

UDC and e-Service Delivery at Local Government Level in Bangladesh: A Framework for e-Government

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ABSTRACT

This is the age of Information and Communication Technology (ICT) which has brought change by being an integral part of governmental service delivery of the twenty-first century. Public service delivery is a great concern for governments. The present government of Bangladesh has realized this fact of ICT and has introduced ICT based Union Digital Centre (UDC), district and upazila web portals to provide quicker and smoother services to the people for creating "Digital Bangladesh". The main focus of this study is to bring citizens under the whole e-governance system. ICT based UDCs are the main actors for this purpose.

The present government has set up 4547 service centres at every Union level (the lowest tier of Local Government) which is known as Union Digital Centre (UDC). ICT based UDCs provide time and cost effective some sorts of off-line and online door step services to the rural people. The broad objective of this study is to make an e-government framework at the local government level in Bangladesh by providing e-services through UDC. The specific objectives are: To find out the role of UDC in public service delivery at the local government level in Bangladesh; and to know the effectiveness of UDC in promoting e-government by delivering e-services to the people. This study has attempted a qualitative research approach to obtain its objectives.

Keywords: E-Governance, E-Service Service Delivery, UDC framework, Bangladesh

1. INTRODUCTION

1.1 Background of the Study

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Digital Bangladesh is one of the nation's dreams, and so special emphasis is given on the application of digital technologies to implement Vision 2021, which we commonly call Digital Bangladesh. Information and communication technology (ICT) has brought this dream true by being an integral part of governmental activities. Although, the developed nations initiated the ICT move of governmental initiatives, today, the rest of the world nations have begun to use ICT on a day-to-day business. In the perspective of technological revolution around the world, governments are accommodating innovative and necessary efforts to confirm desired changes in the area of public administration to keep pace with newer expectations of citizens. No government in the present world can avoid such changes. In this connection, ICTs are being considered as new tools for the governments to satisfy people by providing expected services. Realizing this fact, Bangladesh government has introduced ICT based Union Digital Centre (UDC) and web portals for all government offices at district and upazila levels to provide quicker and smoother services to the people for creating "Digital Bangladesh" [1]. Such use of ICT in governmental activities to provide citizens with effective and efficient services with reduced cost and in minimum time is termed as E-Governance². However, introduction of e-governance does not only involve changing the systems, procedures, and processes of relevant services but also affects the ways and relationships in which citizens and business community deals with government organizations.

The ultimate objective is to bring citizens under the whole e-government system. ICT based UDCs are the main actors in achieving this purpose. Local government of Bangladesh is of two types; 1. Urban Local Government and 2. Rural Local Government. Urban local government has two types: a) City corporation and b) Municipality (Paurosava) corporation. On the other hand, rural local government has three types: a) Zilla Parishad (District Council) b) Upazila Parishad and c) Union Parishad. In Bangladesh more than 70% of people live and work in rural areas and typically have to travel long distances to access government information and services paying higher costs, spending longer times and involving considerable hassle. In order to reach the doorsteps of rural people, government has taken the initiative to establish one-stop information and service delivery outlets known as Union Digital Centres (UDC) in all union councils across the country since 2010. The prime aims of UDC efforts are: to increase interactions between

government and the citizen for efficient and quality service delivery and to elevate greater public voice of governmental activities, to enhance transparency and accountability of the government, to enable poverty alleviation initiatives, to create business opportunities for the private enterprises, and so forth by establishing e-government at the local government level.

These one-stop service centres are run by 1(one) male and 1(one) female entrepreneurs who work with elected local government representatives [4]. Using modern equipment such as-computers, scanners and printers connected with internet modem which are provided by the government, they render citizens nominal fee-based access to public services (land records, birth registration, telemedicine, life insurance, passport, various government allowances and overseas job application as well as application to various other government services) and private services (mobile financial services/mobile banking services, insurance, various types of computer and vocational training). In order to draw a conclusion, this study would like to proceed with relevant observations as pertinent to develop the e-government framework at the local government level.

1.2 Rationale of the Study

Bangladesh is a developing country with a huge population in south Asia. Most of the people are uneducated, poor and live in rural areas. They do not have much scope for getting governmental services and information properly and in a timely fashion. People in rural areas have to go to different governmental offices several times for some important and essential basic services like-land records, various government allowances, land records & registration, passport services, driving licenses, mobile banking services, health related, agricultural information and so on which consumes huge time and money for the poor rural people. Sometimes, people do not have access to government offices easily. That is why; government wants to have easy access to public information and services by creating digital Bangladesh by 2021 which aims to bring under privileged people under the coverage of e-services. In this regard, the present government has already set up one stop service centre at Union level which is known as Union Digital Centre (UDC) for the purpose of improving the accessibility to government services. It is

connected with a central server and all other government officials' portals. ICT based UDC services are time and cost effective, reliable and smooth which gives rural people easy access to accurate and latest government services. So, successful implementation of UDCs can play an important and the vital role to promote the framework of e-government at the local government level in Bangladesh.

1.3 Objectives of the Study

The specific objectives of the study are as follows:

- ▶ To find out the role of UDC in public service delivery at the local government level in Bangladesh;
- ▶ To know the effectiveness of UDC in promoting e-government by delivering e-services to the people; and
- ▶ To suggest a framework for e-Government.

2. E-GOVERNMENT, E-SERVICE, ICT, UDC AND SERVICE DELIVERY

2.1 Introduction

E-government is one of the most important concepts in the present world for e-service delivery. Already, some nations have proceeded ahead with e-government activities. Some other countries are well prepared to start the journey. Countries like Bangladesh have just started moving. Therefore, in the Bangladesh context, the proposed field remains untouched to be explored into, where a substantial gap exists. Very few government, business or technical reports, documents or articles are presently available on e-services in Bangladesh. A small number of studies have been reviewed throughout the world regarding community based service centres. Among them, only a few studies have been found about service centre (like- UDC) which provides e-services to the rural people in Bangladesh. The concept of e-government is very new and innovative in Bangladesh. The available relevant literature that has been reviewed is as below:

E-services: Electronic Service or E-services is one of the key words in this thesis. It is the provision of services via the Internet. It is the use of electronic technology by an organization to provide services to its customers.

Wilson (1998) mentioned that “an e-service is an activity or series of activities that takes place during the interaction between a provider and a customer through an electronic channel“.

UDC is a practical and useful instrument to local governments which are willing to deliver their e-services by making use of the digital infrastructure. As delivering services to citizens is one of the most important responsibilities of local governments and involves information exchange, it easily fits the profile of a main target field in terms of e-governance. Developing an effective and efficient digital infrastructure for the delivery of e-services involves a lot of time, effort and commitment. The public service delivery mechanism of Bangladesh is in the midst of reinventing itself to become more transparent, accountable and responsive to citizens' needs.

A Transparency International Bangladesh (TIB) report acknowledged 30 per cent reduction in corruption in the service sector due to the introduction of e-services (TIB, 2012). UDC is to be set up for the purpose of providing e-services to rural people in Bangladesh. Through the e-service delivery, the UDC will promote the framework of e-government in rural local government level in Bangladesh. In this regard, e-services can play a vital role. Saroar Ahmed Saleheen (2015) “Public Service Delivery- Role of Union Digital Centre (UDC) and Impact on Improving Governance and Development: A Case Study of Narayanganj District” shows that UDC has great impact on improving governance and development by delivering e-services to the rural people. It has been seen in recent times that most of the countries in the world are making ICT based e-service delivery initiatives. As a result, ordinary people are getting smooth and faster services from government and private sectors. Due to implementation of e-service delivery system in developed countries, the rate of corruption is very low while on the other hand the rate of growth is very high which inspired other developing countries like Bangladesh to adopt ICT based e-service delivery system. Some challenges like budget and finance, top-level management initiatives, technical problems like integration and interoperability, inadequate power supply, lack of internet access, lack of regulations are the major barriers for development of e-services in Bangladesh.

E-government: Electronic Government or e-government is a very big concept. The impact of UDC in preparing the framework of e-government at the local government level is the main concern of this

thesis. E-government is the effective and efficient use of modern information and communication technologies (ICTs) such as Internet, LANs and mobile phones to improve the activities of public sector organizations with a view to establish good and transparent governance and to promote development of any country.

According to Heeks (2001), e-government is the application of Information and Communications Technology to the government processes to bring simple, moral, accountable, responsive and transparent (SMART) governance.

E-government will manage the way that citizens deal with the government and with each other, allow citizens to communicate with the government, participate in government policy making and planning, and to communicate with each other. It assumed that work flow in government and semi-government offices will be fully integrated with ICTs through re-engineering of government's business process. By the blessings of e-government, people will have access to all the government facilities round the clock. That means all interaction with the government will be done through one counter 24 hours a day, 7 days a week without physically waiting.

Mohammad Jahangir Alam author of "E-Governance in Bangladesh: Present Problems and Possible Suggestions for Future Development" says that to make transparent and effective government work, to increase government efficiency, accountability and to improve the service delivery and participating the public in all aspects of government activities, e-Governance is obligatory. According to the writer establishment of e-governance in a country it requires- automation in all sectors, ICT infrastructure, proper training, internet connection, strong database, public awareness.

The final objective of e-Government is to create good governance. Shahnila Monjur in her thesis titled "e-governance initiative in a developing country: the case of Bangladesh" says that in this new era of ICT, the role of government is changing rapidly. To bring overall effective improvement in administration, government has changed their patterns by implementing ICT in different sectors of a country and adopting the new concept of e-governance. Most of the developing countries still depend on paper-based service delivery due to a lack of ICT infrastructure and therefore absence of e-governance. Bangladesh can achieve a more citizen friendly service through implementing

e-governance and UDC can play an important role in this regard. E-governance is the most attractive, interesting, useful people-oriented and growing phenomenon and has become one of the pivotal parts of administrative reform to bring good governance in any country (Moon, 2002).

ICT: This is the age of Information and Communication Technology (ICT). ICT plays an important role in all sorts of development. In particular, e-government and e-service delivery are ICT based concepts. The Article “Information Infrastructure in Bangladesh: Need for a National Approach” by Md. Nasiruddin discusses new structure and opportunities of information and technology caused by the rapidly changing ICT. To enhance accessibility and usefulness of information and to assure a country's competitiveness internationally, the writer recommends that it immediately needs to improve the ICT infrastructure.

Hassan in his “E-Governance and E-Government in Bangladesh: Performance, Challenges and Remedies” says that it is the time for developing countries to turn around for changing their age as well as lifestyles with ICT. Only the use of ICT in the government functioning is expected to bring a radical change in this field. According to the writer - ICT is a part and parcel of our daily life. Everything is connected with ICT. So, without ICT we cannot think about our present situation.

Effectiveness of Union Parishad: Union Parishad is the lowest tier which is responsible for some development, quasi-judicial, administrative and service oriented functions in the rural union level. It is run by local elected representative under local government division. Union Parishads are formed under the Local Government (Union Parishads) Act, 2009 (Updated). A Union Parishad is the body primarily responsible for providing public services to their designated entire community.

According to Rahman showed in his report “Effectiveness of E-governance System to improve the Union Parishad’s Activities” that how the Union Digital Centre is working to make the UP more effective by giving prompt and swift services to the rural people at Union level. The writer showed the example of Japanese local government functions. According to the writer -this is also helpful to compare our local government system and share some good practices to minimize our problems in the light of Japan’s experience.

The present government is committed to establish strong local

government institutions at various levels through active participation of the elected representatives in the administration as well as development activities. In this connection, the government has set up 4547 digital centres (known as UDC) in all UP across the country to provide doorstep services to the rural people. Many kinds of public services and important information are provided from this one-stop service hub. UDC works to promote the e-government in local union level and improving the service quality. The UP could play a catalytic role in local level development if it could overcome the existing service delivery systems, administrative and financial limitations and the shortage of technical manpower through the help of UDC. According to the writer, to make the union parishad an effective one, it needs to employ sufficient trained and skilled manpower, sufficient financial capacity, proper IT infrastructure, administrative capability and above all motivated elected representative to lead the process.

Bangladesh Competitiveness: In order to achieve digitization, Bangladesh is trying to improve its efficiency by adopting modern technologies in private and public sectors. In this regard, the present government has established web portals for all offices, computer council, Access to Information (A2I) and UDCs in all UP for the purpose of making digital Bangladesh by 2021.

The government also established IT parks in various places across the country. For skilled and trained Human Resources, the government has been continuing training program for its employees at various levels. E-filing, digital signature, district e-services centre and other digital services (e-TIN, e-passport service, e-tendering, e-registration, e-driving license, e-voter ID card, e-birth registration and so on) have already been introduced in different government departments. On the other hand, the private sector has also been flourishing day by day in our country. The government is also providing various facilities to them for proper exploration.

The government has exempted all taxes on computers and accessories to promote Information and Communication Technology (ICT) (SICT, 2008). As result, our private telecommunication sector and banking sector are fully automated due to facilities provided by the government. The government has also been promoting call centres to develop a business process outsourcing industry (BTRC, 2009). National ICT Policy 2002 has been revised and replaced by national ICT Policy

2009 with notable changes in the methodological framework in the policy document including planned action items. The ICT Policy 2009 also reflects the government's vision to establish a "Digital Bangladesh" by the year 2021.

2.2 Services of UDC

UDC is a one stop service centre which provides various public and private services to the rural people. It is an ICT based service oriented hub which works at the Union level, the lowest tier of local government in Bangladesh. The present government is trying to make it a Centre of Excellence by connecting it to various government and private offices and engaging citizens. People will get various kinds of necessary information and services from UDC. To make it more successful, A2I of the ICT division has already made a website named-E-Totthokosh (www.infokosh.bangladesh.gov.bd) which is a combination of all sorts of national information and services.

The following services and information are provided through UDC such as:

- 1. Birth Registration:** It is one of the important tasks of UDC services. Birth certificate is now mandatory for getting any kinds of government facilities in Bangladesh. Rate of success of birth registration in rural areas through UDC is more than 90%.
- 2. Government Information Services:** This is another important services provided by the UDC. Information relating health, agriculture, market, weather, VGF, VGD, public examination and so on is provided to the rural people easily through the UDC.
- 3. Land Records:** Land records and other documents are also provided by the UDC at the rural level. It saves time and costs as well. The rate of success of this service is not so high. More than 80% rural people using this facility.
- 4. Mobile Banking:** A limited number of mobile banking services by the UDCs with collaboration private banks are available. This is also very popular services for the rural people. Only less than 10% people in rural area using this facilities.
- 5. Employment and Job related services:** Many job seekers get information from UDCs and also they can fill up forms from

this point as well. This service is popular for rural unemployed people. Only small number those who are educated using this service.

- 6. Educational Services:** UDC also provides some important educational services to students. Admission test information, admission form download and so on are provided from local UDCs at rural level.
- 7. Off-line Services:** Various off-line services like; computer printing, computer writing, photocopying, scanning, laminating and so on are provided by UDCs at the local rural level in Bangladesh.
- 8. Death and Inheritance Certificate:** Death and inheritance certificate are issued by the local UP chairman. These two are very important for property distribution and registration compelled by the government. These two certificates are provided by the UDCs. More than 85% people avail this service from UDCs.
- 9. Citizenship Certificate:** This is an important document for every citizen in Bangladesh. For all sorts of purposes, people requires citizenship certificate which is issued by the local UP chairman and distributed by the UDCs. 100% people avail this facility from local UDCs.
- 10. Miscellaneous Information and Services:** Many other miscellaneous private and public information and services are also provided by UDCs at local areas in Bangladesh. Information and services like; various government allowances, insurance services, education, law & human rights, tourism, environment & disaster management, science & technology, industry & commerce are also provided from UDC.

2.3 Research Gap

E-government is an on-going process and can be interpreted from different points of view. Huge numbers of studies about e-governance have been carried out from different points of view in the world context. Only few are related to Bangladesh. So far, I have found and studied about e-government of Bangladesh; most are not from the public administrative perspective and are not related to UDC. Most of the

studies are related to challenges, initiatives, performance and status of e-government in Bangladesh. I have found no study which is related to my current topic. Only a few of the studies possess direct reference to the area of e-government by providing some important aspects of the field.

However, of the research that I reviewed for this study's purpose, there is no similarity with my current study in terms of scope, objective, nature and study area.

3. RESEARCH METHODOLOGY

Research methodology is an important part of any research. It is the process of collecting data and different information for reaching the objectives of the research. It primarily focuses on the methods, tools and techniques of data collection and uses software to analyze those collected data. Different methods are used to collect data from respondents such as; surveys, questionnaires, face to face interviews and group discussions. I prepared questionnaires and collected data by face to face interviews with general people and UDC officials. This study also incorporates both qualitative and quantitative research approaches which focus on asking questions. After collecting data, I use MS Excel for analyzing and interpreting collected data.

3.1 Selection of the Study Area

Five Upazilas of Narayanganj, Narsindgi, Gazipur, Sylhet and Khulna districts were selected for collecting data for the purpose of this study. It is worth mentioning that those Upazilas are one of the pioneer areas in terms of UDC implementation and thus it was the right decision to choose those areas for this thesis. I visited around 30 UDCs in those five upazilas during the data collection period from February 15, 2017 to March 30, 2017.

3.2 Research Methods

In order to draw some inferences on the findings, it is necessary to analyze the collected data quantitatively. So, a combination of qualitative and quantitative approach is applied here to achieve the objectives of this study. In this research, the following methods are used:

I. Content Analysis

II. Interview (Face-to-Face Interview)

III. Questionnaire Survey

Content Analysis: Content Analysis includes collecting data from all relevant books, documents, articles, journals, UN report, published and unpublished research works and online articles that are found to be available.

Interview: For the purpose of this study, interviews were conducted in person i.e. face- to-face interviews were conducted by the researcher himself. The service seekers are the general people of the locality and their demand for services are simple and plain. The perception of the researcher is that one should deal with proper care in collecting information from them. That is why the interview method with closed ended questionnaire is suitable for this purpose. The main objective of this method was to collect information about the perception of the citizens or beneficiaries regarding the role of UDC in promoting e-governance at the local government level.

Questionnaire Survey: Survey with questionnaire is an effective method of collecting primary data. The semi-structured questionnaire survey method is conducted in this research for the purpose of collecting primary data about the role of UDC to promote the e-governance framework at the local government level.

3.3 Sources of Data and Sampling

The data are collected for this study from both primary and secondary sources. Secondary data are gathered from websites, books, newspaper reports, previous research work, seminar papers and reports.

Primary data are collected through interview with the prescribed questionnaires. The government officials and UDC operators are brought under the questionnaire survey and the citizen/beneficiaries are brought under the interview method for collecting primary data. These personnel were brought under the random sampling for the purpose of structured questionnaire survey.

3.4 Sample Size

A total of 109 (One Hundred and Nine) respondents have been selected from 30 (thirty) UDCs of five different Upazilas under five different

districts in Bangladesh. The composition of the respondents is as follows (Table-5.1):

Table 3.1: Composition of Data Collection Areas and Respondents

Research Areas	Categories of Respondents	No of Respondents
Sonargaon Upazila of Narayanganj district, Palash Upazila of Narsingdi district, Sreepur Upazila of Gazipur district, Zokiganj Upazila of Sylhet district and Dumuria Upazila of Khulna district in Bangladesh.	UDC service receivers (General People), UDC entrepreneurs, UP officials and Government Officials	109

3.5 Data Collection Technique

For this research, different types of data collection methods were conducted to collect the primary data. The primary data were collected by using structured questionnaire (Appendix A) from key respondents and asking a set of questions (Appendix B) from service provider's interview. Data collection was done through direct interviews with respondents of various UDCs under five different districts with the help of Upazila administration. Most of respondents from service seekers were uneducated or half educated. In this regard, I had to take help from UDC entrepreneurs/officials. Sometimes, I had to use some motivational techniques to get feedback from respondents.

4. ANALYSIS, FINDINGS AND DISCUSSION

This chapter presents the results of research findings derived from the primary data analysis by using quantitative and qualitative methods. In this chapter data are presented graphically (i.e. Bar chart, Pie Chart) and systematically by using MS Excel which shed light on research

objectives and research questions. The aim of this chapter is to present the empirical results of the graphical analysis derived from content analysis and to discuss the results obtained from the data source.

4.1 Data Obtained from Beneficiaries: Findings and Analysis

This study was conducted from February 15, 2017 to March 8, 2017 in Bangladesh. I have collected these data from 55 respondents (beneficiaries) from 20 different UDCs from 5 (five) different Upazilas (Sub-district) of different districts in Bangladesh. For the purpose of collecting data from respondents, I prepared a questionnaire with the approval of my supervisor which consists of two parts; one is a close ended questionnaire and another one is an open ended questionnaire.

4.1.1 Performance Indicators of UDC from Service Receivers Point of View

The effectiveness and performance of Union Digital Centre (UDC) is measured and analyzed based on the five principles of e-service delivery indicators. These are the most important indicators which need to be considered for evaluation of the successfulness of UDC.

In this step of analysis, the performance of UDC has been analyzed on the basis of five principles of e-service delivery indicators. Entrepreneurs are key persons of UDC who play a vital role for

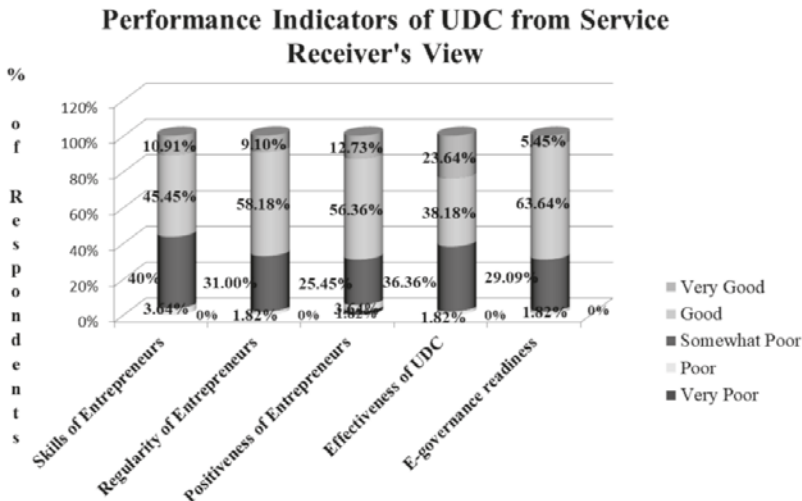


Figure 4.1: Performance Indicators of UDC

minating services and also for the effectiveness of UDC in terms of e-service delivery. The study found the assessment of skills of UDC entrepreneurs by the respondents that are 10.91% very good, 45.45% good, 40% somewhat poor and less than 5% said poor or very poor.

In the case of entrepreneurs, regular presence in UDC is also important for smooth functioning of UDCs. The study revealed that more than 67% of respondents said their regularity in UDC is very good or good but more than 32% said somewhat poor or poor or very poor which is not desired at all for smooth running of UDCs. UDC entrepreneurs' job is not salaried by the government, rather it is like a private-public partnership job, where entrepreneurs earned by selling services to the people with nominal costs. Government only provides logistics, training and other infrastructural facilities to the UDC for rendering services to the rural people. So, they have no fixed income. As a result, most of UDC entrepreneurs are not motivated to provide services and sometimes they left the job for better positions which ensure fixed earning for them.

Entrepreneur's positivity is also an important indicator for effectiveness of UDC. The study showed that 12.73% of respondents said very good, 56.36% said good, 25.45% said somewhat poor and less than 6% said poor or very poor attitude of entrepreneurs towards service receivers when they ask for e-services from UDCs. In rendering services to the clients, all sorts of negativity should be avoided. So, proper motivational programs and other supportive activities should be taken for ensuring a positive atmosphere in rendering services.

Finally, electronics governance readiness is another important indicator for excellent performance of UDC though it depends on many factors related to e-governance. In this case, the study revealed that, 5.45% respondents said very good, 63.64% said good, 29.09% said somewhat poor and 1.82% said poor. It means, e-governance readiness is in a sound position to promote the framework of e-government at the local government level in Bangladesh. Though it has not been completed yet, different government agencies are still working on digitization in different sectors. For example; construction of ICT park, e-services in different government organizations, e-filing activities and expansion of businesses in ICT sector.

4.1.2 Impacts of E-service Delivery

UDC is one of the important innovations of the present government

which provides one-stop door step services at the rural level in Bangladesh. Before introducing UDC, people in rural areas had no scope to get online based e-services. E-service delivery by UDC has a great impact on establishing e-government at the local government level. To measure the impact of e-service delivery of UDC's, we have to analyze the following indicators presented in the bar chart (figure 4.2) below.

During interviews, respondents who are experienced with UDC activities were requested to express their opinion regarding the impact of e-services delivery by UDC on the above-mentioned variables. Proper e-service delivery has some impact. Reduction of corruption is one of them. By ensuring proper and smooth e-services, corruption can be lessening to a sufficient extent.

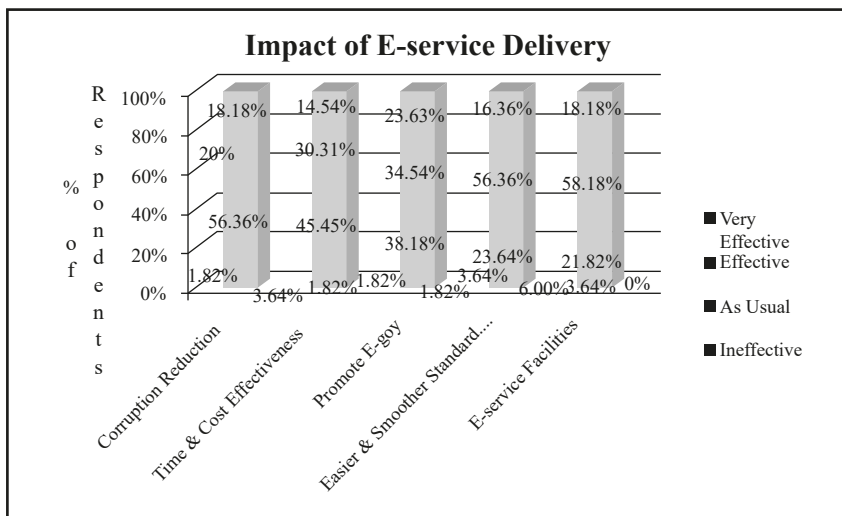


Figure 4.2: Impact of e-service delivery

The study revealed that 18.18% of respondents expressed their opinion as very effective, 20% as Effective, 56.36% As usual and very few said ineffective and not effective. Time and cost is another important indicator for getting the desired services. In this case, 14.54% are very effective, 30.31% are effective, 45.45% are as usual and less than 10% are ineffective and not effective. The study found that 23.63% replied very effective, 34.54% replied effective, 38.18% replied as usual and very low percentage replied ineffective or not effective. By analysing the responses, we found that more than 50% replied positively. In case of life standard indicator, the study found that 16.36% is very effective, 56.36%

are effective, 23.642% are as usual and less than 5% are ineffective or not effective. On the other hand, e-service facilities by UDC, the study found- 18.18% very effective, 58.18% effective, 21.82% as usual and less than 5% are less or not effective.

4.1.3 Beneficiaries Appreciation of E-service Delivery Output: (Question -4)

Analyzing figure 4.3, the study found that 60% of respondents said; equipment is somewhat sufficient under equipment sufficiency indicator of e-service delivery output. That means equipment for rendering service to the people is not sufficient. In the case of accurate and latest information, 20.00% respondents said very sufficient, 38.18% said sufficient, 36.36% are somewhat sufficient, 3.64% said less sufficient and only 1.82% said not sufficient. Though it sounds good, it should be increased more. In the case of satisfaction level, only 14.55% revealed very sufficient, 45.45% revealed sufficient, 32.73% revealed somewhat sufficient and 5.45% showed less sufficient. As satisfaction level sufficiency is less than 50%, so it has to be increased by improving service according to customer satisfaction.

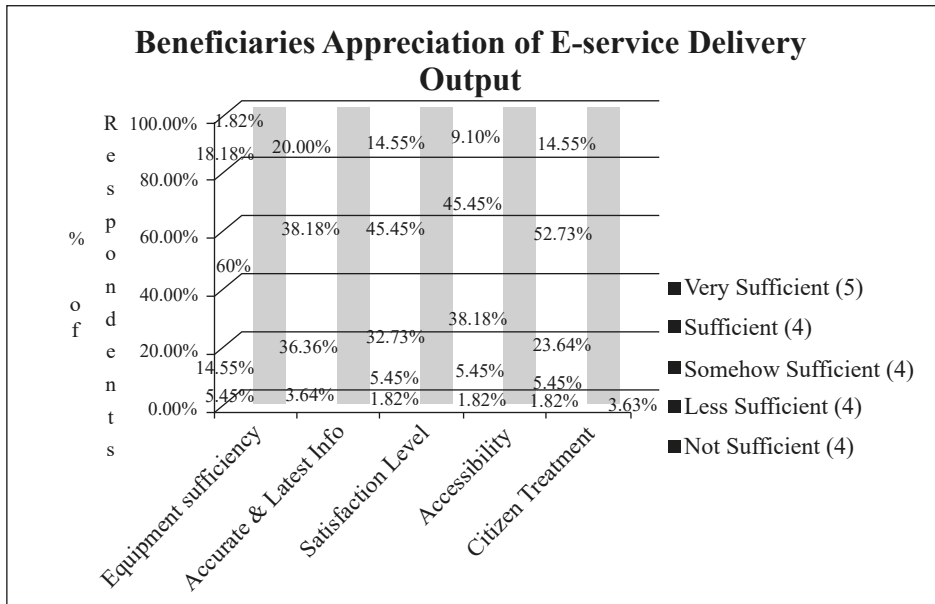


Figure 4.3: Beneficiaries Appreciation of E-service delivery output

Warm and easy access to UDC by local rural people for e-services is an important principle attribute for measuring e-service delivery output. The study revealed people’s perception about the extent of UDC accessibility to e-services that 9.10% are very sufficient, 45.45% are sufficient and 38.18% are somewhat sufficient. In citizen treatment indicator, it revealed that 14.55% are very sufficient, 52.73% are sufficient, 23.64% are somewhat sufficient and about 10% are less or not sufficient.

4.1.4 Expected Improvements of Government Services through e-service delivery by UDC

In this step of analysis, the outcome of e-governance service was analyzed based on the six principles of the e-service delivery indicators by UDC. In the case of “Improve Efficiency” indicator, the study found 21.82% of respondents strongly agree, 38.18% agree, 36.36% are not sure about and less than 5% disagree or strongly disagree.

Transparency is another important indicator for e-governance. In this case, the study revealed-18.18% strongly agree, 60% agree, 20% are not sure and very few people disagree or strongly disagree. E-governance ensures accountability and responsiveness of service providers. In this case, the study revealed respondents opinion-12.73% strongly agree,

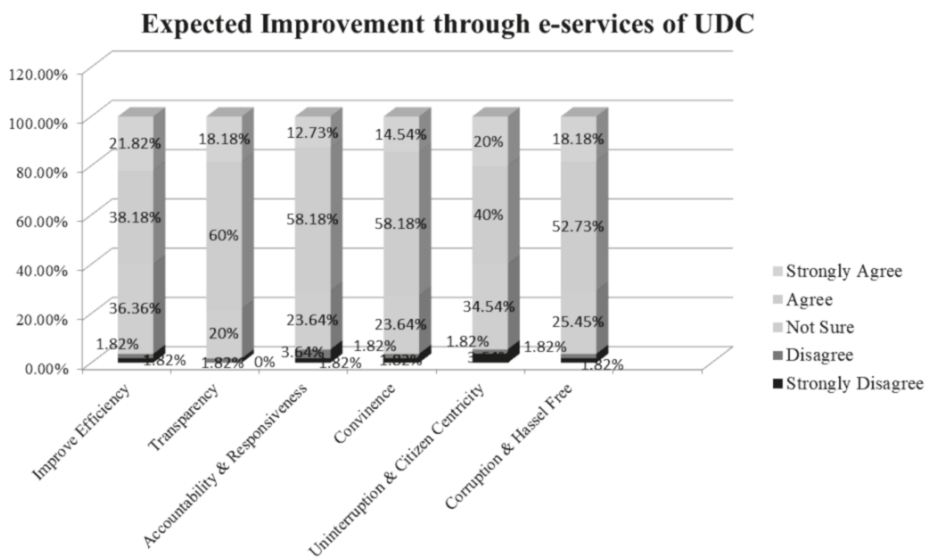


Figure 4.4: Expected Improvements of Govt. Services through UDC services

58.18% agree, 23.64% are not sure and less than 10% disagree or strongly disagree.

In the case of service convenience, a majority of respondents expressed their positive opinion. Uninterruption and citizen centricity are the two most important indicators for e-governance which plays a great role in popularity. In this case the study revealed 20% strongly agree, 40% agree, 34.54% are not sure and very few disagree or strongly disagree to these indicators.

Corruption and hassle free are the most important variables which is ensured by implementing UDC's e-service delivery activities. The study found that more than 70% of people strongly agree or agree and less than 30% are confused (not sure) or are in the disagree category.

4.2 Data Obtained from Officials: Findings and Analysis

The success of UDC depends on the combined activities of UDC entrepreneurs and officials of Union Parishad (UP) and local administration. Without proper support from UP and local administration, it is not possible to run the UDC successfully. Entrepreneurs, UP officials and local administration are playing a vital and key role for smooth functioning of UDCs in the regards to proper e-service delivery in rural Bangladesh.

4.2.1 E-service Delivery Indicators from Service Provider's Point of View: (Question -1)

In this step of analysis, service providers view were analyzed based on seven input and output variables of e-services service provided by UDC. The study found that 1.85% of respondents said very sufficient, 14.81% said sufficient, 42.60% said somewhat sufficient and more than 33% said less or not sufficient equipment and infrastructure are available in UDCs for delivering e-services.

Effective and efficient training are important parts to make someone skilled in a specific arena. The study revealed that less than 40% of respondents said sufficient or very sufficient and more than 60% of respondents said somewhat or less or not sufficient. In this regard, government should have proper initiative to ensure relevant training to all entrepreneurs engaged in rendering e-services.

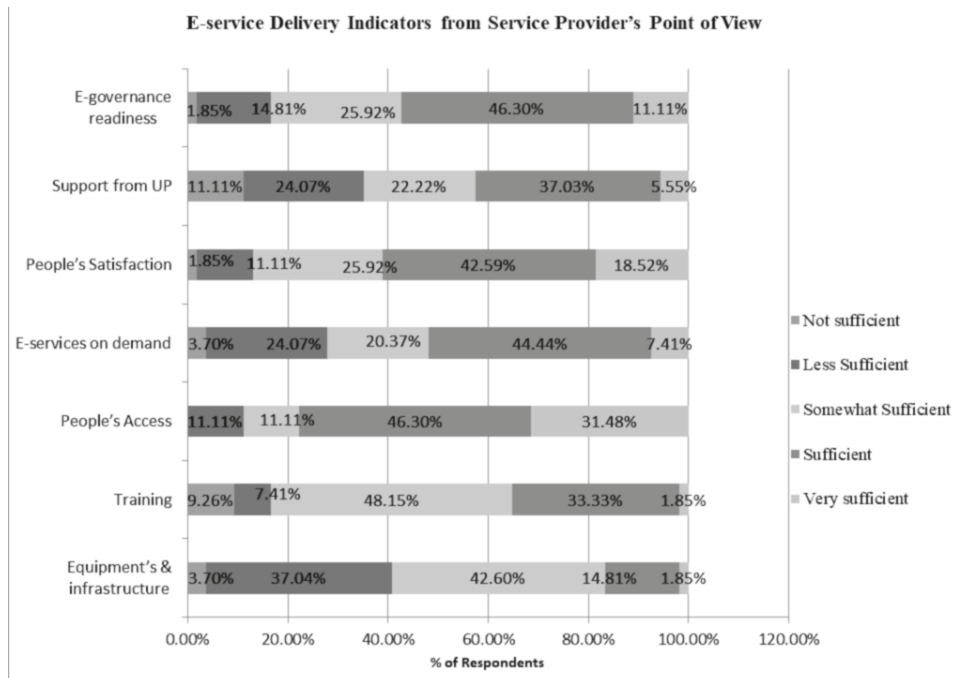


Figure 4.5: E-service delivery indicators

People’s access to UDC is another important variable for measuring the success of UDCs. The study revealed that, more than 76% of respondents said people have very or sufficient access and less than 25% said somewhat or less or not sufficient. But it differs from clients point of views where they said it is less than 55% easy access facilities for service seekers to the UDCs. It must be kept in mind; access to UDCs must be easy, comfortable and friendly so that people are interested to avail services from them.

On demand service or customized service is important to make a success story. Though it is not common but it should be available to the rural people to gain their interest on UDCs. The study revealed the picture that are- 7.41% said very sufficient, 44.44% said sufficient, 20.37% said somewhat sufficient, 24.07% said less and 3.70% said not sufficient. This is really a frustratating scenario of having services from UDCs. It must be improved.

Success of UDCs depend on clients satisfaction. Without proper satisfaction, no business can gain ultimate success. In the above chart, the

study found that only 18.52% of respondents said very sufficient, 42.59% said sufficient, 25.92 % said somewhat sufficient but more than 10% said less or not sufficient with present e-services provided by UDCs.

Support from Union Parishad is also important for UDCs to survive successfully. Without proper support many UDCs cannot run successfully. As UDCs are part of local government institutions, so their success mostly depends on the support they get from Union Parishad (UP) and its officials and representatives. This study found that less than 45% (actual is 42.58%) are currently getting sufficient support from the UP which is alarming for the success and survival of UDCs. It should be more than 90% if it wants to be a successful service providing hub in rural areas.

According to the service providers point of view regarding e-governance readiness, the study revealed that 11.11% of respondents said very sufficient, 46.30% said sufficient and more than 40% said somewhat or less or not sufficient. To promote the electronics Government (e-government) in rural areas in Bangladesh, this indicator is the most important that should be given utmost effort to improve the situation. Without 100 % readiness, it is difficult to ensure successful implementation of e-government in local government level which will ensure good governance and government commitment to implement “Digital Bangladesh by 2021”.

4.2.2 E-government Initiatives through UDC Services

a) Change in Organizational Processes and Procedures

The Government has taken many sector-wise initiatives for implementing e-government in Bangladesh. Enacting new ITC policy 2012, e-filing, e-government, access to information policy, right to information act 2009, digitization policy, computerization in government offices, skilled human resources, ICT training, ICT infrastructure building has been taken by the present government for the implementation of Digital Bangladesh. The study revealed that 24.07% of respondents from service providers said that government has given the most focus on changing organizational processes and procedures.

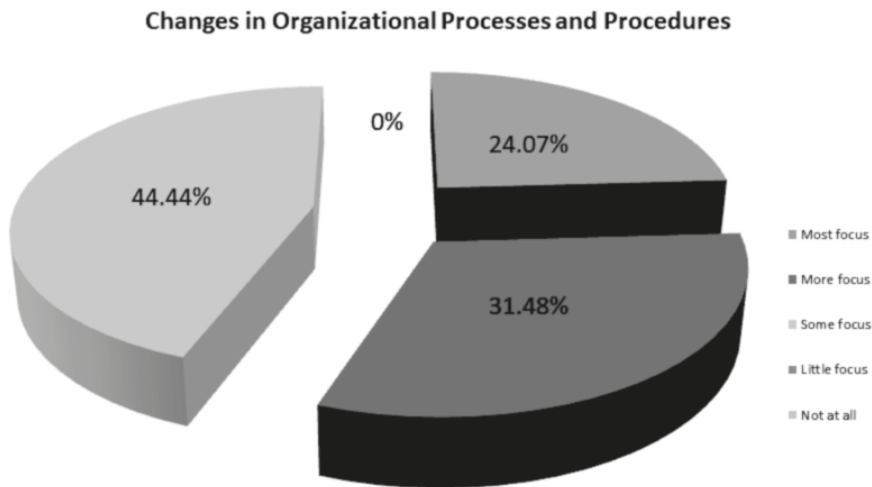


Figure 4.6: Change in Organizational Processes & Procedures

31.48% said more focus and 44.44% said some focus was given on this variables for e-governance initiatives at the local government level in Bangladesh. It is really a good sign for beginners. If it is possible to continue at this pace, it would be possible to implement e-governance in Bangladesh very soon.

b) Preparing E-services for Citizens

E-service is the highest priority issue for the government to ensure peoples satisfaction and implementing digital Bangladesh as well. Before these initiatives, all government offices in Bangladesh provided manual (i.e. paper based) services to the citizens which took too much time. Sometimes, people did not even get their desired services. But after the digitization process which started in 2009, people are getting e-services along with some manual services. E-filing, e-registration, digital smart card, e-tendering, digital passport, chip based digital driving licence and e-services from UDCs are some examples of electronics services that the present government stated to provide to the people from all sorts of government offices in Bangladesh. Not only in the government sector but the process also started in the private sector. Our banking, telecommunication sector, stock exchange and some other private organizations are fully automated and provide e-services due to e-service policy taken by the government.

Preparing E-services for Citizens

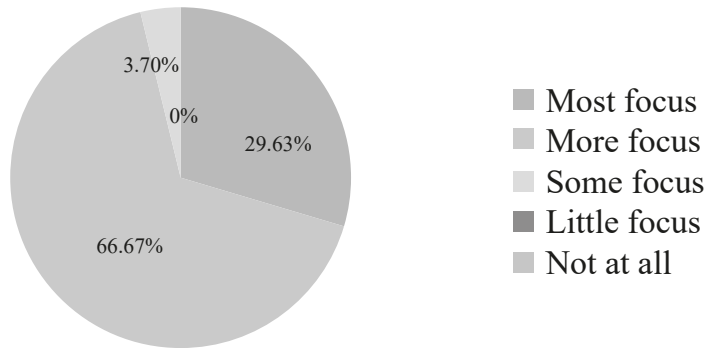


Figure 4.7: Preparing E-services for Citizens

In this regard, the study found that 29.63% of respondents said most focus, 66.67% said more focus and only 3.70% said some focus regarding e-services for citizens which will ultimately be focused on e-governance implementation in Bangladesh.

5. RECOMMENDATIONS AND CONCLUSION

5.1 Introduction:

Union Digital Centre (UDC) is a unique and innovative initiative of the present government in Bangladesh to provide door step electronics services to the rural people. This is a service providing hub where some sorts of government services and information are available for the general people in rural areas with minimum time and costs. This service center is ICT based which started its activities in 2009 under local government division and Access to Information (A2I) of Prime Minister's Office (PMO) and financed by the UNDP and the Bangladesh Government. This is one of the priority areas of the government to bring the people under one umbrella and minimize the gap between citizens and government in the case of providing government services and information electronically. The strategic objective of UDCs is to simplify the governance to all the stakeholders (Citizens, government and Business) by implementing the framework of e-governance through e-service delivery. The broad objective of this study is to find out the role of UDC in promoting

e-governance at the local government level in Bangladesh. With the consequence of the broad objectives, two other objectives have been identified accordingly. The study revealed that e-services need to be of high quality, on demand, easily accessible, time & cost effective, accountable, hassle and corruption free, citizen centric, transparent, convenient and efficiently provided by UDCs to have a positive impact on people’s satisfaction and the government provides initiative to lead e-governance at the local government level. Finally, the study showed that UDC can promote the framework of e-governance in rural Bangladesh. In this study, it has been observed that beneficiaries have begun to realize the importance of UDC which has opened a new window for the rural people in Bangladesh. It empowered rural communities by providing livelihood information on subjects like agriculture, education, health service, land related, mobile banking and so forth. UDC is acting as a one-stop service providing hub which provides door step e-services. So, we can easily say that UDC is the key to implement e-government in rural Bangladesh.

5.2 Proposed Diagram of E-service Delivery for E-government:

According to our constitution, it is a fundamental right of people to have information and services from the state. Besides, today’s world economy is mostly dependent on information and communication technology. It is driven by knowledge and technology and fuelled by information.

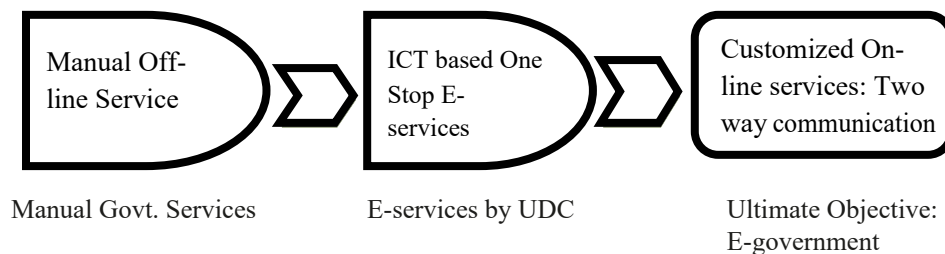


Figure 5.1: Proposed diagram of e-service delivery by UDC

E-services delivery can ensure proper services in due time at minimum costs. So, e-services are vital for the survival of a modern government and electronic governance. Salam (2013) argued that access to government information by citizens and organizations is, therefore, a

fundamental ingredient in effective government. E-service delivery thus shows a government's willingness to provide services to its citizens in the quickest and best possible way. Traditionally, these services were delivered face to face by visiting a public office. Of course, these types of services are not available in rural areas where transportation is poor, roads are inaccessible and governments' offices are also not available (Salam 2013). In this case, UDCs are the 'e-Service delivery outlets' which initiated a new era in information and service delivery for rural and marginalized people in Bangladesh are indispensable.

The figure (figure 8.1) shows how traditional offline manual services are converted to online based e-services by introducing UDCs in rural areas and the ultimate objective is to establish the framework of e-governance at the local government level through e-service delivery by the UDCs.

Salam (2012) argued that to ensure the e-governance, it needs more infrastructure and policy to enable co-operation and interaction among the government agencies and citizens. The government should pay more attention to the new technologies and their impact on organizations and organizations need to give more attention to further research on challenges and opportunities.

5.3 Proposed Framework of E-government:

E-government means the electronics form of government where all sorts of government services and information are provided electronically using computers and the Internet. This is the latest mode of proper service rendering system by a modern government which can ensure easy access of common people to government and commercial information and services. All developed countries run their governance electronically and reached the apex position of development. The success of the world economy is also dependent on the ICT- based governance system. E-governance is a channel through which the government interacts with its citizens (e-services), improves public service delivery and processes (e-administration) and builds external interactions (e-society). It creates win-win relationships where the work of the government is made easier by providing a public service at the disposal of s citizen (Alshehri and Drew, 2010).

UDC	E-Services	E-government
Proper equipment	Convenient Services	On demand services
Skilled Manpower	Standard and quality Services	Faster and quality services
Support from UP and local administration	Smooth services with reduced costs and time	Time and cost effective services
Infrastructure and proper monitoring	Customer Satisfaction	Customer satisfaction with corruption free services
Proper citizen treatment	Easy access and equitable opportunity	Ensure accountability and transparency

Figure 5.2: Proposed Framework of E-government

In this process ICT plays a vital role in spreading e-government worldwide. In our country, the present government initiated the process of ICT -based service centres at the rural level which is known as “Union Digital Centre” or UDC.

5.4 Conclusion

ICT plays a vital role in developmental activities of a country in the present context. It is not possible to bring about a holistic development in all sectors ignoring ICT-based services. Having realized the fact, the present government of Bangladesh has taken the initiative of implementing e-services country-wise involving local government. For this purpose, the government has set up 4,547 UDCs in all Union Parishads across the country to have more access to government services and information by the people. The government places an unprecedented emphasis on revitalizing local government institutions at the rural level (around 4,547 Union Parishads) and at the sub-district level (Upazila Parishads). The LGIs are being re-designed to play an extremely critical role to serve as local delivery centers for information and e-services, thereby upholding the government’s commitment to get services to

citizens' doorsteps. But without proper management, infrastructure development and technical manpower for ICT systems in rural areas, it can never run efficiently. Still we are implementing some new techniques to manage the service delivery system of rural areas through E-governance systems and also trying to emplace some good practices from developed countries like Japan.

UDC is a citizen-centric service centre in a rural area which can ensure efficient and smooth e-service delivery system from single service point. From this service point, people in rural areas can get some sorts of government information easily, cheaply and smoothly. It provides the latest and accurate information and can ensure easy access for the rural people. UDC services improve transparency, accountability and responsiveness, which reduces corruption.

Adaptation of e-Government is a key for smart governance and making information technology (IT) relevant to ordinary citizens in Bangladesh where a large proportion of the population suffers from the digital divide. Now this is a big challenge for us to effectively run this e-Government system in rural areas.

E-government is an on-going and evolutionary process. The growth and status of e-government varies from country to country regarding degree of their preparedness that relates to availability, accessibility and the nature and level of use of e-governance tools and in respect of preparing and providing services for the needs and ease of citizens.

E-governance is a better way of providing government services to the common citizen. However, it is the method by which governments govern their communities, nationally, regionally, and locally, forms an essential element in determining the outcomes which contribute to the quality of life of those communities.

In this respect the study concludes, there are no straightforward ways of improving the e-government system at the local government level, rather many factors control the system, including the structure of the government. As ICT based UDC initiative meets all the requirements so, it can play a vital role to promote e-governance at the local government level by providing e-services. Further research in e-governance should discover UDC service by service analysis and what changes has brought after introducing UDCs in Bangladesh.

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