Impact and Scope of e-Governance Initiatives in State of Punjab (INDIA)

Sushil Kumar Singla
Govt. Polytechnic College
Bathinda (Punjab) India

Himanshu Aggarwal
Punjabi University, Patiala
Patiala (Punjab) India

ABSTRACT

E-Governance refers to the process of automation for providing efficient and effective delivery of government services to the citizens. The purpose of this paper is to explore e-Governance initiatives taken by the Punjab Government. The research findings elaborate on what are the reasons that e-Governance is not properly implemented in rural areas of the state. It highlighted the factors of e-Governance to control the corruption. It also explains knowledge of citizens about internet required for effective implementation of e-Governance. This study is useful to know the impact of e-Governance projects implemented and find out the scope of e-Governance in the State of Punjab.

Keywords

e-Governance, SUWIDHA, Punjab, Factors.

1. INTRODUCTION

E-Governance is a process to deliver the Government Services with the use of information and communication technology. It helps to simplify the service delivery process and offers easy access to the Government Policies. The benefits of e-Governance include transparency in process, efficiency in service delivery, responsibility and accountability of authority. The prime objective of e-Governance is to improve citizens' participation in the decision making for effective and good governance. It seems that e-governance initiative can provide direct benefits to the citizens by delivering the public services in more convenient, cost-effective and citizen-oriented manner. The Central as well as the State Government is trying its best to promote e-governance in the thrust areas such as land record, education, ticker reservation and providing public utilities[2][6][16].

2. E-GOVERNANCE INITIATIVES IN THE STATE OF PUNJAB

The Department of information Technology (DOIT) has been setup in the state of Punjab to execute information technology culture for better implementation of e-governance. The e-governance initiatives of the state focus on citizen-centric governance to deliver efficient and cost effective Government Services. The main e-governance initiatives of Punjab State are as followings:

2.1 Punjab State Wide Area Network (PAWAN)

Punjab Government established the Punjab State Wide Area Network for data, voice and video communications throughout the state. It enables access to the applications of entire State Government and its departments through interconnectivity. It also provides the reliable and secure connectivity within the state administration to make the Government more productive at reduced communication cost

2.2 Property Registration Information System Module (PRISM)

This project automats all major activities of Sub-Registrar office through single window system. It includes deeds of Sale, Mortgage, valuation of property, on the spot registration, WILL, Lease etc and capturing and printing of photographs on stamp paper. It has been implemented in Sub-Registrar offices in the State of Punjab[14].

2.3 Web-based Counseling for PSBTE (Punjab State Board of Technical Education)

It is a Web-based online off-campus counseling for the admission in the entire engineering Diploma course, lateral entry (LEET) to 2nd year engineering Diploma and pharmacy stream in 125 institutes across the state. This provides the convenience to students as they are not required to visit at counseling venue. It saves the time and cost[15].

2.4 Integrated Treasuries Information System of Punjab (ITISP)

It is an online system for automation of District treasuries in the state of Punjab. The aim of this project is to bring more transparency and time bound functioning of treasuries. It includes the verification of DDO through photograph and signature, computerized cheque printing, receipt module and pension module. This project is implemented at District Treasuries and Sub Division Treasuries for improvement in operations and management of state funds.

2.5 Transport System

There are two application softwares used for computerization of transport department. VAHAN (Vehicle Registration System) software is used for registration of commercial and private vehicles. It includes addition and removal of hypothecation, transfer of ownership, NOC and renewal of registration certificate. SARATHI (Driving License issuance system for Transport department) software is used for issuing driving license. It includes the renewal and issuance of duplicate license [13].

2.6 Agriculture Marketing Information Network (AGMARKNET)

This project is used for agricultural marketing boards/departments for dissemination of collected market information. It also includes market fees collection, database of dealers and issuance of licenses to dealers.

2.7 Single User-friendly Window Disposal Helpline for Applicants (SUWIDHA)

It is used to facilitate the citizens by capturing the input at a single point, defining a specified date according to the type of service then accept the cash at the counter itself and deliver the required service on the same counter. It is a single window system to provide effective interface between the Government and Public. It also provides the facility for the citizens to check the status of their applications through the project website[22].

3. OBJECTIVE AND SCOPE OF THE STUDY

The objective of study was to look the impact of e-Governance projects implemented in the state of Punjab and analyze the views of citizens to find out the scope of e-Governance and effective implementation of e-Governance for better result. In view of the certain constraints like time, area and money, the study was confined to the State of Punjab in India because Punjab is growing State of India where e-Governance has been implemented in successful manner. For this purpose, the whole Punjab was categorized into three traditional Zones mainly known as Majha, Malwa and Doaba. Two districts in each zone have been selected on random basis and 50 % Tehsils from each selected district have been included in the study [1][20].

4. RESEARCH METHODOLOGY

4.1 Sampling Scheme

After a thorough literature review on e-governance, a questionnaire was framed to study the views of citizens. The questionnaire is based on five point scale. The research involves the collection of data from the citizens. The total number of respondents, the sample size and applications of statistical techniques has been followed[20]. The details of the research methodology adopted in this research are given below:

4.1.1 For the State of Punjab

1. *Universe of study*-All Districts of Punjab State.

2. *Sample selection*-The present study was confined to State of Punjab with 6 districts from 3 different regions of the State (2 districts each) namely Bathinda, Faridkot , Amritsar, Tarantaran, Jalandhar, S.B.S. Nagar and 50 % tehsils of these districts.

4.1.2 For the respondents

1. Universe of study-All common citizens.

2. Sample Selection-A number of respondents from the selected districts were selected using stratified random sampling (shown in table 1).

Table 1. Sample Table

Group		Number of Respondents	%age Res-ponse size
Gender	1. Female	100	28.99
	2. Male	245	71.01
Residence	1.Urban	211	61.16
	2.Semi-Urban	94	27.25
	3.Rural	40	11.59
Qualification	1.PG	41	11.88
	2.Graduate	180	52.17
	3.Matric	91	26.38
	4.Under Matric	33	9.57
Income Level	1.BPL/ Yellow Card	100	28.99
	2.Non ITaxPay	180	52.17
	3.ITax Payee	65	18.84
Occupation	1.Unemployed	45	13.04
	2.Service	108	31.30
	3.Business	87	25.22
	4.Student	105	30.44
Age Group (Yrs.)	1.Up to 18	69	20.00
	2. 18-40	218	63.19
	3.Above 40	58	16.81
All Data		345	100

4.2 Data Collection and Processing

Keeping in view the above objective the data was collected through direct personnel investigating method. As a result, numbers of factors were identified useful to study the impact and scope of e-governance initiatives in the state of Punjab. The responses of 345 citizens of the selected districts under study were recorded on five point scale with score ranging from 1 to 5[20].

5. ANALYSIS AND FINDINGS

The analysis of Table 2 has been made on the basis of average of 06 different questions asked to sample of 345 people for the opinion about the developments of e-Governance Projects implemented in the State of Punjab.

Table 2. Opinion about the Developments of e-Governance Projects

Sr. No.	Factors	Avg
1.	Work going as per schedule	3.99
2.	Difficulty in works through e-Governance	3.05
3.	Satisfied with the behavior of e-Governance handling officials	3.34
4.	Work completion turn wise	3.72
5.	Now work is in a planned and legal way	3.92
6.	Shortage of services at Suwidha Centre	3.54

The above **Table2** shows that averages of factor 1 and factor 5 are close to 4 which depicts that most of the people are of the opinion that due to the implementation of e-Governance in Punjab, work is done in a planned and legal way as per schedule. The reasons might be that each type of service has a specified delivery time, fixed fee for each service and the documents required are also specified. The average of Factor 4 is 3.72 which tell that work is completed turn-wise under e-Governance projects. If we take the example of SUWIDHA Centres in Punjab then the reasons for it might be the issue of token number to the people. People wait till the token number is displayed on the screen and when their turn comes, they file their applications. But the table also reflects that the average of factor 4 is not close to 5 which shows that some people are facing problems for which the reasons responsible might be the favoritism shown by the officials either due to the agents or their personal relationships. Factor 3 and factor 6 in the table shows that people are moderately satisfied with the behavior of e-Governance handling officials and with the number of services available at SUWIDHA centres. Probably, the reason is the shortage of staff at SUWIDHA centres which has led to increase in work pressure on the available staff. Moreover, the staff is

hired on contract basis which leads to job insecurity among the staff. Average of factor 2 is near to 3 which shows some peoples are facing some difficulties while using e-Governance. It may be due to unawareness about e-Governance and having wrong opinion about computerization.

Internet is the basic requirement for the better implementation of e-Governance. So it is necessary to know how much people are aware of the use of internet. It will help in study of impact and scope of e-Governance. The analysis given in Table 3 shows the internet knowledge of the people.

Table 3. Knowledge about Internet

Sr. No.	Factors	Avg
1.	Do you know about Internet	3.73
2.	Can you work on Internet	3.49
3.	Do you use Internet for e-Governance services	2.93
4.	Can you Check the status of your application on Internet	3.39
5.	Are you able to know the different documents required for particular service on Internet	2.98
6.	Do you know the website address of e-Governance services	3.23

Internet now-a-days has become an important part of our day-to-day life. Internet education/knowledge is a necessity today as it has become an important source of information. The above given **Table3** indicates that how much and how far people are connected with the internet services. In this table factor 1 is showing highest average of 3.73 which means many people have known about internet. They are not unfamiliar with the available internet services. Factor 2 depicts that a good number of people have access to internet. The reason might be access to social networking sites, various services available on internet like online payments, booking of tickets etc. But people also use the internet to check online status of their applications and is pointed out by the average of factor 4. Factor 3 and 6 shows that most of the citizens know the website address of e-Governance services but only few uses the internet for e-Governance services and to know the different documents required for particular services. It may be due to unawareness about e-Governance websites and more interest in social websites.

Punjab government provides various e-Governance facilities to urban as well as rural area but due to some reasons it is not effectively implemented in rural areas. The study of Table 4 tells about the reasons behind improper implementation of e-Governance in rural areas which will help to know the scope of e-Governance.

Table 4. Reasons due to e-Governance Projects not implemented in Rural Areas

Sr. No.	Factors	Avg
1.	Politicians do not want to loose authority and spreading wrong rumors about e-Governance	4.24
2.	Due to Illiteracy	4.29
3.	Due to scarcity of funds	3.90
4.	Due to Policies of Government	4.08
5.	Long Distance to Suwidha Centre from residence	4.17
6.	Costly to visit Suwidha Centre	3.98
7.	Nonexistence of kiosks in village	4.19

The **Table4** describes the reasons for improper implementation of e-Governance in rural areas and the main reasons highlighted by factor 1 and 2 are illiteracy among rural people and lack of interest on the part of politicians to make the people aware of e-Governance services. One of the reasons might be that rural people themselves are illiterate and are not aware of e-Governance services; other reasons are if people become aware of e-Governance services, their dependence on politicians will be reduced which will lower down the benefits in terms of bribe for the politicians and politicians also might fear of losing authority. Another important reasons revealed in the table are non-existence of kiosks in villages and long distance of SUWIDHA centre from residence as shown by factor 7 and 5 respectively. The reason might be that SUWIDHA Centres are located in urban areas and the villagers find it difficult to go to the cities to avail the services of these centres and sometimes they have to take leave to get their work done at SUWIDHA centres. Factor 4 reveals that Government Policies are ineffective. The reason behind ineffective Government Policies might be that Government doesn't have good schemes for rural areas and not proper advertisements to promote those schemes. Factor 6 reveals that rural people find it costly to visit SUWIDHA centres located in urban areas. The reason here might be that the there is no availability of trains to go from one village to another and the buses charge very high. The table also depicts that people have considered long distance as more important reason behind improper implementation of e-Governance in rural area rather than the cost. It means some people are ready to bear cost but are not able to cover long distance and this is the reason that they prefer to grease the palm of the agents to get their work done at the wink of an eye. As per factor 3 scarcities of funds is another reason. Government is investing in so many other areas so Government doesn't have sufficient funds to support e-Governance in rural areas. It may be due to diversion of funds in other areas like Sangat Darshan or other political move.

The main aim of e-Governance is to bring transparency and effective delivery of government services as this can help in eradicating corruption. The analysis of Table 5 depicts the impact of the implementation of e-Governance in controlling corruption.

Table 5. Factors due to e-Governance Contribute to control Corruption

Sr. No.	Factors	Avg
1.	Timely completion of work	4.01
2.	Applying directly at Suwidha Centre	4.37
3.	Single Window System	4.28
4.	Responsibility and accountability of officials	4.24
5.	Knowing Status of application via Internet	4.23

The above given **Table5** shows the average of all factors is more than 4 which shows that all factors are responsible to control corruption in e-Governance. In this table, factor 2 and factor 3 have come out as a main reason to control corruption. Perhaps the reasons are that under e-Governance projects, people are directly linked with the officials of SUWIDHA centres and they need to pay only required amount as per government rules. There is no middlemen who charge people highly to get their work done fast and all the services are available under one roof. Factor 4 and 5 reveal that officials feel themselves responsible and accountable towards the people and if any official commits a mistake, he is punished. So officials have started taking good

care of the convenience of the people and that's why application status is updated online. So now people don't need to give bribe to the middlemen or officials to know their application status. Last but not the least is factor 1 i.e. timely completion of work. The reason here might be that the delivery time of each service is pre-defined. The officials complete the work within given timeframe so that the people may not feel inconvenient.

6. RECOMMENDATIONS

On the basis of studies, surveys, interviewing the people and analysis made for collected data, following recommendation can be made.

1. In SUWIDHA Centre If an official is on leave for any reason, the seat must be compensated as the absence of officials can cause inconvenience to the people. So there should always be a backup.

2. Officials should be given training on Computer Hardware and Software so that they can handle operational problems themselves in the time of emergency and it will also save time and cost.

3. While implementing e-Governance initiatives Government should prefer high quality IT infrastructure in government offices because poor quality infrastructure causes computer hanging, display problem, operating system crash, virus attack and other variety of problems. All these problems can put high pressure on the officials and can also affect their working.

4. SUWIDHA Centres should be set up in rural areas so that rural people can easily avail e-Governance services. It will also be cost effective for them and they will not have to cover long distances to reach SUWIDHA Centres. It will help in controlling corruption as people will stop giving bribe to the middlemen to get their work done in time.

5. Basic Facilities like drinking water and toilet should be available at each e-Governance place for clean and healthy environment.

6. Such software is needed to be used in SUWIDHA Centres which interconnects SUWIDHA Centres to all the departments which provide services to the people. It will give the departments' direct access to the data available at SUWIDHA Centres and the departments don't need to enter the data manually again. It will also help in time saving.

7. Computer hardware and software should be regularly upgraded as per the requirements as it will provide solution to many problems like slow speed, interconnectivity problems etc.

8. A dedicated team of officials is required to continuously supervise and control all the activities of the SUWIDHA Centres. It will help in bringing solution to the problems immediately and in the optimum utilization of resources.

9. The application forms and instructions given to the rural people should be in regional language only as it will give them better understanding of e-Governance services.

10. Government should also educate Administrators and Ministers so that they can realize the importance of e-Governance and also try at their level best to spread awareness regarding e-Governance.

11. Rural people should be given basic computer knowledge so that they may operate computers and may take the benefits

of e-Governance services. Computer education should be made compulsory in the schools of rural areas.

12. Government should advertise in rural areas regarding e-Governance services by distributing posters, pamphlets and by sending a team to all the rural areas to spread awareness.

8. SCOPE

Scholarship Management Facility at SUWIDHA
In the state of Punjab, different types of scholarships are provided to the students, like scholarships to the weaker sections of the community (SC/ST/OBC) or Sikh minority Scholarship etc. But sometimes students don't get scholarships due to illiteracy or lack of awareness among their parents. As various other basic facilities are provided at SUWIDHA Centre and people also can easily approach it, if this facility is also provided there, it would help in creating awareness among people. SUWIDHA can play a significant role as an information centre by displaying posters & pamphlets, by providing scholarship application forms and helping students in filling these forms.

Ticket Reservation Facility at SUWIDHA
There is an Electronic Ticket Reservation System at all railway stations and it is also working efficiently. But this facility along with Bus and Air ticket reservation system can be made available to the citizens at SUWIDHA, it will help citizens a lot as if a person goes to SUWIDHA to access some basic facility and also needs a ticket, then he can easily do both work at one place. It will save both time and efforts.

e-Governance in Employment Exchange
Punjab Government has opened different employment exchanges in different cities. People need to register their names there and get to know about various job opportunities as per their qualification. E-Governance can play an important role here. If names of all the unemployed people are recorded in the computer, they can be informed about suitable job opportunities through e-mail. So people will not require coming to employment exchanges to know about job opportunities. It will reduce the burden of the employees at employment exchanges as they don't require maintaining registers as well. On the other hand, companies can easily access database of employment exchanges to hire manpower and companies can also send recruitment plans on the websites of employment exchanges.

e-Governance in GPF/CPF Management
Government employees are provided with the facility of General Provident Fund (GPF) or Contribution Provident Fund (CPF). This facility is controlled by central or state governments. But the employees do not get information regarding the amount to be deducted from and added to their salary account per month. So government departments can provide the facility of e-Governance through which all government employees can easily get details regarding the amount in their accounts and interest added on it per month etc at their homes. It will prove to be very beneficial to the employees.

Utility Bills Payment Facility at SUWIDHA
Everyone requires paying house tax, electricity bill, phone bill, sewerage bill etc and if citizens will be given the facility to pay all the bills at one place i.e. at SUWIDHA Centre and then SUWIDHA forwards the payments to the concerned department. It will reduce their burden and wastage of time.

Intercity Birth/Death Certificate Facility
Sometimes a person gets birth at one place but after sometime shifts to other place. Now it becomes burdensome task for a person to get birth certificate from that place. So if SUWIDHA Centres all over Punjab get interconnected and this facility can be made available at SUWIDHA Centres, a person can apply for the birth certificate at the SUWIDHA Centre at one place, then application can be sent electronically to the other SUWIDHA

Centre located at some far away place. After completing the whole process, the other SUWIDHA Centre sends back the required document electronically to the first SUWIDHA Centre from where a person can collect certificate.

e-Governance in Rural Development

Punjab Government provides various schemes to villages, but these are not effectively implemented so there is lot of scope of e-Governance in villages. In villages, Panchayats control the whole administration so by creating e-Panchayats, funds for various schemes in villages can be easily managed and state government can also easily get updated information regarding the use of these funds, different facilities available in villages and other needed facilities to upgrade the standard of living of the people in villages.

7. CONCLUSION

In this paper, we have presented the role of e-Governance in improving service delivery and its impact on citizens' life style. The research reveals that e-Governance has the potential to control corruption and providing quality service. But due to lack of internet knowledge among the citizens, e-Governance has not been properly implemented so computer education is required to create awareness regarding e-Governance projects. This research will be helpful to the Government as well as the software developers to design an architecture which can help in the successful implementation of e-Governance projects. At the end of the research paper, specific recommendations are given for the efficient and effective implementation of e-Governance in the state of Punjab. So it can be concluded that proper implementation of e-Governance is the only way to bridge the gap between rural and urban areas

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