Administration, has help to understand various conceptual analysis on Good Governance, the book has also help to clear ideas on various impact of e-governance on public administration, emerging challenges of Information Technology like Infrastructure, capital, access, language etc. Most importantly book has highlights the unceasing influx of information technology in the countries and the response of administrative to it.

Garg's (2011), Electronic Government Information System in Public Administration, provides an idea for shifting of focus from narrow electronic government to broader perspective of information government, the information flows within the public sector, between the public sector and citizens , and among citizens as a way to understand the changing nature of governing and governance in an information society. The book has further provided with the knowledge on goals, ideas and the making of e-government in India.

Molla and Mandal (2017), *Human Computer Interaction and E- Government: Components of the System and Its Evolution,* this article has mentioned the ways in which Information and Technology has been impacting interaction of citizens with the

government which has further increased the expectations of citizens from the government for their betterment.

Bygrave and Bing (2009), Internet Governance Infrastructure and Institutions is edited book defined internet governance as a large, complex and ambiguous topic. It deals with decisions about resource allocation. The history of the development of the internet in terms of its application, infrastructure and sources of inspiration has also been highlighted. The five models of internet governance are model of cyberspace, transnational institutions, code and internet architecture, national governments and law, market regulation and economics which can help for better understanding of internet governance.

Nagaraja (2016), *E-governance in India: Issues and Challenges*, this article mainly highlighted the various issues and challenges in implementing e-governance project it further highlighted recent initiatives of e-governance in India like Government to Governments (G2G), Government to Citizens (G2C), Government to Employees (G2E) and Government to Businesses (G2B). Some of the issues mentioned out here are technical issues, economic issues and social issues and challenges are trust, digital divide, cost and infrastructure.

Panneerval (2005), *E-Governance: A Change Management Tool*, this book deals with the implementation of e-governance particularly in the state of Gujarat, some of the major steps taken by state to increase the efficiency are smart card- based driving license, E-learning in Ahmedabad Schools, Optical Card Registration Certificate. The book is intended to serve a wide audience, especially those working in Public administration, universities and educational institutions etc. The book can be very helpful to garner ideas on how the State of Gujarat became successful in implementing e-governance and those strategies can also be adopted in the state of Sikkim for effective launching of programmes under e- governance.

Tyagi (2014), *E-governance- Emerging Dimension in India*, this article lays down the importance of information communication and technology in the functioning of government and to provide a SMART government which means Simple, Moral, Accountable, Responsive and Transparent system. It highlighted few Programmes in India like Bhoomi, Card, Setu etc. Further it has mentioned few strategies for complete implementation of e-governance in India which includes building technical infrastructure, institutional capacity, legal infrastructure, Centre-state partnership. E-governance is considered as reform in governance, facilitated by the creative use of

ICT. After the implementation of e-governance in India, administration has becomes more responsible and transparent to the citizen which is the key to good governance.

Yadav and Singh (2012), *E-governance: Past, Present and Future in India,* it has mainly highlighted the four pillars of E- governance which are Connectivity, Knowledge, Data content, Capital etc. Some of the e-governance projects in the field of education are online scholarship management system, AISES (All India School Education Survey), VHSE (Vocational Higher Secondary Education) examination management system.

The various literatures reviewed for the preparation of this research synopsis, provides an idea that there has been substantial work done on governance and the implementation of e-governance in India and some of the states like Gujarat, Assam and Kerala, etc, but in fact non- existent of similar research work research work on implementation of e-governance in Sikkim. Hence this study will help us to fill the gap and try to bring out Sikkim's e-governance plan and policies.

1.3 Conceptual Framework

Governance can be used as a specific term to describe changes in the nature and role of the state following the public sector reforms; it basically strives to create quality relationship between the government and citizens. In simple term governance relates to effective management of the affairs of country at different levels; secure the safety and welfare of its people and guarantee territorial integration (Mishra, 2003). The term governance was first used by the World Bank in its report on sub-Saharan Africa in 1989. In this report the Bank suggested that the programmes of fiscal adjustment and investment in that region were being rendered ineffective by a 'crisis of governance'. The Bank saw the weak role of the state and its institutions in implementing structural adjustment programmes. In 1992, World Bank document entitled Governance and Development defined governance as the way in which power is exercised in the management of a country's economic and social resources for development. It has further identified three distinct aspect of governance which is the nature of political regimes; the processes by which authority is exercised in the management of a country's socio-economic resources; and the government capacities on policy formulation and implementation as well as effective service delivery. In a report titled Our Global Neighborhood issued in 1995, has defined 'governance as the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse

interests may be accommodated and cooperative action may be taken. It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to be in their interest. It has four features, governance is not a set of rules or an activity, but a process; the process of governance is not based on control, but on coordination; it involves both public and private sectors; it is not a formal institution, but continuing interaction (Our Global Neighborhood, 1995). In order to understand the different perspective of governance Stoker (1998) has laid down five dimensions which are as follows:

i.   Governance refers to a complex set of institutions and actors that are drawn from but beyond government.

ii.   Governance recognizes the blurring of boundaries and responsibilities for tackling social and economic issues.

iii. Governance identifies the power dependence involved in the relationship between institutions involved in collective action.

iv.   Governance is about autonomous self-governing networks of actors.

v.   Governance recognizes the capacity to get things done which does not rest on the power of the government to command or use its authority. It sees government as able to use new tools and techniques to steer and guide.

While understanding Stoker's perspectives on governance it is concerned with network of relationships of three actors like state, market and civil society, which is an interactive process where government may like to impose its will but its acceptance will depend on compliance and actions of others. One institution has to depend on others which mean power dependence. In this relationships and networks, no institution can easily dominates it will depend on particular process of exchange. The monopoly of political institutions will dilute and the private institutions will play their role to fill the spaces which lead to formation of new institutions which finds expression in blurring of boundaries between the public and the private sector.

Thus, we can see that basically, governance means exercising authority to maintain order and meet the needs of the public within a certain range. The purpose of governance is to guide, steer and regulate citizens' activities through the power of different systems and relations so as to maximize the public interest. The United Nations Development Programmes viewed governance as the totality of the exercise of authority in the management of a country's affairs, comprising the process, complex mechanisms and institutions, through which citizens and groups articulate

their interest, exercise their legal rights and mediate their difference (UNDP, 2010). It encompasses the political, legal, economic, social and judicial administrative authority. In practical terms, it is interplay among the government, the informal sector and the society. While there is divergence in this holistic perspective of governance, there is a general agreement on the main actors or agencies of the governance project (Oyedele and Ayooluwa 2019). Governance basically focuses on the process of governing and interactions between various institutions there are several features of governance which also includes transparency, accountability and cooperation which characterized good governance. Good governance has emerged in the 1990s, especially in the era of growing neoliberal policies of liberalization, privatization, and globalization. The United Nations General Assembly (UNGA) Declaration advanced the concept of good governance on the establishment of a New International Economic Order (NIEO) in 1974 and the adoption of the Charter of Economic Rights and Duties of the state in the United Nations General Assembly (Pinto, 2010). In order to understand the meaning of good governance in a simplest manner, Kenneth Stowe had sets out six characteristics, political freedom; constitutional and judicial protection of the rights of the citizens; independent of judiciary; sustenance of socio-economic development; development of society through education and the last one is executive accountability to a freely elected legislatures (Stowe, 1992). Good governance is also characterized by accountable government, an independent judicial system, freedom of thought and expression, and above all, freedom of choice for its citizens. Good governance also implies a democratic structure, human rights, and freedom of media. According to World Bank 'Good governance' is epitomized by predictable, open, and enlightened policy making, a bureaucracy imbued with a professional philosophy acting in furtherance of public good, the rule of law, transparent process, and a strong civil society participating in public affairs. Good governance fosters strong state capable of sustained economic and social development and institutional growth (World Bank, 1997). The Overseas Development Administration (ODA), World Bank and UNDP Reports, 1993-95 have identified parameters for promoting good governance which are

i. Participation of the entire society in governance
ii. Legitimacy
iii. Accountability
iv. Openness and transparency

v. Competence demonstrates the capacity to create effective policy and decision-making process in order to achieve the efficient delivery of public interest.

Good governance cannot be achieved by government itself it needs cooperation and involvement of citizens, which involves both people who are entrusted with the responsibility to govern and the systems, which they put in place. Hence it is a continuous process not a one-time effort (Mishra, 2003). The advancement in Information Technology has led to growing global interaction, enormous power enjoyed by the government agencies and equally great expectations of people has been increased which brings out the challenge to minimize the mischief by those involved in the governing process and to make them provide good governance. Both the objectives can be achieved through the concept of e-governance, which in simple means using of ICT tools in providing services to the citizens in a more transparent and accountable process. According to the definition of the United Nation Educational, Scientific and Cultural Organization (UNESCO), "E-governance is the public sector's use of information and communication technologies with the aims of improving information and service delivery, encouraging citizen participation in the decision making process and making government more accountable, transparent and effective. 'E-governance comprises the use of information and communication, technologies to support public services, government administration, democratic processes and relationships among citizens, civil society, the private sector and the state'. E-governance also depends on the nature of the society. The more literate, aware and educated a society is, the improved use of electronic governance can be made. If the users of e-governance are not aware of its consequences it can also be misused. E-governance offers both positive and negative dimensions to the society. Increasing use of technology does not mean that the basic normative considerations of society and the fundamental relations between state and citizen will change (Dawes, 2009). It also provides a resourceful and cost effective Government by improving the internal processes of the government through administrative reforms, process re-engineering, modernization and deployment of Information Technology. E-Governance should be deploying to ensure an efficient, effective, productive, objective and accountable Government (Mishra, 2014). While governance describes the process of decision making, good governance may be defined as the processes that guide the political and socio-economic relationships, with commitment to democratic values, trusted services and just and honest business. E-governance on the other side

has been recognized as a vital force for transformational improvement in quality, efficiency and effectiveness of governance. A governance strategy driven by information and communication technology has to be developed and applied with the objective of bringing in more transparency and increased accountability (Bala and Verma, 2018). With this realisation the Government of India established department of Electronics in the year 1970 followed by establishment of National Informatics Centre (NIC) in the year 1977 which led to the implementation of various programmes and schemes focusing mainly on the good governance through e-governance initiatives for the development of accountability, efficiency and transparency mainly for the betterment of citizens for speedy and efficient administration.

Sikkim being the 22nd state of India has also welcome the e-governance initiative of India by establishing the department of Information and Technology (IT) in 2006, with a vision for better governance through the use of Information Communication Tools, income and employment generation through private sector participation and empowerment of the rural communities and also for the efficient administration. The state has further initiated various steps for providing better services to the citizens but it is alleged that it has not reached to the masses in a proper way. Hence, the study will try to bring out the e-governance initiatives of India in general and Sikkim in particular. Further it will also try to examine the various programmes and changes that have been occurred in the state after the implementation of e-governance with the help of survey schedule in East District, Sikkim.

1.4 Rationale and Scope of the Study

E-governance is becoming a buzzword (Nagaraja, 2016).Various studies has been done in this area to study the implementation of e-governance in India and other states but the present study will focus on the evolution, implementation, challenges and the present state of e-governance in Sikkim particularly focusing on the East District, Sikkim. The study is relevant to bring out the issues and views of citizens regarding e-governance as it was initiated mainly for the betterment of citizens. The study as mentioned before will focus on East District, Sikkim following the survey schedule of two areas namely Gangtok and Kaputhang.

1.5 Objectives:

The present research work is designed keeping following objectives:

1. To discuss the process of evolution of e-governance in India in general and Sikkim in particular.

2. To examine changes and developments after the implementation of e-governance with special reference to East District, Sikkim.

3. To highlight the challenges that comes in the way of effective implementation of e-governance in Sikkim.

1.6 Research Questions:

1. How the concept of e-governance evolved in India and Sikkim?

2. What are the various changes and developments occurred after the implementation of e-governance with reference to East District, Sikkim?

3. What are the challenges and problems that come in the way of effective implementation of e-governance in Sikkim?

1.7 Research Methodology

The study has applied both qualitative and quantitative methodology, based on collection of materials both from primary and secondary sources. The primary data has been collected from the study of two areas i.e. Gangtok and Kaputhang village which are selected from urban and rural respectively in order to compare the performance of e-governance in both the areas of East, Sikkim following the survey method. The purposive sampling method has been used to collect data, the sample of 80 respondents were chosen 35 each from both the area and remaining 10 consisted of officials responsible for the implementation of e-governance. For the purpose, intensive interviews have been done of the selected respondents. The respondents collected purposively are consisted of officials responsible for implementing the e-governance Programme in the District as well as the citizens from cross section of the society. The secondary data have been collected through content analysis of books and reviewing different articles and journals. The study also examined government policies, documents relating to the implementation of e-governance in Sikkim.

1.8 Chapterization:

Chapter I Introduction: This chapter deals with conceptual framework of the concept of governance, good governance and e-governance and the problem to be probed, the scope of the study, review of literature and the method to be followed for the study.

Chapter II Evolution of E-governance in India: This chapter has dealt with the evolution of e-governance in India, the challenges faced by the country to implement e-governance and the various programmes launched by the government of India for the continuation of this type of governance.

Chapter III E-governance in Sikkim: Evolution, Challenges and Programmes: This chapter particularly deals with the evolution of e-governance in Sikkim, changes and various programmes launched by the state government for implementing this system. The chapter is based on data directly collected from the government documents of the state which includes Transport Department, Education Department, and Information Technology Department etc.

Chapter IV: Implementation of E-governance in the East District, Sikkim: This particular chapter is based on survey schedule conducted in two areas of East, District which are Kaputhang and Gangtok, the response of the respondents directly obtained from the field has been examined and interpreted in the chapter. On the basis of field data the chapter further has highlighted the various changes and developments occurred in the district after the implementation of e-governance along with that by analyzing the views of respondent suggestions has been made.

Chapter V Summary, Findings and Concluding Observations: The chapter includes the summary of findings and makes concluding observations including suggestions for better e-governance in the state.

Chapter 2

Evolution of E-Governance in India

Introduction

India, being the largely populated and geographically diverse nation, has faced the real challenges of reaching to every citizen at the grass root level and provide them with information and access to different government policies, schemes and services at a suitable time. This has further made it difficult for the citizens to utilize the full potential of government initiatives. The infusion of Information and Communication Technology (ICT) has played a major role in overcoming this challenge. The transformation in the quality in delivery of services to the citizens by the government has been more prominent in recent times with the arrival of e-governance (Bala and Verma, 2018).

E-governance has become a catchword and has attracted many scholars and policy makers with its efficient, accountable and transparent features all over the world. It is a governance strategy to drive ICT with the aim of bringing more accountability and transparency. E-governance has been recognized as a vital force for transformational improvement in quality, efficiency and effectiveness of governance. It possesses all the elements of good governance, hence it can be considered as the key to good governance. Since the concept of e-governance is associated with the concepts like governance and good governance, it is important to trace the history of these concepts mentioned above. Governance, good governance and e-governance are increasingly being used in development literature. Governance describes the process of decision-making and the process by which decisions are implemented. Good Governance may be defined as the processes that guide the political and socio-economic relationships, with commitment to democratic values, trusted services and just and honest business (ibid).

E-governance on the other side is not only about technology. It is about people, processes, and results using information and communications technologies (ICT) to improve the transparency, efficiency, and effectiveness of public institutions. E-governance is composed of two terms electronic and governance which show the depth of relationship between these two different concepts, which in simple can be understood as the application of IT to the processes of government functioning to bring smart and good governance for the betterment of citizens. E Governance could

be defined as an IT-led reconfiguration of public sector governance and how knowledge, power, and purpose are redistributed in light of new technological realities. To make it simpler e-governance also refers to governance processes in which Information & Communications Technology play a significant role. The role played by ICT could be wide ranging in delivery and standard of governance services; to how people access such services; and the participation of people in governance sphere. In other words, e-Governance refers to the use of IT by government agencies such as Wide Area Networks, the Internet, & Mobile Computing that have the ability to transform relations with citizens, businesses, and other arms of governments. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with businesses and industry; citizen empowerment through access to information; or more efficient government management.

2.1 E-government and E- governance

Many scholars and writers have interchangeably used the term e-government and e-governance, despite having some differences in the meaning. Before differentiating what exactly e-government and e-governance means one must have a clear idea on what 'government' and 'governance mean'. The understanding of governance as the act of governing has been replaced with a model of government as an actor in the process of governance. If as this suggests government is a subset or a component of governance within a given polity. This has implications for the impact of technology. If governance without the 'e' comprises many stakeholders, the addition of ICT to the mix is likely to change further the group dynamics, the possibilities for interaction and the nature of communication, the balance of power between and possibly the number of stakeholders (Bannister and Connolly, 2012).

Government is an institutional superstructure that society uses to translate politics into policies and legislations on the other hand governance is the outcome of the interaction of government, the public service and citizens throughout the political process, policy development, programme design and service delivery. E-governance is beyond the scope of e-government. While e-government is defined as a mere delivery of government services and information to the public using electronic means, e-governance allows direct participation of citizens in government activities. E-government is the application of ICT to improve the efficiency and accountability of government, whereas, e-governance depends on the use of ICT by mobilizing

15

government resources, and utilizing the internal information resources by the government employees with the help of citizen's acceptability to the changes taking place to provide better services to them (Panneervel, 2005). E-governance is not just about government web site and e-mail and service delivery over the Internet. It is not just about digital access to government information or electronic payments. It will change how citizens relate to governments as much as it changes how citizens relate to each other (C, 2012). E-governance is such a crucial IT driven initiatives that will allow the government to make information easily available, transparent and in an interactive manner. It thus helps to improve the existing status of the administration by use of information technologies. E-government is organizing public management in order to increase efficiency, transparency, accessibility and responsiveness to citizens through the intensive and strategic use of information and communication technologies in the inner management of the public sector (intra and inter governmental relations) as well as in its daily relations with citizens and users of public services. E-governance on the other side is an ICT-enabled tool to achieve good governance it integrates people, processes, information, and technology in the service of achieving the aim of good governance (Malik, Dhillon and Verma, 2014).

2.2 Four Important pillars of e-governance are:

E-governance is not about 'e' only but about Governance. It is not about computers and websites, but about services to citizens and businesses. E-governance is also not about translating processes; it is about transforming them. IT is concerned with the transformation of government, modernization of government processes and functions and better public service delivery mechanisms through technology so that government can be put on an auto-pilot mode. The four pillars or factors on which e-governance works are:

People:

Process:

Technology:

Resources:

E-governance services can be shared between citizens, businessman, government and employees, which are also considered as models. There are four models of e-governance which are as follows

1. Government to Citizens (G2C): the government provides one-stop, on-line access to information and services to citizens. It enables citizens to ask

questions of government agencies, file income taxes, renew driver's license, driving test etc. in addition government may upload various information on the web, provide downloadable forms online, job vacancies.

2. Government to Government (G2G): it includes services which are shared between the governments includes sharing of information between police departments of various states, exchange of government documents, storages of governmental documents. It aimed at improving the efficiency and effectiveness of overall government operations.

3. Government to Employees (G2E): this model shares services between government and employees which helps in increasing the transparency between them. The service includes online attendance, online filing of complaints and working forms etc.

4. Government to Businessman (G2B): this model helps to increase bond between private sector and government it is a two way interactions and transactions, government –to-business and business-to-government. Two key G2B areas are e-procurement and auctioning of government surpluses. It also includes some of the services like payment of bills and penalty, sharing of information, rules and data, complaints. (Yadav and Singh, 2012).

According to Gandhi and Kumbharana, evolution of e-governance in India can be categorized into three phases first phase was from 1947-1984: information based e-governance, second phase was from 1984-1995: personal computer based e-governance and third phase is from 1995- onwards: internet based e-governance. Further they have also recognized the four pillars of e-governance which are as follows

1. Connectivity: This is required to connect the people to the services of the government. There has to be a strong connectivity for an effective e-governance.

2. Knowledge: This refers to the knowledge of IT, which includes employee who can handle the e-governance in an efficient way.

3. Data Content: There is the requirement of database, which content data related to government services.

4. Capital: It refers to money used by government to provide their services.

The concept of e-governance has its origin in India during the seventies with a focus on development of internal government applications in the areas of defence, economic

monitoring, planning and the deployment of Information Technology to manage data for intensive functions related to elections, census, tax administration (Kumar and Bhanti, 2012).

India was one of the earliest to respond to the possibilities of using ICTs in development administration in the developing world. It may be noted that the Indian State began to design and execute rural development programs with a relatively visible ICT content in the 1970s, while international attention on the potential of harnessing ICTs for developmental activities is a much new phenomenon. Several attempts have been made to use ICTs for improvising development planning, a key area of State action in the pre-liberalization era (Krishnan, 2013). There were also the various challenges faced by the government of India while implementing the e-governance like low level of literacy, low per capita income, insufficient infrastructure and the lack of knowledge among the government employees and the citizens about the e-governance.

In 1970 the Government of India (GoI) established Department of Electronics and subsequently in 1977 GoI took first major step towards implementation of e-governance by establishing, National Informatics Centre (NIC). By 1980 most of the government offices were equipped with computers but their role was confined up to word processing. With the span of time and advent of ICT, the GoI took a remarkable step for fostering e-governance by launching the national satellite based network National Informatics Centre Network (NICNET) in 1987 followed by District Information System of the National Informatics Centre (DISNIC) and NICNET was the first government informatics network across the world equipped with facilities like Telecommunication Network (TELNET), File Transfer Protocol (FTP), internet along with database services GISTNIC and MEDLARS. Up to 1990, NICNET extended its extent from state headquarters to district headquarters (Bala and Verma, 2018).

2.3 The National e-Governance Plan (NeGP).

In year 2000, the Government of India (GoI) established Ministry of Information Technology and identified 12-points minimum agenda for e-governance, further to improve IT performance and productivity. The Government of India approved the National e-Governance Plan (NeGP) Mission Mode Projects, which was formulated by the Department of Information Technology (DIT) and department of Administrative Reforms and Public Grievances (DARGP) to give a boost to e-

governance initiatives in India on 18 May 2006 which seeks to improve delivery of government services to citizens and business establishments with the vision to "Make all government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man (Sapru and Sapru, 2014).

MMPs take a holistic view of e-governance initiatives across the country, integrating them into a collective vision and a shared cause. Around this idea, a massive countrywide infrastructure reaching down to the remotest of village is evolving, and large-scale digitalization of records is taking place to enable easy, reliable access over the internet. The cornerstones of NeGP are citizen centricity, identification of services & service levels, centralized planning & decentralized implementation and Public Private Partnership (PPP). In order to promote e-governance in a holistic manner, various policy initiatives and projects have been undertaken to develop core and support infrastructure components are State Data Centers (SDCs), State Wide Area Network (S.W.A.N), Common Services Centers (CSCs), and National e-governance Service Delivery Gateway (NSDG), State e-governance Service Delivery Gateway (SSDG), Mobile e- governance Service Delivery Gateway (MSDG). The important support include Core policies and guidelines on Security, HR, Citizen Engagement, Social Media as well as Standards related to Metadata, Interoperability, Enterprise, Architecture, Information Security etc (Garg, 2011).

2.4 Mission Mode Projects (MMPs)

There are total 44 numbers of MMPs functioning across the country which are further divided into central, state and the integrated one.

Table 2.1: Showing various Mission Mode Projects launched by Government of India

Central MMPs	State MMPs	Integrated MMPs
MCA21	Agriculture	CSC
Income Tax (IT)	Commercial Taxes	e-Biz
Passport	e-District	e-courts
Immigration Visa and foreigners Registration and Tracking	Employment exchange	e-Procurement
Posts	Land Records (NLRMP)	National e-Governance Service Delivery Gateway
Pension	Municipalities	Indian Portal
Common IT roadmap for PARA military force	e-Panchayats	Financial Inclusion

e-sansad	Police (CCTNS)	Roads and Highways
Central Excise & Customs	Road Transport	Information system
Banking	Treasuries computerization	Social benefit
UID	PDS	National GIS
e-office	Education	National mission on education through ICT
Insurance	Health	Urban governance
	e-Vidhaan	e-Bhasha
	Rural Development	
	Women and Child Development	
	Agriculture 2.0	

Source: Ministry of Information Technology, Govt. of India

The above table shows various MMPs launched by government of India which has been divided into three different categories Central, State, integrated. Many of these projects have been successful in the country as well as state.

The governments at the national and the state level seek to harness their potential and create new dimension of economic and social progress through bringing change in traditional governance structure to e-governance system. E-governance can helps to renovate the relationship between public, private, sector and government and enables better policy outcomes, high quality services and greater engagements with the citizens in the country. Although central government has adopted certain measures to assist states in perusing various e-governance initiatives the state governments themselves have undertaken massive initiatives to transform their governance systems based on it. The State of Andhra Pradesh is the national leader in e-governance initiatives in the country. Several successful e-governance initiatives have been turn out and are recommended for application in other states also. The Andhra Pradesh is the IT hub for a number of IT and ITES service providers, which puts the state in a strong position in infrastructure development and implementation (C and Balraj, 2014). The Andhra Pradesh has taken the initiatives of e-governance known as the Andhra Pradesh State Wide Area Network (APSWAN), which is a network for data, voice and video communication. Through this network, it launched the Twin Cities Network Services to provide various services to citizens in two main cities (Hyderabad and Secunderabad) through one stop Integrated Citizen Services Centers (ICSCs) it is the basic information highway for government to citizen and government to industry interface (Chowdary, 2008).

Karnataka is another state that has undertaken an ambitious e-governance programme. The state government has begun to computerize most departments, especially the education department. Its major city, Bangalore, is known as an IT center attracting companies from advanced industrial nations; and its Indian Institute of Information Technology has a very advanced infrastructure and it facilities. Some of the major e-governance projects initiated by government of Karnataka are Bhoomi project, Bangalore One, Smart School project and KAVERI (Karnataka Valuation and e-registration project (Drogaraju and K, 2015). Similarly, the Government of Tamil Nadu is strongly committed to transforming the state into an advanced system of e-governance by computerizing its major departments and building technical capacity, with the ultimate objective of restoring public confidence and creating an effective relationship between government and citizens. The state has implemented number of e-governance initiatives which are gaining momentum which includes; online employment, Public Utility Forms, Online Electoral Roll and website directory etc (C and Balraj, 2014).

The Success of e-governance lies in increasing the number of electronic interactions between citizens and the government and not merely in building the infrastructure of e-governance, some of the North Indian states has also taken the various initiatives for the implementation of e-governance services in the state, major initiatives taken by Uttarakhand includes e-District, Uttarakhand State Wide Area Network (UK-SWAN), Devbhoomi, Computer Technology in Education, National Population Register (NPR) and Aadhaar (Kandpal and Bisht, 2013). The Government of Uttar Pradesh has adopted various e-governance schemes which is mainly for the women in the state to create an environment of equality they have also adopted Business Process Re-engineering in their processes to achieve the best quality results and benefits of the scheme, these initiatives are really changing the life of women drastically which empowers them digitally and improve their socioeconomic status, and breaks the traditional approach to treat women. Some of the state initiatives are Rani Laxmi Bai Mahila Samman Kosh Portal (RLBMSP), Scholarship portal: SAKSHAM, Integrated Grievance Redressal System (IGRS-jansunwai), and Integrated Pension portal. These initiatives not only empower the women but also strengthen the society (Gupta and Rajan, 2017).

The Directorate of Information Technology, Government of Maharashtra was established in 1998 to achieve the goals of ICT and e-governance in the state.

Maharashtra is the first state in the country to have a dedicated e-governance policy published on 23, September 2011 in local language i.e. Marathi and English. Some initiatives of e-governance services in the state are Common Service Centre, Public Distribution System and Land Records and so on. Some of the challenges of e-governance in Maharashtra are funding, infrastructure and politics (Kumarwad and Kumbhar, 2016). The state of Himachal Pradesh has also adopted various initiatives which include HIMRIS-Himachal- Registration Information System, e-Pension (Pension Disbursement system (Singla and Aggarwal, 2009).

The state of West Bengal have taken out various initiatives to provide the facilities of e-governance in the state, eAbgari project is one of them it is a strategic administrative reform initiated by West Bengal Excise Directorate leveraging state-of-the-art modern technology. It has enabled seamless online communication among all excise officials across the State, all licensees, administrative departments & other stakeholders through workflow based systems hosted on state excise portal. eAbgari has been the single most transformational factor in which the Excise Department functions has greatly increased the department's enforcement and regulatory capabilities through ICT driven process reengineering. E-district is another project which offers services related to Certificates, Ration card, Pension etc. The other services are employment services, Vehicle registration, E-learning.

2.5 E-governance in the North East States of India

Governments are using tools of Information and Communication Technologies to provide various services efficiently. ICT has provided the society a vast area of network communication capabilities e.g. people can communicate with each others in different countries using technologies such as internet, messaging and video conferencing. The widespread social network websites also allow users from all over the world to remain in contact and share different ideas. Small towns and rural areas due to long distance were left behind for availing such services; ICT makes it possible to reach in faraway places. This creates transparency and minimizes the cost of availing the services. Various Government services can be easily provided to remote places at very low cost through computer and internet. Today this can be done in easier way by using local language software. In modern world it seems impossible to improve the social and economic life of rural people without implementing such e-governance programmes. E-Governance not only helps in good governance, but also improves the participation of common citizen in governance and strengthens the

democracy. Indian government plans to provide all services into electronic means at national, state and local level.

In the initial phase, the induction of ICT in governance has been more or less un-organised in northeastern-region. The process of e-governance was initiated by National Informatics Centre by establishing its centre at Guwahati in 1986 aiming at development of ICT based infrastructure (Chetia, 2016). The Department of Electronics and Information Technology (DeitY), government of India has also taken an initiative to prepare Northeast for Digital India creating e-governance capacity building programmes for Northeast ails at enhancing skills of government officers in the state to lead, support, manage and execute MMPs under NeGP and other projects.

Assam Electronic Development Corporation Limited (AMTRON) is a nodal agency of government of Assam for the implementation of various state level and national level projects these are ARBAS, ASWAN, CSC, SDC etc. AMTRON in collaboration with BSNL have organized various state level awareness programmes (Borah, 2016). The state government has initiated many e-governance projects including Electoral Rolls computerizations system, BPL list, Pass port computerization system, computerization of land record system, Prithvi Geographical information system, Griha Lakshmi computerized public distribution system, online tender information system, pay- roll computerization system etc.

The Department of Administrative Reforms & Public Grievances (DAPRG), Ministry of Personnel, Public Grievances & Pensions and Ministry of Electronics & Information Technology (MeitY), Government of India in collaboration with the Government of Meghalaya organized the 22nd National Conference on e-Governance at Shillong during 8-9 August 2019. The theme of the conference was "Digital India: Success to Excellence''. The conference further adopted 'Shillong Declaration' calls for

- Improving citizen's experience with government services by promoting timely implementation of India Enterprise Architecture (IndEA).
- Steps have to be taken to improve connectivity in North eastern states of India by addressing issues of telecommunications connectivity at grassroots level.
- To enhance activities of Electronics Sector Skill Council in NE states.
- Developing India as a global cloud hub and facilities development of government applications and database on Cloud by default.

- Promoting Digital India Projects with focus on Smart Villages and Smart Cities through Startups and Smart Entrepreneurship.

2.6 Conclusion

The Government of India considering geographical location, population factor and many other hindrances in providing services in efficient manner to the citizens, have taken out various initiative in order to deliver services in very transparent, efficient and accountable manner. E-governance is one of them it is also considered by many policy makers and scholars as the key to good governance which is required in this era of technological competition. E-governance has the tremendous capability of speeding up the social, political and economic development especially in developing countries across the globe through multiple advantages. It mainly focuses on three main areas, from governance point of view it enhances transparency and encourages democratic values, it tries to make public services efficient, cost effective and at last it ensures simplicity, efficiency and accountability in managing voluminous information and data effectively. The Indian government has taken out various steps to provide every service in digital system to reach every citizen at time, taking example of the centre state governments has also implemented various schemes under e-governance which is suitable for their state. The implementation of e-governance was not so easy in India due to various challenges which arise on the way like illiteracy, lack of awareness about computer knowledge and internet facilities, lack of proper infrastructure facility, geographical differences etc. But the government tried their best to overcome those challenges and successfully implemented various projects and policies under it. Likewise Sikkim has also followed various schemes under central government and some schemes have been taken by the state government to deliver better services to the citizens and the detailed of the scheme will be highlighted in the next chapter.

Chapter 3

E-Governance in Sikkim: Evolution, Challenges and Programmes

Introduction

Governance basically focuses on the process of governing, involving interactions between various formal and informal institutions as well as influencing the policies and decisions that concern public lives. Likewise good governance advocate freedom of information, a strong legal system and efficient administration and the process to achieve objectives like alleviation of poverty, creation of productive employment and social integration. Good Governance has become an important factor for the sustainable development in the present century. Sikkim has also adopted various measures and efforts for good governance in the state like;

- Accountability: Gram Sabha is considered as one of the most important measures of accountability adopted by the state. Vigilance committees are another step taken by the state in order to check the rent seeking practice and corruption. Audit plays an important task in ensuring financial administration.

- Transparency: It refers to conducting of every public business with openness. State has adopted various steps to ensure transparency like, Right to Information.

- Participation: It is an important factor of good governance. various steps has been taking out by the government to increase in the number of participation like by providing reservation of seats to certain category like scheduled tribes, scheduled castes and women.

- Legitimacy: It emphasizes on the need for a system of governance, which operates based on the interest of the governed not in the interest of the rulers or the elected rulers.

- Decentralization: It is an important ingredient as it helps in sharing of power from centralized authority to local government institution as it helps in effective functioning of local self institutions.

- Civil Society: Democratic institutions depend on three important pillars - government, business and civil society. Likewise some of the measures taken by the state government in uplifting civil society are establishment of educational institutions, existence of open and free press, NGOs.

- E-Governance: It refers to the use of Information and Communication Technology by the administration in providing efficient and transparent services to the citizens in easiest ways as possible. Various e-governance initiatives have been taken out by the state for the welfare of the citizens but most important is the establishment of Information and Technology which leads to the roads to e-governance in the state (Chhetri, 2012).

E-governance as considered by many scholars as key to good governance as it tries to provide efficient, transparent and accountable services to the people. There are four models of e-governance and Sikkim has adopted all the models for the efficient functioning of the state administration, like Government to Citizens, Government to Business, Government to Employees and Government to Government. E-governance not only provides information about various activities of a government but also involves citizens to participate in government's decision making process (Malik, Dhillon and Verma, 2014). Building trust between governments and citizens is fundamental to good governance. Information and Communication Technology (ICT) has been recognized as an essential tool for achieving the new Sustainable Development Goals (SDGs) set by United Nations for the welfare of mankind. It is globally recognized that ICT promotes good governance. ICT can help build trust by enabling citizen engagement in the policy process, promoting open and accountable governance. Through e-governance, government services can be made available to citizens in a convenient, efficient and transparent manner (Sharma, 2016).Various departments of Sikkim have taken an initiative to provide e-governance services to the people and also to make their work easier in order to avoid delay and harassment to the citizens.

3.1 Information and Technology Department of Sikkim

In Sikkim, the Department of Information Technology (DIT) was set up in the year 2000 to implement the IT policy of the Government of Sikkim notified vide gazette notification no: GO/3/DI/99 dated 31.03.1999.It has been said that the establishment of Department of Information Technology led to the evolution of e-governance in Sikkim. The vision of IT Department was "Better governance through the use of Information Communication Tools, income and employment generation through private sector participation and empowerment of the rural communities". With the objective of realizing transparency, accountability, and efficient governance in socio-political spheres, the Government of Sikkim has implemented various projects and

policies under e-governance under the guidance of Government of India. As e-governance refers to Simple, Moral, Accountable, Efficient and Responsible government, Sikkim has also taken different steps in the field of e-governance to provide easier and accountable services to the citizens. The Department has taken some significant steps towards promotion of e-governance in the State. The various Mission Mode Projects (MMP), under the National e-Governance Plan (NeGP), has been implemented by the Government of India (GoI), in the State of Sikkim, with the objective of providing service to the citizens at their doorsteps. It is working in line with the Mission objectives to promote and facilitate the effective integration of technology with governance, through planning, programming, training, consulting and other support activities. Some initiatives of IT department are taken under the guidance of Government of India and some projects are under the supervision of state governments. There are various projects and policies formulated and implemented under e-governance in the state like development of websites for every departments of State where citizens can avail the latest information and notification regarding the various services. Some of the ongoing projects of Information Technology departments are as follows:

Table 3.1: Showing various e-governance initiatives of IT department, Sikkim.

Sl.No	Name of the Project	Department	Description about the projects
1	Data Digitalization for State wide Rollout of e-District MMP, Sikkim	Department of Information Technology, Govt. of Sikkim	Development of data scanner for converting hand written documents to a digital format, application on an android Tablet with high resolution camera.
2	System Recruitment Solution Design including Development of Software, Data Entry and report Generation for socio-Economic Census 2014	Department of Economics, Statistics, Monitoring & Evaluation (DESM&E), Govt. of Sikkim	Development of web and tablet based software for data collection for Census 2014. Android based Tablet application was generated to collect household information where data can also be collected in offline mode i.e without internet. Backend web was developed for some functions like creation of login details of field officer, viewing list of household can be traced by using Google map.
3	Data Migration tool for COI Database	Department of Information Technology, Govt. of Sikkim	It is an application that helps in migration of data from different database to uniform database. It also helps in migration of COI database Hosted at various DCs to a centralized location at State Data Centre, Data management and testing of migration tool.
4	E-Challan	Sikkim Police Headquarter	The application facilitates real time application integration with a backend server which records every challan details. Traffic officers can access vehicle/license details by entering vehicle/license number.
5	State Data Sharing and Accessibility Platform (SDSAP)	Department of Information Technology, Govt. of Sikkim	Developed a distributed web application system for collection of data of all the departments. It facilitates data entry, editing, deleting and updating of data. Development of dashboard for administrators and officials. Employee Central Management of Information (ECMIS) is a complete solution package which provides information of all departments' employees.

6	State Direct Benefit Transfer Portal	DESM&E	State DTB portal is a dynamic platform which provides information and data related to DTB schemes and programs. It displays data which are under DBT, and all UID/Aadhaar related issues. DTB cell Manages schemes, Manages Schemes data, Manages State information, DBT success story.
7	Sikkim Government Services Portal (SGSP)	Department of Information Technology	
8	State portal (www.sikkim.gov.in)	Department of Information Technology	The objective behind the Portal is to provide a single window access to the information and services being provided by the Government with comprehensive, accurate, reliable and one stop source of information ranging from health, education, employment, finances etc.
9	Open Data Centre	Department of Planning	To modernize the Development Planning, Economic Reforms and North Eastern Council Affairs Department, the state government took an initiative to connect people, captured data to enable informed decision. Some of the steps were process automation, process re-engineering.
10	Project Monitoring System	Department of Planning	To monitor project that empowers project owners, planners, managers, engineers and other stake holders to visualize various variables of project delivery like progress, cost resources.
11	REMC	Forest Department	The REMC application is a system where the research applicant can apply for a permit to conduct a research in the state of Sikkim or also renew the old permit to ensure benefits of the research in the Forest and Wildlife Managers.
12	Development of Websites, Business application system and data entry Module and reporting module for various surveys of DES&ME	DESM&E	Development of websites for DESM&ME

| 13 | Installation of video surveillance unit, under Border management and security system | Department of Information Technology | Border Security remains a key homeland security challenge as new risks & threats emerge. Two key missions for border security at the Check posts is to maintain secured state borders for the facilitation of legal commerce, while stopping the traffic of illegal weapons, people, drugs and property. This can be achieved by including images captured by License Plate Reader (LRP) and Driver Imaging System (DIS) surveillance cameras strategically placed at Rangpo Checkpoint border. These integrated images will be supplied to the concerned department with the purpose of enhancing the agency's investigative tools used for interdiction missions. The system has also been installed at the Melli Check Post. |

Source: Information Technology Department, Govt. of Sikkim

The above table shows the various ongoing projects/plans launched by department of IT, Govt. of. Sikkim for providing various services to the citizens as well as employees, business governments, as it follows the four models of e-governance. Some of the projects shown in the table have been implemented by other departments but it has been initiated by IT department so it has been put together. Though there are other steps and initiatives taken up by the IT department of Sikkim in terms of e-governance but those projects have been out dated or it has become non-functional in the state.

3.2 Land Revenue and Disaster Management Department

Land Revenue and Disaster Management Department is concerned with revenue administration in the state which encompasses survey and settlement operations, maintenance and up gradation of Land Records and enforcement of Land Laws in the State. The Department also provides immediate relief to the victims of disaster and is responsible for disaster prevention, mitigation and preparedness and as a nodal agency; it has been implementing various Disaster Management Programs in the State. The department has carried out various e-governance initiatives in order to provide efficient services to the citizens which are as follows.

- National Land Records Modernization Programme (NLRMP)

The Government of India have decided to implement the Centrally-Sponsored scheme in the shape of the National Land Records Modernization Programme (NLRMP) by merging two existing Centrally-Sponsored Schemes of Computerization of Land Records (CLR) and Strengthening of Revenue Administration and Updating of Land Records (SRA&ULR) in the Department of Land Resources (DoLR), Ministry of Rural Development. The main objective of the NLRMP is to develop a modern, comprehensive and transparent land records management system in the country with the aim to implement the conclusive land-titling system with title guarantee, which is based on four basic principles, i.e, (i) a single window to handle land records (ii) the mirror principle, which refers to the fact that cadastral records mirror the ground reality, (iii) the curtain principle which indicates that the record of title is a true depiction of the ownership status, mutation is automated and automatic following registration and the reference to past records is not necessary, and (iv) title insurance, which guarantees the title for its correctness and indemnifies the title holder against loss arising on account of any defect therein. The main components of NLRMP are:

1. Computerization of land records
2. Survey/resurvey and updating of the survey & settlement records
3. Computerization of Registration
4. Modern record rooms/land records management centre at block level
5. Training & capacity building
6. Core GIS
7. Legal changes • Amendments to The Registration Act, 1908 (NLRMP cell, LRD&MD, Govt Sikkim, SITCO building, Deorali).

- File and Record Management System (FARMS)

  FARMS software is a 'Government to Employee' model of e-governance which has been designed, developed and installed, which facilitates Land Record Room Keeper to register and capture all the file stored location details systematically with similar details maintained by the compactor. Barcode label has been generated for easier location of registered files, which provides efficient service. Integration and installation of security equipments in modern record room in SDM offices with technical support and maintenance.

3.3 Transport Department

The system of vehicular transportation was introduced in Sikkim in 1944 known as Sikkim state transport, subsequently this was renamed as Sikkim Nationalized Department in 1955. State transport sector is looked after by the road transportation corporations in Sikkim which is directly taken care by Transport Department. Some of the major e-governance initiatives of this department are as follows:

- Intelligent Transport System (ITS): The Department has implemented ITS system which has benefitted and increased the efficiency of services to passengers. It has modules like tracking fleet, status of current vehicles and determination of route taken and time elapsed at various stoppages, vehicle health monitoring system etc. It now covers 40buses under JNNURM Scheme.

- Integrated Depot Management System (IDMS): IDMS focused mainly on computerization of following process like vendor identification and registration, receipt, scheduling record of earning, vehicle tracking system etc.

- Biometric Attendance System: Digitalization of attendance record keeping by the Department in order to avoid delays.

- Statistical Division: The statistical division has been set up in the Department to maintain all the relevant details pertaining to the Department including fleet strength, maintenance of records, project information etc.

- mPARIVAHAN: The Motor Vehicle Division of Transport Department has implemented citizen centric facilities through mPARIVAH App, which can be used to easy access of important documents like driving license, vehicle registration certificate.

- Online Tax Payment System: Online payment of token tax, driving license etc, with regards to motor vehicles, has been effectively implemented (Transport Department, Govt. of Sikkim).

3.4 Education Department

Quality education has been the key concern to the Government's policies in Sikkim. The Education department of Sikkim looks after all the affairs directly linked with education system like recruitment of employees for the Department, various schools and colleges, state university and so on. In general it can be said that each and every things related to education sector comes under education department of the state. There are various e-governance initiatives taken up by this department in order to increase citizen participation in this sector. Some of the steps are as follows:

- E-Education Infosys: This project was taken up for education department with the objective of enabling all the stakeholders, the departments as well as individual institutions to monitor all the activities relating to development of education in the state. It helps in eliminating all the gaps and barriers of existing system by using ICT.

- Rusa Online Admission: Rashtriya Uchchatar Shiksha Abhiyan (RUSA) is a Centrally Sponsored Scheme (CSS), launched for the development of higher education at the state level and enhancement of allocations for the state universities and colleges. The online admission system became a common platform where the candidates apply for any college based on their preference through Education web portal, which reduce the burden for candidates to visit college wise to apply for the same. Notification regarding selection of candidates, admission date, counseling date is circulated through SMS, mail etc. It has been found that the system has

further increased the number of candidates applying for the colleges as most of the barrier has been reduced like travelling, visiting colleges, conditions of roads, sitting in queue, and as such, it is time saving.

- Mid Day Meal: Mid day meal scheme is the largest school feeding programme to the primary and upper primary school children. Management Information System has been developed for MDM, to facilitate to plan for the allocation of grains to the schools and to keep track about funds allocation, funds utilization, monitoring of regularity in meal serving and utilization. The key features of the web-based application are role based authenticated interfaces, capturing, collecting the data online, tracking the data and monitoring the project online.

3.5 Social Justice, Empowerment & Welfare Department

The Social Justice, Empowerment and Welfare Department envisage and implements schemes and programme to uplift the vulnerable sections of the society. Categorically, the schemes and programmes pivot around the Scheduled Tribes, Schedules Caste, Other Backward Classes, women and children, improvised, orphans, juvenile delinquent and the physically challenged. To oversee the execution of the schemes and programmes, the Department is divided into three sections. These are; Welfare Division, Women and Child Development Division and Social Welfare Division. There is various online scholarship schemes which can applied through online state portal, www.sikkim.gov.in which are as follows

- Post matric scholarship to ST students
- Post matric scholarship to SC students
- Post matric scholarship to central Other Backward Castes students
- Post matric scholarship for Economic Backward Category students

Apart from all those above mentioned projects of various departments there are still smaller and big projects going on in Sikkim -some of them are formulated and some are implemented at the concerned departments. Few important projects which play key role in increasing citizen participation are as follows:

- Trade License Verification Application: Urban Development & Housing Department, Govt. of Sikkim.
- State Implementation Consultant (SIC) for implementation of e-governance in municipalities: Urban Development & Housing Department, Govt. of Sikkim.

- Development of website for every department where citizens can access information about the recent notifications, policies, jobs welfare schemes etc.
- Biometric Attendance: Most of the state departments have biometric attendance which helps in easy and speedy records of attendance which can aware employees to be on time.

3.6 Conclusion

The chapter is based on data mainly collected from government documents. It has been found that Sikkim, though not in a complete way but has been trying to avail services in digital system as much as possible. The various departments of Sikkim like Education, Land Revenue and Disaster Management Department, Transport Department and Information Department etc. have initiated various steps in order to provide services to the people in efficient, transparent and accountable manner. There arise numerous challenges like infrastructure, lack of computer knowledge among the employees and citizens, lack of knowledge about internet among citizens which is a main barrier in providing e-services, poor network facilities, and lack of trust shown by the citizens towards digital system.

Apart from various challenges faced by the citizens as well as employees, e-governance is slowly and gradually becoming the part of governance system and citizens are welcoming the manual paper work to be reorganized as e-governance. All the information contained in this chapter has been taken from the primary sources. Despite various challenges and barriers most of the departments of Sikkim are taking initiatives towards e-governance through their tiny steps. This can be taken as the initial phase of e-governance in Sikkim and can be expected its success in the long run.

Chapter 4

From Governance to E-Governance: A Study of Implementation of E-Governance in the East District, Sikkim

Introduction

The present study attempts to analyze and examine the evolution and implementation process of e-governance in India in general and East district of Sikkim in particular based on the data collected from the field through survey schedules. The areas selected for the study are Gangtok and Kaputhang which come under East District of Sikkim. The fieldwork was undertaken on 15th of November 2019 and was concluded on 20th of November 2019. Data were collected using the certain key variables relating to the socio-economic status like age, sex, income, occupation, educational qualification etc and their relation with the process of e-governance. The study was first conducted Kaputhang as it is quite far from Gangtok and after Kaputhang survey has been conducted at Gangtok. The objective behind the selection of areas is that Gangtok is a constituency, where most of the areas are urban and semi-urban while on the other side, Kaputhang is a village which comes under 07 Taza Gram Panchayat, Rhenock constituency and is a rural area. The two different areas have been selected to examine the understanding of internet/e-governance in rural and urban society of Sikkim. Internet today has acquired an important place in our society. Keeping this view in mind government at central and state have been initiating and implementing various schemes to provide e-governance services to the citizens. It has been alleged that some of the citizens are still unaware about internet and digital system in some areas which insisted to conduct survey first at East District, Sikkim as it is the district where capital of the state lies and it could be understood that capital will always initiate the first step of any new plans/projects and the schemes. The objectives behind the selection of two areas is to examine and understand their knowledge and perspective on e-governance of the State, to analyze their ideas on digital system and how far they are getting the benefit from this changes from manual to electronic governance services.

The chapter has interpreted and analyzed the data obtained through the responses of the respondents collected directly from the field and thereby tried to frame out the respondents' perspective on e-governance, its benefits and impacts on their daily lives.

4.1 Data Collection, Analysis and Interpretation

The sample of 80 respondents was selected from 40households from each area. The study also used techniques like informal talks, personal communication with Panchayat and Municipal members, teachers, common citizens, employees etc. The selected sample was exposed to the question of the benefits, impact and constraints of e-governance in the selected areas.

Figure 4.1: Showing age group of Respondents in Percentage
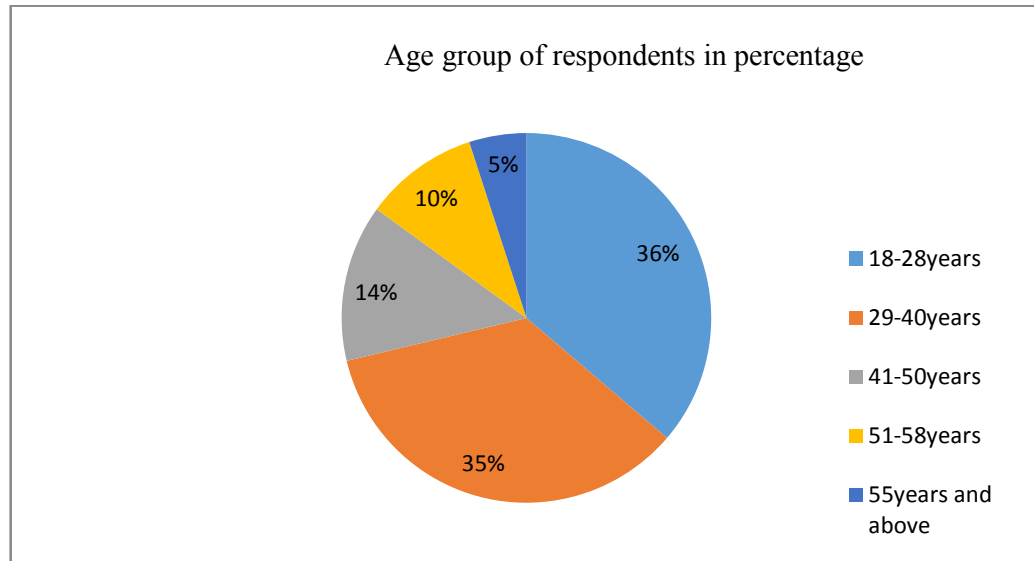
Source: Field Survey

The above figure shows the age group of respondents. The total number of respondents was 80 and age group was divided into four categories that are from 18years to 28years, 29years to 40years, 41years to 50years and 59years and above, the age group has been categorized in order to find out the perceptions of different age groups on the title. This categorization helps out to come to the conclusion that most of the younger generations are much more aware about the new technology and internet but the age groups between 50years and above rarely were aware about e-governance. Out of 80 respondents 4 were from age group belonging to 59years and above, 8 were from 51-58years, 11 were from 41-50years, 28 were from 29-40years and 29 were from 18-28 years.

Table 4.1: Sex-wise Distribution of Respondents

Gender of respondents	Total=80	Percentage
Female	53 out of 80	66.25%
Male	27 out of 80	33.75%
Others	0 out of 80	0%

Source: Field Survey

The table above shows the sex-wise distribution of respondents in %. Out of 80 respondents 53 were Female, 27 were Male and there was no any respondent from others section which includes third gender respondent. Female respondents outnumbered male respondents. The variable like gender has been taken for the survey in order to find out whether there can be any similarities or differences among the respondents on research title based on the gender. The table shows that more than 66 per cent were females while the remaining about 34 per cent were males.

Figure 4.2: Showing Qualifications of Respondents
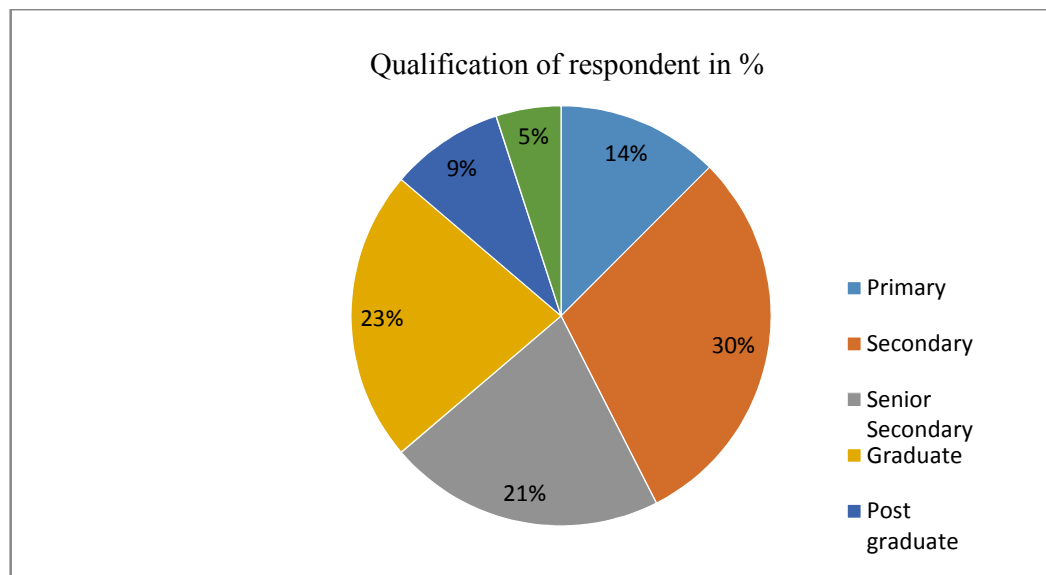
Source: Field Survey

The above figure shows the educational qualification of respondents in percentage. Out of 80 respondents 3 studied up to primary level, 18, secondary level, 9 senior secondary level, and the rest 31 include those respondents who have completed graduation and also those pursuing graduation, 12 respondents include those who have studied up to P.G and also those who are about to complete their study and finally others includes those who haven't enrolled themselves for any educational qualifications. Educational qualification of respondents plays as an important variable

as it has been found that many of the highly qualified respondent were able to understand the research purpose and they can also help to provide valuable suggestions and feedback, those respondent who were qualified were able to understand the concept of e-governance and was also able to access more information about the system but those who haven't enrolled themselves to any of the educational institutions were not been able to understand the concept properly.

Figure 4.3: Showing Income level of the Respondents
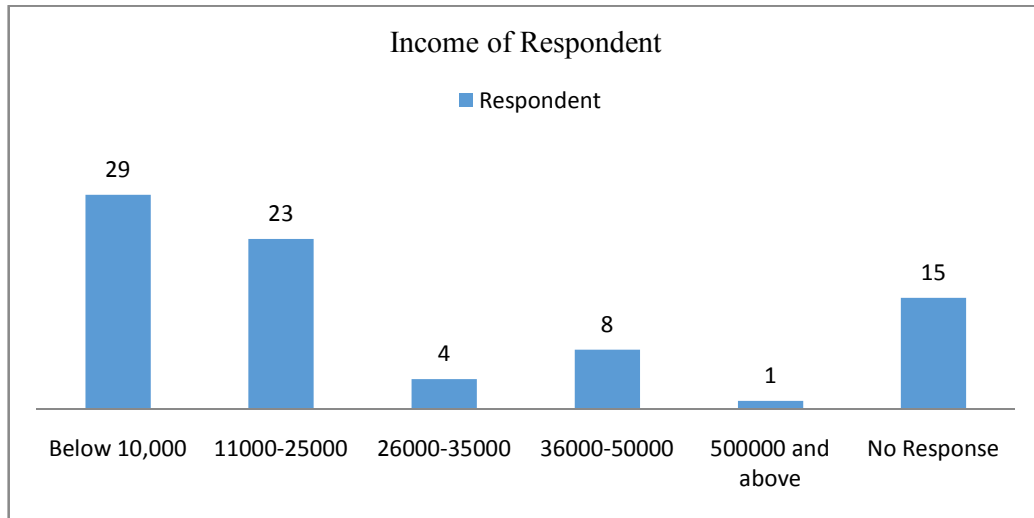
Source: Field survey

The above graph shows the monthly income of the respondents, which was divided into various categories from below 10,000Rs, 11000-25000Rs, 26000-35000Rs, and 50000Rs and above. Another category of respondents was found who were unwilling to disclose their income. Out of 80 respondents 29 have their income below rupees 10,000, 23 have income from rupees 11000-25000, 4 have income from rupees 26000-35000, 8 have income from rupees 36000-50000 and 1 respondent's income was found above rupees 50000. Remaining 15 respondents includes those who did not want to disclose their income as well as students who don't have any individual source of income.

Table 4.2: Showing Resident of Respondents

Resident of Respondents	Total=80	Percentage %
Rural	41 out of 80	51.25%
Urban	29 out of 80	36.25%
Semi-urban	10 out of 80	12.5%

Source: Field Survey

The above table shows the resident of respondents. Out of 80 respondent 41 are from rural area, 29 are from urban and 10 are from Semi-urban area. The resident of respondents has been categorized as urban, semi-urban and rural areas this variable in the research helps to understand the fact that respondents residing in the urban and semi-urban are far more aware about the facilities of e-governance, can update different apps from where they can access various information as compare to respondent residing in the rural areas. Respondents at rural areas not only face problems of accessing information, but the lack of good internet connection facilities followed by frequent cut off electricity increases their problems. After the field study it has been found that respondents residing in the urban areas are taking good facilities of services provided through e-governance initiatives.

Figure 4.4: Showing Awareness of Respondent about Internet
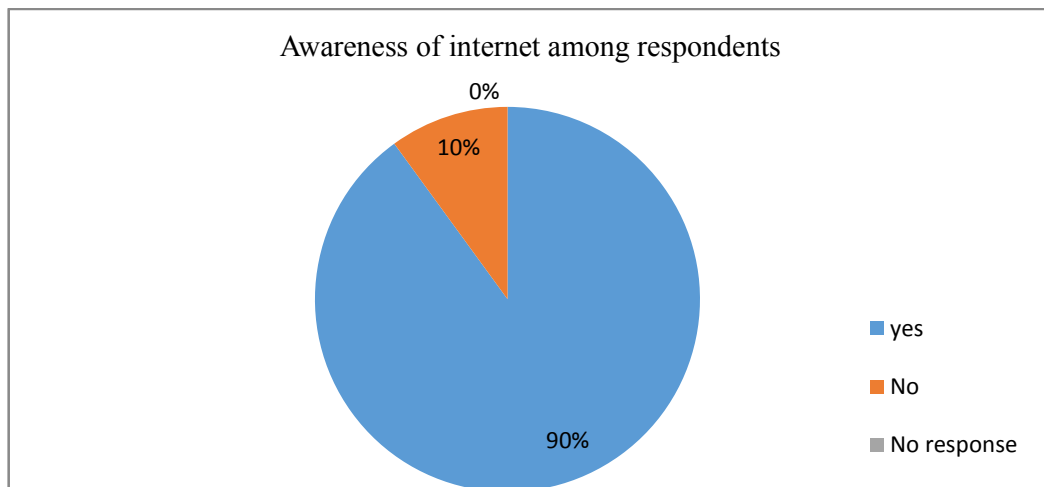
Source: Field Survey

The above figure shows the awareness of Internet among respondents. Out of 80 respondents 72 respondents, that is, 90% are aware about internet and 8 respondents are unaware about internet which is 10%. Every one answered this question; so there was 0% of no response. The 10% of respondents who are unaware of internet mainly include those respondents belonging to old age group mostly from rural area and

some were government job holders about to get retirement from work and those who do not use mobile phones and whose works are taken care of by either their children or grand - children. Some of them are accessing the facilities of e-governance indirectly through cybercafé via different means but they were not aware that services provided to them are through internet connection.

Table 4.3: Showing Percentage of Respondents who access Internet

Access Internet	Total-80	Percentage%
Yes	72 out of 80	90%
No	8 out of 80	10%
No Response	0 out of 80	0%

Source: Field Survey

The above table shows the percentage of respondents who access internet and who doesn't access. Out of 100% that is 80 respondents in total 90% accessed internet and remaining 10% doesn't access internet as they are not aware about it. Those respondents who were aware about internet seem to access it for various purposes and the remaining respondent needs to be depended on others for their works. The survey questioned was framed as internet is an important factor in order to understand the concept of e-governance and to access the services provided by it. Most of the younger generations have been found of accessing internet for various purposes like accessing social media, playing online games, online shopping, online money transfer, following YouTube channels and many more.

Figure 4.5: Showing Percentage of Respondent access Internet through

Source: Field Survey

41
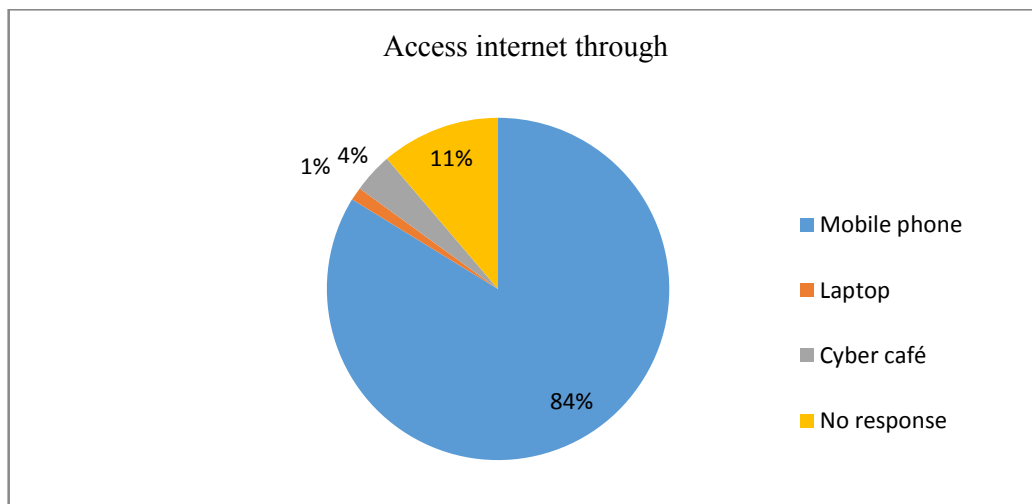
The above figure shows the medium of internet accessed by respondents in percentage. Out of 100 percentage that is total of 80respondents, 84% of them use Internet through mobile phone, 11% of them didn't response to the question, 4% of them use through cyber café and only 1% of them use through Laptop. Most of the respondents access internet through mobile data; only few respondents use internet through cyber café for their works including uploading, scanning and applying certain jobs and filling up certain forms. Government employees use internet through institutional wifi for uploading various data in the websites, receiving mails, sending mails etc. Most of the respondents have been accessing internet through mobile phone as it has been the easiest and more comfortable way to access internet for different purposes, most of the daily works can be done through mobile phones at home and while travelling also it will be more comfortable than using laptops and visiting café, so most of the respondents feel more secure and comfortable accessing internet through mobile phones. The respondent those who didn't responded to the questions include those who are not aware of internet and those who doesn't access it.

Table 4.4: Showing time spent by Respondents for Internet

Time in hours	Total=80	Percentage
1-3hours	41 out of 80	51.25%
3-6hours	21 out of 80	26.25%
Once in a day/sometimes	10 out of 80	12.5%
others	8 out of 80	10%

Source: Field Source

The above table shows the time in hours respondents spend using Internet for various purposes. Out of 80, 41 respondent spend 1-3 hours per/day using internet, 21 of them spend 3-6hours, 10 of them use once in a day or sometimes for their important work and remaining others include those who do not use internet. Most of the internet users are from young generation, college going students and employees mainly recruited for technical support to the concerned department. Some of the respondents have confess that they can spend their whole time using internet during holidays, and long vacation all day scrolling the social media apps like Face book, Whatapps, Instragram and watching online videos playing online games like PUBG.

Figure 4.6: Showing Awareness about meaning of e-governance among Respondent

Awareness of e-governance

- Yes 77%
- No 19%
- No response 4%
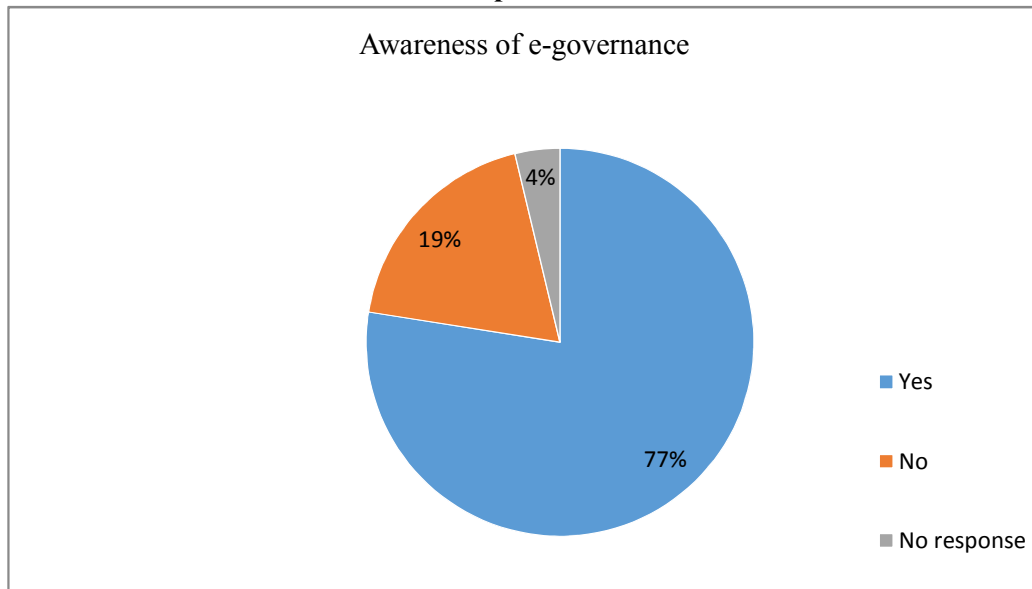
Source: Field Survey

The above figure shows awareness among respondents about e-governance. Out of 80 respondents 62 were aware about e-governance which means 77%, 14 were unaware about this which is 19% and 3 that is 4% did not respond to the question. Those who responded no include those respondents who were aware about internet and have been using internet but they have never heard about e-governance and various initiatives under it. Respondent who did not answer includes those who are also not aware of internet and some of them even do not carry smart mobile phones having the facilities of internet connection. Some of the respondent has access to e-governance services of the state like online filling of forms, visiting websites but they were not aware that it comes under e-governance system. Those who were aware about e-governance initiatives in the country and state have also suggested the concerned e-governance officials to take various initiatives in order to provide better service facilities to the citizens.

Figure 4.7: Showing Respondent awareness on e-governance plans/projects of India
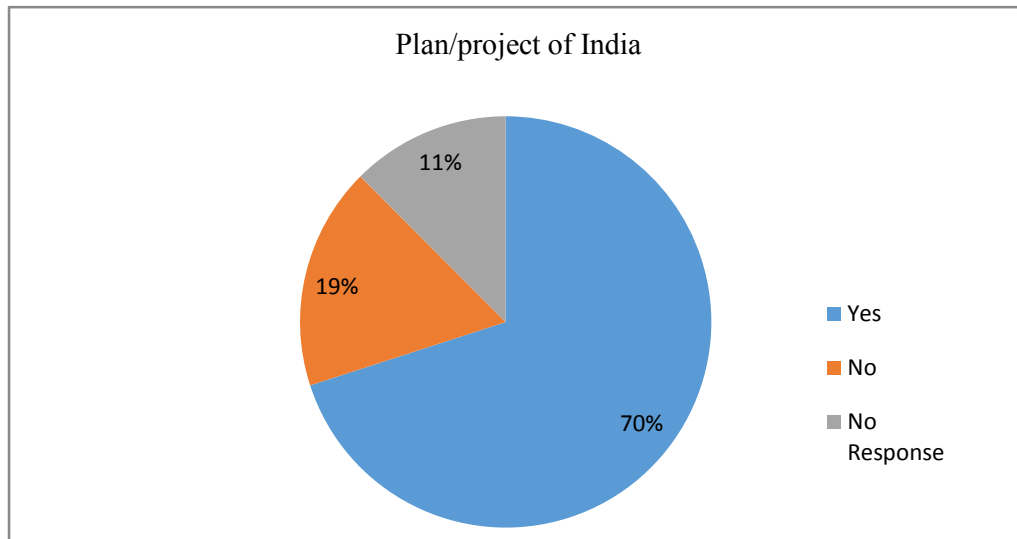
Source: Field Survey

The above figure shows the respondents in percentage those who are aware about various e-governance plans/projects of India. Out of 80 respondent 56 which means 70% were aware about it and 14 respondents which means 19% say no and 10 respondents which is 11% did not respond to the question. Those respondents who were aware about e-governance project/plans of India said that they have heard about Digital India, Online Payment apps, NeGp, Online electricity bill payments, Online filling of various application forms for jobs, higher education through various television advertisements etc. Some of the respondents have heard the names of those projects but they were not aware that those projects were launched under e-governance.

Table 4.5: Showing awareness of e-governance plan of Sikkim

Awareness of e-governance plan of Sikkim	Total=80	Percentage
Yes	48 out of 80	60%
No	21 out of 80	26.25%
No response	11 out of 80	13.75%

Source: Field Survey

The above table shows the awareness of e-governance plan/projects of Sikkim among respondents. Out of 80 respondent 48 were aware about e-governance initiatives of Sikkim and had also access various facilities under it like online scholarship scheme,

RUSA, Single window system, online filling of application form for jobs etc. 21 number of respondent says no and remaining 11 did not respond to the question as they were not aware about the internet, e-governance and the scheme, if they access those services then also they were not aware that it comes under e-governance initiatives of the state.

Figure 4.8: Showing Percentage of Respondents who visit websites for different purposes
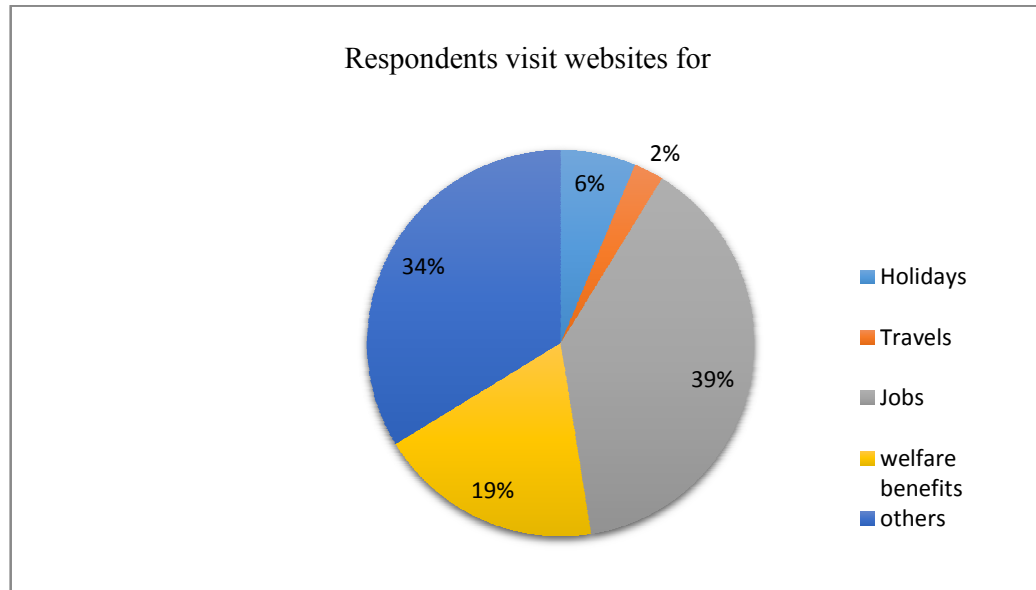
Source: Field Survey

The above figure shows the percentage of respondents who visit government websites for different purposes. Out of 80 respondents 31 respondents, that is, 38.75% visit for accessing jobs related information including filling up online forms, to check the dates for applying jobs. 15 respondents which are 18.75% visit for social welfare benefits of the state which include online scholarship forms, pension's related issues, and ICDS schemes and for various other facilities of different departments. 5 respondents which are 6.25% check for holidays, 2 respondent which means 2.25% check travels related information. Remaining 27 respondent out of 80 which is 33.75% come under others category as they do not visit websites before any important work and it also includes those who do not access internet or are unaware of it.

Table 4.6: Showing Respondents view on Manual Governance to be Reorganized

Welcome old system to be reorganized	Total=80	Percentage%
Yes	52 Out of 80	65%
No	16 out of 80	20%
No Response	12 out of 80	15%

Source: Field survey

The above table shows the views of respondents on changing old manual system to electronic system that is e-governance. Out of 80 respondents 52 of them had welcomed the idea of e-governance as it has made the work easier for the employees as well as the ordinary citizens for availing various facilities in an efficient way, various ideas regarding the schemes, policies and vacancies can be check through government websites which helps in consuming time and money as the citizens did not have to visit to the department to collect the basic information. The 16 respondent said no as they still lack some kind of trust upon the government officials for various benefits, most of the respondent above the age of 50years and above who comes under 20% still have not supported the idea of e-governance fully, they claimed that they need some time to adopt themselves with new system. The 12 of them did not respond to the question as they were not aware about the very concept of e-governance, hence they were not in a position to support either any kind of system.

Figure 4.9: Showing Respondent Views on Reduction of Job Offer
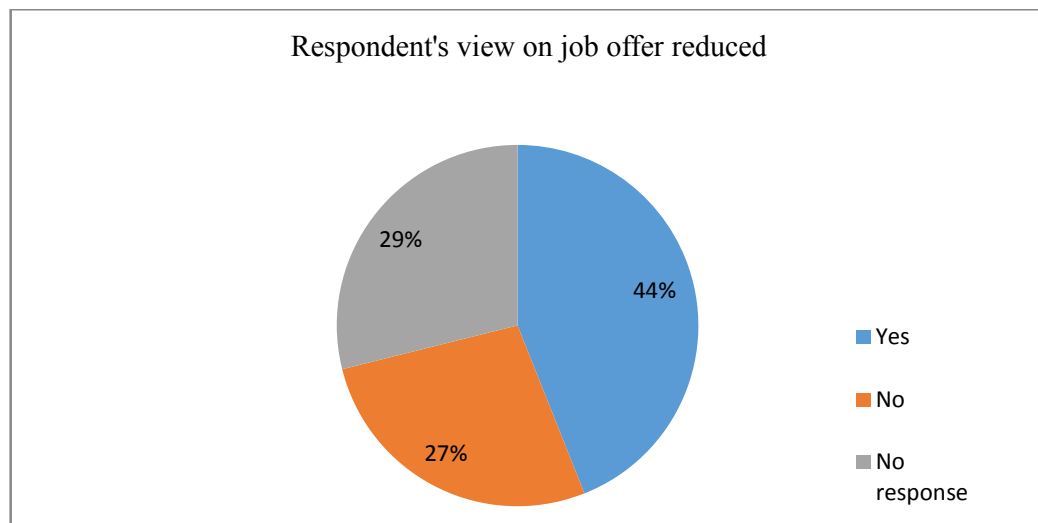
Source: Field Survey

The above figure shows the respondents views regarding the reduction of job offer after the implementation of e-governance system in the state. Out of 80 respondents

35 of them responded 'yes' as e-governance is concerned with computer knowledge and most of the jobs these days required at least basic computer knowledge which has become the constraint for those who do not have any computer knowledge, 22 respondent said 'no' as the advancement in technology has also given the scope for more jobs facilities in the state, those who have basic computer knowledge can work for any private sector companies and can earn for themselves and 23 respondent did not answer the question as they did not know whether the computer knowledge plays a vital role in this generation or they haven't heard about the reduction of jobs facilities due to computer knowledge.

Table 4.7 (a): Showing certain factor of good Governance, Transparency

Transparency	Total=80	Percentage%
Strongly Agree	20 out of 80	25%
Agree	34 out of 80	42.5%
Neutral	25 out of 80	31.25%
Disagree	1 out of 80	1.25%
Strongly Disagree	0 out of 80	0

Source: Field Survey

The table above shows the certain factors of good governance which ensures e-governance and the first one is Transparency. Out of 80 respondents 20 have strongly agreed to this as it provides various transparent initiatives, 34 have merely agreed; 25 were found neutral as they were unaware about e-governance schemes and good governance. Only 1 respondent disagreed about it and none of the respondents strongly disagreed.

Table 4.7(b): Showing Accountability

Accountability	Total=80	Percentage
Strongly agree	13 out of 80	16.25%
Agree	37 out of 80	46.25%
Neutral	24 out of 80	30%
Disagree	6 out of 80	7.25%
Strongly disagree	0 out of 80	0%

Source: Field Survey

The above table shows the views of respondents on Accountability said to be ensured by e-governance. 13 respondents out of the total of 80 strongly agreed; 37 of them

agreed implying moderate view; 24 of them remained neutral and only 6 of them disagreed and none of the respondents strongly disagreed about this.

Table 4.7 (c): Showing Trust Worthy

Trust Worthy	Total=80	Percentage%
Strongly agree	11 out of 80	13.75%
Agree	34 out of 80	42.5%
Neutral	33 out of 80	41.25%
Disagree	2 out of 80	2.5%
Strongly disagree	0 out of 0	0%

Source: Field Study

The above table shows the respondents' views on trust worthiness of e-governance services. Out of 80 respondents, 11 of them have strongly agreed that e-governance services are trustworthy as they are providing online services which respondent can trust, 34 of them just agreed, 33 of them remained neutral as they comes under those category who doesn't know about the e-governance and internet and they have never experienced any type of trust issues and 2 of them disagreed as it they cannot trust online things easily and none of the respondents strongly disagree about it.

Table 4.7 (d): Showing Time Saving

Time Saving	Total=80	Percentage
Strongly agree	27 out of 80	41.25%
Agree	33 out of 80	41.25%
Neutral	18 out of 80	22.5%
Disagree	2 out of 80	2.5%
Strongly disagree	0 out of 80	0%

Source: Field Survey

The above table shows the views of respondents on e-governance as time saving, in which 27 of them strongly agreed that the e-governance initiatives has been saving time of both the administration and the citizens as citizens do not have to visit every departments to enquire about everything and it will be easier for the administration to handle every small issues online and 33 of them just agreed as they did not want to strongly agreed on the time saving qualities of e-governance and 18 of them chose to remain silent as they were not aware about the schemes and initiatives of e-governance and 2 of them disagreed and none of them strongly disagree.

Table 4.7 (e): Showing 24 hours availability of services

24hours Services	Total=80	Percentage
Strongly Agree	21 out of 80	26.25%
Agree	28 out of 80	35%
Neutral	23 out of 80	28.27%
Disagree	8 out of 80	10%
Strongly disagree	0 out of 80	0%

Source: Field Survey

The above table shows the respondents' views on availability of 24hours services through e-governance in which 21 of them strongly agreed, as they can fill up the important forms whenever possible at the given time from anywhere with good internet connection and they don't have to visit departments for filling up certain important forms, 28 of them just agreed, as sometimes they are unable to do their work on time due to server down and slow functioning of the websites, 23 of them remained neutral they don't wanted to discuss on those things which they are unaware about; 8 of them disagreed as sometimes the officials responsible for answering calls and replying mail fail to be responsive and citizens need to suffer because of the carelessness of the officials and none of them strongly disagree.

Figure 4.10: Showing Respondent Views on Reduction of Corruption and Red Tapism
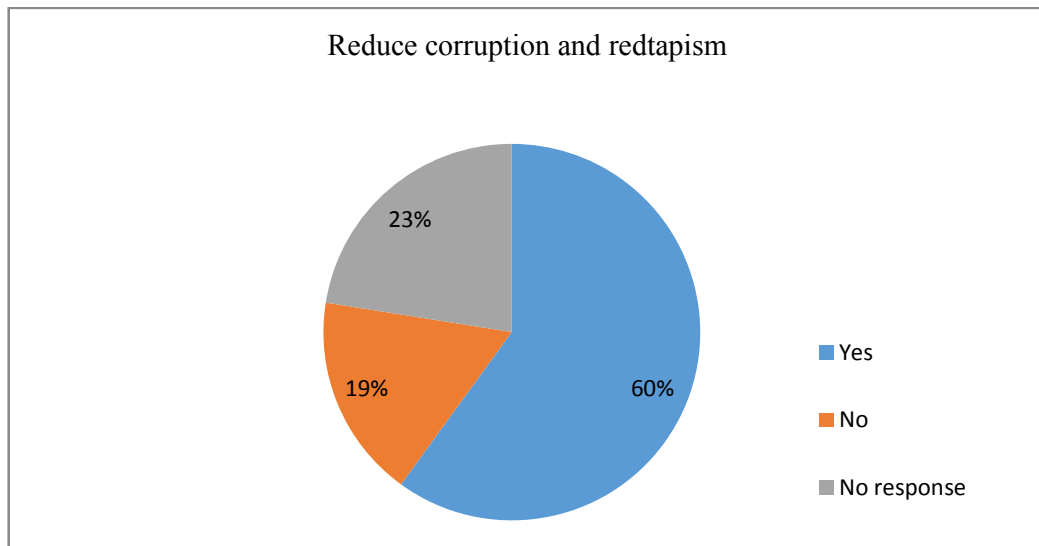
Source: Field Survey

The above figure shows the views of respondents in percentage regarding decrease in corruption and red tapism in percentage. Out of 80 respondents 48 of them said 'yes'

as it has reduced corruption and the slow process of working at the office, 14 of them said 'no' as still the red tapism and corruption can be seen practicing in the offices and 18 of them did not respond to the question as they were not aware about all those things.

Table 4.8: Showing Reduction of Corruption and Red Tapism

Corruption and redtapism	Total=80	Percentage
Substantially	5 out of 80	5%
Moderately	24	30%
Slightly	34	42.5%
No response	18	22.5%

Source: Field Survey

The above table shows the views of respondents on reduction of corruption and red tapism after e-governance in the state, 5respondent says it has reduced substantially, 24 of them says moderately, 34 of them says slightly and 18 of them did not respond to the question.

Figure 4.11 (A): Showing Citizens Expectations from the Government, Quality of Services
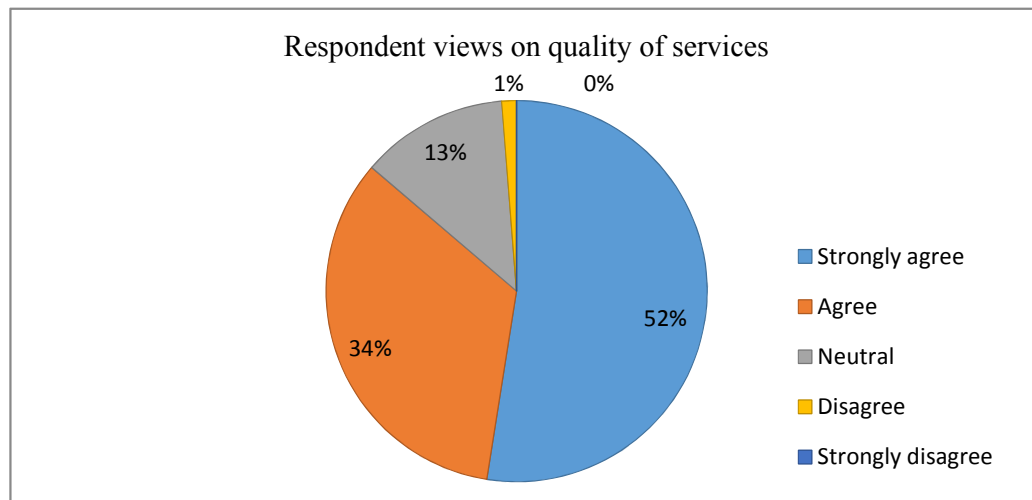
Source: Field Survey

The above figure shows the expectations from the government on various subjects - the first one is the quality of services. 52% of respondents have strongly agreed on the improvement of quality of services, citizens can expect more better facilities from the administration in providing services to the citizens, 34% just agreed, 13% of them remained neutral as they didn't want to respond to the question, only 1% of them

disagreed and none of them strongly disagreed. Majority of them claimed that after electronic governance now government can improve the quality of services they were providing and the best services can be expected.

Table 4.9: Showing Citizen's Expectations from Government, Transparency in Operations

Transparency in Services	Total=80	Percentage
Strongly Agree	39 out of 80	48.75%
Agree	29 out of 80	36.25%
Neutral	11 out of 80	13.75%
Disagree	1 out of 80	1.25%
Strongly disagree	0 out of 80	0%

Source: Field survey

The above table shows the respondents expectation from government and the mentioned table is about transparency in operations where 39 respondents, that is, 48.75% strongly agreed that there is need of more transparency in the of operations of government services, 29 of them which is 36.25% agreed, 11 of them that is 13.75% remained neutral as they were not aware about the concept of e-govenance and its functions while only 1 of them that is 1.25% disagreed as there are other factor also which needs more focus besides transparency and none of them strongly disagreed. Majority of the respondents have demanded to improve more transparency in operations after e-governance implementation in the state.

Figure 4.12: Showing Respondent Expectations on Government, Awareness and Mobilization
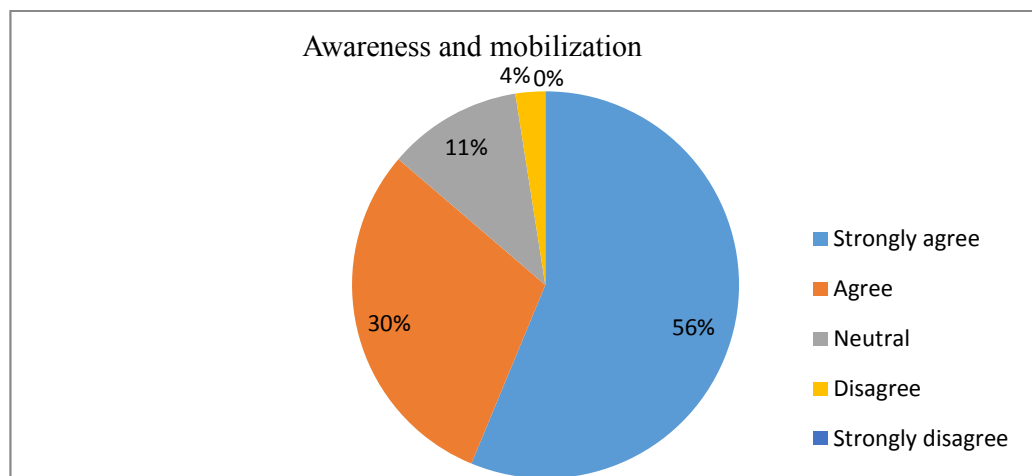
Source: Field Survey

51

The above figure shows the views of respondents in percentage regarding awareness and mobilization camps for various new schemes of the government including e-governance. 56% of them have strongly agreed that awareness camp and mobilization are of great importance particularly for the rural areas if the state is initiating various steps for the welfare and benefit of citizens then before implementing those steps it is important for them to aware the citizens mainly residing in the rural areas which in return will also help them to cooperate collectively with the administration for the functioning of the state. They have strongly demanded for such type of awareness and mobilization campaign which is the need of an hour. The 30% of them agreed to the fact that those awareness camps and mobilization is necessary, 11% of them remained neutral, as they did not want to say anything about it or they are not aware about it and finally 3% of them disagreed as they claimed that it is not much important to have any awareness campaign as it can be learn by themselves with the support of technologies, the 3% of them includes those who are closely in touch with the recent technological update and who can engaged themselves with the new technological facilities and none of them strongly disagreed about this fact.

Table 4.10 (a): Showing Infrastructure of E-Governance that Makes Effective Government Services

Government staff should know about e-governance	Total=80	Percentage
Strongly agree	34 out of 80	42.5%
Agree	29 out of 80	36.25%
Neutral	14 out of 80	17.5%
Disagree	3 out of 80	3.75%
Strongly disagree	O out of 80	0%

Source: Field Survey

The above table shows the e-governance infrastructure that makes effective government services. The first one is that the government staff should know everything about e-governance in which out of 80 respondents, 42.2% of them strongly agreed, as it help citizens in better way and it will also help to create balance of work division among the employees too. 36.25% of them agreed, 17.5% of them remained neutral as they does not wanted to reply or say anything about the question, 3.75% of them disagreed as they think that it is not important that every staff most

know about it as some staff with proper knowledge can help them and remaining can handle other issues of the department and none of them strongly disagreed.

Table 4.10 (B): Showing Infrastructure of e-governance that makes Effective Government Services

Regular updating of websites	Total=80	Percentage
Strongly Agree	32 out of 80	40%
Agree	34 out of 80	42.5%
Neutral	11 out of 80	13.75%
Disagree	2 out of 80	2.5%
Strongly disagree	1 out of 80	1.25%

Source: Field Survey

The above table shows the views of respondents on regular updating of government websites in order to make effective government services. 32 of them that is 40% strongly agreed that regular updating of websites is most in order to keep citizens updated about various new notice, applications and the related news about the concerned department. 34 of them that is 42.5%, just agreed, 11 of them that is 13.75% remained neutral, 2 of them that is 2.5% disagreed and 1 of them that is 1.25% strongly disagreed.

Table 4.10 (c): Showing Infrastructure of e-governance that makes Effective Government Services

Computer should work effectively	Total=80	Percentage
Strongly Agree	31 out of 80	38.75%
Agree	31 out of 80	38.75%
Neutral	16 out of 80	20%
Disagree	2 out of 80	2.5%
Strongly disagree	0 out of 80	0%

Source: Field Survey

The above table shows the infrastructure effectiveness of e-governance - one of them is that computers should work effectively in order to avoid delays. Out of 80 respondent 31 of them that is 38.75% strongly agreed that proper functioning computers can help to deliver services in a better and more efficient way to the citizens and if computers are kept in the offices then it has to be working in more sound condition so that citizens doesn't need to face delay in accessing and availing

services which are meant for them. 31 of them is 38.75% just agreed, 16 of them which is 20% remained neutral as they were not aware about the computer and its function in providing them services , 2 of them that is 2.5% disagreed and none of them strongly disagreed.

Table 4.10 (d): Showing Infrastructure of e-governance that makes Effective Government Services

Responsiveness of e-governance officials	Total=80	Percentage
Strongly Agree	31 out of 80	38.75%
Agree	30 out of 80	37.5%
Neutral	15 out of 80	18.75%
Disagree	3 out of 80	3.75%
Strongly disagree	1 out of 80	1.25%

Source: Field Survey

The above table shows the views of respondents on responsiveness of e-governance officials as it is also one of the infrastructures that make government services effective. Out of 80, 31 of them strongly agreed that e-governance officials needs to be more responsive towards citizens, 30 of them agreed, 15 of them remained neutral, 3 of them disagreed and 1 of them strongly disagreed.

Table 4.11 (a): Showing respondents views on e-governance and government

Efficiency of government services	Total=80	Percentage
Strongly agree	21 out of 80	26.25%
Agree	30	37.5%
Neutral	25	31.25%
Disagree	4	5%
Strongly disagree	0	0%

Source: Field Survey

The above table shows the views of respondents on efficiency of government which has been increased after the implementation of e-governance in the state. The respondents are given different options in order to choose the correct option they felt. Out of 80 respondents 21 of them strongly agreed that efficiency in providing services to the citizens has increased, 30 of them just agreed, 25 of them remained neutral, 4 of the respondents disagreed and none of the respondents strongly disagreed.

Table 4.11 (b): Showing e-governance and Government, Citizen's Participation

Citizens' Participation	Total=80	Percentage
Strongly Agree	21 out of 80	26.25%
Agree	35 out of 80	43.75%
Neutral	20 out of 80	25%
Disagree	4 out of 80	5%
Strongly disagree	0 out of 80	0%

Source: Field Survey

The above table shows the views of respondents on citizens' participation after the implementation of e-governance in the state, out of 80 total respondents, 21 of them strongly agreed including both officials and citizens as their participation relating to various government jobs, filling up forms, accessing websites has been increases, 35 of them just agreed, 20 of them remained neutral, 4 of them disagreed and none of them strongly disagreed.

Table 4.11 (c): Showing e-governance Reduces, Administrative Burden

E-governance reduces administrative burden	Total=80	Percentage
Strongly Agree	16 out of 80	20%
Agree	42 out of 80	52.5%
Neutral	18 out of 80	22.5%
Disagree	4 out of 80	5%
Strongly disagree	0 out of 80	0%

Source: Field Survey

The above table shows the views of respondents regarding the reduction of administrative burden after the implementation of e-governance in the state. Out of 80 respondents 16 of them strongly agreed, 42 of them just agreed, 18 of them remained neutral, 4 of them disagreed as it has created unbalance in distribution of works some have to do much works as compared to others and none of them strongly disagreed.

Figure 4.12 (a): Showing Advantages of e-governance

It is not beneficial to Poor	Total=80	Percentage
Strongly agree	5 out of 80	6.25%
Agree	15 out of 80	18.75%
Neutral	33 out of 80	41.25%
Disagree	25 out of 80	31.25%
Strongly Agree	2 out of 80	2.5%

Source: Field Survey

The above table shows the views of respondents on advantage of e-governance, the first one is that it is not beneficial to poor. 5 of the respondents strongly agreed that poor people lack facilities to avail to access e-governance services so it is not advantageous. 15 of them just agreed, 33 of them remained neutral, 25 of them disagreed and claimed that it is not meant for any particular section of society it is the service which everyone can access and none of them strongly disagreed.

Figure 4.13: Showing Respondent views on e-governance is advantageous to whom
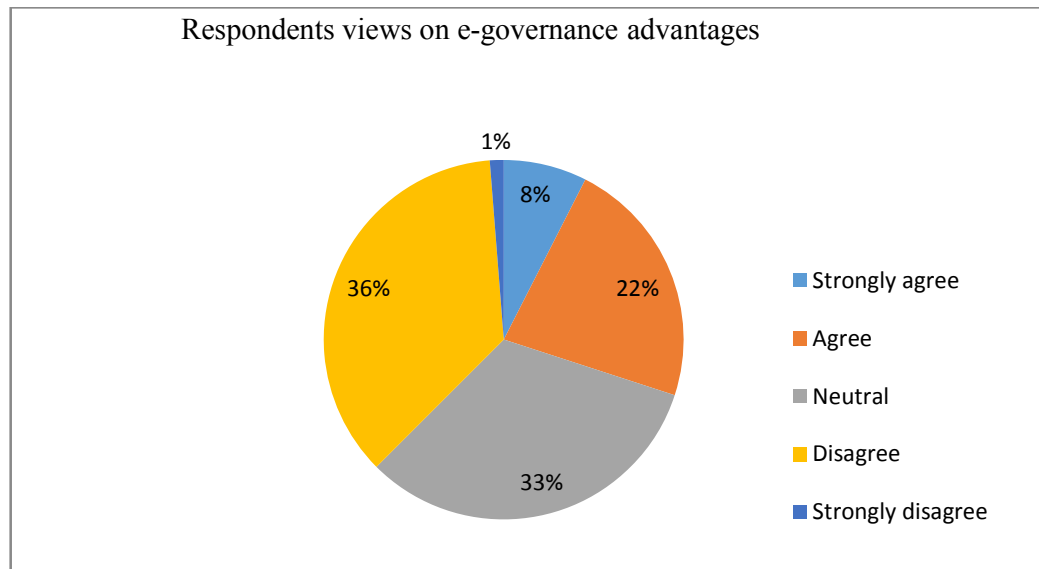
Source: Field Survey

The above figure shows the respondents views on whether e-governance is beneficial to rich people. 6 out of 80 respondents strongly agreed that only rich people can have full advantage of e-governance as they can access information and avail services through every medium like smart phones, computers and laptops. 18 just agreed 26

remained neutral, 29 of them disagreed as it is not only for rich people and 1 of them strongly disagreed.

Table 4.12 (b): Showing e-governance is Beneficial only to the Urban People

It is beneficial to urban people only	Total=80	Percentage
Strongly Agree	2 out of 80	2.5%
Agree	28 out of 80	35%
Neutral	21 out of 80	26.25%
Disagree	27 out of 80	33.75%
Strongly disagree	2 out of 80	2.5%

Source: Field Survey

The above table shows the respondents views on whether e-governance is beneficial to people residing in urban areas only. Out of 80 respondents 2 of them strongly as people residing in urban areas are near to cyber café including various facilities like good supply of electricity, good internet network connection various offices responsible for those schemes and services from where they can enquire about anything they wanted to know. 28 of them agreed, 21 of them remained neutral, 27 of them disagreed and 2 of them strongly disagreed.

Figure 4.14: Showing e-governance beneficial to rural people only
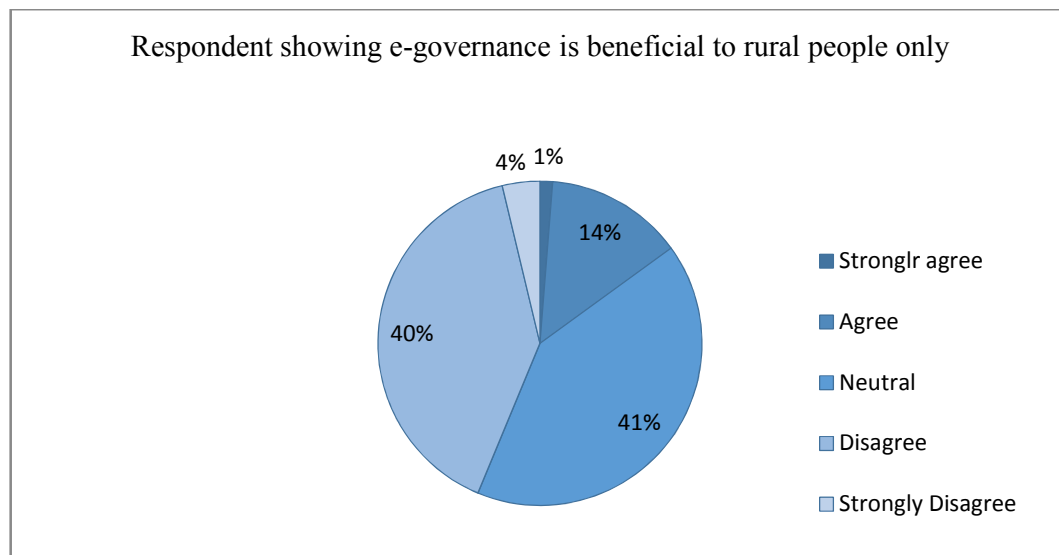
Source: Field Survey

The above figure shows the respondents views on is e-governance is beneficial only to the rural people. Out of 80 respondents 1 of them strongly agreed and claimed that it is for the entire citizens hence it can be beneficial to the rural people also, 11 of them just agreed, 33 of them remained neutral and most of them are from rural areas

and claimed that they haven't access much services under e-governance as they are not aware about it and they cannot access it by themselves due to various barriers, 32 of them disagreed and claimed that it is beneficial to those sections of society where every facilities has been given including proper network connection and regularity in electricity but this facilities are not much reachable in every rural areas and 3 of them strongly disagreed and stated that proper awareness is the key to help the citizens residing in rural areas to access those facilities in a more proper way.

Table 4.12 (C): Showing e-governance is Beneficial only to Literate and Educated

It is only beneficial to literate and educated	Total=80	Percentage
Strongly Agree	7 out of 80	8.75%
Agree	21 out of 80	26.25%
Neutral	27 out of 80	33.75%
Disagree	23 out of 80	28.75%
Strongly disagree	2 out of 80	2.5%

Source: Field Survey

The above table shows the respondents views on e-governance is beneficial to literate and educated only. Out of 80 respondents 7 of them strongly agreed as literate people can understand the languages in which services have been providing and also they can keep themselves updated about every new schemes, 21 of them just agreed, 27 of them remained neutral as they were not aware about the concept so they didn't wanted to respond without understanding it properly, 23 of them disagreed as they claimed illiterate people can also be seen using and accessing all those facilities provided through e-governance and 2 of them strongly disagreed as if illiterate people are also given proper training then they can also access those services as equal as literate one and sometimes literate people can also lack proper computer knowledge and they have to depend on others.

4.2 Findings

There are various findings and issues which came across after the field survey of two areas that is Gangtok and Kaputhang which is related to objectives of the study. The paper has various objectives of the study like, to examine the evolution of e-governance in India in general and Sikkim in particular, to analyze the challenges and

changes that came particularly in the east district after the implementation of e-governance. The respondents have been chosen from every section of society including the officials and the employees of different departments responsible for the implementation process in order to understand perspectives about it. The survey questions have been prepared as ranking scale type giving the respondents opportunity to rate the options given to them according to their preferences. The indicators like sex, age, income, qualification, occupation and resident of the respondents have been asked in order to distinguish their views on the research topic. The survey questions were started from the basic elements of e-governance that's awareness about internet and it has been found that many of the respondents still do not have any proper knowledge about internet, smart phone, computer, online system etc, but on the other side few respondents have much more knowledge about digital system, online transaction etc which generates some kind of gap between the respondents. Majority of respondents has welcomed the idea of changing old manual paper work into digital but few of them still lacks complete trust upon the digital system. They fear of fraud and misusing of their information, though they are excited about learning new things and practicing it but it needs some time to build up some trust. It has also been found that e-governance has been successful in reducing corruption and re-tapism slightly as it has increased efficiency of delivering services to the citizens. Some of the respondents also claimed that though e-governance has made things easier there are various job opportunities but it has also been limited to those who have proper computer knowledge as every job nowadays required at least basic computer knowledge which became barrier to those who have not acquired computer knowledge. It has been found from the field that e-governance are ensuring certain factors of good governance like, transparency, accountability, trust-worthy and it also provides 24 hours services as citizens accessing internet can check out any new information about the concerned departments at any point of time through government websites. But it has also been found that there are lacks of responsiveness from the e-governance officials as they give contact details in the website for every kind of enquiry and solution for any problems whereas citizens failed to get information and the officials never responded in time and their responses are not satisfactory as expected. As e-governance is not only concerned about providing services to the citizens but it has four different models which allows it to make everyone's work easier from government to citizens, government to employees,

government to business and government to government. Likewise it has been examined and analyzed from the field that in Sikkim e-governance has also become successful in reducing administrative burden as employees nowadays do not have to carry huge bundle of files like before. Now, every data can be kept secured and digitalized in the computer at the concerned department but it also has some disadvantages like sometimes they failed to acquire those data at time due to server failure, computer became dysfunctional, and there can be chances of data being deleted from the computer. Employees of the concerned department has claimed that citizens participation nowadays has increased in every section like students filling up online scholarship form as earlier it was to be filled up through manual system but now students accessing internet can fill up those forms through android phone or by visiting cyber café nearby, though it has been a problem to few who do not access internet and also to students residing at village areas sometime face electricity and server problems, but at larger interest it has been beneficial to students as it saves both their time and money. It has been stated from the Social welfare department of the state that they have started receiving large number of application forms after it has been made online, same case is also with the students filling online college form through RUSA which allow them to choose college of their preference sitting at home and their approval and disapproval can be sent to them through text messages, mail or through phone calls. Citizens filling up various government jobs, visitors of websites have increased as compared to earlier. There are various expectations from the government as well as administrators as now e-governance has been implemented which is making the work of administrators easier as accepted by the employees and citizens want them to increase their quality of providing services, transparency of operations should prevail and government services have to be trustworthy. Most importantly, the respondents from the field study have strongly demanded for the awareness and mobilization campaign regarding any new scheme which is being formulated and implemented for them in the state. If that scheme is meant for them then they have to be aware of it which also helps them to co-operate each other that are administration and citizens. The officials has to be trustworthy as mainly illiterate and uneducated citizens will fail to build up trust so easily to digitalized system and the concerned employees have to be patient with them in explaining about digital system, its benefits, drawbacks so they can be at least confident enough to build trust upon them. There are some kinds of confusion among respondents like is e-

governance beneficial to every individual or it is beneficial to the educated, literate and citizens residing in urban areas only or the poor people. But at last, the conclusion can be drawn that it is beneficial to everyone from poor to rich, educated to uneducated, literate to illiterate and from rural to urban citizens but citizens have to be aware about this and need to keep them updated and the concerned officials have to take various initiatives to provide them every method to access those information and schemes. Proper training and the awareness and mobilization camps can be seen as the need of the hour for every concerned citizen build the strong relationship among the ordinary citizen and the administration which also help in speedy and efficient delivery of services. Which not only make the work of citizen easier but it will also make the work of administration easier and quicker.

Chapter 5

Conclusion

Introduction

The development in application of Information and Communications Technologies (ICT) and its related infrastructure tools on governance have transformed the life of citizens in the modern societies. E-governance is a multi-dimensional concept which has different meanings. In Simple terms, it can be understood as the use of internet to provide better facilities to the citizens, efficient functioning by the employees and to provide speedy information among the various departments, improved interactions with business and industry, citizen empowerment through access to information. It enables active citizen involvement by informing the citizens, consulting them as required and encouraging their participation. It helps to improve the communication between administrations, citizens and businesses leading to improved governance, public sector management, less corruption, increased transparency, increased accountability, greater convenience and cost reductions. Thus, the advancement in E-governance not only acts as an engine for economic growth, it also enhances the potential for the delivery of social services and the effectiveness of government administration for good governance to maximize the welfare of people in a comprehensive way. E-governance has been recognized as a vital force for transformational improvement in quality, efficiency and effectiveness of governance. Hence, governments across the world are now moving from the traditional way of handling administrative tasks to be re-organized to meet the expectations of the growing populations. The importance of e-governance has been felt and government departments are trying very hard to provide information and transaction services through their websites. Though various efforts have been put to provide services with the help of internet in India but still there are some reasons which come as a barrier in actively enhancing e-governance services to the Indian citizens which not only includes lack of proper plans from governments, but due to some other barriers like, limited availability of internet infrastructure, high cost of access and usage, lack of awareness and low digital literacy, narrow range of applications and services and an unfavorable business environment.

The study has been divided into five chapters - each chapter focusing on the topic which is relatable to one another. The first chapter is the introduction which contains

the statement of the research problem, review of literature, conceptual framework, objectives, research questions, research methodology and chapter-wise plan of the study.

The second chapter is the, Evolution of e-governance in India, which has highlighted the process of evolution of e-governance in India and the various initiatives taken up by the government of India for the proper implementation of e-governance services to the citizens like NeGp, MMPs. The chapter has also covered initiatives of various state governments for providing efficient services to the citizens and it has also highlighted about the recent Shillong declaration of northeast, India.

The third chapter is, E-governance in Sikkim: Evolution, Challenges and Programmes which is completely based on the initiatives taken up by the state of Sikkim in implementing e-governance services to the citizens. Some of the departments covered in the research area are Education department, Land Revenue and Disaster Management department, Transport department and Social Justice, Empowerment, & Welfare department, apart from the other important initiatives of the state that have been briefly highlighted in the chapter.

The fourth chapter is, From Governance to E-Governance: A Study of Implementation of E-Governance in the East District, Sikkim. This chapter is completely based on field survey of two areas, that is, Kaputhang and Gangtok and 80 respondents were chosen including citizens, government employees and officials who are responsible for the implementation of e-governance services in the district. The chapter has interpreted all the data collected from field through graph, figures and table in order to understand them in a more clear way.

The final chapter is, Conclusion which covers the brief summary of every chapter and includes the major findings and suggestions to improve the efficient functioning of e-governance services.

In case of implementation of e-governance in Sikkim, particularly the East district, the case has been similar to India. Sikkim being the less populated state, the penetration of ICT is relatively better as compared to other states, but it has not been able to provide every citizen with the facilities of accessing the services properly. While doing the field study there arose various barriers responsible behind providing those services like lack of knowledge about internet among citizens. It has been found that still there are many citizens who are not only unaware about e-governance but they are also not aware about internet which is considered as the base of e-governance

without which understanding and accessing e-governance services will be hard. The government officials responsible for the implementation of e-governance services have to be more aware about various techniques which help in providing efficient services. Some of the common barriers every state faced while implementing e-Governance include security, inequality in accessing computer technology by the citizens, high initial cost for setting up the e-government solutions. The important constraints found may be put as under:

- Lack of Trust: it has been found from the field that still there is lack of a full trust among the citizens and the administration. Citizens mainly residing in rural areas do not want to share their information online. They seem to be satisfied only after visiting the concerned departments for various concerns.

- Inequality in accessing Internet Facilities: another barrier is the lack of equal accessing internet facilities among the citizens, citizens residing mainly in rural areas do not enjoy equality in accessing e-governance services due to reasons like poor network, frequent electricity cut off due to bad weather, lack of technological institutions, lack of cyber café etc.

- Cost: Cost is one of the most important barring factors that comes in the way of e-governance implementation particularly in the developing countries where most of the people live below poverty line, where basic needs are given more priority then internet. An individual living below poverty line does not afford a computer for him to access the benefits of online services properly. Economic poverty is not the only cause of digital divide but it can also be caused by the lack of awareness among the people.

- Lack of awareness among citizens: During the field survey it has been found that there are number of citizens who lack awareness not only about e-governance but also about internet, smart phones etc, which was the major challenge to implement e-governance services properly among those citizens. Some of them were accessing those facilities but they claimed that they do not know that they are enjoying those services through internet.

- Privacy: The privacy of the citizen also needs to be ensured while addressing the issues. Whenever a citizen gets into any transaction with a Government agency, they provide lots of personal information, which can be misused by the private sector. Hence citizens feel uncomfortable to share their information

because of fear of fraud, misuse of their data. Thus, the citizen should be given assurance by the government that the information shared by them would pass through reliable channels and it will be secured.

Some of the major findings after the completion of research work need some of the suggestions to improve the desired state of e-governance. While framing any policies by the concerned authorities like some of the respondents still need to be more aware about internet and all those technological tools that are developing rapidly, where the respondents themselves have strongly demanded the awareness and mobilization camps in their areas for every new policies framed by the departments before and after implementation, it will help to build strong trust among the administration and citizens as trust issue has always been seen as the barrier in the implementation process. Internet is not only the main factor of e-governance it also needs to check other tools like network coverage, proper connection of electricity facilities and the availability of smart phones among the citizens. In order to meet this challenge concerned authorities can set up one or two cyber café or office to provide the facilities of e-governance services to the citizens. They can also provide training to the citizens about accessing services through their smart phones as some of the respondents possessed mobile phones having access to all the facilities but they were unknown about those facilities and they never availed those facilities in their phones. E-governance has reduced the administrative burden among the employees but it has also been found that those employees having good knowledge about computer and internet are facing problems of work load as most of the employees in the departments do not possess any computer based knowledge and after implementation of e-governance everything has to be maintained in computer which leads to work misbalance. Hence in order to avoid this low awareness, proper training has to be provided to the employees of concerned departments also.

E-governance has various positive impacts but it doesn't mean it is safe from criticisms. Various scholars, policy framers and the observers criticized it from different angles. Though it has made the work of the citizens and administration easy but the fraud of misusing data, personal details can be seen in the minds of the citizens. Online activity has also led to the reduction of social harmony in the society as people these days talk less with their neighbors, they ask and search everything online, they trust people in online more than their closed ones. People have become more dependent and desired of being in more comfort zone. This trend has

continuously been increasing which is creating distance among the near ones. Respondents mainly belonging to rural areas and age group above 50 are unaware about technological developments like computer, internet, smart phones, online payment, digitalization, face book, whatapps etc, in which the concerned authorities need to focus on providing those facilities to people belonging to this sections also. It has been found that e-governance has been successful in reducing corruption and re-tapism slightly as it has increased efficiency of delivering services to the citizens. Some of the respondents also claimed that though e-governance has made things easier there are various job opportunities but it has also been limited to those who have proper computer knowledge as every job nowadays required at least basic computer knowledge which became barrier to those who have not acquired computer knowledge. After the implementation of e-governance in the state, citizen participation has increased at every sector. Officials have started receiving huge numbers of application forms like online scholarship, online college admission through RUSA, online filing up job vacancies, visiting websites but these facilities are accessed only by those citizens who are literate, and those having proper computer knowledge and also by those who are residing in that areas where every facilities are available. On the other side, respondents residing mainly in rural areas are unable to access those information and avail those facilities due to lack of proper connectivity of networks, electricity, frequent cut off electricity due to bad weather conditions and other factors in which the officials have to be responsive and accountable while dealing with them. It has been examined and analyzed from the field that in Sikkim e-governance has also become successful in reducing administrative burden as employees nowadays do not have to carry huge bundle of files like before but their responsibilities has increased as now they have to be more concerned about every small error while uploading, scanning and transferring any data from the office, the personal details of the citizens has to be kept secured in order to avoid any misuse and fraud. Though every datum can be kept in a secured and digitalized way in the computer at the concerned department but it also has some disadvantages like sometimes they failed to acquire those data at time due to server failure, computer became dysfunctional, and there can be chances of data being deleted from the computer in which the officials of the departments have to be concerned about those things and they have to be answerable if anything happens.

Successful implementation of e-governance services involves building of institutional capabilities, implementing a good e-governance policy, and the availability of technological capacity and most importantly the awareness about it among the citizens and the employees which is the need of the hour. Awareness can only help to bring citizens to avail services delivered for them. Proper training can be provided to every age group people in order to make them access the new system and experience them in as more comfortable way especially to those citizens residing in rural areas and whose age groups are above 50 years. They will love to learn new things if officials can convince them and win their trust as technology are growing in a rapid way and world is becoming more and more digitalized every day. Every new technological device is taking birth and in this era of technological advancement, not a single state can keep them away from it. So it is better to include every citizen as soon as possible to access and experience new technologies in order to be more competitive and efficient in and around the world. The state cannot ignore any citizens to avail any facilities what they can do is to train every minds in their own way to avail those facilities. It cannot guarantee continued use of the system unless the system is also designed in such a way as to deliver satisfactory outcome. Hence the accessing system has to be designed in such a way that every citizen feels comfortable and secure in availing the new system and they can build strong trust upon the system. People also need to be aware about both the positive and negative impacts of e-governance. Then only they can utilize it in a more proper way.

Biblography

Agangiba, Akotam William and Agangiba, Akotam Millicent. (2013). E-governance justified. International Journal of Advanced Computer Science and Applications. Vol.4(2):223-224.

Ali, M (2015). Governance and Good Governance: A conceptual Perspectives.

Bala, M. Verma, D. (2018). Governance to Good Governance through e-governance: A critical review of concept, model, initiatives and challenges in India. International Journal of Management, IT & Engineering, and Vol. 8(10): 50-56.

Bannister, Frank and Connolly, Regina. (2011) New Problems for old? Defining e-Governance.

Bannister, Frank & Connolly, Regina. (2012). Defining E-Governance. *e-Service journal*. Vol. 8(2): 1-25.

Bhattacharya, Sumanta & Goswani, Joyita. (2011). Study of E-Governance: The Attractive Way to Reach the Citizens. *International Journal of Computer Application*. 2nd National conference-Computing, Communication and Sensor network. 29-33.

Borah, S. K. (2013). Implementation of Citizen-centric e-governance projects in Assam. *Journal of Humanities and Social Sciences*, Vol. 7(2): 27-34.

Borthakur, Protim Partha and Bhuyan, Jyoti Dip. (2019). Effectiveness of Information and Communication Technology in Promoting E-Governance in India. International Journal of Innovative Technology and Exploring Engineering. Vol. 8(10): 13-18.

Bygrave, A., & Bing, J. (2009). *Internet Governance Infrastructure and Institutions*. New York: Oxford University Press.

C, Devasena Lakshimi & Balraj, Punitha Lakshmi. (2014). E- Governance in Southern States of India- Towards Whole-of- Government (WOG*). International Journal of Emerging Trends and Technology in Computer Sciences*. Vol. 3(2): 225-262.

C, Subramanian. (2012). E- Governance: A key to good Governance in India. *International Journal of Recent Scientific Research* . Vol. 3(5): 1233-1238.

Chakraborty, B. (2007). *Reinventing Public Administration*. Orient Blackswan.

Chetia, SRB. (2016). E- Governance in North-East India. *Journal of Political Sciences and Public Affairs*. Vol 4(2): 1-3.

Chettri, D.P. (2012). *Decentralised Governance and Development in India*. New Delhi: Mittal Publication.

Dawes, S, Sharon. (2008). The Evolution and Continuing Challenges of E-Governance. *Public Administration review*.

Department of Information and Technology. (2004). *Information Technology Mission*. Gangtok: Government of Sikkim.

Fakeeh, A. Khalid. (2016). The E-Governance (E-Gov) Information Management Models. International Journal of Applied Information Systems (IJAIS). Vol. 11(1): 10-14.

Gandhi, Vaibhav & C.K, Kumbharana. (2017). E- Governance in Local Bodies in India. *International Journal of Sciences, Engineering and Technology Research (IJSTER)*. Vol. 7(2):122-127.

Garg, K. (2011). *Electronic Government (Information System in Public Administration*). New Delhi: *Arise Publishers & Distributors*.

Gupta, Saurabh & Rajan, Sameer. (2017). E- Governance Initiatives for the Socio-Economic Empowerment of Womwn to Transform the Uttar Pradesh State of India. *International Journal of Engineering Research and Application*. Vol. 7(6): 102-106.

K, N. (2018). E-governance in India: Issues and Challenges. *IOSR journal of economics and Finance.*

Kalsi, N.S, Kiran, Ravi and Vaidya S.C. (2009). Effective e-Governance for Good Governance in India. International Review of Business Research Papers. Vol. 5(1): 212-229.

Kandpal, Vineet & Bisht, Manoj. (2013). Administrative Reforms in State Uttarakhand India using Information and Communications Technologies. *International Journal of Advanced Research in Computer Science and Software Engineering*.

Kassen, Maxat. (2012). Globalization of e-governance: open government as a global agenda; benefits, limitations and ways forward. Information Department. Vol 30(1): 51-58.

Koudiki, Bhaskar Vijay. E-Governance- A Strategic Management Tool for Universities in Karnataka- An Exploratory study. Canara Bank School of Management Studies: 1-28. Bangalore, India.

Krishnaprabu, S. (2019). E-governance in Education Sector. International Journal of recent Technology and Engineering. Vol. 8(1):958-961.

Kumar, Puneet & Bhanti, Prateek. (2012). Prospects of E-governance in India. *International Journal of Engineering and Innovative Technology*. Vol. 2(3).

Kumarwad, Laxman & Kumbhar, D Rajendra. (2016). E-Governance initiatives in Maharashtra (India): Problems and Challenges. *Journal of Information Engineering and Electronic Business*.

Malik, Poonam & Dhillon, Priyanka & Verma, Poonam (2014). Challenges and Future Prospects for E- Governance n India. *International Journal of Sciences, Engineering and Technology Research*. Vol. 3(7): 1964-1972.

Mishra, Purva (2014). Progressive Punjab: A Step towards e-governance. *Indian Journal of Public Administration.* Vol 2.

Molla, N., & Mandal, I. (2017). Human computer Interaction and E-Government: Components of the System and Its Evolution. *International Journal of Advanced Research in Computer Engineering and Technology*, Vol.6(9): 1408.

Nagaraja, K. (2016). E-Governance in India: Issues and Challenges. *Journal of Economics and Finance*, Vol. 7(2): 50-54.

N, Ganesh, Balaraman, Premkumar and K, Priya. (2019). Theoretical Insights on E-Government and Global Trends in E-Governance Technologies & Applications. International Journal of Engineering and Advanced Technology. Vol. 8(5):1843-1850.

Panneerval, P. (2005). E-Governance: *A Change Management Tool*. New Delhi: Rawat Publications: 1-248.

Pinto, M. (2010). Good governance: New Public Management Perspective. In R. Sharma, & R.K Arora, Good Governance Stimuli and Strategies. Jaipur: Aalekh Publishers. 130-140.

Sapru, R.K & Sapru, Yudhishtra. (2014). Good governance through E-governance with special reference to India. *Indian Journal of Public Administration*, Vol.2.

Sargunam, T & Viji, Vinod. (2014). Use of Social Media in Effective Implementation of E-Governance in India. *International Journal of Communication and Networking system*. Vol. 3: 267-278.

Sharma, S K, Rathore, Singh Vijay and Jawarial, L.K. (2016). E-Governance in India-Trends, Prospects, Challenges and Solutions. International Journal of Engineering Management & Sciences. Vol. 3(4):1-5.

Sharma, R., & Arora , R.K. (2010). *Good Governance Stimuli and Strategies*. Jaipur: Aalekh Publishers.

Shukla, S.K (2010). The concept of Good governance. In R.Sharma, & R.K. Arora, *Good Governance Stimuli and Strategies* (pp.39-51). Jaipur: Aalekh Publishers.

Singh, A. (2005). *Administrative Reforms Towards Sustainable Practices*. New Delhi: Sage Publications.

Singla, Kumar Sushil & Aggarwal, Himanshu. (2009). Significant E-Governance Projects in India States. *International Journal of Recent Trends in Engineering*. Vol. 2(4): 39-42.

Sophiarani, Soubam & Singh Ibohal. Ch. (2013). Use of G2C information services under the e-Governance initiatives in NE India: A Pilot survey. Annals of Library and Information Studies. Vol.60: 107-114.

Srivastava, Nidhi. (2015). E-Governance in Rural India. *International Journal of Computer Science and Information Technologies*. Vol. 6(1). 741-744.

Tyagi, A. (2014). E-Governance: Emerging Dimension in India. *International Journal of Business and Management Invention.*

Ungsuchaval, Theerapat (2017).   Mainstreaming Moments in Governance Theories: Some Observations. *Journal of Asian Review of Public Affairs and Polity*. Vol. 2(3): 24-54.

Yadav, Nikita & Singh, V.B. (2012). E-Governance: Past, Present and Future in India. *International Journal of Computer Applications*. Vol. 53(7).

Yogaraju, S.D and K, Yogarajnarasimhachari. (2015). E-Governance Initiatives in Karnataka State: A Note. *International Jornal of Research in Engineeering, IT & Social Sciences*. Vol. 5(3): 27-33.