

Public Service Delivery- Role of Union Digital Center (UDC) and Impact on Improving Governance and Development: A Case Study of Narayanganj District, Bangladesh

[A dissertation submitted in partial fulfillment for the Degree of Master of Arts in Governance and Development]

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September 2015

DECLARATION

I do hereby declare that I am the sole author of this dissertation titled as “**Public Service Delivery: Role of Union Digital Center (UDC) and Impact on Improving Governance and Development: A Case Study of Narayanganj District, Bangladesh**” and it has not been submitted or published elsewhere. The dissertation is fully prepared for academic purpose and for the partial fulfillment of the degree of MA in Governance and Development. The dissertation is submitted to the BRAC Institute of Governance & Development, BRAC University Authority with norms of standard research works.

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SUPERVISOR AUTHORIZATION

I hereby recommended and certify that this dissertation entitled “Public Service Delivery: Role of Union Digital Center (UDC) and Impact on Improving Governance and Development: A Case Study of Narayanganj District, Bangladesh” is a research work conducted by Mr. Saroar Ahmed Saleheen, MAGD 6th Batch, BU Student ID No.14272001 under my supervision for partial fulfillments for the degree of Master of Arts in Governance and Development in the BRAC Institute of Governance and Development, BRAC University, Dhaka, Bangladesh.

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Dedicated to

My father Mr. Ahmed Shamsur Salehin whose struggle always inspires me to go ahead

&

My Mother Mosammat Jahanara Begum who always loves me silently

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Abstract

This is the age of information and communication technology (ICT). ICT plays a vital role in everywhere in human life. In western country, development is mainly based on ICT. Without development of ICT infrastructure, it is not possible to develop in other sectors of a country. It has been seen in recent time, most of the countries in the world taking ICT as their main hub for making development. Their public service delivery is totally based on information and communication technology (ICT). As a result, general people are getting smooth and faster services from government and private sectors. Due to implementation of e-service delivery system in developed countries, rate of corruption is very low and on the other hand rate of growth is very high which inspired other developing countries like- Bangladesh to adopt ICT based e-service delivery system. The present government came to the power in 2008 National General election by declaring “Digital Bangladesh” in their election manifesto which inspired people to give their vote in favour of the party. After coming to the power, the present Awamileague government, formed Access 2 Information (A2I) and computer council with the financing from UNDP. Through the A2I, government already established 4509 Union Digital Centre (UDC) in 4509 Union parisad and 64 District e-service Centre in all districts. In addition to those, government also digitized all government and autonomous bodies and trained up manpower for e-service delivery to the people.

For this study purpose, I have selected Narayanganj Sadar and Sonargaon Upazila as my study arena where I worked as Assistant Commissioner in DC office, Narayanganj. Data have been collected from 53 respondents (35 beneficiaries, 12 UDC entrepreneurs and 6 monitoring authority) who were very helpful and inter active.

Union Digital Centre (UDC) is run by two entrepreneurs who are appointed by the monitoring authority Deputy Commissioner and trained up by A2I of Prime Minister's Office. UDC is playing important role in providing e-services to the rural grass root people with minimum costs. It provides all sorts of government services like- TR / Kabikha information, passport form, birth registration certificate, printing facilities etc. Through the delivery of e-services to the general people, UDC minimizes gap between govt. and people. It also plays a significant role for establishing the framework of e-governance which ultimately will lead to good governance in Bangladesh.

This study has attempted to assess the current status of e-service(s) and what would be the prospective of e-service(s) by minimizing gap. It has also endeavored to identify the barriers/challenges to adopt public e-service(s) in UDC. Due to time and resource constraints only selective areas of Narayanganj has been surveyed.

The study is based on both literature review and questionnaire survey. Three types of questionnaire were prepared. One for supply side i.e. for officials of UDC, one for monitoring authority and another was for demand side i.e. customer of UDC. Questionnaire survey was conducted on total 53(fifty three) respondents. Of them, 12(twelve) were officials, 6 (six) were monitoring authority and the rest 35(thirty five) were customers of different unions in Narayanganj. The effectiveness of UDC about the e-service delivery largely depends upon the citizen's satisfaction and infrastructure & logistic support. That is why, it is needed to improve the satisfaction level of rural people according to their desire. Moreover, it is also important to improve the infrastructure & logistic support for the purpose of smooth e-service delivery.

Key-words: *e-service, e-governance, good governance, public service delivery, UDC*

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List of Acronyms

A2I	Access to Information
DC	Deputy Commissioner
BBS	Bangladesh Bureau of Statistics
ICT	Information and Communication Technology
G2B	Government-to-Business
G2C	Government-to-Citizen
UNO	Upazila Nirbahi Officer
UNESCO	United Nations Educational Scientific and Cultural Organization
UNDP	United Nations Development Program
UN	United Nations
UDC	Union Digital Centre
PMO	Prime Minister's Office
UP	Union Parisad
ACC	Anti-corruption Commission
ICT	Information and Communication Technology
G2G	Government-to-Government
G2E	Government-to-Employee
IT	Information Technology
MAGD	Masters of Arts in Governance and Development
BIGD	BRAC Institute of Governance and Development
BCDM	BRAC Centre for Development Management
VAS	Value Added Service

CHAPTER-ONE

INTRODUCTION

1.1 Background of the Study

Information and communication technology (ICT) has become an integral part of the governmental activities at the outset of twenty-first century. Although, the developed nations initiated the ICT move of governmental initiatives, today, the rest of the world nations have begun to use ICT in day-to-day business. The use of ICT, such as Wide Area Networks, the internet, mobile computing devices, and so forth, has become a phenomenal in disposing governmental responsibilities across the world. Present Government has introduced UDC (union information & service center), district and upazila web portal, based on ICT, to provide quicker and smoother services to the people.

The development of countries cannot be achieved fully without the development of the rural community. In Bangladesh about 72 percent of total population lives in the rural areas (World Bank report 2012). Having this in realization government of the people's republic of Bangladesh has undertaken a project to transform Bangladesh into a "Digital Bangladesh" by the year 2021 to provide government services at the door of the rural grass root people. The concept of Digital Bangladesh aims to introduce a system which enables public services to reach the people instead of the people going to seek services. For this purpose, now Bangladesh Government has launched Union Information and Service Center (UDC) in all 4,501 unions across the country to disseminate information and deliver government services to all citizens.

The Union Digital Centre is equipped with computers and wireless Internet, offer various e-services to people at nominal cost. UDC acts as one-stop service outlets of the country which is known as local knowledge center. It has the chance to create a positive impact on rural areas by providing e-Services to rural people. It has now challenges for the citizen to carry out the benefits of UDC's and make this sustainable which will meet citizen centric demand. It also reduces gap between govt. and citizens.

UDC is able to bring various types of information related to the government services for the welfare of the rural people. Union Digital Centre (UDC) is a strong and important initiative to implement Digital Bangladesh-Vision-2021. Local government of Bangladesh is divided into rural, urban and hill districts (Specialized Local Government System) which have more or less similar functions. Urban authorities are single-tier and include 11 city corporations (Big cities) and 315 Paurashava (Municipality). Rural local government has three tiers: 61 Zila Parishads (district), 483 Upazila (sub-district) Parishads, and 4,573 Union Parishads (Union council). There are also 3 Hill District Parishads. Union Parishads (Parishad means Council) are the smallest and one of the important tiers of rural administrative and local government units in Bangladesh. Through the UDC, information can be delivered to the mass people very easily, cheaply and quickly. In November 11, 2009, Honorable Prime Minister Sheikh Hasina inaugurated the UDC of all over the country. Local Government division with the help of Access to Information (A2I) of PM office has already set up UDC in more than 4500 union parishad. Bangladesh Computer Council (BCC) appointed assistant programmer to every DC office and gave training to every entrepreneur/ director of all UDCs with the help of A2I and DC office. In every UDC there are two entrepreneurs / directors in which one is male and another is female. Training facilities and equipment like – computer, web cam and projector have been given to both directors from A2I and BCC. The whole activities are monitored by the district administration (DC Office) under the direct supervision of the Additional Deputy Commissioner (General) who is known as District Focal Point. A blog named – www.UDCbd.ning.com has been introduced by A2I which is one of the biggest and popular blog in Bangladesh.

The use of ICT in governmental activities to provide citizens with effective and efficient services at a reduced cost and in minimum time is termed as **E-Governance**. The prime aims of E-governance effort include: increased interactions between government and the citizen for efficient and quality service delivery and to elevate greater public voice of governmental activities, enhanced transparency and accountability of the government, enabling poverty alleviation initiatives, creating business opportunities for the private enterprises, and so forth.

1.2 Statement of the Problem

Bangladesh is a small country with vast unexplored resources. She has large number of population and most of them live in villages. These huge numbers of population need a proper communication system and advanced knowledge about e-services to make them productive human resource which is an important component for development and growth. Recently, the government has introduced Union Digital Centre's (UDC) which provide information including health, education, agriculture, law, human rights, environment, industry and commerce at free of cost. If the goal of Union Digital Centre (UDC) is fulfilled then the e-services in rural areas as well as in national level will be improved. UDC's and its scope are very new in Bangladesh .Most of the people of rural area are not educated. Such kind of internet services at the remote areas will help to change the living status of the rural poor through making a close network with the regional and national levels for promoting overall development towards the digital Bangladesh.

Building a Digital Bangladesh is an election pledge of the present government. The concept would be perceived by the generations to come as 'Sonar Bangla of the 21st century'. This idea has captured the minds of the millions and inspired them in an unprecedented way. We consider it to be a key driver of national development. The programme for 'Digital Bangladesh' and its implementation will ensure a unique success to our pursuit of transforming Bangladesh into a middle-income country by 2021. This vision, together with numerous creative enterprises, will lead the country towards higher and sustainable growth path. There is a widely held view that ICT plays a key role in reaching the public service to the doorsteps of the people and it is evidenced by the experience of many developed and developing countries.

In conformity with the Vision-2021, the quality of service delivery and its access to the grass root level has been significantly enhanced because of wider application of ICT. It also supports to close the gap arising from digital divide. Establishment of e-Service Center in each government office at the upazilla, in each Purashava and City Corporation and building ICT infrastructure is essential condition for establishing Digital Bangladesh.

1.3 Rational of the Study

Bangladesh is a third world developing country with huge population. Most of the people are uneducated, poor and lives in rural area. They are deprive of getting government services and information properly and in due time. Present government, with the financial help of UNDP, has already set up ¹Union Digital Centre (UDC) in 4509 unions, the lowest tier of Local Government system in Bangladesh so that grassroots people can be benefited. This research is done to investigate how Union Digital Centre (UDC) minimize gap between govt. and citizens / promotes e-governance in the rural area in Bangladesh by providing e-service. Furthermore, considering the issue from development perspective it has been find out the functions of UDC are to promote e-governance framework for rural people. Moreover, by revealing the findings obtained through the present study, government will be generally acknowledged to be aware of the services in rural areas. In this case, Union Digital Centre (UDC) plays a great role for the rural people by providing various e-services at a lower cost.

UDC is a place where all sorts of off-line, on-line government & commercial services are available for the grassroots people. It is based on ICT. The usage of ICT will broaden the operational scope of modern public administration and the reliability of its actions as foundations to achieving progress, development, and good governance. Successful implementation of UDC can play a vital role to implement e-government in Bangladesh. The present democratically-elected government, powered in January 2009, has expressed its firm commitment to transform the “context less” nature of public administration to a citizen-friendly, accountable, and transparent government by implementing the key election pledge known as “Vision 2021.” Through traditional system, all kinds of governmental services are provided manually and it is very costly as well as time consuming. As a result, most of our rural people did not get proper services in time and they remain out of government service facilities. So implementing UDC can ensure better citizen services by rendering cost effective smooth services.

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¹Access to Information Programme. (2009). *Digital Bangladesh Concept Note*. Dhaka: Prime Minister Office.

1.4 Objectives of the Study:

The overall goal of UDC is to make the Government services available to the rural grass root people. The specific objectives of the study are:

- To know the effectiveness of the UDC in public e-service delivery
- To minimize the gap between government and citizens by improving delivery of government services & information to the rural people;
- To ensure public satisfaction by reducing cost transaction cost, time and through the provision of products and services electronically;

1.5 Research Questions

- a. How efficiently/effectively the services are provided by UDC to the citizens?
- b. Does UDC have implications on citizen service delivery?
- c. Does UDC initiative able to minimize gap for service delivery between Government & Citizens?

1.6 Scope of the Research

The main purpose of UDC is to make a link to the rural people with the easiest delivery of e-service. The research has emphasized on the efficient interaction between the people of rural areas and the government about the citizen's e-service delivery.

It has also given the importance on the enhancement of rural citizens' satisfaction. Thus it is possible to ensure the e-governance for the betterment of the people.

Here, it is mentioned that the research focuses on the providing of quality public services through the UDC to gain the rural citizens' satisfaction. It will show whether the citizens of rural areas are getting more benefit after starting the UDC than the traditional type of service delivery.

1.7 Limitations of the study

The report is focused and based on 6 (six) Unions of two Upazilas under Narayanganj district. Due to budget, time and resource constraints it was not possible to cover some other districts in Bangladesh. A total of 53 respondents were interviewed which are not a large number. As a new researcher, it creates difficulties to conduct a research work due to lack of skill, knowledge, and experience. This was happened for personal lacking, time limitations and some other relevant causes. I also faced some problems due to shortage of necessary and relevant books, journals and written documents in various libraries and educational institutions regarding the issue. Most of the respondents did not want to answer the whole questions, because they were busy in their professional and routine work.

1.8 Organization of the Research

This report contains five chapters. The first chapter includes the introductory chapter like-background, problem statement, objectives of the study, research questions, limitations etc. This Chapter ends with the organization of the report.

Chapter Two: Review of Literature & Over View of UDC- This chapter focuses on the conceptual overview of UDC, definition of some key words, an overview of some earlier initiatives of providing information at rural areas, an overview of some existing services provided by the UDC, institutional structure and arrangement of UDC, a selected review of literature and analytical framework for the study etc.

Chapter Three: Research Methodology- This chapter includes the methods, tools and techniques of data collection, data source, data Processing and data analysis etc.

Chapter Four: Research Findings and Discussion- In this chapter I mainly analyze the collected data and variables from various points of views .It focuses the relationship among the variables. Analysis and data interpretation are presented through various figure like – pie chart, bar chat, column chart etc.

Moreover, in this chapter data interpretations were done on the level of customers' satisfaction, infrastructure & logistics support performance of UDC and effectiveness of UDC in respect of e-service delivery.

Chapter Five: Conclusion and Recommendation-The chapter highlights some suggestion and recommendations for the better e- service delivery through UDC on the basis of field data and observation for the further research.

CHAPTER-TWO

LITERATURE REVIEW & OVER VIEW OF UDC

2.0 Introduction

Bangladesh is a third-world country burdened with huge population. As result, it is very essential to introduce a mechanism which will help to provide better services to this huge population .The introduction of e-Government can solve this problem. E-Governance/UDC will enable citizens to access government services and information as efficiently and effectively as possible through the use of internet and other channels of service delivery mechanisms and communication network and devices. An efficient and effective public administration is an essential precondition for economic and social development. For example- the revolution of ICT in South Korea has brought a huge change in human behavior, the management of corporations, governance of states and above all the delivery system of government services. People of South Korea have very easy access to all sorts of government services with a low cost and a very short time. There everything is done electronically. As result, the rate of corruption is very low but effectiveness of providing government service is very high.

A number of studies have been reviewed throughout the world regarding community based information centers. But only few studies have been found about UDC which provides e-services to the rural grass root people in Bangladesh. The concept of UDC is very new and innovative in respect of third world country like Bangladesh. This chapter on role of UDC will present some theoretical as well as empirical analysis of UDC among rural grass root people in Bangladesh which proves its efficiency in minimizing gap between citizens and government in respect of service delivery.

2.1 Conceptual Framework of UDC

2.1.1 UDC

Union Digital Centre (UDC) is a strong and important initiative to implement Digital Bangladesh-Vision-2021. ² Through the UDC, information can be delivered to the mass people very easily, cheaply and quickly.

²*Access to Information Programme. (2009). Digital Bangladesh Concept Note. Dhaka: Prime Minister Office.*

In November 11, 2009, Honorable Prime Minister Sheikh Hasina inaugurated the UDC of all over the country. Local Government division with the help of Access to Information (A2I) of PM office has already set up UDC in more than 4500 union parisad. Bangladesh Computer Council (BCC) appointed assistant programmer to every DC office and gave training to every entrepreneur/ director of all UDCs with the help of A2I and DC office. In every UDC there are two entrepreneurs is male and another is female. Training facilities and equipment like – computer, web cam and projector have been given to both directors from A2I and BCC

Conceptual Framework

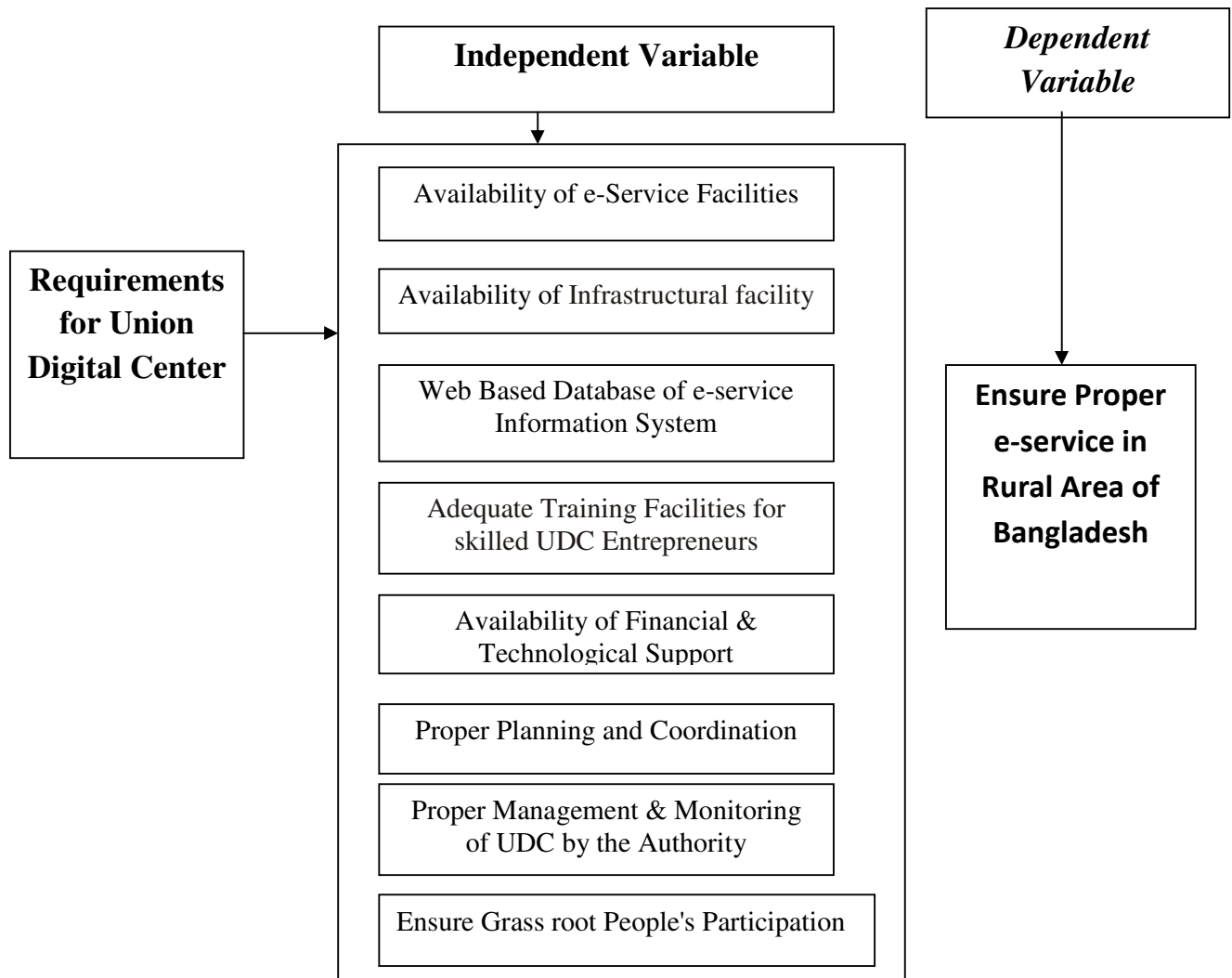


Figure: 2.1 Conceptual Frameworks

The whole activities are monitored by the district administration (DC Office) under the direct supervision of the Additional Deputy Commissioner (General) who is known as District Focal Point. A blog named – www.UDCbD.ning.com has been introduced by A2I which is one of the biggest and popular blog in Bangladesh.

This above figure represents the research paper at a glance. By this figure, the relationship between dependent and independent variable has been shown. So it is essential to know about dependent and independent variable. The variable that is assumed to depend on other is called dependent variable. An independent variable is a variable which has effect upon the dependent variable. It causes change in the dependent variable. This is also known as explanatory variable. Proper functioning of Union Digital Centre (UDC) can ensure good e-services to the rural people. Financial support, infrastructural facilities, manpower, technological support, training, planning, people's participation and coordination are the main parts for promoting UDC in rural area.

2.1.2 UDC at a Glance

³The following information will provide a pen picture of whole Bangladesh Union Digital Centre.

Total Number of Union Digital Centre	4545
Total Number of Entrepreneurs	9095
Citizens visit to UDC per month	3.20 million
Total Birth Registration	3, 40, 00,000
Mobile Banking Services Available	3700 UDC
Life Insurance Offered	2770 UDC
Telemedicine Services Offered	35,000 Citizens
Computer Literacy Training Provided	45,000 Students
Health Services provided	.75 million citizens
Overseas workers registration	1.45 Million

³ *Prospective Report on Effectiveness of e-governance system to Improve Union Parishad's Activities*

2.1.3 Terminology of Key Words

Some of the major keywords of the research are as follows:

⁴**E-Service**

The concept of **e-service** (short for electronic service) represents one prominent application of utilizing the use of information and communication technologies (ICTs) in different areas. However, providing an exact definition of e-service is hard to come by as researchers have been using different definitions to describe e-service. Despite these different definitions, it can be argued that they all agree about the role of technology in facilitating the delivery of services which make them more of electronic services.

Importance of E-service

Lu (2001) identifies a number of benefits for e-services, some of these are:

- Accessing a greater customer base
- Broadening market reach
- Lowering of entry barrier to new markets and cost of acquiring new customers
- Alternative communication channel to customers
- Increasing services to customers
- Enhancing perceived company image
- Gaining competitive advantages
- Potential for increasing Customer knowledge

⁵**E-governance**

The word “electronic” in the term e-Governance implies technology driven governance. E-Governance is the application of Information and Communication Technology (ICT) for delivering government services, exchange of information communication transactions, integration of various standalone systems and services between Government-to-Citizens (G2C), Government-to- Business (G2B), Government-to-Government (G2G) as well as back office processes and interactions within the entire government frame work.

^{4 & 5} From Wikipedia: The Free Encyclopedia

Through the e-Governance, the government services will be made available to the citizens in a convenient, efficient and transparent manner. The three main target groups that can be distinguished in governance concepts are Government, citizens and businesses/interest groups. The essence of E-governance is to reach the beneficiary and ensure that the services intended to reach the desired individual has been met with.

⁶**Acceptance**

User acceptance of technology is defined according to Morris (1996, referred by Wu 2005, p. 1) as “the demonstrable willingness within a user group to employ information technology for the tasks it is designed to support”. This definition can be brought into the context of e-service where acceptance can be defined as the users’ willingness to use e-service or the willingness to decide when and how to use the e-service.

⁷**Accessibility**

Users’ ability to access to the e-service is important theme in the previous literature. For example, Huang (2003) finds that most of the websites in general fail to serve users with disabilities. Recommendation to improve accessibility is evident in previous literature including Jaeger (2006) who suggests the following to improve e-services’ accessibility like: design for accessibility from the outset of website development, Involve users with disabilities in the testing of the site ,Focus on the benefits of an accessible Web site to all users.

⁸**Administrative literacy**

According to Grönlund et al. (2007), for a simple e-service, the needs for knowledge and skills, content and procedures are considerably less. However, in complicated services there are needed to change some prevailed skills, such as replacing verbal skills with skill in searching for information online.

⁹**Benchmarking**

This theme is concerned with establishing standards for measuring e-services or the best practices within the field. This theme also includes the international benchmarking of e-

government services (UN reports, EU reports); much critic has been targeting these reports being incomprehensive and useless. According Bannister (2007) "... benchmarks are not a reliable tool for measuring real e-government progress. Furthermore, if they are poorly designed, they risk distorting government policies as countries may chase the benchmark rather than looking at real local and national needs"

¹⁰**Digital Divide**

Digital divide is considered one of the main barriers to implementing e-services; some people do not have means to access the e-services and some others do not know how to use the technology (or the e-service). According to Helbig et al. (2009), "we suggest E-Government and the digital divide should be seen as complementary social phenomena (i.e., demand and supply). Moreover, a serious e-government digital divide is that services mostly used by social elites."

E-readiness

Most of the reports and the established criteria focus on assessing the services in terms of infrastructure and public policies ignoring the citizen participation or e-readiness. According to by Shalini (2009), "the results of the research project reveal that a high index may be only indicating that a country is e-ready in terms of ICT infrastructure and info-structure, institutions, policies, and political commitment, but it is a very poor measure of the e-readiness of citizens. To summarize the findings, it can be said that Mauritius is ready but the Mauritians are not"

"E-readiness, as the Economist Intelligence Unit defines, is the measure of a country's ability to leverage digital channels for communication, commerce and government in order to further economic and social development. Implied in this measure is the extent to which the usage of communications devices and Internet services creates efficiencies for business and citizens, and the extent to which this usage is leveraged in the development of information and communications technology (ICT) industries. In general terms, the definition of e-readiness is relative, for instance depending on a country in question's priorities and perspective.

⁶⁻¹⁰ *From Wikipedia: The Free Encyclopedia*

Efficiency

As opposed to effectiveness, efficiency is focused on the internal competence within the government departments when delivering e-services. There is a complaint that researchers focus more on effectiveness “There is an emerging trend seemingly moving away from the efficiency target and focusing on users and governance outcome. While the latter is worthwhile, efficiency must still remain a key priority for eGovernment given the budget constraints compounded in the future by the costs of an ageing population. Moreover, efficiency gains are those that can be most likely proven empirically through robust methodologies.

Security

Security is the most important challenge that faces the implementation of e-services because without a guarantee of privacy and security citizens will not be willing to take up e-government services. These security concerns, such as hacker attacks and the theft of credit card information, make governments hesitant to provide public online services. According to the GAO report of 2002 “security concerns present one of the toughest challenges to extending the reach of e-government. The rash of hacker attacks, Web page defacing, and credit card information being posted on electronic bulletin boards can make many federal agency officials—as well as the general public—reluctant to conduct sensitive government transactions involving personal or financial data over the Internet.” By and Large, Security is one of the major challenges that faces the implementation and development of electronic services. People want to be assured that they are safe when they are conducting online services and that their information will remain secure and confidential

Stakeholders

Axelsson et al. (2009) argue that the stakeholder concept-which was originally used in private firms-, can be used in public setting and in the context of e-government. According to them, several scholars have discussed the use of the stakeholder theory in public settings. The stakeholder theory suggests that need to focus on all the involved stakeholder s when designing the e-service; not only on the government and citizens.

Usability

Compared to Accessibility, There is sufficient literature that addresses the issue of usability; researchers have developed different models and methods to measure the usability and effectiveness of e-Government websites. But still there is call to improve these measures and make it more compressive.

The word usability has cropped up a few times already in this unit. In the context of biometric identification, usability referred to the smoothness of enrollment and other tasks associated with setting up an identification system. A system that produced few false matches during enrollment of applicants was described as usable. Another meaning of usability is related to the ease of use of an interface. Although this meaning of the term is often used in the context of computer interfaces, there is no reason to confine it to computers.

Monitoring Authority

Monitoring authority means-the authority who monitors the activities of the UDC. Here, Deputy Commissioner (DC), Additional Deputy Commissioner (ADC) and Upazila Nirbahi Officer (UNO) are the monitoring authority of the UDC under their jurisdiction. They have the power to employ UDC entrepreneurs. In case of any irregularities, they can take any decision or action (if any) any time. They are authorized to monitor and supervise their day to day activities, arrange training for the UDC entrepreneurs, arrange seminar/workshop and other motivational /promotional activities.

2.2 Over View of Union Digital Centre (UDC)

2.2.1 Digital Bangladesh

¹¹Digital Bangladesh by 2021" emerged as part of "Charter for Change"-the election manifesto of Bangladesh Awami League for the 9th Parliamentary Election. The use of information and communication technology has been playing a vital role in the 21st century due to globalization and the government is encouraged to adapting with the coming future. The democratic government has declared the "Vision 2021" in the election manifesto which targets establishment of a resourceful and modern country by 2021 through effective use of

¹¹ Bangladesh Awami League. (2008). *The manifesto and programme of Bangladesh Awami League*

information and communication technology-a "Digital Bangladesh". "Digital Bangladesh" does not only mean the broad use of computers, perhaps it means the modern philosophy of effective and useful use of technology in terms of implementing the promises in education, health, job placement, poverty reduction etc. Therefore, the government underscores a changing attitude, positive thinking and innovative ideas for the success of "Digital Bangladesh". The philosophy of "Digital Bangladesh" comprises ensuring people's democracy and rights, transparency, accountability, establishing justice and ensuring delivery of government services in each door through maximum use of technology-with the ultimate goal to improve the daily lifestyle of general people. Government's "Digital Bangladesh" includes all classes of people and does not discriminate people in terms of technology. Hence, government have emphasized on the four elements of "Digital Bangladesh Vision" which are human resource development, people involvement, civil services and use of information technology in business.

2.2.2 UDC: Purpose & objectives

The key objectives of UDCs are to ensure easy access of common people to government, commercial and social information and services; create ICT infrastructure at all Union Parishads and to increase its efficiency through prompt delivery of information and other day to day services. It also provides a supportive environment for creation of local entrepreneurs; ensures free flow of information for empowering rural community; and creates a vibrant, knowledge-based UP.

Free flow of information is the pre-condition of peoples' empowerment. Especially it can change the standard of living of the backward people. For this purpose ministry of Local Government has taken initiative to set up UDC in the union level to ensure information service for the grassroots people's door steps. UDC means Union Digital Centre where all sorts online and off-line (*information like-health, agriculture, education, land, market condition, weather, passport, employment, M-banking, internet connectivity, printing, compose, scanning, photocopier etc.*) facilities are provided to the people. We can denote it as an information cell (store house of information) in rural level and pre condition of implementing of e-Governance as well as Digital Bangladesh. This is the era of globalization. The whole world is considered as a global village.

So free flow of information and application of ICT are two pre-requirements of being connected with global village as well as empowering people. UDC is the combination of communication technology and information where people can get connected with the whole world or the global village. UDC is such an important place where every people even the poor villagers/grassroots people in remote place can be benefited. UDC is the one of the important tool of implementing Digital Bangladesh.

2.2.3 Partners of UDC

To operate successfully in the long run, public-private partnership is needed. Such partnerships are built with Banks (Dutch Bangla Bank, Mercantile Bank, Trust Bank Limited, One Bank Limited, Bikash Ltd, BRAC, life insurance (Jibonbima), telecommunications (Robi, Banglalink), non-govt. organizations (Dhaka Ahsania Mission, Practical Action) government agencies (Cabinet Division, Bangladesh Computer Council), solar energy (Infrastructure Development Company Limited), and Cyber Cafe Owners' Association of Bangladesh (CCOAB).

2.2.4 Services to be provided by UDC

The Government of Bangladesh declared a vision of Digital Bangladesh by 2021 to ensure services at peoples' doorsteps. A total number of 4,501 Union Information and Services Centres (UDCs) have been established in the *Union Parishads*. All of them are inaugurated simultaneously on 11th November, 2010 by Hon'ble Prime Minister of Bangladesh and UNDP's administrator & former Prime Minister of New Zealand Ms Helen Clark in order to translate the dream of 'Digital Bangladesh' into reality. We can denote UDC is the store house of information. Through the application of ICT, we can easily access to any information smoothly and quickly with a lowest cost.¹² The following services and information can be provided through UDC such as:

- Birth Registration
- Health Information
- Agricultural Information
- Market Information

¹² KM Mahiuddin and Shah Md. Safiul Hoque, *Asian Studies, Journal of the Department of Government and Politics, JU, No. 32, June 2013 pp 49-57*

- Information about law enforcing agencies
- Information about admission test in all levels (school, university etc.)
- Information related to public examinations
- Weather forecasting /Natural disaster information
- Social safety network-VGD, VGF, Kabikha, Kabita etc. information
- Land related information- registration, mutation, record, survey etc.
- Family planning Information
- Mobile Banking service
- Employment & Job Information
- Voter ID card & election related various information
- Information related to all sorts of development activities taken in local & central level
- Computer compose, printing, scanning & laminating
- Photographic service
- Photocopier service
- Internet Browsing & E-mail Service – connectivity with information super high way
- Video conferencing
- Mobile Telephone Service
- Tax related information- income tax, VAT, excise duty etc.
- Business & recreation information
- Various types of government forms download
- All other information related to government Services.

Present government is planning to make it more equipped so that rural people need not to come to various government agencies. People will get all kinds of services and information necessary to lead a peaceful life from UDC. One stop service will be provided to all citizens from one place. To make it more successful, Access to Information (A2I) of Prime Minister Office has already made a website named-E-Totthokosh (www.infokosh.bangladesh.gov.bd) which is a combination of all sorts of national information. So now it will be the center of excellence.

And these services indicate the national 4G systems which are mostly related to e-Governance system in rural area.

G2G: Government to Citizens G2B: Government to Business

G2G: Government to Governments G2E: Government to Employees

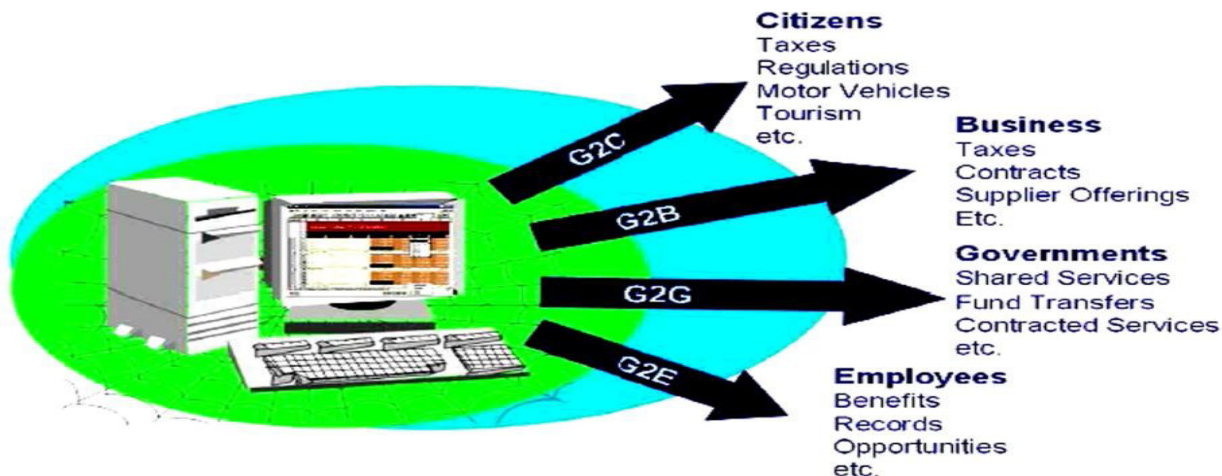


Figure : 2.2 E-governance Service Model (Source: Access to Information (A2I)

2.2.5 PROSPECTS OF UDC

UDC has huge prospect in our country if it is successfully implemented. Ours is over populated country. So it is quite impossible to provide different public services from central offices/ different government organizations. UDC has given the opportunity to provide all sorts of services from the root level to the grassroots people. Now only certain numbers of services are provided from UDC. All other services like- data & information related to land, passport, national ID card, voter ID, banking service, library facilities etc can be provided from UDC. Then grassroots people need not go distance places and different government offices. They will get all facilities from one place (one stop service) that is UDC.

2.3 ¹³An Overview of Earlier Initiative of Rendering E-services for Rural Grass Root People in Bangladesh

UDC emerged from its earlier version known as CeC (Community e- Centre) is a Public Service Delivery Chanel at union level. In 2007, two Community e-Centre (CeC) was established as pilot under Democratic Government Thematic Trust Fund (DGTTF) of UNDP. In early 2008, CeC has been included as a driver project of UNDP supported Access to Information (a2i) Programme of Prime Minister's Office.

¹³ Prospective Report on Effectiveness of e-governance system to Improve Union Parisad's Activities

2.3.1 The Dhaka Ahsania Mission (DAM): In 1987, Dhaka Ahsania Mission started the community-learning centre which was known as Gonokendra centre. It was similar to UDC. Some of the community learning centers were providing different types of ICT facilities by using computers throughout the country (<http://www.ahsaniamission.org>)

2.3.2 Development Research Network: It is a research organization which was established in 2001. It is seen that this organization established 4 (four) Pallitathaya Kendra which are similar to Union Digital Center (UDC) at the rural areas throughout the country in 2005.

2.3.3 Catalyst: It is an initiative to provide the ICT facilities at the rural areas of Bangladesh. It started to work in partnership with two renowned private sectors namely Alokito Gram and GHAT to extend the ICT facilities through establishing the Rural ICT Center (RIC) at the community level of Bangladesh (<http://www.katalystbd.com>)

2.3.4 Community Development Library (CDL): CPDL was founded to satisfy the necessity of information needs of development organizations and rural community people of Bangladesh.

It is such an organization which was established to exchange the information, to process different types of development information. To fulfill the information thirst of rural community people, this library has established another 26 Rural Information Resource Centers (RIRC) throughout the country. These RIRCs serve as forums for women and youth, children's corner, awareness-building, knowledge and information sharing facilities (Islam & Islam, 2008).

2.3.5 Grameen Phone Community Information Center: Grameen Phone (GP) is one of the pioneer organizations for providing information in Bangladesh. This organization took a pilot project in 2006 namely “Community Information Center” to provide Internet access and some other services for the rural people. CIC provides greater access to news and information about the daily lives and development of the citizens of Bangladesh on a range of topics relevant to their daily lives and developments (<http://www.gpcic.org>).

2.3.6 Community Information Services offered by Govt. Organizations: The three important ministries of Bangladesh namely Ministry of Information and Communication Technology, Ministry of Education and Ministry of Cultural Affairs provide various information to the people through ministry.

2.3.7 Practical Action Bangladesh: It was established in 1966 with a view to alleviate poverty. Afterwards it founded two another Rural Technology Centers (RTC) in 2006. Moreover, a good number of steps have been taken to reach the ICT facilities at the doorsteps of rural people by the following organizations namely Youth Community Multimedia Center (YCMC), Amader Gram Learning Center (AGLC), Telecentre Network (BTN), Rural Information Resource Center (RIRC), Bangladesh NGOs Network for Radio and Communication (BNNRC), BRAC Bmail Network Ltd (brac Net), Digital Equality Network (DEN), Digital Knowledge Foundation (DKF) and so on. These organizations worked like the union information and services centers.

2.4 Over view of Existing e-services through UDC in Bangladesh

Union Information & Services Centre (UDC) is government run information Centre located at Union Parishads at union level. With the leadership of Local Government Division and assistance of Local District Administration, 4,501 UDCs have been established all over the country. All 9,002 entrepreneurs (one male youth and female youth in each UDC) are providing government and non-government services to the doorsteps of poor and marginalized people at union level. UDC Blog (UDCbd.ning.com) has been created for the entrepreneurs, and this blog is working as an effective online communication and problem solving platform among all the entrepreneurs as well as local district administration.

Key Findings:

- Crucial livelihood information i.e. agriculture, health, law, etc. is easily available on time near doorsteps of all citizens.
- Many new potential government and non-government services being added.
- Entrepreneurs started to have their own life.
- Entrepreneurs are earning BDT 3 corer per months on average and 45 lac people are taking services in every month.
- Capacity of Union Parishad in prompt service delivery enhanced and closer ties established among the LG employees, people's representatives and citizens.
- Government officials' bureaucratic hegemony reduced. Now a friendly relationship has been developed among the UDC entrepreneurs and officers local administration (e.g. DC, ADC, UNO) through the activities of UDC.

- Government information and services e.g. form collection-submission, tax payment, land record copy collection and so on available near doorsteps of all citizens.
- Convenient Access to a wide range of commercial services from online banking, life insurance to English language learning ensured.
- Online interaction platform UDCbd.ning.com (UDC blog) created.
- A host of local entrepreneurs, half of which is women, created.

2.5 Challenges of UDC

Union Digital Centre (UDC) is the innovation and initiative of present government. It has started its journey on 11 November 2009. So now, it is in the preliminary stage and facing many challenges such as-

- Lack of Awareness of grassroots people
- Lack of Infrastructural facilities (like-electricity, internet connectivity etc.)
- Lack of Logistic Supports & equipment (projector, training etc.)
- Lack of co-operation from UP chairman, UP secretary & other political people
- Lack of Capital and co-operation from private sectors
- Insufficient Trained Manpower
- Lack of interest of general people
- Trouble Shooting Problems.
- Electricity problem
- Internet speed is very slow in rural level
- Coordination gap among the Union Parishad Chairman, Union Parishad Chairman and UDC entrepreneurs.
- Few officers of local administration are not pro-active as well.
- Entrepreneurs' dropout rate is high.
- All entrepreneurs' technical skills as well as accounting skills are not enough.
- Campaign, mobilization and marketing strategy are not enough.

Most of the people in the grassroots level are not well aware about UDC and its functions. To make it more effective, promotional and awareness strategies have to be taken by the concerned authorities as soon as possible. Political commitment and proper planning are necessary in this regard.

2.5.1 More Challenges to provide e-services in the Developing World

The future of e-service is bright but some challenges remain. There are some challenges in e-service, as Sheth & Sharma (2007) identify are:

- Low penetration of ICT especially in the developing countries;
- Fraud on the internet space which is estimated around 2.8billion USD
- Privacy due the emergence of various types of spyware and security holes, and
- Intrusive characteristics of the service (e.g. mobile phones based) as customers may not like to be contacted with the service providers at any time and at any place.

2.6 ¹⁴Institutional Structure and Management of UDC

2.6.1 Conditions for Selecting Union Parishad in different phases

UDCs are established in each of the Union Parishads under three phases. In each of the phases, there are some conditions for every Union Parishad to establish UDC.

Phase 1: In order to establish the UDC under the phase-1, following Union Parishads are given preference.

- Union Parishad (UP) Complex which is newly built and the infrastructure is good to set up the UDC
- Union Parishad that has electricity connections for smooth functioning of UDC.
- Union Parishad that has sufficient computer and printer
- Union Parishad that has hat-bazar near to it
- UP that has public movement always
- UP chairman who has much initiative
- Local unemployed youth those have much eagerness to run the UDC (Ahsan, *et al*-2010)

¹⁴ *Prospective Report on Effectiveness of e-governance system to Improve Union Parishad's Activities*

Phase 2: Under this phase the following Union Parishad has to be given preference

- Though the Union Parishad Complex is old, it can be used for establishing the UDC
- Union Parishad has the electricity connection, though it has no computer and printer. These computer and printer can be arranged from LGSP and revenue fund
- UP chairman having much initiative in this regard
- Local unemployed youth having much eagerness to run the UDC (Ahsan, *et al*-2010).

Phase 3:

- Though the UP has not electricity connection, initiatives are taking to set up the solar panel for smooth functioning of UDC
- Though the UP has no computer and printer, these can be arranged from LGSP and revenue fund
- UP chairman having much initiatives in this regard (Ahsan, *et al*-2010)

2.6.2 Management of Union Digital Centre (UDC)

Steps to be a member: UDC entrepreneurs, officials of local administration, chairman and secretary of union parishad, govt officials of different ministries, experts, members of infokosh (www.infokosh.bangladesh.gov.bd), assistant programmers at district level of Bangladesh Computer Council (BCC) and some others write in the UDC blog. Invitation from moderator or any other member is needed to be the member. Issue based discussions are going on among entrepreneurs and officers of local administration, government & private sectors. At present more than 13,000 people are the members of the blog. Among them 10,000 bloggers are entrepreneurs, rest of them are Deputy Commissioners, Additional Deputy Commissioners, Upazila Nirbahi Officers (UNO), Upazila Chairmen, District Information Officers and Deputy Directors of Local Governments.

2.6.3 Mobilization and Follow-up (Monitoring) by Local Administration:

Officers of local administration take various motivational activities in order to make the UDC sustainable. These activities includes, awareness building, yard meeting, participatory action research, workshop and so on. They identify these needs through this Blog.

Furthermore, Deputy Commissioners (DC), Additional Deputy Commissioners (ADC) and Upazila Nirbahi Officers (UNO) arrange monthly coordination meetings and follow-up activities on UDCs in District/Upazila level. The directions of those meetings are communicated through this Blog. Even all the preparation including agenda selection, date selection and invitation are done by the blog.

CHAPTER-THREE

RESEARCH METHODOLOGY

Generally, research methodology is a process to collect data and different information for achieving the research objectives. It primarily focuses on the methods, tools and techniques of data collection. It may include interviews, surveys, research publication and research technique. The instruments for gathering data also fall within the definition of methodology of a research (Aminuzzaman: 1991). The purpose of this study is to find out the effectiveness of UDC in minimizing gap for e-service delivery between govt and citizens. This study incorporates both of the qualitative and quantitative research approach which focuses on asking questions.

3.1 Research Design

To determine and qualify the relationship between dependent and independent variables, the quantitative research was apprehended. The relationship was expressed between variables using different statistical tools (Creswell, 2003). The overview of the research design is shown by the following flow chart.

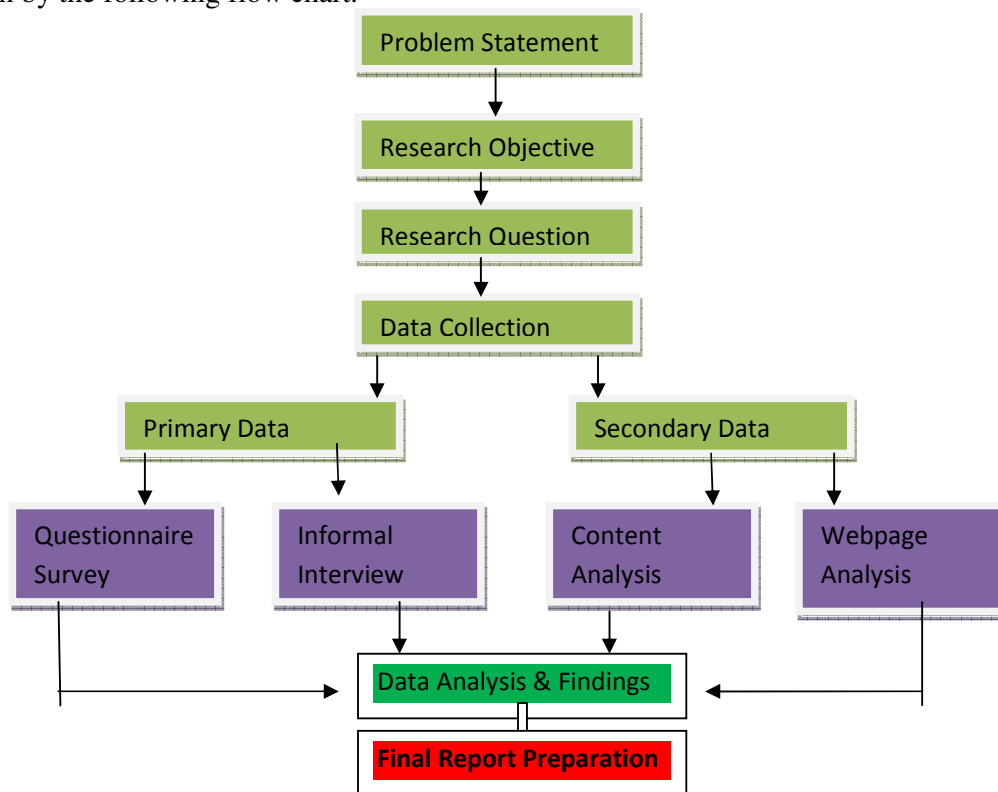


Figure 3.1: Research Design

3.2 Selection of the Study Area

For the purpose of this study, the two Upazila of Narayanganj district viz. Narayanganj Sadar and Sonargaon have been selected. It is worth mentioning that Narayanganj is one of the pioneer districts in terms of UDC implementation, and thus it is valid to choose Narayanganj for this thesis.

3.3 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, published and unpublished research works and online articles that are found to be available.

Interview: For this study interviews are carried out in person or beneficiaries i.e. face-to-face interviews are conducted. The service seekers are the general people of the society and their demand for services are simple and plain. The perception of the researcher is that they should deal with utmost care in acquiring information from them and that's why the face to face interview method with semi-structured oral interview is suitable for this purpose. Thus the main objective of this method is to collect information about the perception of the citizens or beneficiaries regarding the role of UDC in minimizing gap for e-service delivery.

Questionnaire Survey: The semi-structured questionnaire survey method is conducted in this research for the purpose of collecting primary data about the role of UDC in minimizing gap for e-service delivery between government and citizens. It is one of the effective method of collecting primary data.

3.4 Sources of Data and Sampling

The data are collected for this study from both primary and secondary sources. Secondary data are gathered from the existing literatures such as books, newspaper reports, previous research works, seminar papers, reports etc.

Primary data are collected through interview and questionnaire survey. The officers' class one and office assistants/ computer operators are brought under the questionnaire survey and the citizen/beneficiaries are brought under the interview method for drawing primary information. These personnel were brought under the random sampling for the purpose of structured questionnaire survey.

3.5 Sample Size

A total 53 (fifty three) respondents has been selected from the three strata. The composition of the respondents is as follows (Table-3.1):

Table 3.1: Composition of the respondents

Research Area(s)	Categories of Respondents	No. of Respondents
UDC of Fatullah, Enayetnagar, Kashipur and under Narayanganj Sadar and of Sonargaon Upazila.	Entrepreneurs	12
	Beneficiaries	35
	Monitoring Authority	6
	Total	53

3.6 Data Collection Technique

In this research, different types of data collection procedure for this research were conducted to collect the primary and secondary data. The primary data were collected by using structured questionnaire (Appendix A) from key respondents and asking set of questions (Appendix B) from experts' interview. The secondary data was gathered through content analysis from the research articles, text books and dailies while documents survey scheme from various webpage.

3.7 Data Processing

The Collected data were analyzed, sorted, summarized, calculated edited, formatted, tabulated and classified according to the objective of the research. The collected data were also processed systematically in different research approaches according to the predetermined variables like age, education, occupation, income etc. which were classified on the basis of qualitative approach.

3.8 Data Analysis

The data are collected from both primary and secondary sources. After processing, the collected data were then analyzed and interpreted by using some statistical tools and techniques. Moreover, the collected data were categorized, tabulated, analyzed using SPSS (Statistical Packages for the social Sciences) method. It has also been used Ms-Word, M-Excel for the purpose of analyzing the data.

3.9 Scale Construction

For the purpose, the role of UDC regarding e-service delivery, the following scale is constructed:

Table 3.2: Five point scale for measuring the effectiveness of UDC

Scale	Citizens Satisfaction	Infrastructure & Logistics	Effectiveness Measurement
5	Very Good	Very Sufficient	Very Effective
4	Good	Sufficient	Effective
3	Somehow Good	Somehow Sufficient	Somehow Effective
2	Poor	Less Sufficient	Less Effective
1	Very Poor	Not Sufficient at all	Not Effective at all

3.10 Citizens' Satisfaction Measurement

In this study, citizens' satisfaction was measured by using 5(five) indicators which are: the standard of e-service, entrepreneurs' regularity at UDC, extent of accessibility to UDC, skills of UDC entrepreneurs, success of e-service delivery.

The assessing indicators consist of 2 (two) questions of the questionnaire by using 5 (five) point scale to measure the effectiveness of UDC. The five scales are determined as very good (5), good (4), somehow good (3), poor (2), very poor (1).

3.11 Infrastructure and Logistics Support Measure

In this paper, infrastructure and logistics support is evaluated by using 7 (seven) tools which are: power supply situation of UDC, internet speed, skilled of entrepreneurs of UDC, UDC entrepreneurs satisfaction with their income, e-service providing equipment's of UDC, support from Union Parishad. The assessing indicators consist of 2(two) questions for each of the indicators of the questionnaire by using 5(five) point scale to assess the effectiveness of UDC. The five scales are determined as very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1):

3.12 Effectiveness Measurement

The role & effectiveness of UDC are measured by using 2 (two) variables which are: (i) Citizens' satisfaction along with its 5 (five) sub-variables (ii) Infrastructure and logistics support along with its 7 (seven) sub-variables. The assessment indicators consist of 2 (two) questions for each of the indicators of the questionnaire by using 5 (five) point scale to measure the effectiveness of UDC. The five scales are determined as very effective (5), effective (4), somehow effective (3), less effective (2), Not effective at all (1).

3.13 Validity Test

The collected data have been tested through cross checking with each other and with the secondary data sources.

3.14 Limitation of the Study

The study is limited to 35 (Thirty Five) Citizens /beneficiaries, 12 (Twelve) UDC officials and 6 (Six) controlling authority of two Upazila Administration of Narayanganj district viz. Narayanganj Sadar and Sonargaon. As an individual researcher it is very difficult to collect and manage data from all Upazila of Bangladesh within a short span of time. So, only 6 (six) UDC's of both the Upazila are being selected for this study.

CHAPTER FOUR

ANALYSIS, FINDINGS AND DISCUSSION

In this chapter, collected primary data will be presented and analyzed systematically in the light of objective, research questions & analytical framework. The data were collected through questionnaire survey, informal interview, content analysis and webpage survey methods. This chapter presents the results of research findings derived from the primary data analysis by using quantitative and qualitative methods. The present study analyzed how UDC minimizes gap between government and citizens through service delivery.

4.1 Data obtained from Beneficiaries (Questionnaire-B) - Demographic Profiles

The study was conducted for the period from June 10, 2015 to July 30, 2015. The Aim of descriptive statistics was to summarize the data collected from the sample target population of the Union Digital Centre. There were 35 respondents (beneficiaries) from six Unions of two upazila under Narayanganj district interviewed for this study purpose. For collecting data from beneficiaries, I prepared questionnaire – B which consists of two parts .Part A contains seven questions regarding demographic information and part B contains 5 (five) questions including sub-questions regarding other information. The following tables display the demographic profiles.

4.1.1 Distribution of Respondents by Gender

The distribution of 35 (thirty five) respondents i.e. beneficiaries of UDC were surveyed which consolidated below according to gender:

Table 4.1: Distribution of Respondents by Gender

Male/Female	Frequency	Percentage
Male	21	60%
Female	14	40%
Total	35	100%

From the above table, it has been found that among 35 respondents, 60% are male (21) and 40 % are female. So, the greater parts of the respondents are male who are very rational. These are represented through the following figure.

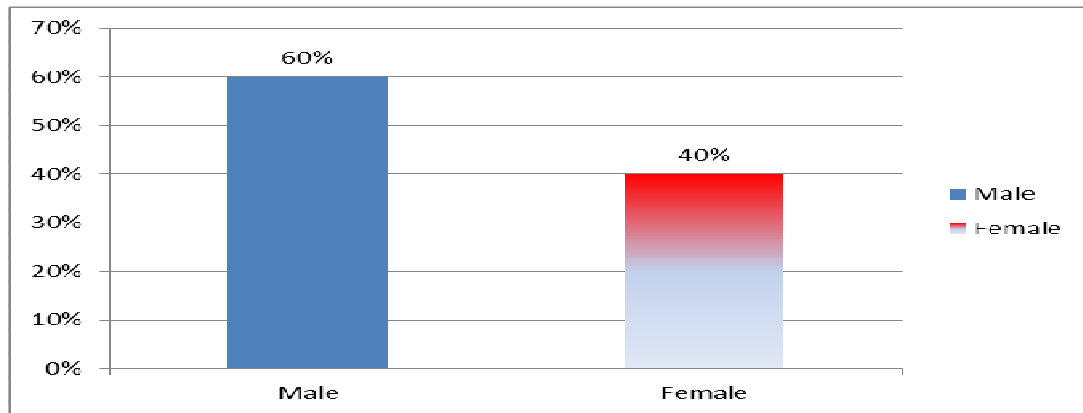


Figure :4.1 Distribution of Respondents by Gender

4.1.2 Distribution of Respondents by Age

The age distribution of the 35(Thirty five) respondents were as follows:

Table 4.2: Distribution of Respondents by Age

Age Group	Frequency	Percentage
21-30	18	51.43%
31-40	10	28.57%
41-50	5	14.29%
51+	2	5.71%
Total	35	100%

From the above Table-4.2, it has been found that most of the respondents (51.43 %) fall in the age group 21-30 who are young and energetic to do any work with enthusiasm and the least (5.71%) of them fall into age group 51+ . And then 28.57 % fall into age group 31-40 and 14.29 % fall into age group 41-50. Age group revealed that most of the respondents were young community people. These interpretations showed by the following figure.

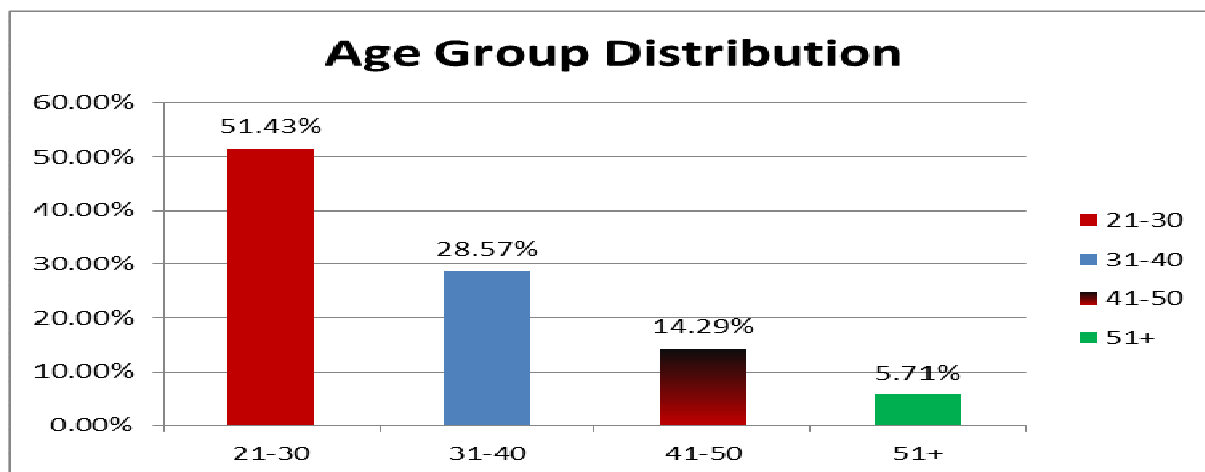


Figure :4.2 Distribution of Respondents by Age

4.1.3 Distribution of Respondents by Occupation

The occupational status of the respondents was as follows:

Table 4.3: Distribution of Respondents by Occupation

Occupation	Frequency	Percentage
Student	8	22.86%
Service	9	25.71%
Business	11	31.42%
Others	7	20%
Total	35	100%

From the above Table-4.3, it has been found that most of the respondents (31.42%) are engaged in business. 22.86 % of respondents from beneficiaries are student, 25.71 are service holders and rest 20 % are engaged in other occupations such as cobbler, farmers and others. These interpretations presented by the following figure (Pie Chart);

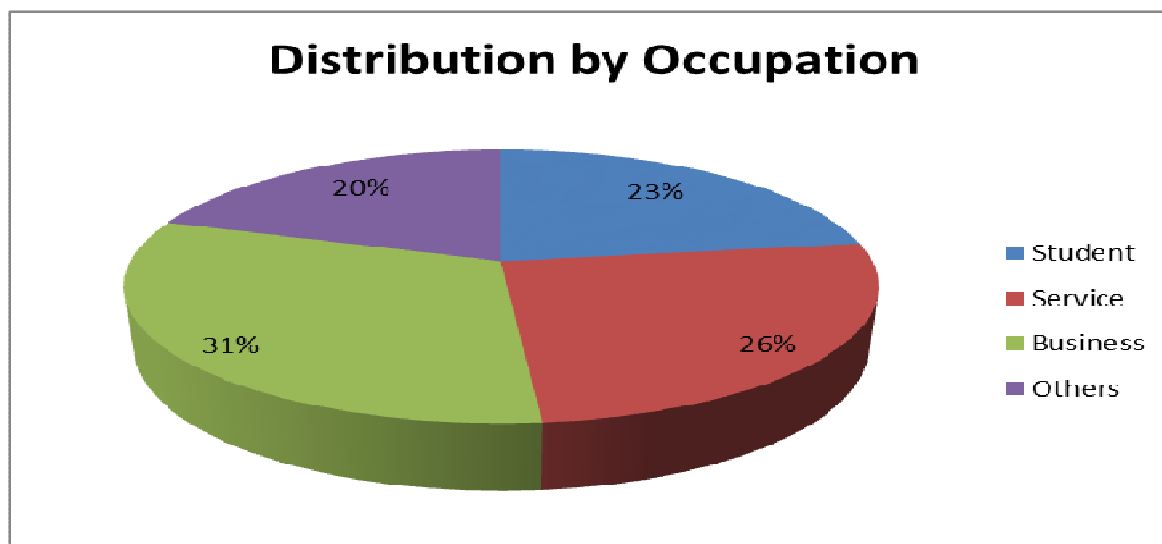


Figure :4.3 Distribution of Respondents by Occupation

4.1.4 Distribution of Respondents by Education Level

The education levels of the respondents were as follows:

Table 4.4: Distribution of Respondents by Educational Level

Education Level	Frequency	Percentage
PSC/Equivalent	7	20.1%
JSC/Equivalent	9	25.71%
SSC/Equivalent	8	22.85%
HSC/Equivalent & above	11	31.43%
Total	35	100%

Thirty five respondents fall in the above given educational level. From the above table, we have found that most (31.43%) of the beneficiaries fall into HSC and above group. The left of the respondents fall into PSC level (20.10%), JSC level (25.71%) and SSC level (22.85%). These above collected information are shown in the following figure (Pie Chart). Here, we see most of the respondents (beneficiaries) are well educated who are conscious about Union Digital Centre and its services.

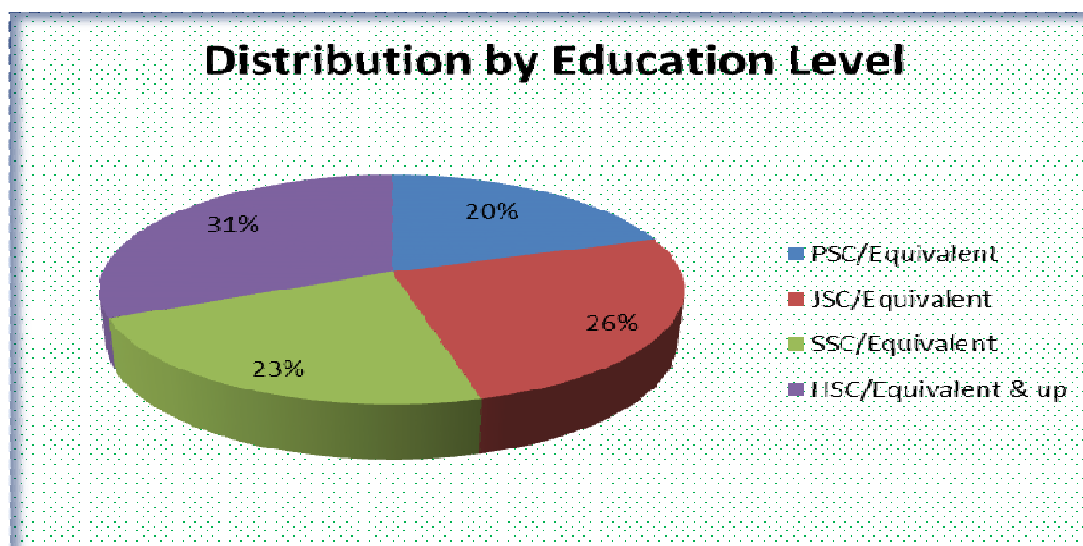


Figure: 4.4 -Distribution of Respondents by Education Level

4.1.5 Distribution of Respondents (Beneficiaries) by Income Level

The respondents are put in the following table from the lowest level to the highest.

Table 4.5: Distribution of Respondents by Income Level

Income Level	Frequency	Percentage
Tk. 5,000-10,000	18	51.43%
Tk. 10,001-15,000	5	14.29%
Tk. 15,001-20,000	9	25.71%
Tk. 20,000-above	3	8.57%
Total	35	100%

From the above table, we have come to know that most (51.43%) of the respondents fall into this Tk.5000-10,000 income level. 14.29 % respondents fall into Tk. 10001-15,000 income group level, 25.71 % fall into Tk. 15,001-20,000 income level and left others (8.57%) fall into income level tk. 20,000-above level. We, see most of the respondents are lowest income earner. This information about income level of beneficiaries is presented in the following figure accordingly for better understanding.

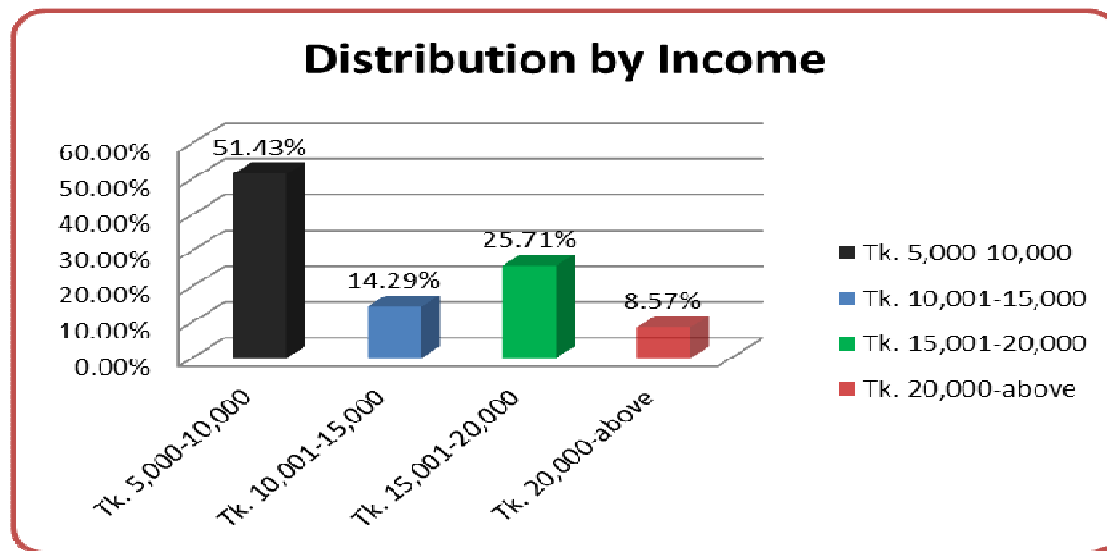


Figure: 4.5 - Distribution of Respondents (Beneficiaries) by Income Level

4.2 Citizens' Satisfaction: Findings and Analysis

Union Digital Centre (UDC) is one of the important successes of present government to provide e-services to the people, especially grass root people with minimum costs. Before introducing UDC, rural grass root people were not well aware about the e-services. Now people are getting e-services from union level through UDC. The success of UDC depends on citizen's satisfaction. Citizen's satisfaction depends on various factors such as standard of e-service delivery, skills of UDC entrepreneurs, regularity of entrepreneurs, extent of accessibility of e-services, success of e-service delivery, impact of e-service delivery by UDC and reduction of rate of corruption by e-service delivery by UDC. Moreover, the research analyzed the gap between the service providers and service receivers. These are analyzed with table and graphical (figure) presentation below.

4.2.1 The Standard of E-service Delivery of six UDC

To measure the standard of e-service delivery of six UDC's are presented in the table below. The standard of e-service delivery is one of the important criteria for effectiveness of UDC which ensure citizen's satisfaction. As the community people are the receivers of e-services, their satisfaction is very much necessary to define the effectiveness of UDC. People's satisfaction about the standard of e-services is calculated according to the following way in

respect of presumed scale (i.e. very good=5, good=4, somehow good=3, poor=2, very poor=1):

Table 4.6: Standard of e-service delivery

Level of Success	Frequency	Percentage	Mean Value (out of 5 scale)
Very Poor	0	0%	4
Poor	2	5.71 %	
Somehow good	5	14.29 %	
Good	19	54.29 %	
Very good	9	25.71 %	
Total	35	100 %	

From the above table, we have found that 54.29 % people among 35 respondents considers e-service delivery as “Good” and 25.71 % people considers e-service standard as “Very Good”, 14.29 % considered the e-service as “Somehow Good”,5.71 % considered the quality of e-service were “Poor”. These are displayed by the following figure.

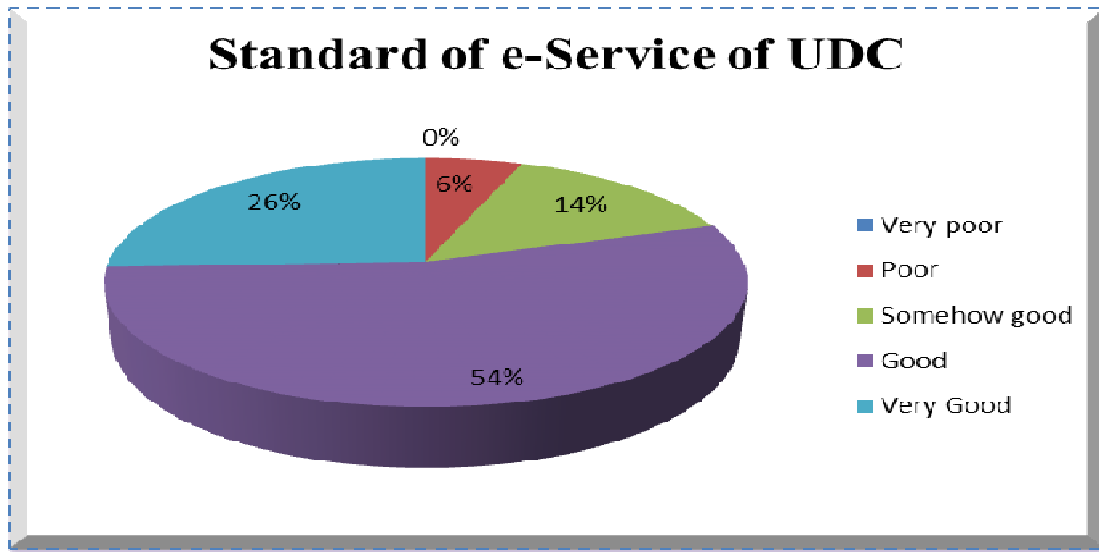


Figure :4.6 Standard of E-service Delivery

The above table (table: 4.6) also presents the mean value of the standard of eservices of six UDCs is 4 according to the presumed value of out of 5 scale. So, it can be said from the above findings UDC’s are trying their best to provide eservices for the betterment of community people. From this findings it is also clear that the UDCs are providing e-services

which are in-between of ‘Good’ and ‘Very Good’ (as the mean value 4 lies in-between of ‘God’ and effective level of e-service according to previously assumed scale 5) level.

4.2.2 Skill of UDC Entrepreneurs for E-service Delivery

UDC entrepreneurs play a vital role for the effectiveness of UDC in terms of e-service delivery. The e-service delivery is disseminated by the UDC entrepreneurs. If they are not skilled enough to provide the e-services, people will deprive from getting desired services. So, the Skill of UDC entrepreneurs is one of most important tools for ensuring the effectiveness of UDC to provide e-service to the rural citizens. As the citizens are main stakeholders of e-services, their satisfaction regarding e-service delivery is very important to assess the effectiveness of UDC. The skill of UDC entrepreneurs is presented according to the following way (very good=5, good=4, somehow good=3, poor=2, very poor=1).

Table 4.7: Skills of UDC Entrepreneurs

Level of Skill	Frequency	Percentage	Mean Value (out of 5 scale)
Very Poor	1	2.87 %	3.54
Poor	3	8.57 %	
Somehow good	9	25.71 %	
Good	20	57.14 %	
Very good	2	5.71 %	
Total	35	100 %	

The assessment of the UDC entrepreneurs about their skills by the respondents is revealed in the above table. These assessments are presented and interpreted through the following figure.

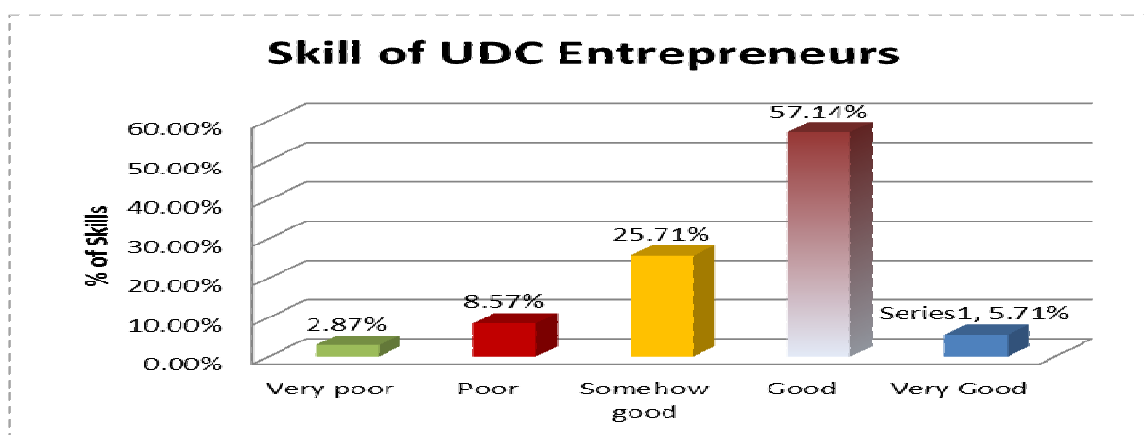


Figure : 4.7 Skill of UDC Entrepreneurs

The figure represents that most of the respondents (57.14 %) opined the UDC entrepreneurs have “Good” skills to deliver the services through UDC and make it successful. Accordingly, a remarkable 25.71 % respondents opined that UDC entrepreneurs are “Somehow Good” level of skill and 5.71 % respondents opined that they are “Very Good” in skills to deliver e-services through UDC. On the other hand, 2.87 % respondents opined that UDC entrepreneurs have “Very Poor” level of skills and 8.57 % opined that they have “Poor” level of skills to deliver e-services. From the above figure, it has been observed that a significant portion of respondents have given negative comment regarding the skill of UDC entrepreneurs. From the above table, it is also seen that the mean value of the skill of UDC entrepreneurs for e-service delivery is 3.54 according to the presumed scale 5.

So, it is clear from the above figure that UDC has ‘**effective**’ (as the significance of mean value 3.54 = ‘effective’ according to previously assumed 5 scales) level of ‘entrepreneurs skill for the e-service delivery among the rural citizen.

4.2.3: Entrepreneurs Regularity at UDC for E-service Delivery

Entrepreneurs’ regularity is very important for effectiveness of UDC. If the entrepreneurs are regular at UDC, e-service delivery will be smooth and as a result rural people will get their desired e-services regularly. The entrepreneurs’ regularity at UDC is highly necessary to assess the success of UDC. So, citizens satisfaction about the Entrepreneurs’ regularity for e-service delivery is presented in the table below and interpreted through the figure (4.2.3) according to the following way in respect of presumed scale (i.e. very good=5, good=4, somehow good=3, poor=2, very poor=1).

Table 4.8: Entrepreneurs Regularity at UDC for E-service Delivery

Level of Skill	Frequency	Percentage	Mean Value (out of 5 scale)
Very Poor	1	2.86 %	3.71
Poor	2	5.71 %	
Somehow good	9	25.71 %	
Good	17	48.57 %	
Very Good	6	17.15 %	
Total	35	100 %	

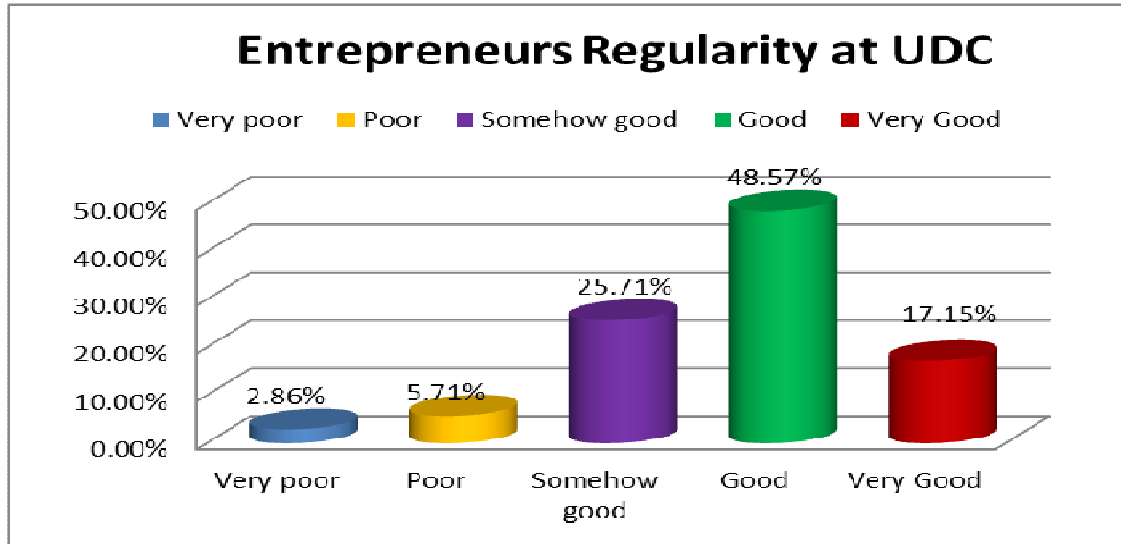


Figure : 4.8 Entrepreneurs Regularity at UDC

The figure shows that 48.57 % respondents opined that the UISC entrepreneurs’ regularity at UDC is ‘good’, 25.71 % respondents opined that the entrepreneurs’ regularity is at ‘somehow good’ level while 5.71 % respondents considered that the entrepreneurs’ regularity is at ‘poor’ level, 2.86 % respondents considered that their regularity is ‘very poor’. Thus, it is seen that though a good number of entrepreneurs’ regularity was at ‘very good’ or good or ‘somehow good’ level but 8.57 % entrepreneurs’ regularity at ‘poor’ and ‘very poor’ level for e-service delivery through UDC.

Again, the above table illustrates that the mean value of entrepreneurs’ regularity at UDC for e-service delivery is 3.71 according to the presumed scale 5.

So, it is clear from the above figure that UDC has ‘**effective**’ (as the significance of mean value 3.71 = ‘effective’ according to previously assumed 5 scales) level of ‘entrepreneurs regularity at UDC’ for the e-service delivery among the rural citizen.

4.2.4 Extent of Accessibility to UDC e-service

Citizen’s access to the UDC for getting e-service is one of the principal attributes for measuring of the effectiveness of UDC .If the beneficiaries of UDC enter into the UDC for their necessary e-services at the websites, web-portal and get the services properly, then it can be said that rural citizens have sufficient access to the UDC.

As the citizens of rural community are the customers of e-services, their perception about the extent of accessibility to e-service is important to assess the effectiveness of UDC. Their perception about the extent of accessibility to e-service is presented and interpreted according to the following way in respect of presumed scale (i.e. very good=5, good=4, somehow good=3, poor=2, very poor=1).

Table 4.9: Extent of Accessibility to UDC e-service

Level of Access	Frequency	Percentage	Mean Value (out of 5 scale)
Very Poor	0	0 %	4.06
Poor	2	5.71 %	
Somehow good	8	22.86 %	
Good	11	31.43 %	
Very Good	14	40.00 %	
Total	35	100 %	

The figure below shows that significant number (40 %) of respondents viewed that the extent of accessibility to e-service of rural people are 'Very good' and 31.43 % respondents opined that the accessibility to e-services are 'Good', Again, 22.86 % respondents considered the accessibility to e-service is 'Somehow good' while 5.71 % considered the extent of accessibility to e-service are 'poor'.

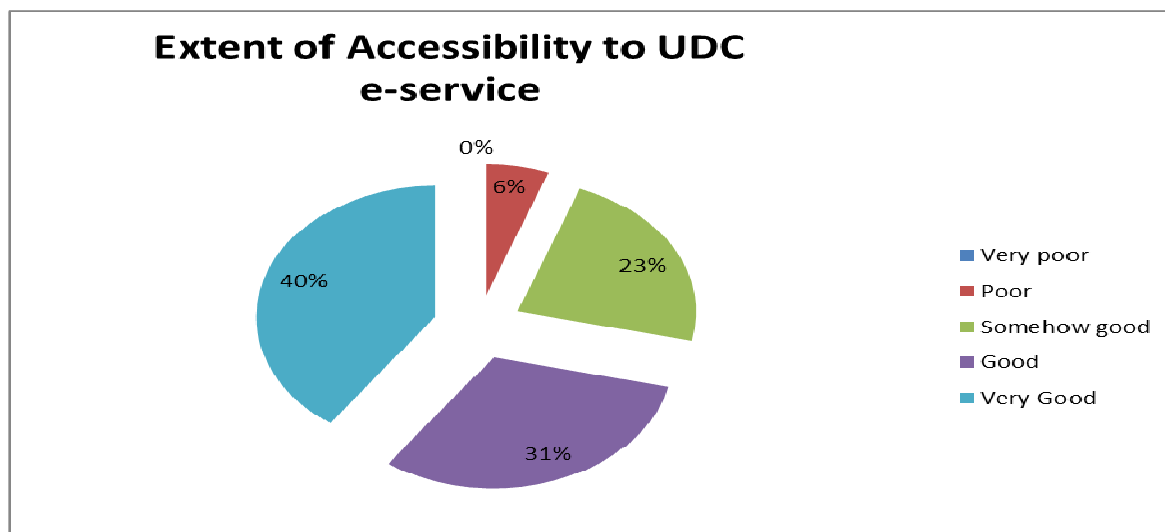


Figure :4.9 Extent of Accessibility to UDC e-service

Accordingly, the above table (Table: 4.9) indicates that the mean value of ‘accessibility to e-service’ of UDC is 4.06 according to the presumed scale 5.

By analyzing the above table it is clear that the overall extent of accessibility to e-service are in-between of ‘effective’ and ‘Very effective’ level (as the mean value 4.06 lies between ‘somehow effective’ and effective level according to previously assumed 5 scales) for the rural community people.

4.2.5 Success of E-service Delivery by UDC

It is important to know how citizens consider about the success of e-service delivery of UDC for measuring the effectiveness of UDC (Union Digital Centre). The success of UDC mainly depends on quality e-service delivery, availability of updated information in the Web-portal and Web-site of union parishad, usefulness of e-services, and extent of accessibility to UDC. Citizens’ satisfaction about the success of e-service delivery is interpreted according to the following way in respect of presumed scale (i.e. very good=5, good=4, somehow good=3, poor=2, very poor=1):

Table: 4.10: Success of E-service Delivery by UDC

Level of Success	Frequency	Percentage	Mean Value (out of 5 scale)
Very Poor	0	0 %	4.08
Poor	1	2.86 %	
Somehow good	6	17.14 %	
Good	17	48.57 %	
Very Good	11	31.43 %	
Total	35	100.00 %	

The figure below indicates that significant 48.57 % respondents opined that the success of e-service delivery is ‘good’. Accordingly, 31.43 % respondents opined that the success of e-service delivery is in ‘Very good’ level and 17.14 % respondents opined that ‘success of e-service delivery’ is in ‘Somehow good’ level. On the other hand, 2.86 % respondents considered the success level is poor.

From the above table, it is also seen that the mean value of the success of e-service is 4.08 according to the presumed scale 5 regarding e-service deliveries.

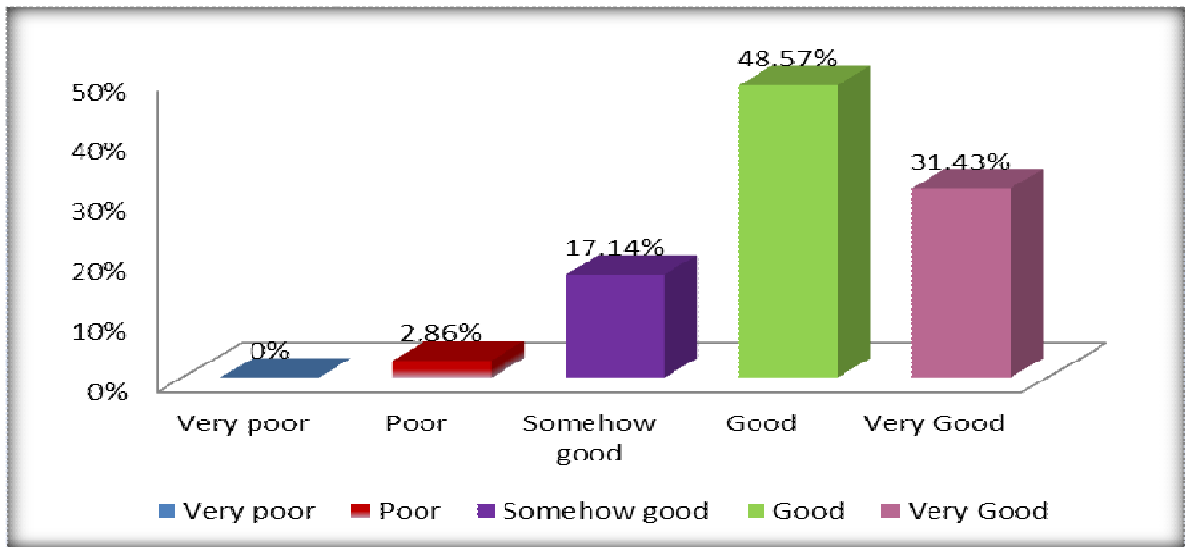


Figure: 4.10 Success of E-service Delivery

From the above table (4.10) it is said that the ‘success of e-service delivery’ of UDCs is at ‘**effective**’ level (as the significance of scale 4.08=‘effective’ level of e-service delivery according to previously assumed scale 5) about the e-service delivery among the rural community people.

Analyzing the above table it is clear that the overall success of e-service are in-between of ‘**effective**’ and ‘**Very effective**’ level (as the mean value 4.08 lies between ‘somehow effective’ and effective level according to previously assumed 5 scales) for the rural community people.

4.2.6 Impact of e-service delivery by UDC

The following table presents the level of impact of e-service delivery on efficient and effective citizen centric public service.

Table 4.11: Impact of e-service delivery by UDC

Faster & Convenient	Frequency	Percentage
Not Agree	2	5.71 %
Moderately Agree	5	14.29 %
Agree	15	42.86 %
Strongly Agree	9	25.71 %
Extremely Agree	4	11.43 %
Total	35	100 %

Respondents were requested to express their opinion based on their experience on scale 1 to 5. Some observations are analyzed one by one. Statements carry the value of e-service as compared to existing traditional service. These are explained through the following figure.

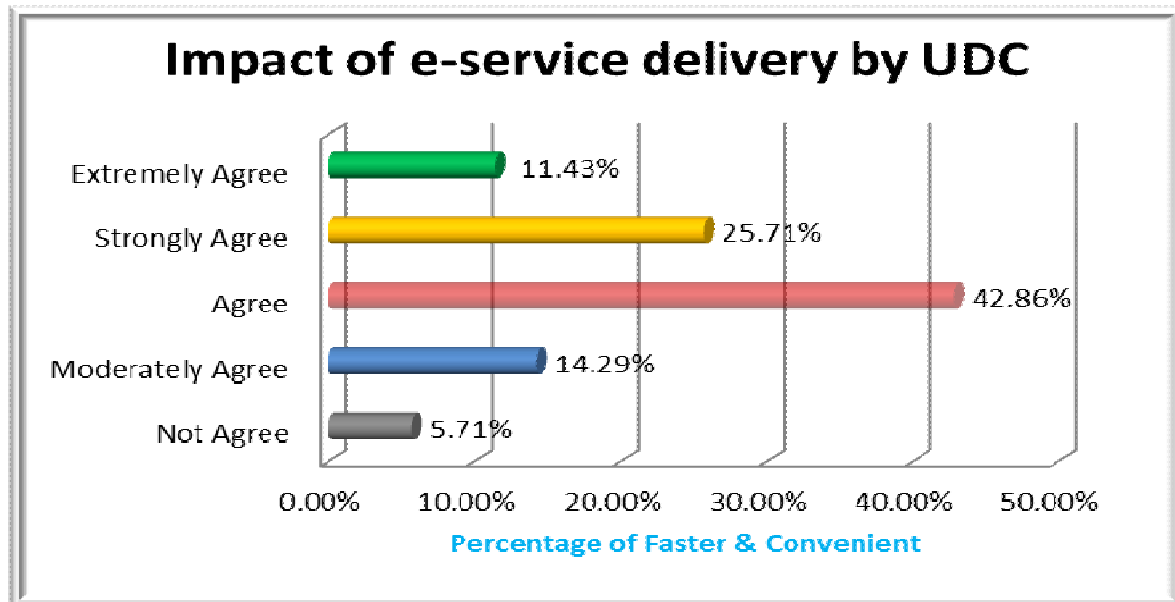


Figure : 4.11 Impact of e-service delivery

To interpret the perception- e-service would be “faster & convenient”, major part (42.86 %) of the beneficiaries express their opinion as “Agree”, 25.71 % as “Strongly agree” ,11.43 % of respondents express their opinion as “Extremely Agree” and 14.29 % are “Moderately Agree”. On the other hand, 5.71 % respondents are not agreed, that means, against the statement.

By analyzing the data, it has been found that most of the people agree with the statement that is e-service delivery through UDC (Union Digital Centre) is faster and convenient.

4.2.7 Rate of Corruption Reduced by e-service delivery from UDC

Data regarding following variable has been collected from beneficiaries’ respondents to measure the utilization of e-service delivery through UDC. The effectiveness of UDC depends on various variables. Reduction of corruption by e-service delivery is one of the important variables for e-service effectiveness.

The collected data has been represented by the following table.

Table 4.12: Rate of Corruption Reduced by e-service delivery from UDC

Reduced Corruption	Frequency	Percentage
Not Agree	2	5.71 %
Moderately Agree	11	31.43 %
Agree	15	42.86 %
Strongly Agree	6	17.14 %
Extremely Agree	1	1.86 %
Total	35	100 %

The data collected to evaluate the statement “e-service could reduce corruption and ensure more accountability” has been interpreted by the following figure.

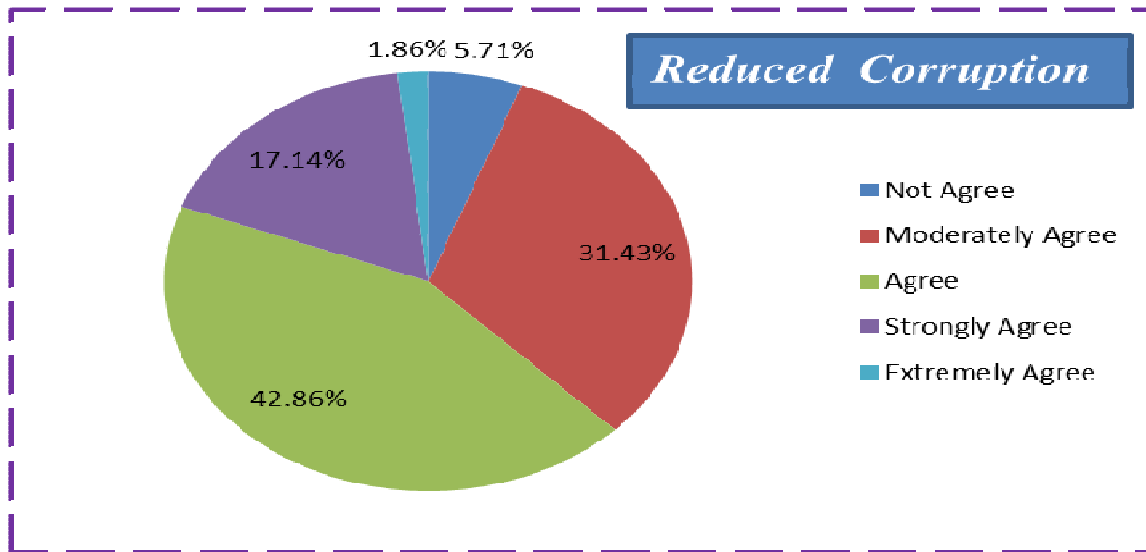


Figure: 4.12 Reduced Corruption by e-Service Delivery

In the above figure, it has been found that 42.86 % respondents (out of 35) are agree with the statement. Accordingly, 31.43 % respondents are moderately agree, 17.14 % are strongly agree with the statement. On the other hand, 5.71 % of respondents are not agree with the statement and 1.86 % of respondents are extremely agree with the statement.

By analyzing the data, it has been found that majority respondents believe that e-service delivery through UDC can reduce corruption successfully.

4.3 Data obtained from UDC Entrepreneurs & Other Officials (Questionnaire-A)

Union Digital Centre entrepreneurs and officials of Union Parisad play vital role for success of UDC's activities by providing e-service to the people. They are the main actors in this arena. For this reason, some important data has been collected from them for this study purpose. The study was conducted on June 30 to July 12, 2015 at Narayanganj Sadar Upazila and Sonargaon Upazila under Narayanganj district with help of district administration. The respondents were mainly UDC entrepreneurs and local body representative of 6(six) union of the two upazila. The collected information and data has been displayed and interpreted in the following table and figures.

4.3 (a) Demographic Information

4.3.1 Distribution of Respondents by Gender

The distribution of respondents i.e. beneficiaries of UDC were consolidated below according to gender:

Table 4.13: Distribution of Respondents by Gender

Male/Female	Frequency	Percentage
Male	7	58.33 %
Female	5	41.67 %
Total	12	100 %

In the above table, it has been seen that there were 12 (twelve) UDC officials and local body representatives which are presented graphically and interpreted below.

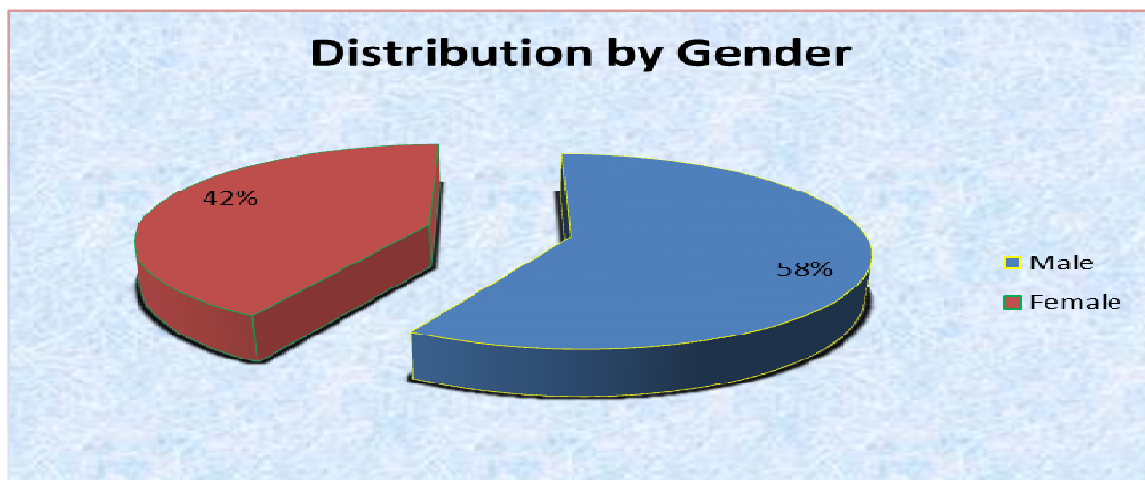


Figure : 4.13 Distribution of Respondents by Gender

The above figure (4.13) shows that among twelve respondents, 58 % were male and the rest 42 % were female. This proves that male is in dominating position in respect of UDC service delivery though female respondents are a bit less than male.

4.3.2 Distribution of Respondents by Age

The age distribution of the 12 (Twelve) respondents were as follows:

Table 4.14: Distribution of Respondents by Age

Age Group	Frequency	Percentage
21-30	5	41.67 %
31-40	3	25 %
41-50	4	33.33 %
50+	0	0 %
Total	12	100 %

The above table presents 12 (Twelve) respondents among different groups with percentages which are explained with the following figure.

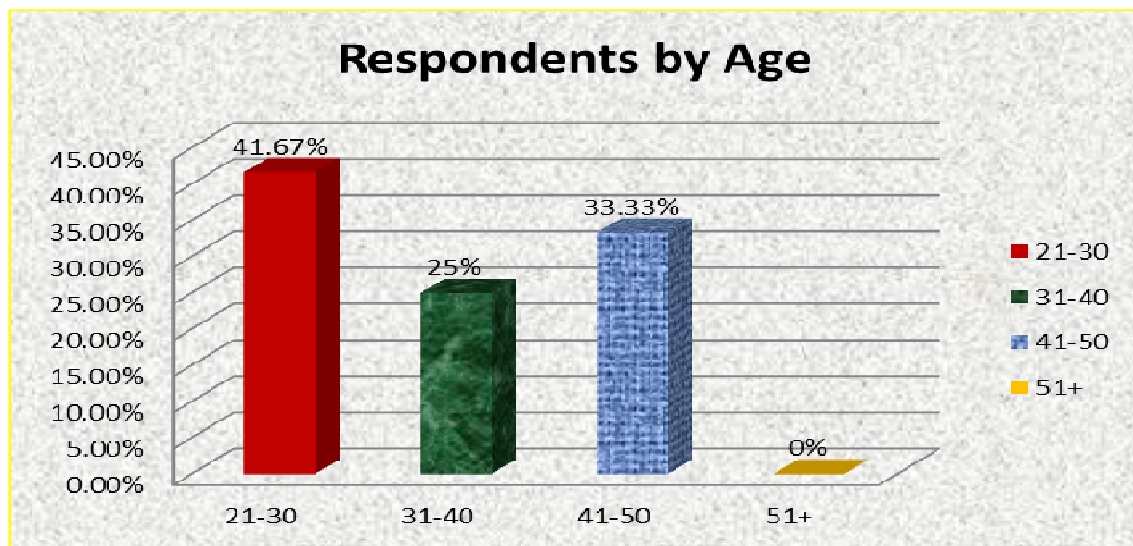


Figure : 4.14 Distribution of Respondents by Age

From the above figure, it has been seen that most of the respondents (42 %) of both gender are very young aged and they fall into age group (21-30). The second highest respondents

UDC officials fall into age group 41-50 and the percentage is 33.33 %. Accordingly, 25 % respondents fall into age group 31-40.

Analyzing the above graph and data, I have found that all the UDC entrepreneurs' age limit is within 50 years. More than 50 years old entrepreneurs are not available. So, it proves that service provided by the UDC is very smooth and efficient as most of the service providers are young and energetic.

4.3.3 Distribution of Respondents by Education Level

The education levels of the respondents were as follows:

Table-4.15: Distribution of Respondents by Education Level

Education Level	Frequency	Percentage
PSC/Equivalent	0	0 %
JSC/Equivalent	0	0 %
SSC/Equivalent	4	33.33 %
HSC/Equivalent & Above	8	66.67 %
Total	12	100 %

In the above table, the respondents are arranged according to their educational background. The data related to UDC entrepreneurs' education have been displayed and interpreted by the following figure.

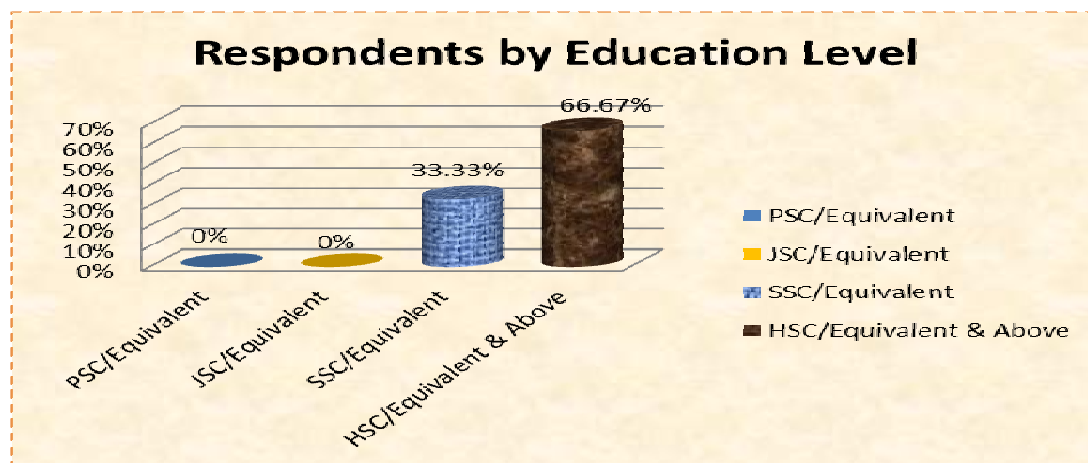


Figure : 4.15 Distribution of Respondents by Education Level

From the above figure, it has been seen that all the entrepreneurs' level of education is equivalent or more than SSC level which is a good sign. The highest number (67 %) of entrepreneurs is HSC and above education level and the left (33 %) percent number of entrepreneurs' educational background is SSC and equivalent. As most of the entrepreneurs are well educated, the service quality of UDC will be higher and excellent which will ensure e-governance in Bangladesh.

4.3.4 Distribution of Respondents by Income Level Satisfaction (i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1)

Income is one of the important indicator of UDC's succeed. The respondents are put in the following table according their income level satisfaction from the lowest level to the highest.

Table 4.16: Distribution of Respondents by Income Level Satisfaction

Income Level Sufficiency	Frequency	Percentage	Mean value (out of 5 scale)
Not sufficient at all	1	8.33 %	2.75
Less Sufficient	3	25 %	
Somehow Sufficient	6	50 %	
Sufficient	2	16.67 %	
Very Sufficient	0	0 %	
Total	12	100 %	

Data related to income level satisfaction of UDC entrepreneurs have been displayed and interpreted by the following figure (4.3.4)

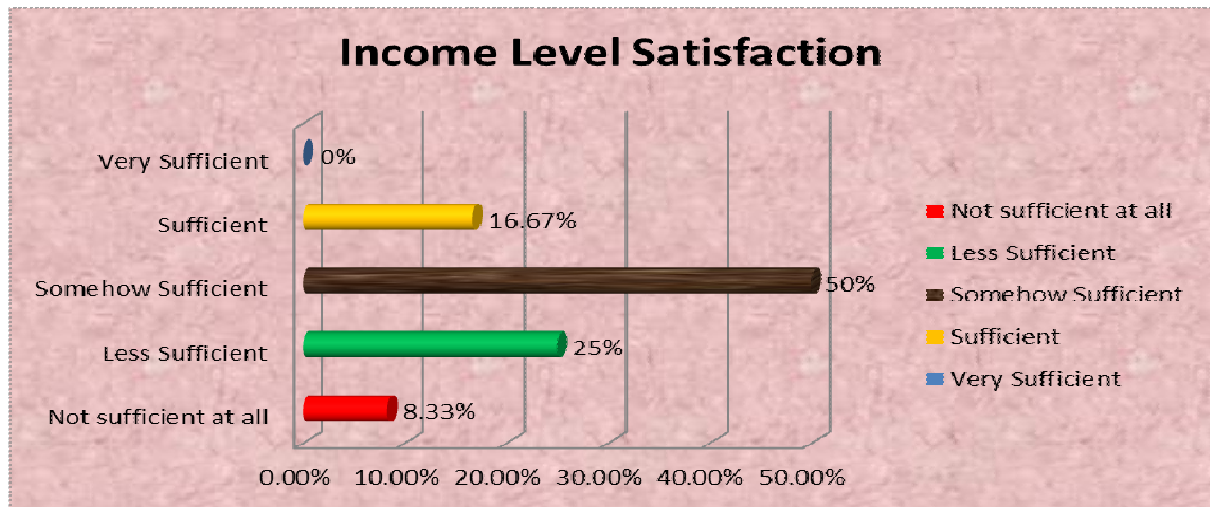


Figure 4.16 Distributions of Respondents by Income Level Satisfaction

From the above figure, it has been seen that out of twelve, 50% respondents' income level fall into somehow sufficient. Accordingly, about 17 % earn sufficient income, 25 % earn less sufficient income and a remarkable amount (8.33 %) earns which is not sufficient at all. We know job satisfaction mostly depends on income level satisfaction. Without income level satisfaction, it is not possible to provide excellent service to the people. So, analyzing the data- it is recommended to the authority to take necessary action regarding the income level satisfaction of UDC entrepreneurs.

4.3 (b) Infrastructure and Logistic Support: Overall Performance of 6 (six) UDCs

4.3.5 Speed and Access to Internet & E-mail

Internet speed is very important to determine the effectiveness of UDC. All types of e-service activities like e-mail, on-line banking, on-line shopping, Skype, internet browsing etc. largely depend upon the internet speed. If the internet speed is at satisfactory level, e-service delivery can be provided according to the customers demand. Internet speed for e-service delivery is explained according to the following way in respect of presumed scale (i.e. High Speed =4, Moderate Speed =3, Slow =2, Very Slow =1)

Table 4.17: Speed & Access to internet

Level of Internet Speed	Frequency	Percentage	Mean Value (out of 4)
Very Slow	1	8.33 %	2.33
Slow	4	33.34 %	
Moderate	6	50.00 %	
High Speed	1	8.33 %	
Total	12	100 %	

The above table shows that 50% respondents responded that the internet speed for providing e-service to the rural people are at 'Moderate' level and 33.34 % respondents opined that the speed of internet is 'slow'. Again, 8.33 % respondents consider the internet speed is 'Very Slow' for delivering e-service to the rural community people while another 8 % consider the internet speed is 'High Speed'. It has also been found out that most of the UDC entrepreneurs use internet and mail frequently but they don't belong to any PC or Laptop of their own.

Accordingly, the above table (Table: 4.3.5) indicates that the mean value of ‘internet Speed’ of UDC is 2.33 according to the presumed scale 4 which indicates moderate.

The level of internet speed level of the respondents has been displayed in the following figure.

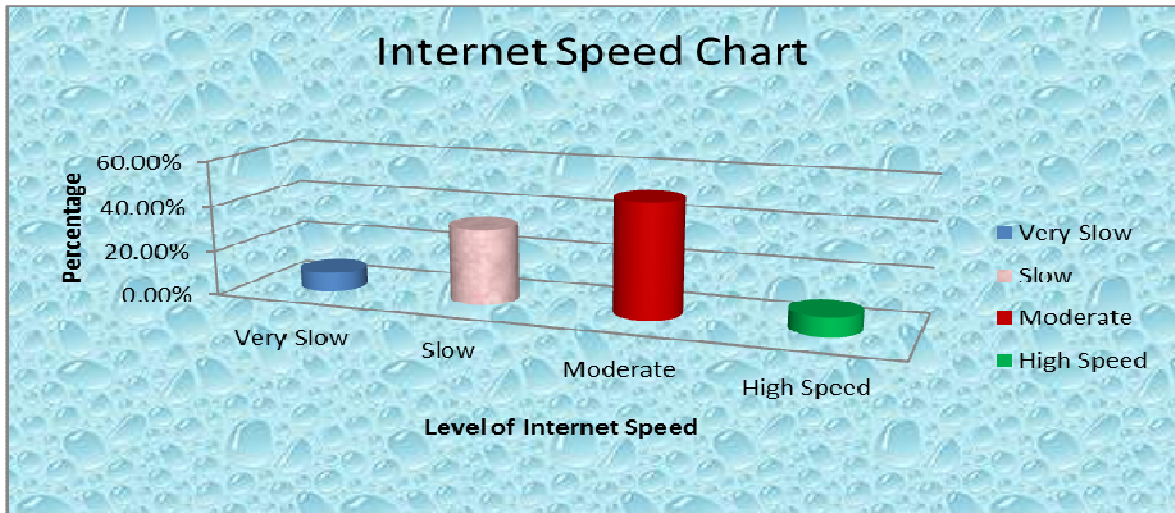


Figure : 4.17 Speed and Access to Internet & E-mail

Analyzing the above figure, it has been seen that most of the respondents of UDC entrepreneurs replied that their internet speed is moderate which is in between slow and high speed. For smooth e-service delivery and establishment of e-governance framework, internet speed is must. That means – high speed internet is required.

4.3.6 Level of ICT Training of Entrepreneurs for Providing E-service

The UDC entrepreneurs are the key personnel for providing the e-services to the rural community people. To make the UDC effective, trained entrepreneurs are very much necessary. The UDC entrepreneurs are some young local people those do not have satisfactory knowledge regarding the e-service delivery to meet the citizens’ desire. If they are trained at a desired level, they will be able to provide more services efficiently. According to the respondents view, training of UDC entrepreneurs for providing e-services is explained on the following way using presumed scale (i.e. Advance=4, Moderate = 3, Elementary =2, No Training =1)

Table 4.18: Level of ICT Training of Entrepreneurs for Providing E-service

Level of Training	Frequency	Percentage	Mean Value (out of 4)
Advance	2	16.67 %	2.91
Moderate	7	58.33 %	
Elementary	3	25 %	
No Training	0	0 %	
Total	12	100 %	

The data are presented in the figure below (Figure 4.3.6) indicate the level of ICT training of the officials of both strata (officers and office assistants).

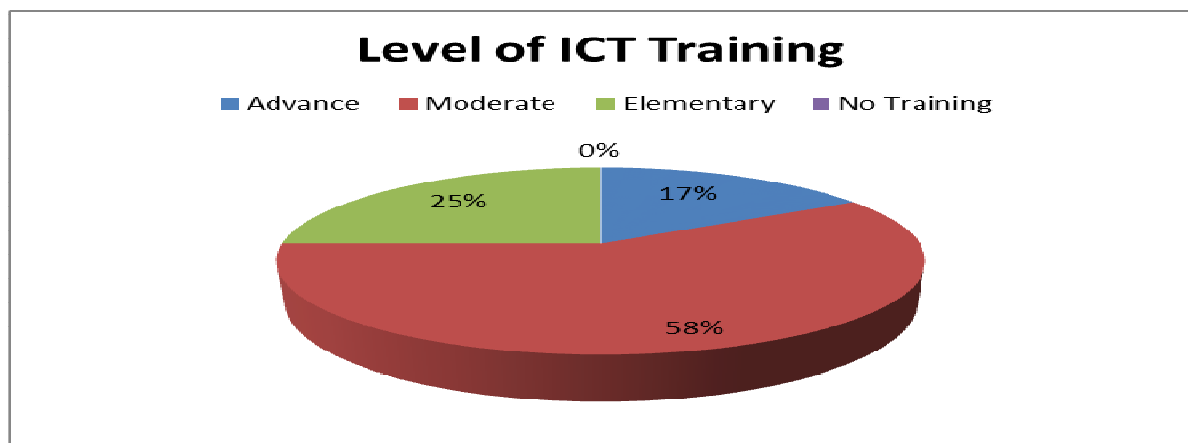


Figure: 4.18 Level of ICT Training

From the above figure it is revealed that 58% of the total respondents have “Moderate” level of ICT training and 17% have ‘Advanced Level’ and 25 % have ‘Elementary Level’ of ICT related training. From the information it is clear that the largest number of respondents (58 %) exposed to ‘Moderate Level’ of ICT training which indicates very good sign for the policy makers.

Thus, it is also observed from the above table (Table4.3.6) that the mean value of entrepreneurs’ training of UDCs is 2.91 (according to the previously calculated out of 4 scale)

4.3.7 Overall Power Situation (Status of Power Supply)

To make the UDC effective, electricity supply is very important. Though some of the UDCs have some alternative way of electricity supply by using solar panel, generator etc, it does not work properly for speedy e-service works. Uninterrupted power supply plays a vital role for smooth functioning of UDC.

Electricity supply of six UDCs is explained according to the following way in respect of presumed scale (i.e. Sufficient=4, Insufficient=2, somehow sufficient=3, Worst =1)

Table 4.19: Overall Power Situation

Power Situation	Frequency	Percentage	Mean Value (out of 4)
Sufficient	7	58.33 %	3.33
Insufficient	3	25 %	
Rarely Sufficient	2	16.67 %	
Worst	0	0 %	
Total	12	100 %	

The collected data are presented and explained in the figure below (Figure 4.3.7).

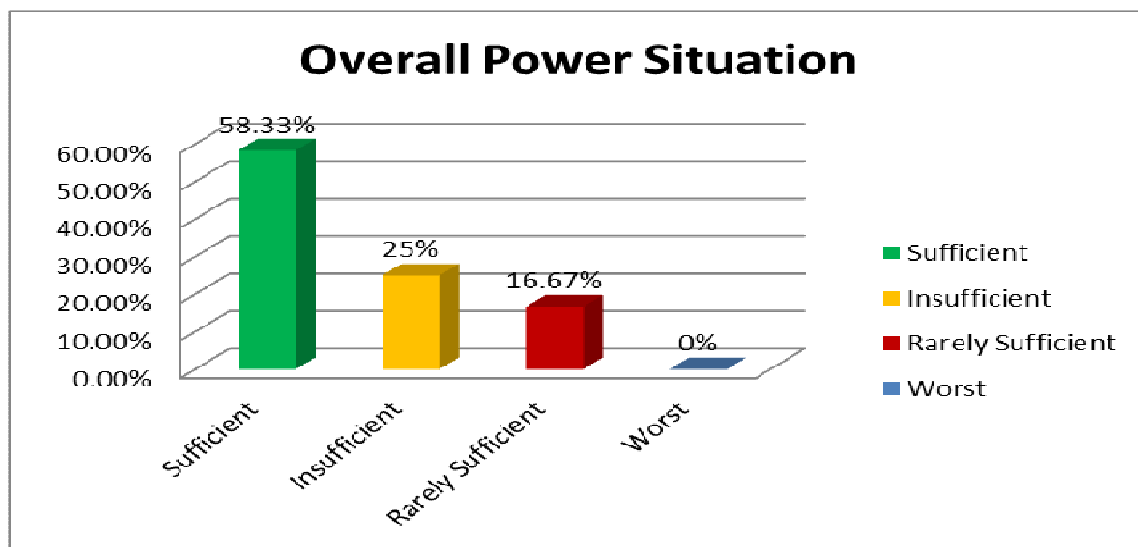


Figure: 4.19 Overall Power Situation

From the above figure (4.3.7), it is observed that most of the respondents i.e. 58 % considered that the existing 'Insufficient' and 17 % respondents considered that the electricity supply is 'Rarely sufficient'.

Analyzing this figure it is seen that the power supply situation of UDC is more or less sufficient for providing the e-services smoothly among the rural community people.

4.3.8 Beneficiaries' Perception about e-Service Delivery

Most of the beneficiaries in the rural areas usually come to the Union Digital Centre for various services like- various govt. forms, public examination results, birth registration, TR, Kabikha information, health and agriculture related information etc.

Table 4.20: Beneficiaries' Perception about ICT related Services

Beneficiaries' Perception	Frequency	Percentage
Good	9	75 %
Moderate	3	25 %
Poor	0	0 %
Total	12	100 %

For this study, I have collected data from 12 UDC entrepreneurs and officials. Their opinion regarding beneficiaries perception have been presented and interpreted through the following figure.

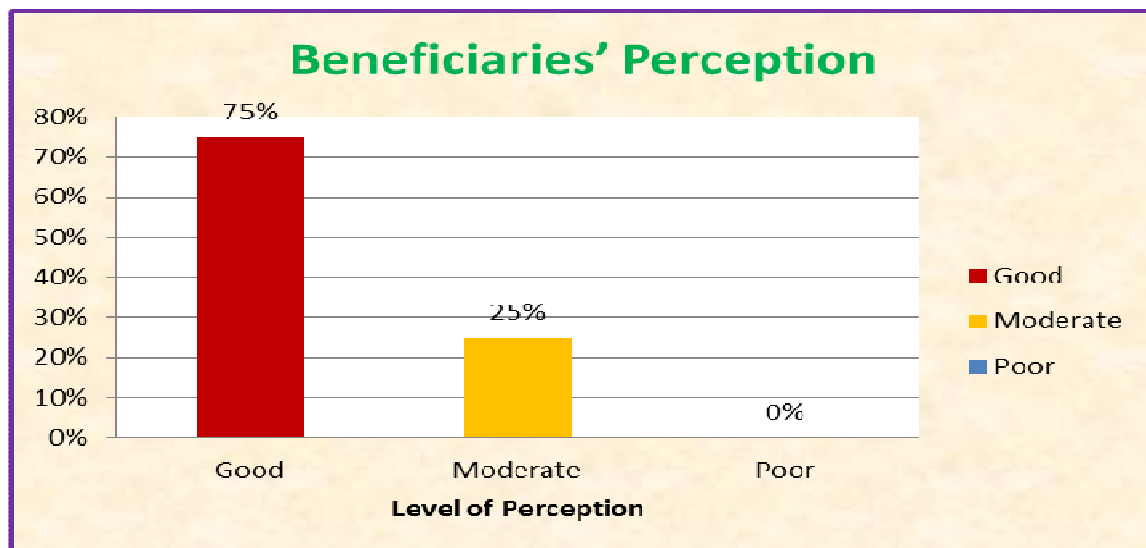


Figure: 4.20 Beneficiaries' Perception about e-Service Delivery

From the above figure, it has been seen that 75 % entrepreneurs opined – most of the beneficiaries have “Good” perception and impression regarding UDC’s services and 25 % opined that beneficiaries have “Moderate “perception regarding their services provided.

Analyzing the above information, I have come to the conclusion that majority people have good idea regarding e-services provided by the UDC’s in Bangladesh. They got most of their information from Union Digital Centre and some people got information from UNO office.

4.3.9 Union Parisad (UP) Support to UDC for E-services Delivery

Union Digital Centre is a part of Union Parisad. The entrepreneurs work under UP chairman with the direction and direction supervision of Upazila Nirbahi Officer (UNO).

Table 4.21: Union Parisad (UP) Support to UDC for E-services Delivery

Level of Sufficiency	Frequency	Percentage
Not sufficient at all	4	33.33 %
Less sufficient	3	25.00 %
Sufficient	5	41.67 %
Very sufficient	0	0 %
Total	12	100 %

All sorts of logistic supports have been provided by the Computer Council with the financial support from UNDP through NILG and DC office. Union Parisad is supposed to assist to the UDC entrepreneurs for smooth functioning of their e-service activities. It is observed that the UDC which is getting proper support from Union Parishad and chairman, it is providing more service to the rural people. According to the respondents view, the existing support to UDC from UP for providing e-services is interpreted and presented through the following figure and on the following way using presumed scale (i.e. very sufficient=4, sufficient=3, less sufficient=2, not sufficient at all=1).

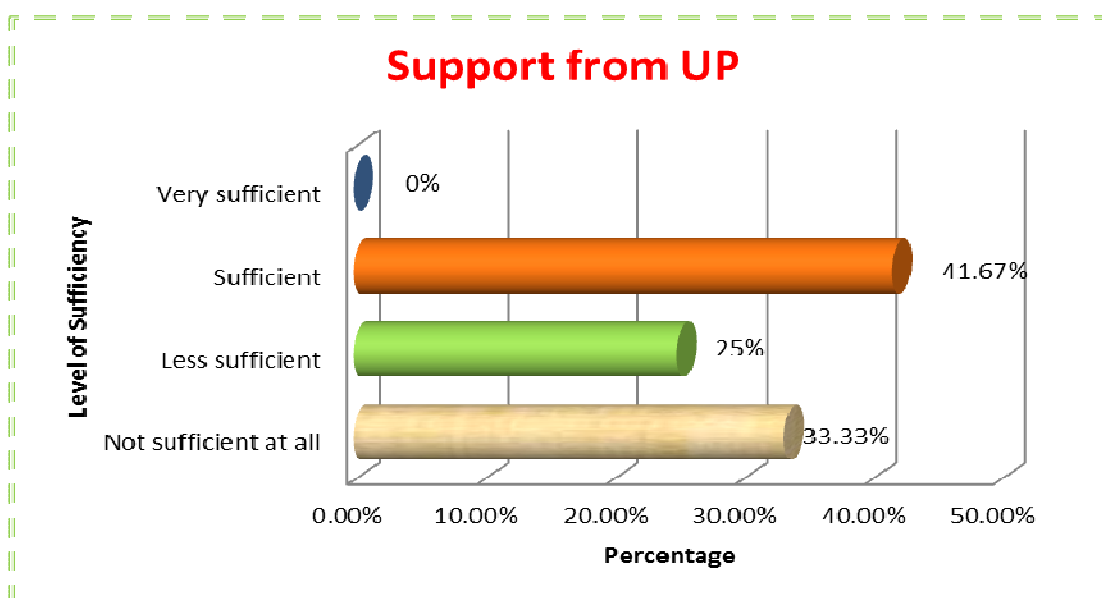


Figure : 4.21 Support to UDC from UP for Providing E-services

From the above figure, it has been seen that about 42 % respondents from UDC entrepreneurs opined that they get “Sufficient” support from Union Parisad and 25 % respondents opined that they get “Less Sufficient” support from Union Parisad. On the other hand, about 33 % respondents (a large number) opined negatively regarding the support from UP. They opined that they support they get from UP is not sufficient at all. They demand for more support from UP and its Chairman for smooth functioning their e-service activities.

Analyzing the above given information, it can be said that for the effectiveness of UDC activities and implementing the e-governance in the root level of Bangladesh, more support from Union Parisad and Chairman is required.

Otherwise, total effort of implementing e-governance through UDC by providing e-service and minimizing gap between govt. and citizens will be futile.

4.3.10 E-readiness of Union Digital Centre (UDC)

E-readiness is the basis of e-service delivery from Union Digital Centre. The data found during the study indicate scores of E-Governance Readiness of the study areas. The score is calculated on the basis of likert scale which is presented in the table below and interpreted by the following figure.

Table 4.22: E-readiness of Union Digital Centre (UDC)

Level of E-readiness	Frequency	Percentage
Unready	0	0 %
Not Ready	3	25 %
Moderately Ready	7	58.33 %
Ready	2	16.67 %
Completely Ready	0	0 %
Total	12	100 %

The figure indicates the evaluation of E-Governance Readiness of 6 (six) Union Parisad of Narayanganj district. This evaluation is mainly focuses on the supply side’s readiness. Due to time constraints, I could not collect data from beneficiaries regarding this issue.

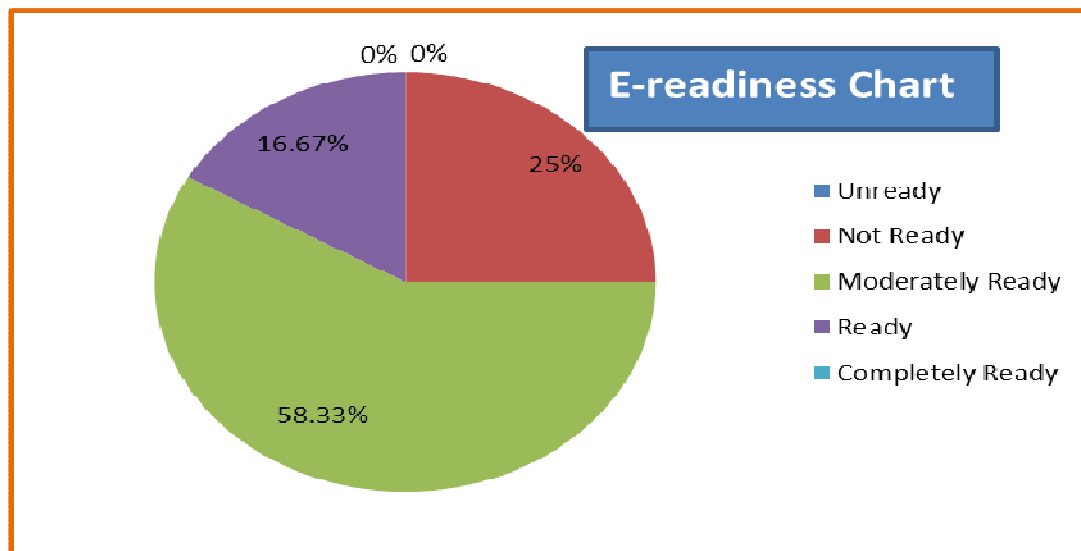


Figure :4.22 E-readiness of Union Digital Centre (UDC)

From the above figure, it has been shown that most of the respondents (about 58 %) ranked or opined that e-readiness is on “Moderately Ready” level and only about 17 % ranked e-readiness as “Ready” level. On the other hand, a large number (25 %) opined that e-readiness is “Not Ready” level due to various impediments / barriers. Here, in this study no one said that e-readiness is “Completely ready “or “Unready”.

By analyzing the above data, it can be said that e-readiness is on the process and undergoing. Very soon we expect to have a complete e-readiness for getting complete e-services which will lead to implementation of e-governance in Bangladesh.

4.4 Data obtained from UDC Monitoring Authority (Questionnaire-C)

For this thesis purpose, I have met 6 monitoring authority of Narayanganj district who are responsible for monitoring the activities of UDC regularly. They are different level of government officials among ADC, UNO and AC (land) from this territory. These data are presented in table and analyzed with various charts.

4.4.1 Impediments to E-service Delivery by UDC

The study attempted to know the impediments of e-service delivery through UDC in Bangladesh by interviewing of monitoring authority. The authority was government officials and staffs worked in administration. The research was conducted total 6 authorities under the interviewing of the study.

Officials were asked for to mark their opinion based on their experience .The collected data have been presented in the following table.

Table 4.23: Impediments to E-service Delivery by UDC

Type of Impediments	Frequency	Percentage
Insufficient Policy & regulatory framework	1	16.67 %
Lack of Human Capital	2	33.33 %
Lack of Privacy and Security	0	0 %
Lack of Marketing about UDC services	3	50 %
Total	6	100 %

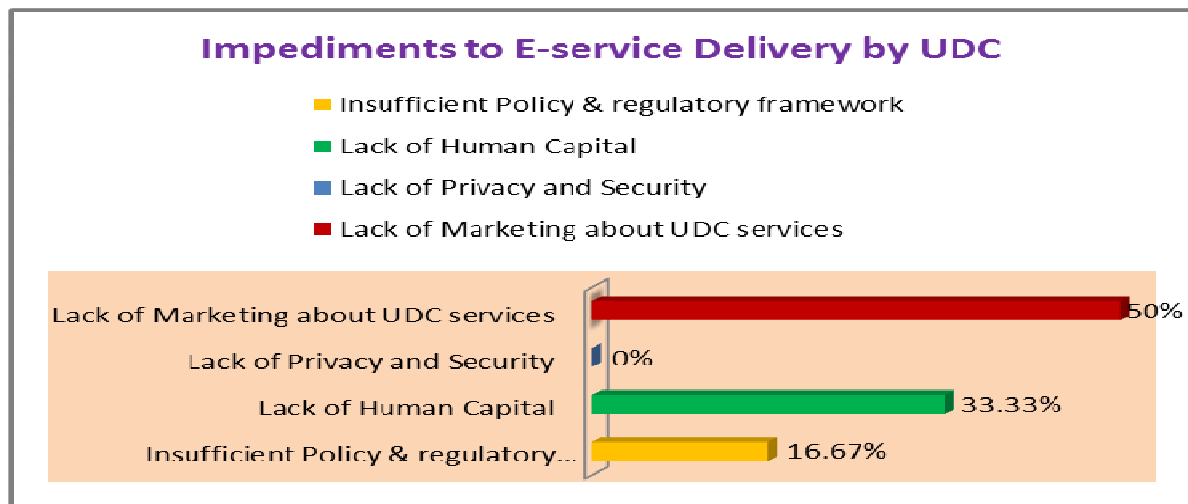


Figure: 4.23 Impediments to E-service Delivery by UDC

The figure shows that majority of the respondents (60 %) ranks ‘Lack of marketing about UDC services’ as the most alarming barrier to E-service delivery by the UDC. The next is “Lack of Human Capital” and “insufficient policy & regulatory framework” which are viewed by 33.33 % and 16.76 % of the respondents respectively. Beside these, frequent load shedding and lack of infrastructure and logistics are exponential impediments to E-service delivery by the UDC in Bangladesh.

4.4.2 Regular Monitoring & Survey of UDC's Activities by the Authority

Monitoring is an important part of the success of Union Digital Centre (UDC) in Bangladesh. Without proper monitoring by the authority, it would not be succeed in delivering e-services to the people in rural areas in Bangladesh. The data collected from six monitoring authority of two Upazila in Narayanganj district have been presented by the following table.

Table 4.24: Regular Monitoring & Survey of UDC's Activities by the Authority

Level of Monitoring	Frequency	Percentage
Very Poor	0	0 %
Poor	0	0 %
Somehow good	0	0 %
Good	2	33.33 %
Very Good	4	66.67 %
Total	6	100 %

The opinion collected for this study has been interpreted by the following figure below.

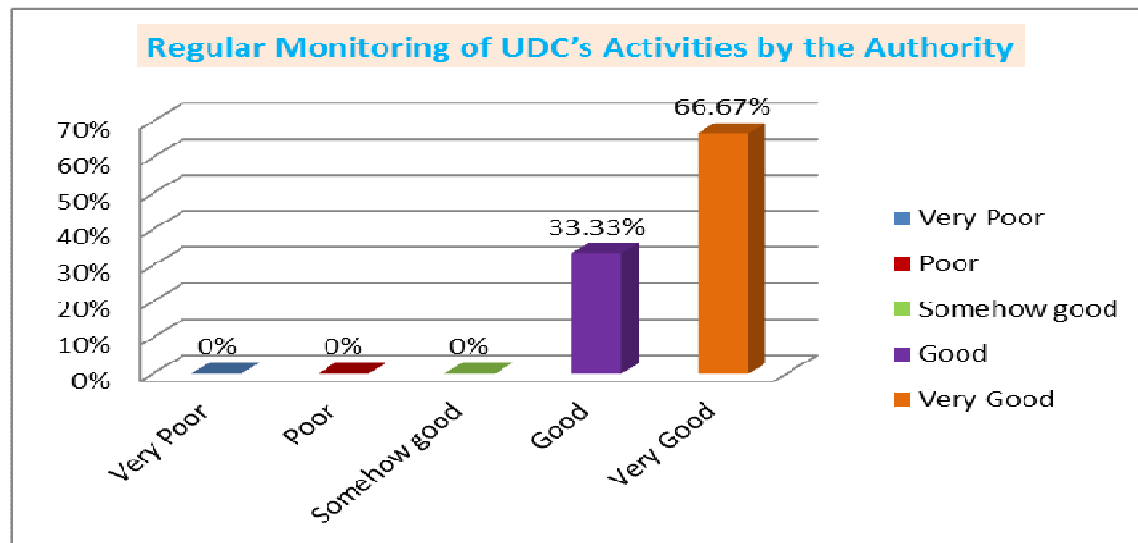


Figure : 4.24 Regular Monitoring & Survey of UDC's Activities by the Authority

In the above figure, it has been shown that majority (66.67 %) of the respondents have been opined that they monitor properly. They rank monitoring activities as “Very Good” and rest of the respondents ranks “Good” about their monitoring activities. Because of proper and regular monitoring, UDC became successful in providing e-service delivery in rural areas.

4.4.3 Performance Measure of UDC's Entrepreneurs by the Authority

The success and effectiveness of UDC depends on the performance of the UDC entrepreneurs. If they work properly and sincerely, then people will get regular e-services which make the UDC more successful one and therefore it will lead to establish framework of e-governance and help to minimize gap between govt. and citizens. To measure the performance of the UDC entrepreneurs by the monitoring authority the five point scale has been used (i.e. very good=5, good=4, somehow good=3, poor=2, very poor=1).

Table 4.25: Performance Measure of UDC's Entrepreneurs by the Authority

Level of Performance	Frequency	Percentage	Mean Value (out of 5 scale)
Very Poor	0	0 %	3.5
Poor	1	16.67 %	
Somehow good	1	16.67 %	
Good	4	66.66 %	
Very good	0	0 %	
Total	6	100 %	

The data collected regarding the performance of UDC entrepreneurs have been analyzed by the following figure.

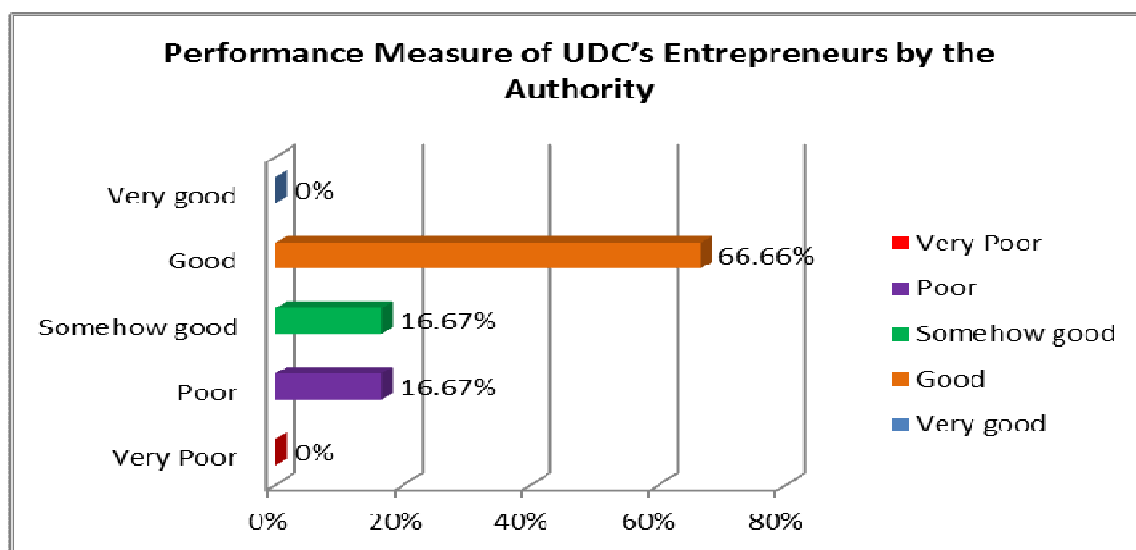


Figure: 4.25 Performance Measure of UDC's Entrepreneurs by the Authority

In the above figure, it has been shown that majority (66.67 %) of the respondents opined that the performance of the UDC entrepreneurs is "Good". On the other hand, 16.67 % of the respondents opined that their performance is "somehow good" and next 16.67 % opined that UDC entrepreneur's performance is "poor".

By analyzing the above figure, it can be said that most of the respondents believe that majority of the UDC entrepreneurs performs well to provide e-services to the rural people through UDC and as a result UDC’s are doing well in establishing e-governance in rural Bangladesh. Mean value 3.5 out of 5 means that performance of UDC entrepreneurs is good.

4.4.4 Response Measures of the UDC services seekers/beneficiaries by the Authority

As monitoring authority is an important part of the success of UDC, so their opinion regarding the response measures of the beneficiaries is very essential. So, for this study, data have been collected from the respondents on the basis of five point scale (i.e. very good=5, good=4, Medium=3, Average =2, Very Poor=1) and presented by the following table.

Table 4.26: Response Measures of the UDC services seekers/beneficiaries by the Authority

Level of Response	Frequency	Percentage	Mean Value (out of 5 scale)
Very Poor	0	0 %	4
Average	0	0 %	
Medium	1	16.67 %	
Good	4	66.66 %	
Very Good	1	16.67 %	
Total	6	100 %	

The data collected from the respondents have been presented and discussed by the following figure.

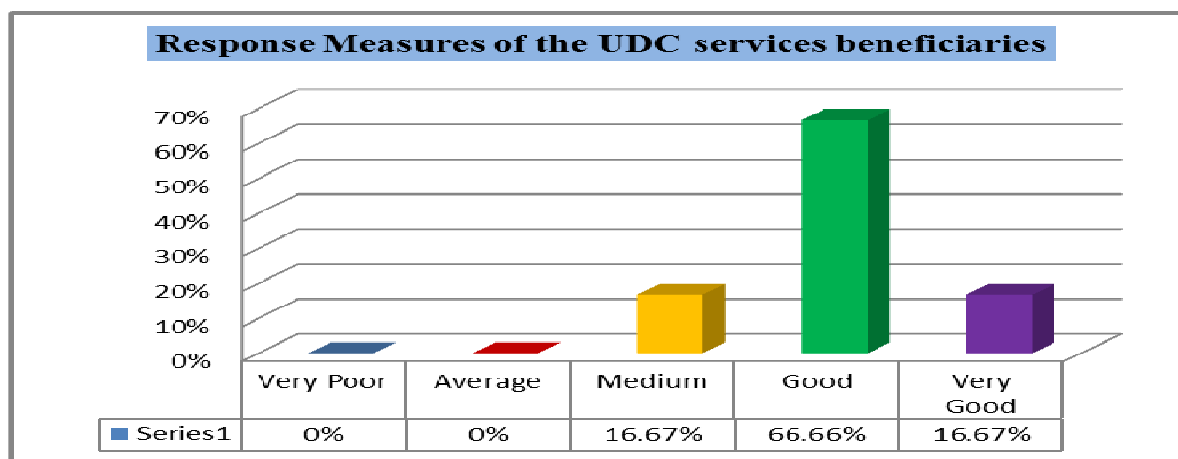


Fig: 4.26 Response Measures of the UDC services seekers/beneficiaries by the Authority

In the above figure, it has been shown that majority of the respondents (67.67 %) opined beneficiaries' response as "Good", 16.67 % opined "Very Good" and next 16.67 % opined "Medium".

By analyzing the figure and data, it is very clear beneficiaries' response regarding e-service delivery is good. Also, mean value 4 out of 5 indicates "good" response by the beneficiaries to the e-service delivery.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

ICT is the key issue for development and to run a modern government in any democratic polity. It has emerged as a single most effective strategic intervention to empower citizens and to deliver goods and services to the end stakeholders. UDC initiatives, by using ICTs, attempt to reduce cost, optimize efficiency and effectiveness, make governments more accountable and transparent, reduce the scope for corruption, and so forth.

UDC essentially helps reduce the inherent gaps that occur in the process of manual operational procedure during the interactions between different stakeholders. Creation of national database and preserving that in a national web portal for interactive utilization by different stakeholders is instrumental in bridging the gaps in particular cases. Moreover, it will help to increase the capacity for both the government and the other stakeholders by enabling all in ICT sector.

In this study, it has been observed that beneficiaries have begun to realize the importance of UDC. UDC has opened a new window for the rural people in Bangladesh. Effective and efficient uses of ICT can bring the potential to make the rural communities in Bangladesh prosperous and empowered when crucial livelihood information like education, agriculture, health, land, law, etc. are available on time near doorsteps of all citizens. Even the common people who do not have much formal education let alone technical knowledge, have started to recognize the importance of adopting e-service(s) in case of un-interrupted, effective and efficient service delivery. Both the beneficiaries and officials of UDC have posed a great expectation for online service delivery. But some sorts of challenges are identified in developing e-service(s) that should be overcome very soon. In order to move towards a better future that ensures a competitive, socially responsible, vibrant, and dynamic UDC in Bangladesh, it needs to bridge the gap between the services promised and services offered.

For this, it is necessary to have efficient collaboration of the e-service components i.e. the service provider, the channels of service delivery, and the service receiver.

5.2 Recommendations

Union Digital Centre (UDC) is an important place in every union where people -especially poor rural grassroots people can get facilities of modern science. It's a blessing for the general people. Through the UDC, modern technologies have reached to the root level of our country due to initiative of present government. Different classes of people can get different types of benefits from the UDC. Students, women, educated unemployed person, farmers, teachers, journalists, employees -government or private, doctors, businessmen, residential/non-residential Bangladeshi people and many other classes of people can get benefits from UDC as per their requirements. Some recommendations are given below to increase the benefits of the people by improving UDCs.

□ **Human Resource Development-** The policy makers in Bangladesh have woken up to the reality that 'human ware' is far more important than hardware and software to realize the Digital Bangladesh vision. The HRD challenge appear in different forms: first, the service providers especially the government must be much more aware of the service delivery options and benefits ICTs present; second, the government officials must embrace ICTs in their day to day work – the younger officers seem must more amenable to developing an ICT work culture; third, the general literacy of the population being less than 50% presents a significant challenge in adoption of computer technologies (and, for this reason, adoption using mobile phones, TV, radio at the general user end is far more realistic in the short term.

□ **Financial allocation and institutional capacity-**The still lacking institutional capacity to identify, design and manage ICT-based projects within the government deters the policy makers to allocate significant budgets that would be required to implement Digital Bangladesh. Some of the demonstration initiatives called 'Quick Wins' facilitated by the Access to Information (A2I) programme and other programmes such as Managing at the Top (MATT-2) are recently creating an appetite for calculated risk-taking for larger ICT-based projects within the civil service. Institutional capacity must be enhanced to formulate conducive policies and procedures as well.

□ **Affordable connectivity-** The cost of internet connectivity is still one of the highest in the region and is well below the affordability of the common citizen. Broadband access is still in its infancy because of lacking last mile connectivity and high cost of access. Development of a policy for Universal Service Fund is still an area of exploration.

□ **Locally relevant and local language content-** The new media and internet open up the user to a world of information and knowledge, but unfortunately, very little is in the native language and much of the content is not locally relevant, contextually meaningful or culturally sensitive to the teeming millions.

□ **Reliable and continuous Power Supply-** The country currently suffers from a chronic shortage of about 1,500 MW of power. In locations of the country, power is not available when it is needed to conduct a digital programme such as during office or school hours. With Digital Bangladesh implementation, this shortage will one hand impedes progress of digitalization, and on the other, will make the power shortage more acute unless power generation can be boosted in the short term.

□ **Strong Internet Speed-** The present internet speed in the UDC is very low. Generally, EDGE or GPRS modem are used in the UDCs which are very slow in providing high speed of internet. Rather it can be used 3G/WIFI modem or broadband connection for providing quick eservices among the rural people.

□ **Make UDC as Center of Excellence-** Geographically, UDC has the potential to become a business hub. As it is established in union parisad (UP), it can be a growth center at local level and lower tier of administration. Rural level development activities can be monitored through UDC. People can get one stop service in UDC. So UDC can be made as a one stop service center for both government and non-government activities.

□ **E-health services:** UDC may preserve the name of all health centers of the concerned UDC area and contract service system, treatment, transport support, and its expenditure, doctors costs and capacity among the vicinity and countrywide.

On the other hand, UDC may make connection between patients and hospitals so that primary treatment can be provided through local trained medical assistant who have the direct connection with UDC as well as hospitals. UDC also brings first aid to give treatment through medical assistant.

□ **Land services-** UDC will provide some essential land services to the citizens through land management and registration department. In this connection, UDC will process the application for ROR, Mutation, Information and registration etc. For these services UDC will directly contact with land management and registration department.

□ **Positive Attitude-** Positive attitude among service seekers is needed towards UDC for its success. It has a great impact on the success of UDC.

□ **Trained Entrepreneurs-** Trained entrepreneurs are very much necessary for the smooth functioning of UDC. They are the life of UDC as the performance of UDC mainly depends upon the well trained entrepreneur's. If they are trained enough to provide the e-service according to customers' need, the UDC must be effective.

□ **Entrepreneurs' Handsome Income:** Income has a great impact on the success of UDC. If entrepreneurs don't have enough income from UDC, they will not be encouraged to run the activities of UDC. People will not get proper service as well.

□ **Entrepreneurs' Co-ordination Power:** Both of the entrepreneurs of UDC have good academic qualification having better co-ordination capabilities among their beneficiaries. As a result, the UDC performs well.

□ **Strengthening UDCs:** Today UDCs have become important vehicles for disseminating e-services to the citizens. The government should have pragmatic steps to make the UDCs functional more.

□ **Narrowing the Digital Divide:** In the study it is observed that there are an evident digital gap between the centre and the periphery. So, the government should give more attention to those Upazila situated at the periphery with a view to minimizing the visible digital divide.

□ **Database:**

Database is the store house of information/data where all sorts of specific data inserted are available when needed. The service of UDC is based on the database.

□ **Implementing e-Governance & Citizen Engagement:**

E-governance or electronic governance may be defined as delivery of government services and information to the public using electronic means.

By using IT in government activities / services, we can ensure transparency, efficiency, effectiveness, accountability, responsiveness and speediness in disseminating information & services to the public. In implementing e-Governance in any country, citizens need to be engaged in this process. Otherwise it would not be possible to run this process successfully. It has three components such as-

- Government-to-Citizen (G2C)
- Government-to-Business (G2B)
- Government-to-Government (G2G)

In the above mentioned elements of e-Governance, we see in every stage citizen involvement is must to apply this process successfully.

For this purpose, we need to develop skilled & educated manpower by applying ICT everywhere to implement/ to run e-Governance successfully as citizens are the main stakeholders / beneficiaries of this process.

□ **Awareness Building & Promotional Activities:**

People in the grassroots level are not well aware about the functions of UDC. They do not at all about what facilities are provided from UDC. As a result, two third of the UDCs are not running well.

So, this is high time to take promotional activities to make the purpose of UDC successful. Local political leaders' like- UP chairman, Members, Teachers, Government Officials and mass media can play active role in this regard.

□ **Role of District and Upazila Administration (Monitoring):**

The UDC operated in the union level is under the supervision of Upazila Administration as well as district administration. The office of the Deputy Commissioner monitoring all the activities of all UDCs through the Office of the Upazila Nirbahi Officer (UNO). Local government division with the help of Access to information (A2I) of PM office has given full authority to the Deputy Commissioner (DC) to take any decision, to arrange training program for concerned entrepreneur directors and to monitor all the activities done in UDCs under his territory. So, field administration is playing an important role to make the UDCs successful. But it is observed, that in every district (64) all UDCs are not running successfully. So the role of field administration should be enhanced.

□ **Role of Political Leaders:**

Sometimes it is seen in some districts that political leaders specially – union parishad chairman are not co-operating properly to run the UDC properly. Most of them are not well aware about its functions. So those people needs to be properly oriented to the matter as they are the key persons to play important role in this regard.

□ **Develop Infrastructural facilities:**

Infrastructural facilities – especially utility service (electricity) are not sufficient to provide service in all unions. Still now one third unions in Bangladesh are out of this facility (electricity).

As a result, it is difficult to open UDC in those unions with the help of solar panel and other sources of power. Government and other private organizations should come forward to solve this problem. On the other hand, facilities of sub-marine cable are limited to urban area. It's widespread use need to be introduced so that every citizen can avail this opportunity.

Some other recommendations are as follows--

- The officials may be offered some sorts of incentive packages for additional contribution in e-service implementation. It has a positive impact on motivation and satisfaction of the employees;
- There should be a provision of citizens“ participation and empowerment” in service concerning decision making process;
- The right to information (RTI) Act, 2009 must be put into action using enabling ICT tools so that customers could access to information quickly and efficiently.
- To build up Customer Relationship Management (CRM) to provide the necessary information, procedures and strategy for designing, implementing and managing the required level of e-service quality on long term basis.
- To maintain Quality of Service (QoS) and Quality of Experience (QoE) by provisioning Network Management System (NMS);

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APPENDIX-A



Questionnaire for UDC Officials (Set-A)

Masters of Arts in Governance and Development
Program (MAGD)

BRAC Institute of Governance and Development (BIGD)

BRAC University, Dhaka.



A Survey on Public Service Delivery- Role of Union Digital Center (UDC) and Impact on Improving Governance and Development: A case study of Narayanganj District.

[N.B: The answers of this questionnaire will be used for academic research only. Your sincere cooperation will extend a lot of value to the research]

Name of UDC/Union- _____ ;Upazila- Sadar ;Dist-Narayanganj

Part-A: Demographic Information

1. Respondent Name:

2. Age:

3. Sex: Male / Female

4. Education:

5. Marital Status: Married / Unmarried

6. Designation / Occupation:

7. Income (monthly):

Part-B: Other Information

Q 1. How many times do you spend here for rendering service?

a) 5 Hours b) 8 Hours c) More than 8 hrs d) Less than 5 hrs

Q 2. Are you satisfied with current situation of UISC for rendering service to people?

a) Yes b) No

Q 3. Do you think the money spent for the service by customers is enough?

a) Yes b) No

Q 4. Do you need any other technical support for providing smooth service?

a) Yes b) No

Q 5. How to make the UDC a successful service rendering center? (Opinion in one/two sentences)

-

Q 6. What services are provided by the UDC? Please mention (Please put tick to each of them)

S.L No	Name of e-services	Tick/cross
1.	Birth Registration	
2.	Health , agriculture, market ,weather ,public exam and admission related Information	
3.	Social safety network-VGD,VGF, Kabikha, Kabita etc. information	
4.	Land related information- registration, mutation, record, survey etc.	
5.	Mobile Banking service	
6.	Family planning & employment related Information	
7.	Voter ID card & election related various information	
8.	Various types of government forms download	
9.	Passport application	
10.	Computer compose , printing, scanning, e-mail communication etc.	

Q 7. What are the obstacles of UDC in providing services? (Please put tick)


S.L No	Name of Obstacles	Put tick
1	Electricity	
2	Internet connectivity	
3	Political Influence	
4	Availability of information	
5	Lack of ICT knowledge of beneficiaries	
6	Other	

Q 8. [Please put tick mark () in the respective boxes]

[Scale: not sufficient at all (1), less sufficient (2), somehow sufficient (3), sufficient (4), very sufficient (5)]

Questions Based on Variables	Scale				
1. You have sufficient equipment to provide e-services from UISC/UDC	1	2	3	4	5
2. Level of capability of UDC to provide e-services through existing equipment	1	2	3	4	5
3. Level of accessibility of general people to UDC for getting desired e-service	1	2	3	4	5
4. Level of skills you have to provide the services to the people through UDC	1	2	3	4	5
5. Received sufficient training for rendering e-services through UDC	1	2	3	4	5
6. Received sufficient yearly budget from govt. to run the UDC properly	1	2	3	4	5
7. Sufficiency of Internet speed for providing e-services to the people	1	2	3	4	5
8. UDC have sufficient alternative source of power supply system to run UDC for e-service delivery	1	2	3	4	5
9. People's perception towards the effectiveness of UDC	1	2	3	4	5
10. UDC has succeeded in minimizing gap for service delivery between citizens and government.	1	2	3	4	5

11. The present level of e-service delivery through UDC is enough for making effective UDC	1	2	3	4	5
12. Support from Union Parishad for proper delivery of e-service through UISC/UDC	1	2	3	4	5
13. Your (Entrepreneurs) satisfaction level with present income by providing e-service through UISC/UDC	1	2	3	4	5
14. Existing e-service delivery fees need to be increased for the enhancement of entrepreneurs' income	1	2	3	4	5
15. Present e-service infrastructure is enough for providing effective e-service to the people through UISC/UDC	1	2	3	4	5
16. People's awareness of the services provided by the UISC	1	2	3	4	5

Thank you for co-operation 

Signature of the Respondent

APPENDIX-B



Questionnaire for UDC Beneficiaries (Set-B)

Masters of Arts in Governance and Development
Program (MAGD)

BRAC Institute of Governance and Development (BIGD)

BRAC University, Dhaka.



A Survey on Public Service Delivery- Role of Union Digital Center (UDC) and Impact on Improving Governance and Development: A case study of Narayanganj District.

[N.B: The answers of this questionnaire will be used for academic research only. Your sincere cooperation will extend a lot of value to the research]

Name of UISC/Union- _____ ;Upazila- _____ ;Dist-**Narayanganj**

Part-A : Demographic Information

1. Respondent Name:

2. Age:

3. Sex: Male / Female

4. Education:

5. Marital Status: Married / Unmarried

6.Designation / Occupation:

7.Income (monthly):

Part-B :Other Information

Q 1. How do you come to know about UDC? (Please put tick)

a) People b) Advertisement c) UDC entrepreneurs

d) Public Representative/ Govt. Officials

Q 2. What services are provided by the UDC? (Please put tick to each of them)

S.L No	Name of e-services	Tick/ cross
1.	Birth Registration	
2.	Health , agriculture, market ,weather ,public exam and admission related Information	
3.	Social safety network-VGD,VGF, Kabikha, Kabita etc. information	
4.	Mobile Banking service	
5.	Family planning & employment related Information	
6.	Various types of government forms download	
7.	Passport application	
8.	Computer compose , printing, scanning, e-mail communication etc.	

Q 3. What are the obstacles of UDC in providing services? (Please put tick)

S.L No	Name of Obstacles	Put tick/ cross
1	Electricity	
2	Internet Connectivity	
3	Political Influence	
4	Qualification of UDC entrepreneurs	
5	Other	

Q 4. How many times do you usually come to UDC in every month?

- a) 2 Times b) 5 Times c) More than 5 times d) Less than 2 times

Q 5. [Please put tick mark () in the respective boxes]

[Scale: very poor (1), Poor (2), Moderate (3), good (4), very good (5)]

Questions Based on Variables	Scale				
	1	2	3	4	5
1. Your level of satisfaction regarding e-service delivery from UDC is					
2. The level of accessibility of general people to UDC for getting desired e-service					
3. The existing level of UDC e-services delivery performance to meet the demand of general people					
4. The level of skills /qualification of UDC entrepreneurs to provide the services to the people					
5.Amount of fees paid for each service taken from UDC					
6.The level of enthusiasm of UDC entrepreneurs to provide services is					
7. Regularity of UDC entrepreneurs for providing e-services through UDC					
8. Entrepreneurs initiative to promote UDC activities in the concerned area is					
9. The level of people's perception towards the effectiveness of UDC					
10. Level of gap for service delivery through UDC between citizens and government					
11. The level of desired e-service delivery from UDC is					

Thank you for co-operation

Signature of the Respondent

APPENDIX-C



Questionnaire for UDC Monitoring Authority (Set-C)

Masters of Arts in Governance and Development
Program (MAGD)

BRAC Institute of Governance and Development (BIGD)

BRAC University, Dhaka.



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[N.B: The answers of this questionnaire will be used for academic research only. Your sincere cooperation will extend a lot of value to the research]

Name of UISC/Union- _____ ;Upazila- _____ ;Dist- **Narayanganj**

Part-A: Demographic Information

1. Respondent Name:

2. Age:

3. Sex: Male / Female

4. Education:

5. Marital Status: Married / Unmarried

6. Designation/Occupation:

Part-B :Other Information

Q 1. Do you monitor the activities of UDC regularly?

a. Yes

b. No

Q 2. Do you aware of the services provided by the UDC? (Put Tick in box)

← Very Less Average Medium Good Strongly aware →

Q 3. Do you have any periodic survey to measure customer satisfaction?

a. Yes

b. No

Q 4. Do you get any complain from beneficiaries?

a. Yes b. No

Q 5. If you get any complain, then what sorts of action have been taken?

-

Q 6. What about the performance of entrepreneurs? (Put Tick above the remark)

← Very Less Average Medium Good Very Good →

Q 7. Do you arrange regular training for the UDC's entrepreneurs?

a. Yes b. No

Q 8. What about the response of the UDC services seekers/beneficiaries? (Put Tick above the remark)

← Very Less Average Medium Good Very Good →

Q 9. Do you take any marketing or publishing activities to increase awareness of general people regarding UDC services?

a. Yes b. No

Thank you for co-operation

Signature of the Respondent