

**AN INSTITUTIONAL ASSESSMENT OF UISC (UNION INFORMATION AND
SERVICES CENTER): A CASE STUDY OF TWO SELECTED UNION
PARISHAD OF BANGLADESH**

MA Dissertation

Submitted
By
Md. Oliur Rahman
ID No: 13372006



MA in Governance and Development
Institute of Governance Studies, BRAC University
Dhaka, Bangladesh
December, 2014

**AN INSTITUTIONAL ASSESSMENT OF UISC (UNION INFORMATION AND
SERVICES CENTER): A CASE STUDY OF TWO SELECTED UNION
PARISHAD OF BANGLADESH**

MA Dissertation

Submitted

By

Md. Oliur Rahman

ID No: 13372006

Supervisor

Dr. M. Salahuddin Muhammad Aminuzzaman

Professor

Department of Public Administration

University of Dhaka



MA in Governance and Development

Institute of Governance Studies, BRAC University

Dhaka, Bangladesh

December, 2014

DECLARATION

I do hereby declare that I am the sole author of this dissertation titled as “An Institutional Assessment of UISC (Union Information and Services Center): A Case Study of Two Selected Union Parishad of Bangladesh” and it has not been submitted or published elsewhere. The dissertation is fully prepared only for academic purpose and for the partial fulfillment of the degree of MA in Governance and Development. The dissertation is submitted to the Institute of Governance Studies, BRAC University Authority with norms of standard research works.

Md. Oliur Rahman

December, 2014

Dedicated to.....

This research is dedicated to my beloved parents Mrs. Jahanara Begum and Md. Nuruddin Molla who have nourished my dreams and encouraged me to make it happen.

ACKNOWLEDGEMENT

At the very inception, convey my earnest praise to Almighty Allah who has created us and given me the patience, ability and strength to finish the dissertation in time.

I would like to extend my honor and heartfelt thanks to respected supervisor Dr. M. Salahuddin Muhammad Aminuzzaman, Professor, Department of Public Administration, University of Dhaka for his valuable guideline and continuous suggestions along with inspiration throughout the research work to accomplish.

I am very much pleased to express my gratitude and sincere honor to Dr. Rizwan Khair, Director (Ex), Institute of Governance Studies, BRAC University for providing his advice and encouragement during the whole of my research work.

I am highly grateful to Dr. Md. Zohurul Islam, Academic Coordinator, Institute of Governance Studies, BRAC University for extending his guideline and direction to complete the research in time.

I would like to convey my earnest appreciation to the officers, staffs of Bhola Sadar Upazilla Administration and Dhania, Bhelumiah union Parishad of Bhola, Bangladesh those helped me during the data collection. I also offer my thanks to all of my colleagues for their sincere cooperation and suggestion during the preparation of this research work.

Finally, I am very much thankful to Mr. Md. Khorshed Alam, Assistant Administrative officer, Institute of Governance Studies, BRAC University for his sincere cooperation throughout the course.

Md. Oliur Rahman

December, 2014.

ABSTRACT

UISC (Union Information and Services Center) is an outlet to provide information and e-service facilities among the rural level people of Bangladesh. This center was established to deliver the information like market condition, agriculture, education, government and non-government commercial services, community relation support services etc. The purpose of UISC is to provide the easiest e-services and to make an interaction. In this research, both qualitative and quantitative research approach have been applied. Data were collected by using questionnaire from random sampling through the service providers and the service receivers from the study area which was in Bhola sadar Upazila under Bhola District in Bangladesh.

The institutional assessment of UISC, in this study, was evaluated by citizen's satisfaction and infrastructure & logistic support. Accordingly, citizen's satisfaction is evaluated by 5(five) different variables and infrastructure & logistic support is evaluated by 7(seven) different variables. Standard of e-service, skill of UISC entrepreneurs, entrepreneurs' regularity at UISC, extent of accessibility to UISC, success of e-service delivery have found the positive relation with the citizen's satisfaction. While e-service providing equipments, power supply, internet speed, trained entrepreneurs, entrepreneurs' satisfaction /income, financial Support, support from Union Parishad have the positive relation with infrastructure & logistic support. The study result has shown that the effectiveness of UISC, in respect of citizen's satisfaction, is near to the effective level while the effectiveness of UISC, in respect of infrastructure & logistic support, is in between of effective and somehow effective level.

The effectiveness of UISC 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. It is sure that the effectiveness of UISC is possible to reach its utmost level through comprehensive development of both citizen's satisfaction and infrastructure & logistic support.

The research and its results also have some limitations which direct for further study to make the UISC effective regarding e-service delivery.

TABLE OF CONTENTS

Contents	Page
Acknowledgement	i
Abstract	ii
Table of Contents	iii
List of Tables	vi
List of Figures	vii
CHAPTER 1: INTRODUCTION	1-7
1.1 Background of the Study	3
1.2 Relevance of UISC	4
1.3 Statement of the Problem	5
1.4 Rationale of the Study	5
1.5 Research Objective	5
1.6 Research Question	5
1.7 Scope of the Research	6
1.8 Limitation of the Study	6
1.9 Organization of the Research	6
CHAPTER 2: LITERATURE REVIEW	8-20
2.1 UISC: Conceptual Framework	9
2.1.1 UISC	9
2.1.2 Definition of key Words	10
2.2 An Overview of Earlier Initiatives for Providing E- services in Rural Areas	13
2.2.1 The Dhaka Ahsania Mission (DAM)	13
2.2.2 Development Research Network (D.Net)	13
2.2.3 Katalyst	13
2.2.4 Community Development Library (CDL)	13
2.2.5 Grameen Phone Community Information Center	13
2.2.6 Community Information Services offered by Govt. Organizations	14
2.2.7 Practical Action Bangladesh	14
2.3 An Overview of Existing E-Services through UISC in Bangladesh	14
2.3.1 Market information	14
2.3.2 Information through UISC Website and web-Portal	14
2.3.3 Commercial services	15
2.3.4 Information Services	15
2.3.5 Government Services	15
2.3.6 Knowledge Sharing	15
2.3.7 Community Relation	15
2.3.8 Telemedicine	15
2.3.9 Working as a Telecentre	15
2.3.10 Supportive Activities	16

2.4 Institutional Structure and Management of UISC	16
2.4.1 Conditions for Selecting Union Parishad in Different phases	16
2.4.2 Management of UISC:	17
2.5 A Selected Review of Literature	18
2.6 Analytical Framework	19
2.6.1 An analytical Framework for Institutional Assessment of UISC	20
CHAPTER 3:RESEARCH METHODOLOGY	21-27
3.1 Research Area:	22
3.2 Research Design	24
3.3 Research Methods	24
3.4 Sampling	25
3.5 Sample Size	25
3.6 Data Collection Technique	25
3.7 Data Processing	26
3.8 Data Analysis	26
3.9 Scale Construction	26
3.10 Citizens' Satisfaction Performance Measure	26
3.11Infrastructure and Logistics Support Performance Measure	27
3.12 Effectiveness Measurement	27
CHAPTER 4: RESEARCH FINDINGS AND ANALYSIS	28-60
4.1 Data obtained from the Beneficiaries (Questionnaire type-A)	29
4.1.1 Distribution of Respondents in respect of Gender	29
4.1.2 Age Distribution of Respondents	30
4.1.3 Occupational Status of the Respondents	30
4.1.4 Respondents' Education Level	31
4.2: Citizens' Satisfaction: Findings and Analysis	32
4.2.1(i) The Standard of E-service Delivery of two UISC	32
4.2.1 (ii)The Comparison of Standard of E-service Delivery of 2 (two) UISCs	33
4.2.2 (i) Skill of UISC Entrepreneurs for E-service Delivery.	34
4.2.2 (ii) The Comparison of skill of Entrepreneurs about E-service Delivery of 2(two) UISCs	35
4.2.3 :(i) Entrepreneurs Regularity at UISC for E-service Delivery	36
4.2.3(ii) The Comparison between two UISCs on Entrepreneurs' Regularity at UISC for e-service delivery.	37
4.2.4(i) Extent of Accessibility to e-service of UISC	39
4.2.4.(ii):Different Scenario of Extent of Accessibility to E-service	40
4.2.5 :(i)Success of E-service Delivery:	41
4.2.5(ii) The Comparison between Success of E-service Delivery	42

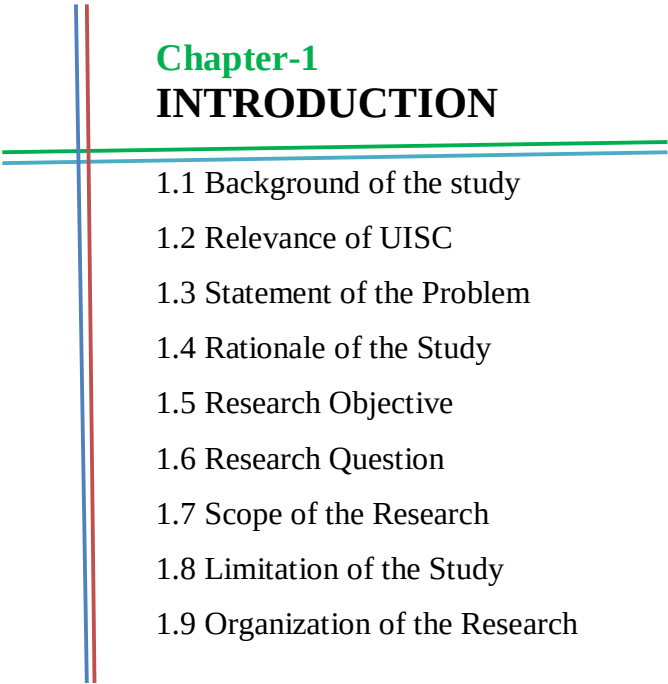
of 2(two) UISCs	
4.3 Citizens' Satisfaction: Overall Performance of 2(two) UISCs	42
4.4 Data Obtained from UISC Personnel (Questionnaire Type-B)	43
4.4.1 Age Distribution of Respondents	43
4.4.2: Infrastructure and Logistic Support: Findings and Analysis	44
4.4.2(1) Existing E-Service Equipments of UISC	44
4.4.2(ii):The Comparative Status of Existing E-service Equipments of two UISCs	45
4.4.3(i)Workable E-service Equipments' Scenario	46
4.4.3(ii):The Comparative Status of Workable E-service Equipments.	46
4.4.4(i) Speed of Internet	47
4.4.4(ii):The Comparative Status of Internet Speed of two UISCs	49
4.4.5(i): Status of Electricity Supply of two UISCs	50
4.4.5 (ii):The Comparative Status of Electricity Supply.	51
4.4.6 (i) Training of Entrepreneurs for Providing E-services	52
4.4.6(ii):The Comparative status of entrepreneurs' Training	53
4.4.7 (i) The Existing Support to UISC from UP for Providing E-Services	54
4.4.7 (ii):The Comparative status of UP Support to UISC	55
4.4.8(i) The Entrepreneurs' Satisfaction with their Income	55
4.4.8(ii):The Comparative Scenario of Entrepreneurs' Satisfaction with Income	56
4.5: Infrastructure and Logistic Support: Overall Performance of 2(two) UISCs	57
4.6 Critical Factors for better Performance of Dhaniah UISC than Bhelumiah UISC	58
CHAPTER 5: CONCLUSION AND RECOMMENDATIONS	61-66
5.1 Conclusion	62
5.2 Recommendations	63
5.2.1 Provide Available E-service Delivery Equipments	63
5.2.2 Engage Available skill personnel	63
5.2.3 Strong Internet speed	63
5.2.4 Uninterrupted Power Supply	63
5.2.5 Strengthen Monitoring System	64
5.2.6 Raising Awareness of the Citizens	64
5.2.7 Make UISC AS Center for All Services	64
5.2.8 Initiate Outsourcing system	64
5.2.9 To Initiate the Partnership Activities	64
5.2.10 Capacity Building and Service Expansion Strategy for UISC	64
REFERENCES	67-69
APPENDICES	70-74

List of Tables

Table: 3.5	Respondents from different areas	25
Table: 3.9	Five point scale for measuring the effectiveness of UISC	26
Table 4.1.1	Distribution of respondents in respect of gender	29
Table 4.1.2	Distribution of respondents in terms of Age	30
Table 4.1.3	Occupational status of the service receivers	30
Table: 4.1.4	Respondents' education level	31
Table: 4.2.1(i)	The Standard of e-services of UISC	32
Table: 4.2.1 (ii)	The Comparison of standard of e-service delivery of 2 (two) UISCs	33
Table 4.2.2(i)	Skill of UISC entrepreneurs	34
Table 4.2.2(ii)	The Comparison of skill of entrepreneurs of 2(two) UISCs	35
Table: 4.2.3(i)	Entrepreneurs regularity at UISC for e-service delivery	36
Table 4.2.3(ii)	The Comparison between two UISCs on entrepreneurs' regularity at UISC	38
Table: 4.2.4(i)	Extent of accessibility to e-service	39
Table: 4.2.4.(ii)	Different scenario of extent of accessibility to e-service	40
Table: 4.2.5 :(i)	Success of e-service delivery	41
Table 4.2.5(ii)	The Comparison between success of e-service delivery of 2(two) UISCs	42
Table: 4.3	Citizens' satisfaction: overall performance of 2(two) UISCs	43
Table 4.4.1	Distribution of respondents in terms of Age	43
Table: 4.4.2(i)	E-Service providing equipments of UISC	44
Table: 4.4.2(ii)	The Comparative status of existing e-service equipments of two UISCs	45
Table 4.4.3(i)	Workable e-service equipments' scenario	46
Table: 4.4.3(ii)	The Comparative status of workable e-service equipments.	46
Table:4.4.4(i)	Speed of internet	48
Table: 4.4.4(ii)	The Comparative status of internet speed of two UISCs	49
Table: 4.4.5(i)	Status of electricity supply of two UISCs	50
Table: 4.4.5 (ii)	The Comparative status of electricity supply	51
Table: 4.4.6 (i)	Training of entrepreneurs for providing e-services	52
Table: 4.4.6 (ii)	The Comparative status of entrepreneurs' Training	53
Table:4.4.7 (i)	The Existing support to UISC from UP for providing e-services	54
Table: 4.4.7 (ii)	The Comparative status of UP support to UISC	55
Table: 4.4.8(i)	The Entrepreneurs' satisfaction with income	56
Table: 4.4.8 (ii)	The Comparative scenario of entrepreneurs' satisfaction with income	56
Table: 4.5	Infrastructure and logistic support: overall performance of two UISCs	57

List of Figures

Figure 2.6.1	Analytical framework	20
Figure 3.1	Administrative map of Bhola District	23
Figure: 3.2	Research design	24
Figure 4.1.1	Distribution of respondents in respect of gender	29
Figure 4.1.2	Age distribution of respondents	30
Figure: 4.1.3	Respondents' occupational level	31
Figure 4.1.4	Respondents' education level	31
Figure 4.2.1(i)	Standard of e-services of UISC	33
Figure: 4.2.2 (ii)	The Comparison of skill of entrepreneurs about e-service delivery of 2(two) UISCs	36
Figure: 4.2.3 :(i)	Entrepreneurs regularity at UISC for e-service delivery	37
Figure: 4.2.3 (ii)	The Comparison between two UISCs on entrepreneur's regularity at UISC for e-service delivery	38
Figure: 4.2.4 :(i)	Extent of accessibility to e-service of community people	39
Figure: 4.2.4 (ii)	The Comparative mean value of extent of accessibility to e-service delivery of 2(two) UISCs	40
Figure 4.4.3(ii)	Workable e-service equipments scenario	47
Figure: 4.4.4 :(i)	Internet speed of UISCs for e-service delivery	48
Figure: 4.4.4(ii)	The Comparative status of internet speed of two UISCs	49
Figure: 4.4.5(i)	Status of electricity supply of two UISCs	50
Figure: 4.4.5 (ii)	The Comparative status of electricity supply	52
Figure: 4.4.6 (i)	Training of entrepreneurs for providing e-services	53



Chapter-1

INTRODUCTION

- 1.1 Background of the study
- 1.2 Relevance of UISC
- 1.3 Statement of the Problem
- 1.4 Rationale of the Study
- 1.5 Research Objective
- 1.6 Research Question
- 1.7 Scope of the Research
- 1.8 Limitation of the Study
- 1.9 Organization of the Research

1. INTRODUCTION

Information is power and present age is the age of information. Free flow of information is pre-condition for empowering a person, an institute, a society and a country as a whole. A reliable information and services system is very necessary to obtain the efficient management and planning system for both public and private levels in Bangladesh. Through reliable information and services system, it is possible to bring a positive change in the society. For any reliable information and services system, it is needed to have an effective information system which can be easily accessible by the people. Quick information and services system are possible through using e-service providing equipments. In order to ensure better service delivery to the people of Bangladesh, e-services¹ are very necessary. Through e-service delivery, it is possible to ensure transparency, accountability, rapidness of work at every stage of both public and private sectors.

E-service is making a change in the lifestyle of people of Bangladesh and creating an interaction with the society and institutions. It is also dividing people into information-rich and information-poor group. The group which is poor in information is more disadvantaged and deprived of information because of not having sufficient income, lack of literacy rate, lack of sufficient access to e-service proving. This deprivation of information is creating the information-poor group in the society and thus it is making information gap at a wider scale. Considering the above mentioned situations, both private and public sectors have started to render the services through Community Information Centers (CICs) to provide information among the rural community people and extend the benefits by using the e-service equipments .From the above discussion, it is clear that CICs are the centers for providing ‘Shared ICT Access Facilities’ using computers, internet and other ICT equipments. CICs have been able to provide different e-services among the community level people at affordable prices among people of the developing countries of the world.

The principle aim of shared-access model is to make easier the e-service related services among the common users with a lower cost than privately owned computer organizations which are more expensive to bear for the rural community poor people. Sometimes, the price of the services of privately organization is so high that it is

¹ ‘E-service’ means the service provided by using the electronic means namely internet, e-mail, website etc.

beyond the reach of poor people as they are financially insolvent. Considering these things CICs have been started to serve the rural community people for their betterment. It is well-known that the services of CICs in many countries of the world have brought a revolutionary change in the quality of life of the people.

Considering the people of rural areas, the government, some renowned NGOs and other private organizations have initiated CICs in rural areas by giving some other different names like Union Information and Service Center (UISC), Telecenter, Rural Net, Rural e-Center, Gram web etc.

In this regard, the government proposed a new concept, a new world, a vision in 2008 to make Bangladesh as a middle-income country by 2021. The Government believes that to reach this vision, the first step would be to make Bangladesh as an ICT based country for its development and good governance (Bangladesh Enterprise Institute, 2010).

In order to reach this vision, it is not possible to avoid majority of people from e-services those are living in rural areas (about 80%people) of the country. So the government took a gigantic task to provide the e-services at the union level people. The main aim of UISC is to reach the government services to the doorsteps of the rural people through using less cost, less time. Thus government took initiatives to extend the facilities through UISC (Union Information and Services Center).The principal attempt of this research is to show the existing e-service providing status in rural areas ,to identify the possible areas of e-service in rural community and how to show the effectiveness of UISCs in Bangladesh.

1.1 Background of the Study

Bangladesh took so many steps to achieve the e-governance in recent years through the application of automation in internal processes. A good number of e-government projects were taken by the government of Bangladesh from 1990 to 2006 under the Ministry of Planning. During this time, government automated the railway ticketing in1996,e-birth registration project in Rajshahi city corporation in 2001.Moreover, government successfully automated the BANBEIS during this time. We see that government only focused on the efficiency of the organizations during this time though it did not give the importance on the citizens for their easy access to the public services delivery. During 2002, the government of Bangladesh took the ICT policy and declared the ICT as a thrust sector which helped to ahead the e-governance activities until 2006 through ICT capacity and infrastructure development. A good number of

projects were initiated during this time though it did not last for long. After 2006, most of the e-governance activities have been given emphasis on citizen service delivery (BEI, 2010).

With the change of time, government took the steps to make a 'digital Bangladesh' in 2009 which is a new concept. With this vision, government gave emphasis on citizen centric activities through providing e-services. In order to provide the available information and e-services for the millions of people living at the rural and remote areas, UISC(Union Information and Services Center) was launched in 4547 parishads throughout the country in 11November,2010(a2i,2014).

The Access to Information (a2i) project of prime minister's office took the initiatives with a view to establishing one stop information and e-service delivery centre for the lowest tier of local government (i.e. union parishad).In order to take public and private services at the doorsteps of the rural community people, UISC has been established by the initiatives of a2i project supported by UNDP and USAID.UISC has been established based on the principles of Public-Private-People-Partnership(4Ps)model. Here it can be mentioned that unlike the conventional PPPs which focuses on building the large infrastructure 4Ps focuses to keep the citizens at the center of partnership model. Accordingly, the same model is going to be applied at Poursava and city areas through establishing Poursava Information and Service Centers (PISCs) and City Information and Service Centers(CISCs) in all semi-urban and urban areas(a2i,2014).

The main objectives of establishing the UISCs throughout the country was to address both the demand- side and supply side challenges associated with assessing public information and services(a2i,2014).

1.2 Relevance of UISC:

One of the main targets of the government to make Bangladesh as a 'Digital Bangladesh'. To reach this target, it is very much necessary to ensure the free-flow of information at the rural community which is possible through establishing UISC. Moreover, the UISC can play a vital role to ensure the Right to Information Act-2008.Moreover, the Government of Bangladesh is committed to reach the ICT facilities among the people as one of the signing countries in World Summit on Information Society (WSIS) Plan-2003.The government of Bangladesh also believes that each of the UISCs will be the center of knowledge within 2020 (Ahsan *et al*,2010).

1.3 Statement of the Problem:

The wider usage of ICT is going to be implemented by the political agenda 'Digital Bangladesh' which got an official fashion as perspective plan. One of the aims of Perspective plan or Vision2021 is to make an ICT based country for the sake of transparency, accountability, responsiveness at the public sector. To reach this vision into reality, the role of lowest tier of local government i.e. Union Parishad is very important as the majority of people of Bangladesh is living at the rural community. For the quick service delivery among the rural community people by using the e-service providing equipments, UISC should be more effective and that is why it is very much important to assess the effectiveness of UISC about the e-service delivery among the rural community people. Thus in a depth analysis, of the effectiveness of UISC would provide a valuable insight in the urgency of materializing the vision of providing the e-service delivery with a successful manner.

1.4 Rationale of the Study

UISC is one of most the important institutions of Bangladesh for e- service delivery to the rural community people by using the e-service providing equipments. There is no alternative of using e-service equipments for the easy access to public service delivery. It is believed that it is possible to ensure public service delivery through e-service within the shortest possible time. Moreover, to ensure better transparency and accountability, using of e-service equipment is a must. As it is an important sector of the government for public service delivery, I have concentrated to write on union information and services centre (UISC) because we know that about 80% people of Bangladesh are living in rural areas. Without taking this large number of people under the mainstream of e-service facilities, no development is possible. Moreover, very few studies have been conducted on the UISC. In fact, peoples' participation through UISC is most important for our overall development. That is why; I have been keenly interested to this field.

1.5 Research Objective:

- Review the effectiveness of UISC about the e-service delivery.

1.6 Research Question

- What are the implications of e-services to the Union-level people?

1.7 Scope of the Research:

The main purpose of UISC is to make a link to the rural people of Union level with the easiest delivery of e-service through using the e-service providing equipments. The research has emphasized on the efficient interaction between the people of rural areas and the government about the citizen's service delivery. It has also given the importance on the enhancement of rural citizens' satisfaction and confidence about the government services at the door steps of the rural people. 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 UISC to gain the rural citizens' satisfaction. It will show whether the citizens of rural areas are getting more benefit after starting the UISC than the traditional type of service delivery.

1.8 Limitation of the Study:

The Study has some limitations. This research gives the importance on government to citizen (G2C) centric e-service delivery system though it does not do the same on government to government (G2G) and government to business (G2B) centric e-service delivery systems. The researcher did not get enough time to complete the research. He also could not spend sufficient time at the study area due to shortage of budget. On the whole, the study area was in a remote place, so it was very difficult to go to the area frequently.

1.9 Organization of the Research:

The dissertation has been divided into five chapters.

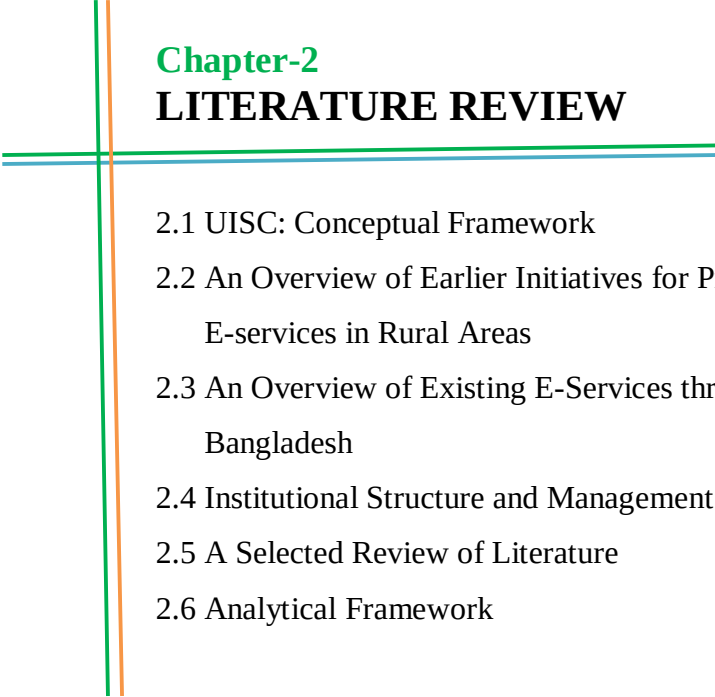
Chapter One-Introduction: The first chapter includes the introductory chapter namely background, problem statement. The research report also covers the research objectives, research questions, scope of the research, limitations also. This Chapter ends with the organization of the report.

Chapter Two-Review of Literature: This chapter focuses on the conceptual overview of UISC, 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 UISC, institutional structure and arrangement of UISC, 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, source of data, data Processing and data analysis etc.

Chapter Four-Research Findings and Discussion: This chapter analyzes the data and variables .It focuses the relationship among the variables. This chapter also focuses on the comparative analysis and gap analysis of each item of the services provided by the UISC for rural community citizens. Moreover, this chapter also provides the level of customers' satisfaction, infrastructure & logistics support performance of UISC and effectiveness of UISC in respect of public service delivery.

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



Chapter-2

LITERATURE REVIEW

- 2.1 UISC: Conceptual Framework
- 2.2 An Overview of Earlier Initiatives for Providing E-services in Rural Areas
- 2.3 An Overview of Existing E-Services through UISC in Bangladesh
- 2.4 Institutional Structure and Management of UISC
- 2.5 A Selected Review of Literature
- 2.6 Analytical Framework

2. LITERATURE REVIEW

A number of studies have been conducted throughout the world regarding community information centers but very few studies have been done about the UISCs those are providing e-services for the rural community people in Bangladesh. It is (UISC) a new concept in respect of a country like Bangladesh. The literature review chapter on institutional assessment of UISC will present some theoretical and empirical analysis of UISC regarding the e-service delivery among the rural community people.

2.1 UISC: Conceptual Framework

2.1.1 UISC

Union Information and Services Center (UISC) is a newly established one-stop service outlet throughout the 4547 Union Parishad (UP, lowest tier of local government) of the country (a2i,2014). By the assistance of ICT equipment, UISC has become the center of various types of information of both government and private services at the doorsteps of citizens in rural areas of Bangladesh. It ensures the savings of time both service providers and beneficiaries, minimizes cost and has made the lives hassle free. As a part working under the public-private-peoples' partnership (PPPP) model, this center is run by two local entrepreneurs in each union Parishad supported by local the administration.

Moreover, there are many reasons for setting up an UISC in every Union Parishad which are as follows: As a part of Digital Bangladesh, a total number of 4,547 Union Information & Services Centers (UISCs) have been established at all Union Parishads, some of them inaugurated on 11th November, 2010 by Honorable 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 and some inaugurated simultaneously (Mahiuddin and Hoque, 2013).

Now 9094 young entrepreneurs are working with 4,547 UISCs, and half of them are women. These entrepreneurs are self-employed and are not the paid employees of Bangladesh Government. These employees manage their lives with their own income. For successful and smooth functioning of UISC for long run, different supports from various govt. and private organizations are mobilized through partnerships. These entities not only offer people oriented services through these centers but also provides hardware maintenance and other technical supports to keep these centers operational.

Different Services at UISCs (Up to February/2014)

Total UISC throughout the country	4547(Out of 4547 UP)
Total entrepreneurs	9094 out of them 4547 are women
Service receiver in each month	32,000,00 citizens
Total birth registration	3,40,000,00
On-line registration for foreign	20,22,436
Mobile banking	1706 UISC
Life insurance facilities	2768 UISC
Telemedicine facilities	at 30 UISC
Health service	at 400 UISC

(Digital Bangladesh, 2014)

2.1.2 Definition of key Words

a) Institutional Assessment

Institutional assessment is used to identify the strengths, weaknesses, threats and opportunities of an organization in order to craft plans for future development. In this study, institutional assessment is used to measure the SWOT of UISC for its further development. Evaluating UISC in terms of relevance, efficiency, effectiveness and sustainability is the core of institutional assessment of UISC.

Relevance: Does the UISC meet expressed needs of its stakeholders?

Effectiveness: How well/successfully are the goals of UISC be achieved?

Efficiency: How well are institutional and technical resources used to obtain the results desired?

Sustainability: According to literature, sustainability incorporates the attributes like institutional autonomy, leadership, learning capacity, ability to recover from setbacks and to changes that ensure sustainability and self-reliance.(Swiss consulting, 2011)

Though institutional assessment covers the above mentioned 4(four) components, the institutional assessment of UISC would be measured in this study in terms of effectiveness only.

b) Effectiveness: “Effectiveness is the capability of producing a desired result. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression”.²

“The degrees to which objectives are achieved and the extent to which targeted problems are solved. In contrast to efficiency, effectiveness is determined without reference to costs and, whereas efficiency means "doing the thing right," effectiveness means "doing the right thing.”³

Accordingly, in this research ‘effectiveness’ will be measured through two independent variables namely citizens’ satisfaction and infrastructure and logistic support. Thus, citizens’ satisfaction, in this study, will be measured by the following sub-variables,

- Standard of e-service
- Skill of UISC entrepreneurs,
- Entrepreneurs’ regularity at UISC,
- Extent of accessibility to UISC,
- Success of e-service delivery,

Accordingly, Infrastructure and logistic support will be measured by the following sub-variables as well,

- Existing e-service providing equipments
- Workable e-service providing equipments
- Internet speed
- Electricity supply
- Entrepreneurs’ training
- Existing UP support to UISC
- Entrepreneurs satisfaction with their income

C) Implication: In this study ‘Implication’ is a term which means the possible effect or result of e-service delivery of UISC among the rural community people. (Oxford, 2014)

c) E-Governance: E-Governance is a term which refers to the governance system by using the ICT tools to provide the better service delivery among the people. The aim of

² The definition of "Effectiveness "is taken from Dictionary.com, LLC.

³Business Dictionary (n.d), Effectiveness.<http://www.businessdictionary.com/definition/effectiveness.html>

e-governance system is to create a knowledge- based society for the betterment of the country. (Saugata and Masud, 2007)

d) E-Service: “The concept of e-service (short for electronic service) represents one prominent application of utilizing the use of Information and Communication Technology (ICT) 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”(Lofstedt,2005).

According to Rowley,(2006) e-services as:“deeds, efforts or performances whose delivery is mediated by information technology. Such e-service includes the service element of e-tailing, customer support, and service delivery”. This definition reflects three main components- service provider, service receiver and the channels of service delivery.

“E-Service constitutes the online services available on the Internet, whereby a valid transaction of buying and selling (procurement) is possible, as opposed to the traditional websites, whereby only descriptive information are available, and no online transaction is made possible” (Jeong, 2007).

According to Goldkuhl, G & Persson, A. (2006a), e-service means that an external user (a citizen) interacts through a user interface of a public IT system based on web technology.

The above mentioned definitions basically focus on three main components of e-services namely the service provider, the channels of service delivery (i.e., technology) and the service receiver. In this connection, if we can consider about the public e-service then public organizations are the service providers, citizens and businesses are the service receivers. Here, the channel of service delivery is the third components of e-service. It can be mentioned that internet is the principal channel of e-service delivery and the rest important channels like telephone, call center, mobile phone, and television can also be regarded.

2.2 An Overview of Earlier Initiatives for Providing E-services in Rural Areas:

Providing of information by using ICT equipments is no more confined in the town people rather it has been regarded as an important tool for developing the rural areas and brings the rural people with the mainstream of development. It is an initiative to reach the government services to the rural people instantly by using the ICT equipments.

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

2.2.2 Development Research Network (D.Net): 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 Information and Services Center (UISC) at the rural areas throughout the country in 2005 as a part of pilot project in Nilphamri, Netrokona, Noakhali and Bagerhat (<http://www.dnet.org.bd>)

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

2.2.4 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 mitigate the information thirst of rural community people, this library has established another 26, RIRC (Rural Information Resource Centers) 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).

2.2.5 Grameen Phone Community Information Center: Grameen Phone (GP) is one of the pioneer organizations for providing community information in Bangladesh. This organization took a pilot project in 2006 namely "Community Information Center" to provide Internet access and some other services among 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>).

2.2.6 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 among the people through ministry (Islam & Islam-2008).

2.2.7 Practical Action Bangladesh: It was established in 1966 with a view to reducing 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 door-steps of rural people by the following organizations namely Telecentre Network (BTN), Amader Gram Learning Center (AGLC), Youth Community Multimedia Center (YCMC), Rural Information Resource Center (RIRC), Bangladesh NGOs Network for Radio and Communication (BNNRC), BRAC Bdmil 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 (Islam & Islam-2008).

2.3 An Overview of Existing E-Services through UISC in Bangladesh

UISCs are providing different e-services by using computers, internet access and e-mail. Hundreds of rural people are visiting UISC everyday for their daily important activities. There are two trained young entrepreneurs at every UISC for providing the e-services. Moreover, a good number of young citizens are taking different types of trainings from UISC. Thousands of rural citizens are getting the information about the different development activities from the concerned union parishad. The different e-services provided by the UISC are as follows:

2.3.1 Market Information: It is very much necessary for a successful seller to know the domestic and global market information. The seller has to know the demand of new product, existing products, and market strategies for different products etc. By the help of entrepreneurs of UISC, it is possible for the sellers to know the required information for the betterment of business.

2.3.2 Information through UISC Website and web-Portal: The official websites and web-portals have been developed both in Bengali and English for the information to the rural people at every UISC. These provide all the necessary information for the rural people so that people of rural communities can easily use and browse for the new

things by the help of two entrepreneurs. All of the potential information can be found at the UISC website and web-portal.

2.3.3 Commercial Services: Different types of commercial services like computer training, emailing, internet browsing, photography and photocopy, printing, scanning, talking with the help of Skype etc are now available at UISC with a minimum cost.

2.3.4 Information Services: UISC provides all types of information. For the governmental officials, it provides agriculture, health, education related information. Moreover it is providing the consultancy services related to soil test, land registration, fish cultivation, and application of fertilizer by using the internet service. It also provides tourism information, environment and disaster management related affairs etc.

2.3.5 Government Services: UISC is now providing birth and death registration, computerized character certificate or citizenship certificate, voter lists of concerned union, different types of governmental circulars or forms. Moreover, it is now providing to the rural students about the circular of different renowned institution or universities, on-line admission opportunities, result of different public examinations etc. It is now accepting the application for land records to be submitted to the DC office also. .

2.3.6 Knowledge Sharing: UISC has been a center for knowledge sharing for the people of rural areas. People are coming from very rural areas to share their respective views, opinions, ideologies, knowledge etc. People are not going to the distant towns or cities to gain the information about health, education, agriculture etc rather they are getting these facilities to their nearly UISC.

2.3.7 Community Relation: UISC is making the people of different communities very connected though these people were living in different distant places. Thus farmers can build up on-line friendship with the farmers those are living in distance. Thus teachers, businessmen and other professionals can do the same due to the contribution of UISC.

2.3.8 Telemedicine: Patients can take the advices of specialist doctors without going to the hospitals in the towns. Rather they can take the help of telemedicine. Now there are 30(thirty) UISCs throughout the country where telemedicine services are provided through SKYPE.

2.3.9 Working as a Telecentre: The UISCs are now working like telecentres. The main target of UISC is to make a link the rural community people with each corner of the country. So, the target of UISC is to collect and preserve the mobile-mail id of each

citizen at the UISC and use it at the necessary time. It would be preserved so that people can communicate with their relatives within a few minutes without any difficulties

2.3.10 Supportive Activities: Supportive services will cover human resources development, community, voluntary organization, media engagement and research organization. The A2I program supported by UNDP is extending more about the ICT facilities for the better and quick e-service delivery of the rural people. A2I project has found that access to the service delivery for the rural people very much complicated. So this program aimed at making easy access through online submission of any type of application to DC office, Upazila Parishad and other important offices of the country (Mahiuddin and Hoque, 2013).

It is evident that to expedite the quick service delivery for the rural people A2I implemented the UISC for providing e-services at union level people, created the web portal by the help of local administration. In this regard, A2I along with Bangladesh Computer Council (BCC) trained up some ICT experts at district, upazila and union levels.

2.4 Institutional Structure and Management of UISC

2.4.1 Conditions for Selecting Union Parishad in different phases

UISCs 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 UISC.

Phase 1: In order to establish the UISC 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 UISC
- Union Parishad that has electricity connections for smooth functioning of UISC.
- 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 initiatives
- Local unemployed youth those have much eagerness to run the UISC

(Ahsan, *et al*-2010)

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 UISC
- 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 initiatives in this regard
- Local unemployed youth having much eagerness to run the UISC
(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 UISC
- 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)

2.4.2 Management of UISC:

There is a committee comprising of 7-9 members for conducting and managing the UISC. The Chairman of concerned Union Parishad is the chairman of this committee. The duration of this committee is about 2(two) years. One-third of the members of this committee would be the women. The UP secretary will provide all types of institutional and other assistance to the committee. The managing committee is assigned to render the following activities

- Selecting of local entrepreneurs
- Buying of different tools and equipments of UISC
- Render all necessary assistance to the UISC entrepreneurs
- Strengthen the motivational activities among the rural community people for taking the services provided by the UISC
- To help the entrepreneurs for maintaining different reports and accounts of income and expenditure.
- To hold at least a meeting in each month for reviewing the UISC activities
(Ahsan, *et al*-2010)

2.5 A Selected Review of Literature

Actually, UISC is a new concept in the country like Bangladesh though there are some researches in this area throughout the world. Thus in respect of Bangladesh, it is just going to be explored the knowledge in this field although number of knowledge gaps exist. Access to Information (a2i) project of prime minister's office is mainly responsible for establishing and publishing different articles, reports and journals, there are some other government, organizational, project based reports, articles, journals have been recently published. These publications are insufficient for the research activities in this area which are found. So, Internet has been used as a source for achieving information or exploring the references.

There is a study on *Village Information Centers, Pondicherry, India* (owners 2002-2005) that has analyzed the ways of using ICT for the purpose of development of poor regions of India. Its output was to improve the general living conditions of the poor families, marginal farmers, fishermen. Moreover, the village information center could able to make the general welfare of these people of India.

There is another study on *"Information support services of the rural development libraries in Bangladesh"* (Islam & Uddin, 2005) where authors have shown the information and services system of rural development libraries of Dhaka, Comilla and Bogra districts in Bangladesh. In this study authors have pointed out the situation of rural development libraries due to revolution and advancement of information communication technology. The study identifies the tools and techniques which are used in different functional units of these libraries to fulfill the demand of growing information needs of the rural people of Bangladesh.

There is conducted another study on *Community Information: What Libraries can Do: A Consultation Document* where it is said that the "the services which helps individuals and groups about the daily problem-solving and with participation in the democratic process. The community information services centers concentrate on the needs of those who are not ready access to other sources of assistance and on the most important problems that people have to face, problems to do with their homes, jobs and the rights"(The Library Association-1980)

There is an another study in India on *"Community Information Center Project in North East India: connecting the far flung"*(Battcharjee-2002).This project was initiated to interface between citizen and government, providing internet access, web browsing

and email facilitation of people, usage of computers make available among children and women to provide the IT services for local community people.

There is another related study on “*Rural transformation by the establishment of community information centers in the rural areas of Nepal: a pilot project* (Aryal-2000). The aim of this project is to aware local community people how Information and Communication technology can make their better life. The project has shown how the benefits of information and communication technology can be reached even to the farmers. The one and only aim of this project is how Nepal can compete with the today’s world in respect of Information and Communication technology.

There is another related study namely, “*Telecenters for Sustainable Rural Development: Review and case study of a South African Rural Telecenters*” (Breitenbach-2013). This paper has shown how the telecenters of Africa played an important role in the field of Communication Technology for the economic development. This Paper has also showed how the telecenters improved the lives of the people of the rural community at Thabina in Africa.

There is another study entitled *Multipurpose community Telecenter’s for rural development in Pakistan* (Mahmood 2005). Here the author has shown about the challenges and opportunities of establishing Multipurpose Community Telecenters (MCTs) in rural areas of Pakistan. In his study he has also shown about the propose of establishing of MCTs in Pakistan in terms of policy formulation, planning, management, funding, building, equipment, technology, services, target groups, marketing and sustainability.

In Bangladesh there are only a few studies are seen. There are some writings and documents in the website of Access to Information Project (A2I) under the Prime Minister’s office and Bangladesh Computer Council (BCC). These two organizations basically deal with providing and arranging the ICT facilities throughout the country.

Therefore, it can be said that it requires a lot of depth cross reference studies in the area of UISC for assessing institutionally regarding the status or level of effectiveness, its missing areas and some other important knowledge gap.

2.6 Analytical Framework:

Depending on the previous conceptual framework, issues related to e-services through UISC, a theoretical background of analytical framework is going to be made. Moreover, analytical framework has been tried to make in line with the literature review and other concepts of the study. The analytical framework explains the

variables of effectiveness of UISC through citizen's perception, infrastructure and logistic support for e-service delivery.

Effectiveness of UISC regarding the e-service delivery concerned with the rural citizens' satisfaction who are the main stakeholders of UISC. Their (citizens) satisfaction involved in standard or quality of e-service, skill of UISC entrepreneurs those are responsible for providing the e-service, entrepreneurs' regularity at UISC, extent of accessibility to UISC etc.

Accordingly, effectiveness of UISC regarding the e-service delivery connected to smooth infrastructure and logistics support which are necessary to provide the uninterrupted e-service delivery among the rural community people. Thus, it (infrastructure and logics support) is involved in e-service providing equipments, workable e-service providing equipments, power supply, internet speed, trained entrepreneurs, entrepreneurs' satisfaction /income, support from Union Parishad etc. These can be displayed by the following figure (figure: 2.6.1)

2.6.1 An Analytical Framework for Institutional Assessment of UISC:

For the purpose of institutional assessment of UISC about e-service delivery, the following framework is made:

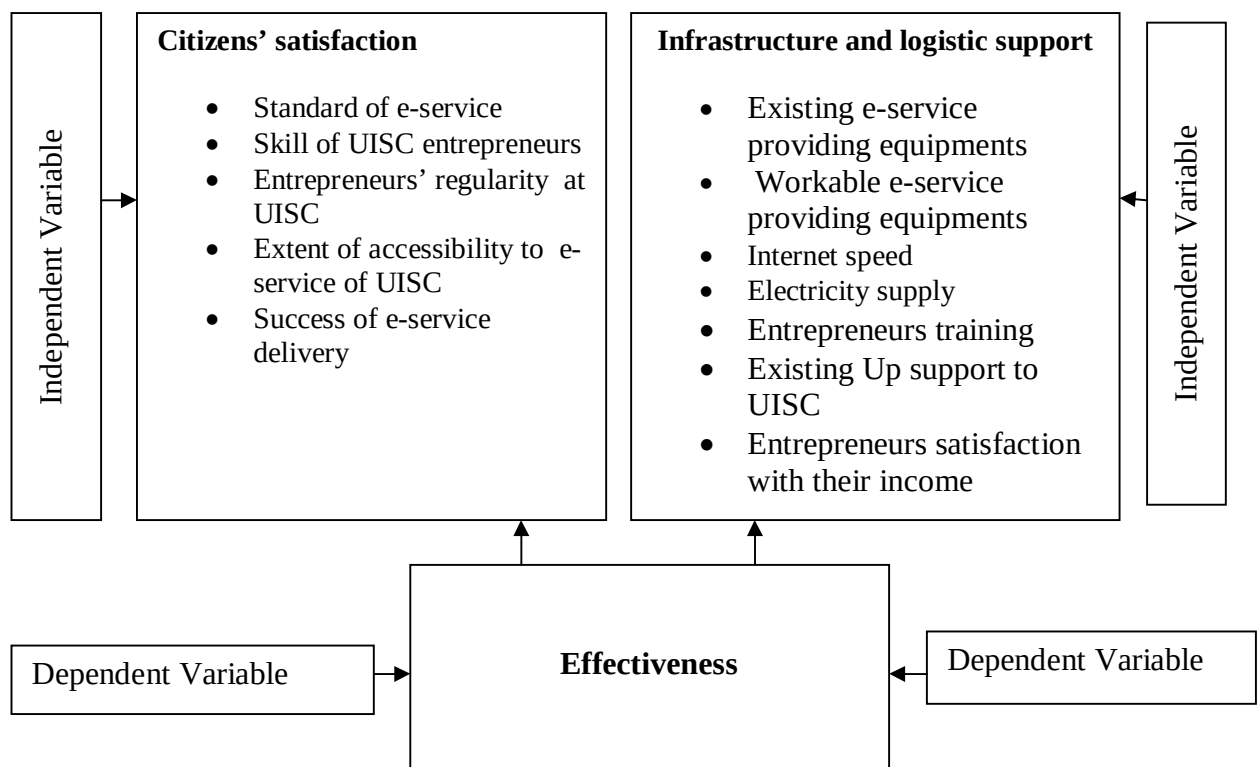


Figure 2.6.1: Analytical framework (Asgarkhani, 2005)

Chapter-3

RESEARCH METHODOLOGY

3.1 Research Area:

3.2 Research Design

3.3 Research Methods

3.4 Sampling

3.5 Sample Size

3.6 Data Collection Technique

3.7 Data Processing

3.8 Data Analysis

3.9 Scale Construction

3.10 Citizens' Satisfaction Performance Measure

3.11 Infrastructure and Logistics Support Performance Measure

3.12 Effectiveness Measurement

3. RESEARCH METHODOLOGY

Research methodology is a process to collect data and different information for the use of making decisions. It may include interviews, surveys, publication research and research techniques, present and historical information also. The purpose of this study is to review the effectiveness of UISC in respect of e-service delivery. The study incorporates both of the qualitative and quantitative research approaches. The study is qualitative as it focuses on asking question, collecting data from the citizens and UISC officials in the form of words, video etc. instead of attempting to quantifiably measure variables or having a look to potential relationships between variables. Besides, it is more restrictive in testing hypothesis as it is expensive and time consuming. The research is quantitative in the sense as it also focuses on collecting numerical data to analyze the used statistical methods.

3.1 Research Area:

For the purpose of this research, two unions of Bhola i.e. Dhaniala Union and Bhelumiah Union have been selected. It is important to mention that Bhola is an island district, so it is very important to bring the rural people under the mainstream of development without connected them through e-services of UISC.

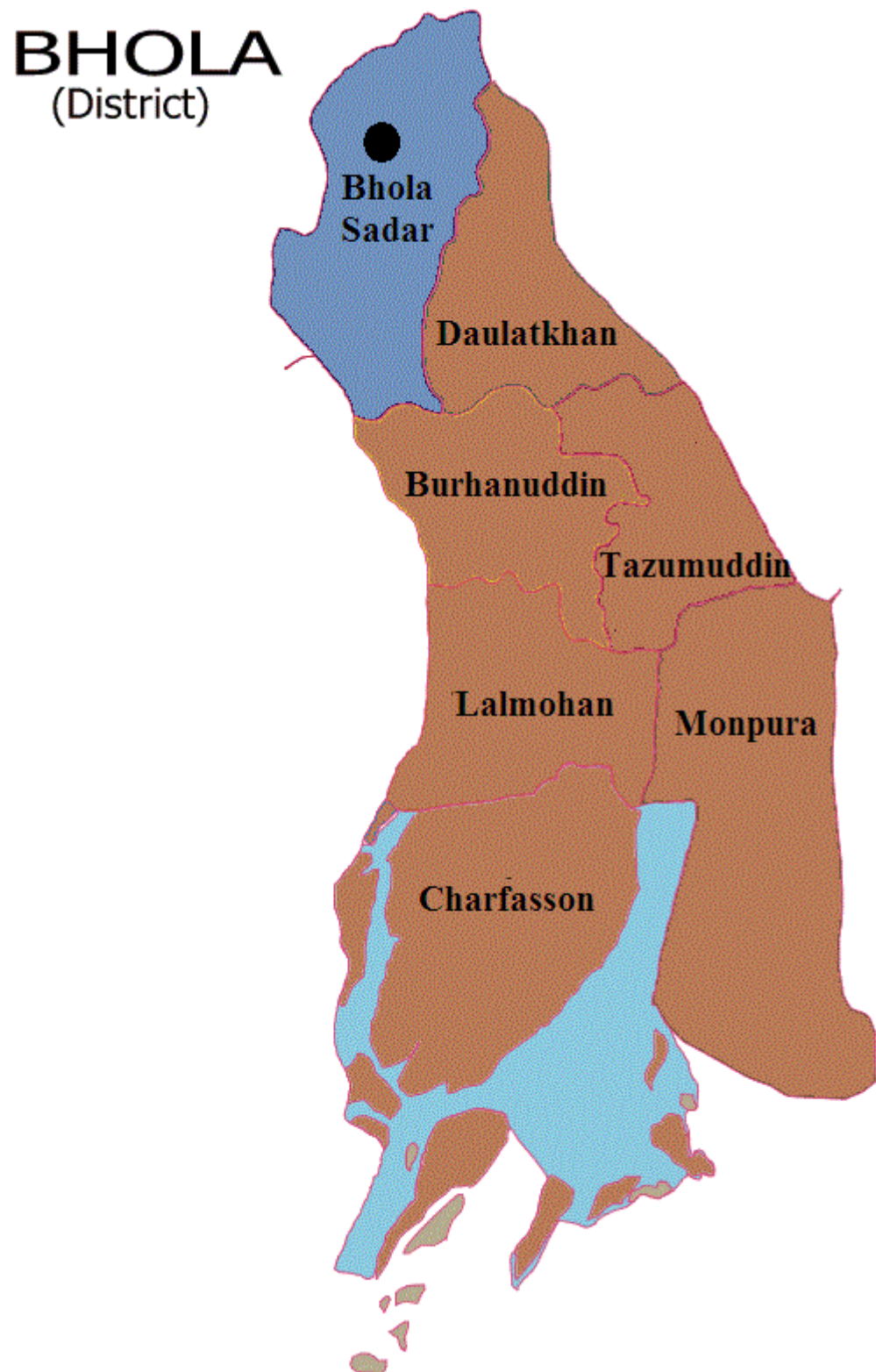


Figure 3.1 Administrative Map of Bhola District⁴

⁴ From <http://www.lged.gov.bd/DistrictHome.aspx?districtID=4>

3.2 Research Design:

The overview of the research design is shown by the following flow chart (Figure 3.2)

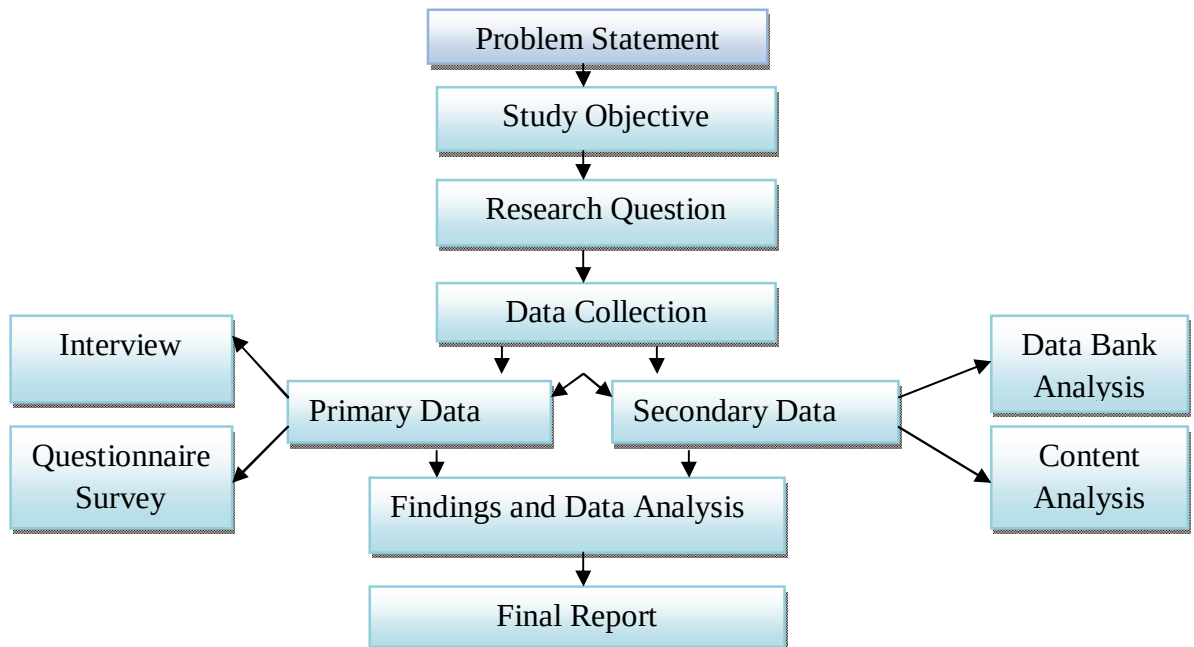


Figure: 3.2 Research design (Marshall & Rossman, 1999)

3.3 Research Methods:

In order to make an institutional assessment of UISC, it is incorporated the following methods:

- a) Data Bank Analysis:** For this research, some data are found through UISC monitoring tools, analyzing the UP web-site, webpage survey and UP web-portal also.
- b) Content Analysis:** Content analysis comprises of gathering data of UISC from different relevant research articles, documents, published or unpublished journals, electronic source, different relevant reports and online articles etc.
- c) Interview:** For this study interviews are carried out in person or beneficiaries i.e. face- to- face interviews are conducted. Besides these, interviews are also administered by the telephone and using more advanced communication technology such as Skype.
- d) Questionnaire Survey:** Questionnaire survey method is administered for the purpose of achieving some primary data for institutional assessment of UISC of Bangladesh.

3.4 Sampling:

All of the officials related to the UISC of two Union of Bhola district could not be brought under the research work due to time constraints. The research is only confined with some key officials those are regarded as service providers like DC (Deputy Commissioner), ADC (General) who is the focal point officer of UISC in Bhola district, UNO (Upazila Nirbahi Officer), Assistant Commissioner (ICT). Accordingly, it was limited to some local body key representatives like Upazila chairman, Union Parishad chairman etc. These personnel were brought under the random sampling for the purpose of structured questionnaire survey. Moreover, some beneficiaries (those are the e- service receivers) of UISC were brought under the random sampling process. Here it can be mentioned that three strata have been selected (Officials of UISC, related local body representatives and beneficiaries for the purpose of this study.

3.5 Sample Size:

The total sample size of this research was 60 (sixty) from the three strata. So the respondents of different categories would be as follows:

Research Area	Categories of Respondents	No. of Respondents
Dhanias Up and Bhelumiah Up of Bhola District	Beneficiaries/Service receivers	50
	Officers, UISC related personnel like Local-body representatives, UISC Entrepreneurs those are directly or indirectly involved in UISC Management	10
-	total	60

Table: 3.5 Respondents from different areas

3.6 Data Collection Technique

In this study, the data were collected from primary and secondary sources. The primary data were collected through taking interview from the beneficiaries by using structured questionnaire (Appendix-A) and taking structured, informal interview from the key respondents (Appendix-B and C). The key respondents were related government officials, UISC entrepreneurs, local body representatives those were brought under the structured questionnaire through informal interview and the citizens/beneficiaries were brought under the interview method to get the primary information. On the other hand,

secondary data were obtained from different books, journals, reports, internet, website, monitoring tools⁵ of UISC.

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 Collected data were then analyzed and interpreted by using some statistical tools and techniques like frequency distribution, arithmetic mean etc. 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 of institutional assessment of UISC regarding e-service delivery, the following scale is constructed:

Scale	Citizens' Satisfaction	Infrastructure and logistics support	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

Table: 3.9 Five point scale for measuring the effectiveness of UISC (ISSAS, 2009)

3.10 Citizens' Satisfaction Performance Measure

In this study, citizens' satisfaction performance was assessed by using 5(five) indicators which are: the standard of e-service, skill of UISC entrepreneurs, entrepreneurs' regularity at UISC, extent of accessibility to UISC, 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 UISC. The five scales are determined as very good (5), good (4), somehow good (3), poor (2), very poor (1).

⁵ 'Monitoring tool' is a table for showing the daily income of UISC entrepreneurs.

3.11 Infrastructure and Logistics Support Performance Measure

In this research, infrastructure and logistics support performance is evaluated by using 7(seven) tools which are: e-service providing equipments of UISC, power supply situation of UISC, internet speed, trained entrepreneurs of UISC, UISC entrepreneurs satisfaction with their income, 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 UISC. 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 effectiveness of UISC is 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 UISC. The five scales are determined as very effective (5), effective (4), somehow effective (3), less effective (2), Not effective at all (1).

Chapter-4

RESEARCH FINDINGS AND ANALYSIS

- 4.1 Data obtained from the Beneficiaries (Questionnaire type-A)
- 4.2: Citizens' Satisfaction: Findings and Analysis
- 4.3: Citizens' Satisfaction: Overall Performance of
2 (two) UISCs
- 4.4 Data Obtained from UISC Personnel (Questionnaire Type-B)
- 4.5: Infrastructure and Logistics Support: Overall Performance of
2 (two) UISCs
- 4.6 Critical Factors for better Performance of Dhaniah UISC
than Bhelumiah UISC

4. RESEARCH FINDINGS AND ANALYSIS

The aim of this chapter is to present the data and analyze them according to the collected sources. The data were collected through questionnaire survey, interview, content analysis, data bank analysis, analyzing the UISC's monitoring tools to assess the effectiveness of UISC about of e-service delivery. This chapter also shows the results of research findings which are got from data analyses.

4.1 Data obtained from the Beneficiaries (Questionnaire type-A)

The study was conducted from February 2013 to April 2013. The aim of presenting the descriptive statistics was to summarize the collected data. The respondents were 50 beneficiaries of two Unions of Bangladesh. The following tables display the demographic profiles.

4.1.1 Distribution of Respondents in respect of Gender

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

Male/Female	Frequency	Percentage
Male	41	82%
Female	9	18%
Total	50	100%

Table 4.1.1 Distribution of respondents in respect of gender (n=50)

The above table illustrated that the research was conducted among 50 (fifty) respondents where 82% were male and 18% were female respondents (Table: 4.1.1). This can be interpreted through following figure:

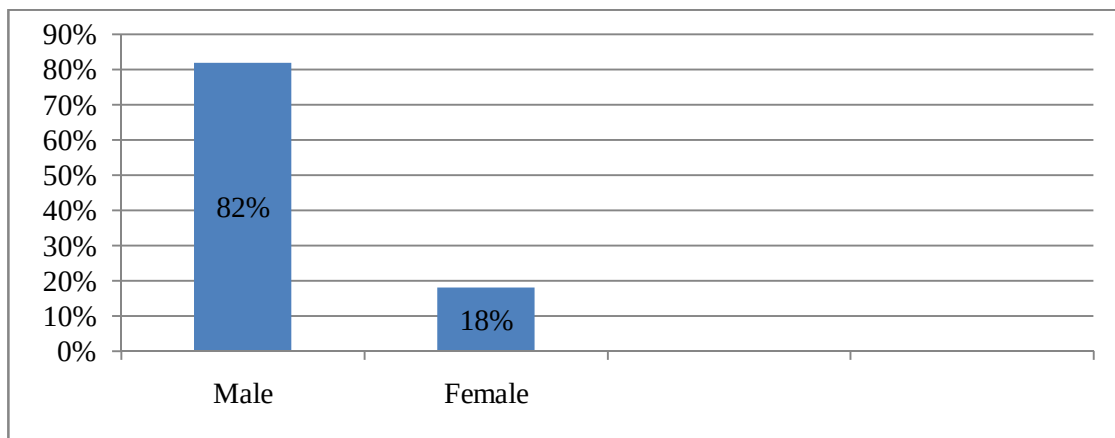


Figure 4.1.1 Distribution of respondents in respect of Gender (n=50)

4.1.2 Age Distribution of Respondents

The age distribution of the 50(fifty) respondents were as follows:

Age group	Frequency	Percentage
21-30	28	56%
31-40	15	30%
41-50	6	12%
51+	1	2%
Total	50	100%

Table 4.1.2 Distribution of respondents in terms of Age (n=50)

The above table revealed the respondents' age groups. The Table showed that major number of respondents i.e. 56% fall in the age group of 21-30 years while 30% fall in the age group of (31-40 years), 12% fall in the age group (41-50) and 2% fall in the age group 51+. Age group revealed that most of the respondents were some young community people. These interpretations showed by the following figure:

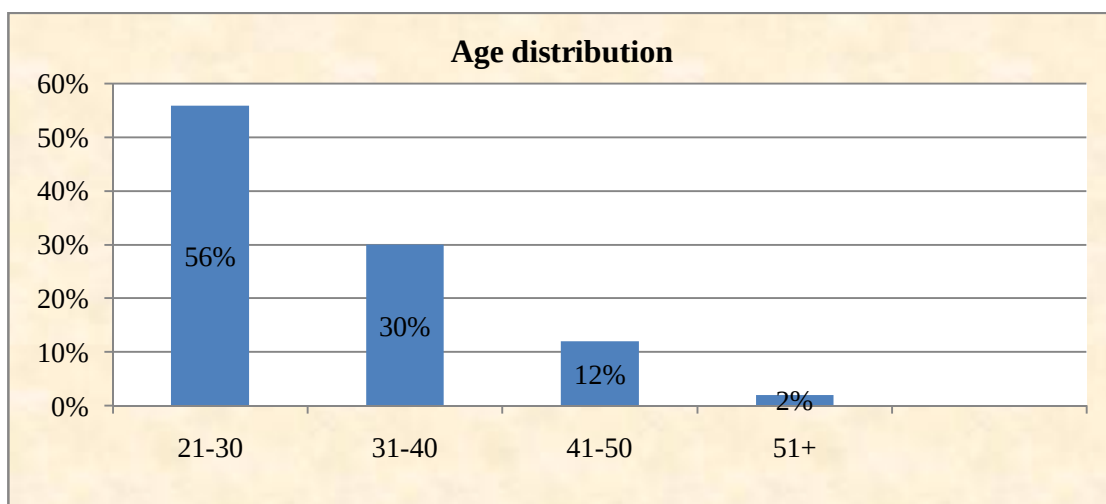


Figure 4.1.2 Age distribution of respondents.

4.1.3 Occupational Status of the Respondents

The occupational status of the respondents was as follows:

Occupation	Frequency	Percentage
Student	25	50%
Service	15	30%
Business	10	20%
Total	50	100%

Table 4.1.3 Occupational status of the service receivers

The Table exposed that 50% respondents were students, 30% were in service, and again 20% were businessmen and so on. These interpretations showed by the following figure;

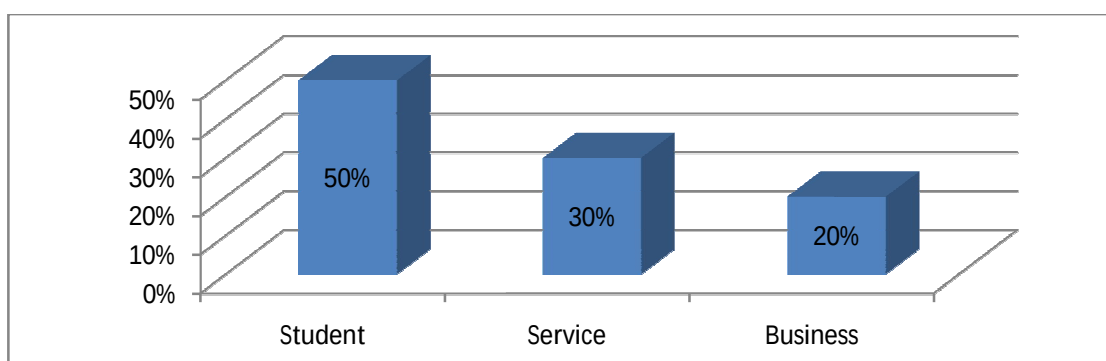


Figure: 4.1.3 Respondents' occupational level

4.1.4 Respondents' Education Level

The education levels of the respondents were as follows:

Education Level	Frequency	Percentage
PSC/Equivalent	5	10%
JSC/Equivalent	1	2%
SSC/Equivalent	8	16%
HSC/Equivalent	36	72%
Total	50	100%

Table: 4.1.4 Respondents' education level

From the above table it was seen that most of the respondents were well-educated as 72% of them are HSC/Equivalent and above, 16% respondents were SSC/Equivalent and so on. The table interprets that most of the educated persons are e-service receiver.

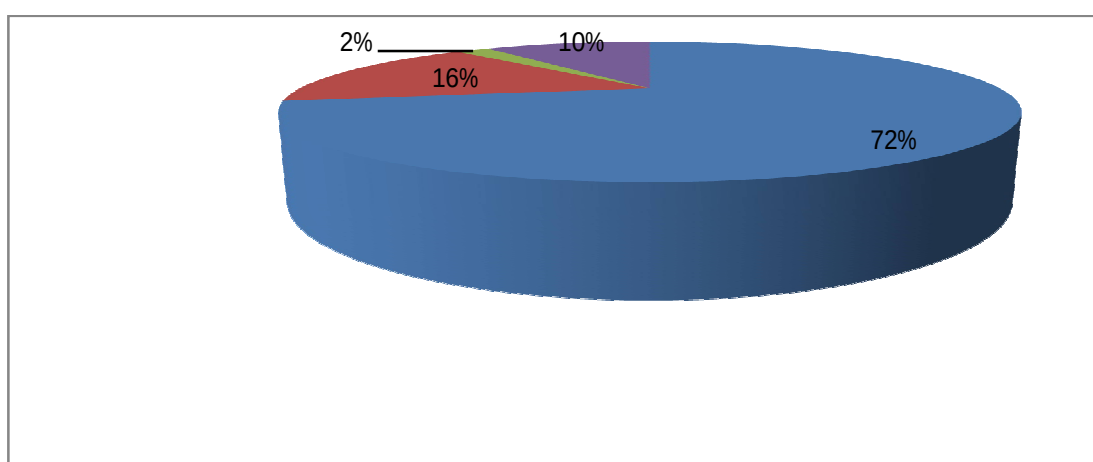


Figure 4.1.4 Respondents' education level

4.2: Citizens' Satisfaction: Findings and Analysis

The effectiveness of UISC about the e-service delivery depends upon the satisfaction of the rural community people that how citizens consider about the existing e-service delivery of UISC. Under this variable, citizen's Satisfaction is analyzed on the basis of five attributes to analyze the effectiveness of UISC about the e-service delivery. The indicators are: Standard of e-service, skill of UISC entrepreneurs about the e-service delivery, entrepreneurs' regularity at the UISC to deliver the e-services, extent of accessibility to e-services from UISC, success of e-service delivery. Moreover, the research was analyzed about the gap between the service providers and service receivers.

4.2.1 (i) The Standard of E-service Delivery of two UISC

The Standard of e-services is one of the important attributes for measuring the effectiveness of UISC regarding the e-service delivery among the community level people. As the community people are the receivers of e-services, their satisfaction is very much necessary to assess the effectiveness of UISC i.e. what is the level of satisfaction of community people about the existing quality of e-services Their 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):

Level of success	Frequency	Percentage	Mean Value(out of presumed 5 scale) of success
Poor	8	16%	3.50
Somehow good	12	24%	
Good	27	54%	
Very good	3	6%	
Total	50	100%	

Table: 4.2.1(i) The Standard of e-services of UISC

The above table represents that 54% respondent (among the 50 respondents) of 2 (two) unions considered that the quality of e-services was 'good' and 24% respondents considered the e-services were 'somehow good', 16% considered the quality of e-services were 'poor'. From this table, it is observed that about 84% respondents are more or less positive about the standard of e-services of UISC. These were displayed by the following table:

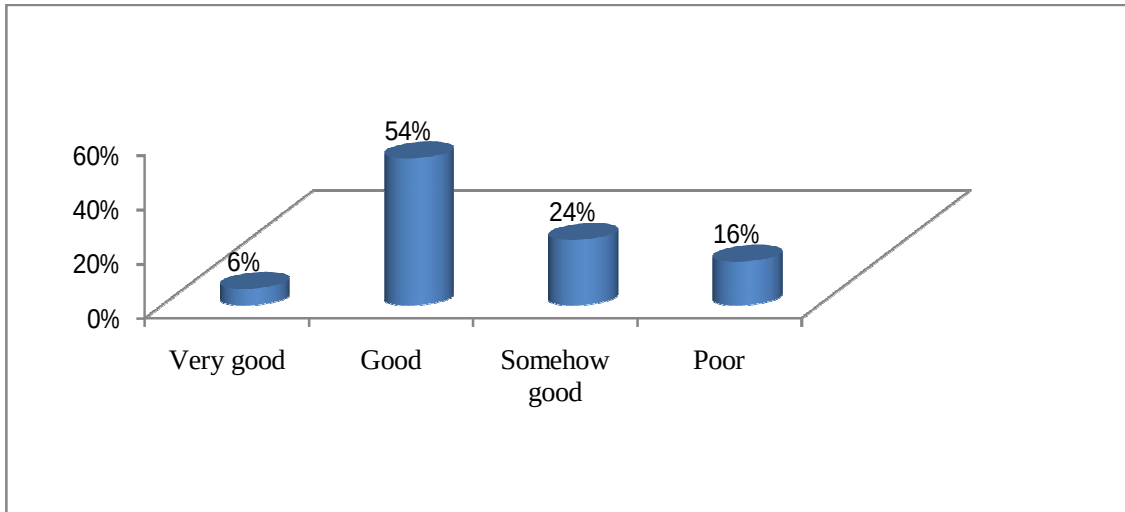


Figure 4.2.1(i): Standard of e-services of UISC

The above table (table: 4.1.8) also portrays that the mean value of the standard of e-services of two UISCs is 3.50 according to the presumed value of out of 5 scale.

So, it can be said from the above findings that UISCs are trying their best to provide e-services for the betterment of community people. From this findings it is also clear that the UISCs are providing e-services which are in-between of **‘somehow effective’** and **‘effective’** (as the mean value 3.50 lies in-between of ‘somehow effective’ and effective level of e-service according to previously assumed scale 5) level.

4.2.1 (ii) The Comparison of Standard of E-service Delivery of 2 (two) UISCs

All of the UISCs are assigned for providing e-services to the rural community people. Some UISCs are performing well but some are not able to achieve the desired goal to fulfill the citizens’ desire. So, a comparative scenario is shown here to assess the comparative effectiveness of two UISCs according to the previously assumed scale (very good=5, good=4, somehow good=3, poor=2, very poor=1):

Name of UISC	N	Comparative Mean (out of 5 scale)value
Dhaniah	25	4.00
Bhelumiah	25	3.00
Total	50	3.50

Table: 4.2.1 (ii) The Comparison of standard of e-service delivery of 2 (two) UISCs

The above table shows the comparative mean value (out of previously assumed 5 scales) for the standard of e-service of Dhaniah and Valumia UISC (Table 4.2.1 (ii))

according to the data collected from the respondents. From the assumed scale it appears that the mean value of Dhania UISC is 4.00(out of previously assumed 5 scale) and standard of e-service of Bhelumiah UISC is 3.00(out of scale 5).

From the above table it is clear that Dhania UISC is delivering ‘**effective**’ level (as the significance of scale 4.00=‘effective’ level of e-service delivery according to previously assumed scale 5) of e-services to the rural community people whereas Bhelumiah UISC is delivering ‘**somehow effective**’ level (as the significance of scale 3.00=somehow effective) of e-services to the citizens of the rural community people.

So it can be said that the standard e-service delivery performance of Dhania UISC is better than Valumia UISC in terms of ‘standard of e-service’.

4.2.2 (i) Skill of UISC Entrepreneurs for E-service Delivery.

The effectiveness of UISC in terms of e-service delivery largely depends upon the skilled entrepreneurs. The e-service delivery is implemented by the UISC entrepreneurs. If they are not skilled enough to provide the e-services, citizens will suffer and desired goal of UISC will not be achieved. So, the Skill of UISC entrepreneurs is one of most important tools for measuring the effectiveness of UISC about the e-service delivery among the rural citizens. As the citizens are main stakeholders of e-services, their satisfaction about the entrepreneurs in terms of skill is very much necessary to assess the effectiveness of UISC. Their satisfaction about the skill of UISC entrepreneurs is presented according to the following way (very good=5, good=4, somehow good=3, poor=2, very poor=1):

Level of skill	Frequency	Percentage	Mean Value (out of presumed 5 scale)
Poor	11	22%	3.58
Somehow good	3	6%	
Good	32	64%	
Very good	4	8%	
Total	50	100%	

Table 4.2.2(i): Skill of UISC entrepreneurs

The above table represents that most of the respondents i.e.64% opined that the UISC entrepreneurs have ‘good’ skill to deliver the e-services in order to run the UISC. Accordingly, 6% respondents responded that the entrepreneurs have ‘somehow good’ level of skill. Again, 8% respondents of 2 (two) UISCs consider the entrepreneurs have ‘very good’ level of skill while 22% respondents opined that the UISC entrepreneurs are ‘poor’ in skill to deliver the e-services. From this table, it is

also observed that though a good number of entrepreneurs have ‘very good’/good or ‘somehow good’ level of skill about the e-service delivery of UISC, a large portion of UISC entrepreneurs are ‘poor’ in skill. From the above table, it is also seen that the mean value of the skill of UISC entrepreneurs for e-service delivery is 3.58 according to the presumed scale 5.

From the above table it is clear that the entrepreneurs’ skill of Dhania and Bhelumiah UISCs are **in-between of effective and ‘somehow effective’** level(as the mean value 3.58 lies in between of ‘somehow effective’ and ‘effective’ level of e-service delivery according to previously assumed scale 5) for the e-service delivery among the rural community people. Though these are overall scenario of e-service delivery of UISCs according to the respondents view, the separate scenario is something more mentionable. These can be presented through the table below (Table: 4.2.2.ii)

4.2.2 (ii) The Comparison of ‘Skill of Entrepreneurs about E-service Delivery’ of 2 (two) UISCs

All UISC entrepreneurs do not have enough skill to run the UISC for providing the e-services among the rural people. Some UISC entrepreneurs were performing well but some could not provide the services to fulfill the citizens’ desire. So, a comparative scenario is shown here to determine the comparative effectiveness of two UISCs according to the previously collected data and assumed scale (very good=5, good=4, somehow good=3, poor=2, very poor=1):

Name of UISC	N	Mean (out of 5 scale) of skill
Dhania	25	4.00
Bhelumiah	25	3.16
Total	50	3.58

Table 4.2.2(ii): The Comparison of skill of entrepreneurs of 2(two) UISCs

The above table portrays the mean value (out of previously assumed 5 scale) for the sub-variable ‘skill of UISC entrepreneurs about e-service delivery’ of Dhania and Valumia UISC (Table 4.2.2: ii) according to the data collected from the respondents. From the assumed scale, it appears that the mean value of ‘skill of entrepreneurs about e-service delivery’ of Dhania UISC is 4.00 (out of previously assumed 5 scales) and ‘skill of entrepreneurs about e-service delivery’ in Bhelumiah UISC is 3.16 (out of scale 5).

These interpretations can be displayed by the following figure:

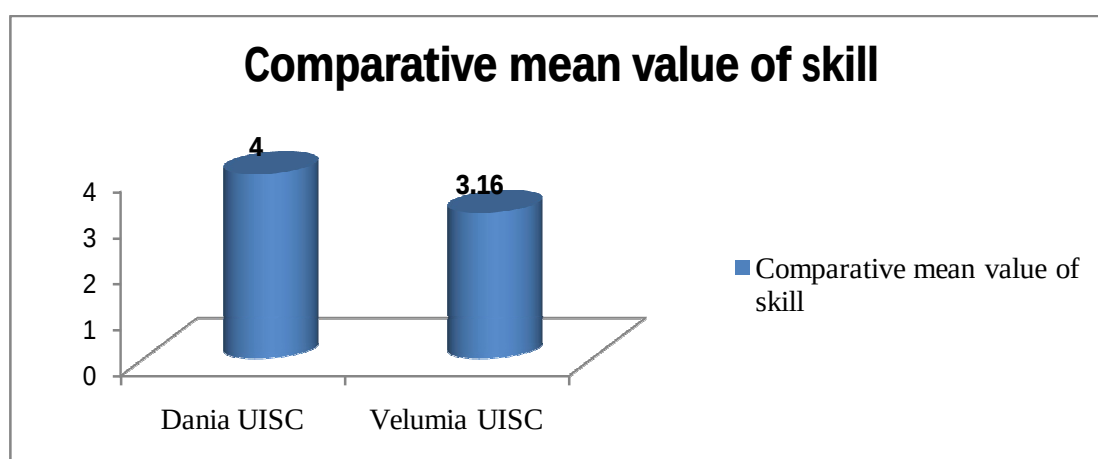


Figure: 4.2.2 (ii) The Comparison of skill of entrepreneurs about e-service delivery of 2 (two) UISCs

So, it is clear that the entrepreneurs of Dhania UISC have **‘effective’** (as the significance of scale 4.00=‘effective’ according to previously assumed 5 scales) level of skills for the e-service delivery among the rural citizen. On the other hand, the entrepreneurs of Bhelumiah UISC have **‘somehow effective’** (as the significance of 3.00= ‘somehow effective’ level according to previously assumed 5 scales) level of skill about e-services to the rural people. Thus, it can be said that the skill of Dania UISC is better than the skill of Valumia UISC.

4.2.3: (i) Entrepreneurs Regularity at UISC for E-service Delivery

Entrepreneurs’ regularity at the UISC is one of the important tools for e-service delivery of UISC. If the entrepreneurs are regular at UISC, e-service delivery will be strengthened. Rural citizens will get their desired e-services regularly. The entrepreneurs’ regularity at UISC for the purpose of e-service delivery is highly necessary to assess the effectiveness of UISC. So, their satisfaction about the Entrepreneurs’ regularity at the UISC for 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)

Level of Skill	Frequency	Percent	Mean Value Of (out of scale-5)
Very Poor	2	4%	3.52
Poor	5	10%	
Somehow good	10	20%	
Good	31	62%	
Very Good	2	4%	
Total	50	100%	

Table: 4.2.3: (i) Entrepreneurs regularity at UISC for e-service delivery

The table shows that 62% respondents opined that the UISC entrepreneurs' regularity at UISC for the purpose of e-service delivery is 'good', 20% respondents of 2 (two) UISCs responded that the entrepreneurs' regularity is at 'somehow good' level while 10% respondents considered that the entrepreneurs' regularity is at 'poor' level, 4% 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 14% entrepreneurs' regularity at 'poor' and 'very poor' level for e-service delivery of UISC.

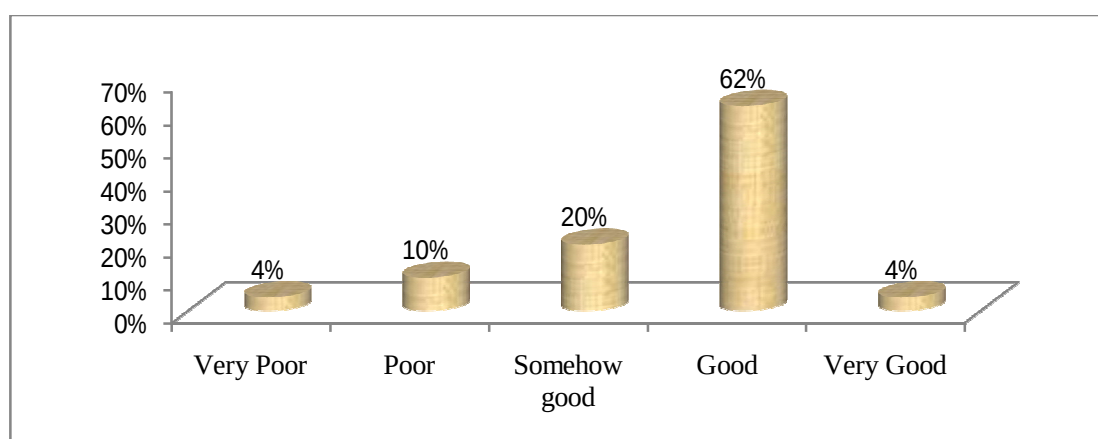


Figure: 4.2.3: (i) Entrepreneurs' regularity at UISC for e-service delivery

Again, the above table (Table: 4.2.3 :i)) illustrates that the mean value of entrepreneurs' regularity at UISC for e-service delivery is 3.52 according to the presumed scale 5.

From the above table it can be said that the entrepreneurs' regularity at UISC for e-service delivery of Dania and Bhelumiah UISCs is in-between of '**effective**' and '**somehow effective level**' level (as the mean value 3.52 lies in between of 'somehow effective' and 'effective' level according to previously assumed 5 scales) for the rural community people. Though these are the scenario of two UISCs according to the respondents view, the separate scenario is more different. These can be presented through the table below (Table: 4.2.3.ii)

4.2.3 (ii) The Comparison between two UISCs on 'Entrepreneurs Regularity at UISC' for E-service Delivery.

The Entrepreneurs regularity at UISC is very important. But entrepreneurs' presence in all UISCs is not same. Some UISC entrepreneurs are very regular to their daily activities; some do not have the regularity. In case of Dania and Bhelumiah UISC, the same thing is happened. The UISC entrepreneurs regularity at two UISCs are

determined according to the following way by using presumed scale (i.e. very good=5, good=4, somehow good=3, poor=2, very poor=1)

Name of UISC	N	Mean(out of 5 scale)
Dhaniah	25	4.04
Bhelumiah	25	3.00
Total	50	3.52

Table 4.2.3(ii): The comparison between two UISCs on entrepreneurs regularity at UISC.

The above table compares the mean value of ‘entrepreneurs regularity at UISCs for e-service delivery (Table 4.2.3: ii) according to the data collected from the respondents.

From the presumed scale, it is evident that the mean value regarding ‘entrepreneurs regularity at UISC’ for e-service delivery of Dhaniah UISC is 4.04=good (out of previously assumed 5 scales) while the mean value regarding ‘entrepreneurs regularity at UISC’ for e-service delivery of Bhelumiah UISC is 3.00=somehow good (out of scale 5). These interpretations can be displayed by the following figure:

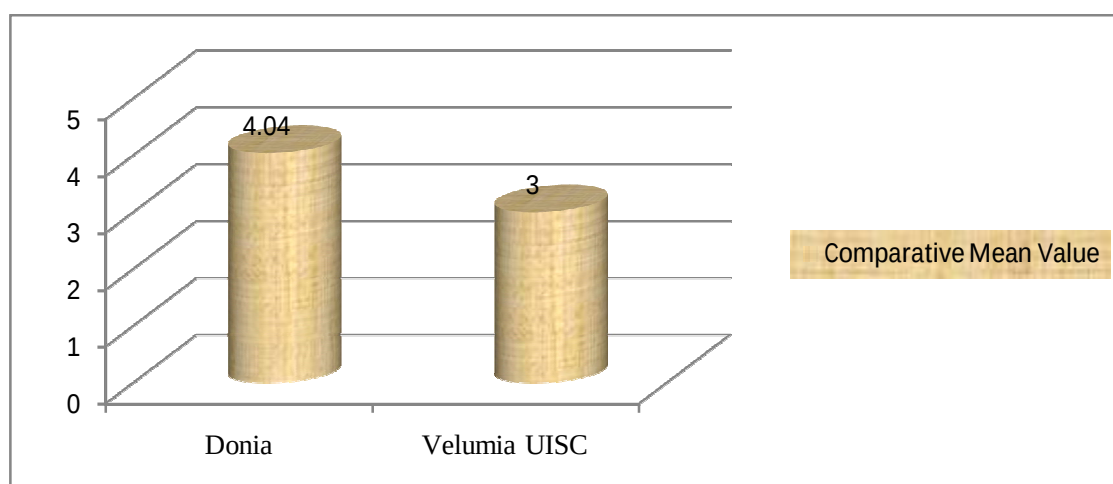


Figure: 4.2.3 (ii) The Comparison between two UISCs on entrepreneurs regularity at UISC for e-service delivery.

So, it is clear from the above figure that Dhaniah UISC has ‘**effective**’ (as the significance of mean value 4.04=‘effective’ according to previously assumed 5 scales) level of ‘entrepreneurs regularity at UISC’ for the e-service delivery among the rural citizen. On the other hand, the entrepreneurs regularity of Bhelumiah UISC has ‘**somewhat effective**’ (as the significance of mean value 3.00=‘somewhat effective’ level according to previously assumed 5 scales) level for e-service delivery to the rural citizens. Here, it can be said that the entrepreneurs’ regularity of Dhaniah UISC is better than that of Valumia UISC.

4.2.4 (i) Extent of Accessibility to E-service

The opportunity of the customers' access to the e-service is one of the principal attributes for measuring of the effectiveness of UISC i.e. how much the community people are getting the e-services through accessing the UISC. If the beneficiaries of UISC enter for their necessary services at the websites, web-portal and get the services like e-mail, Skype id of UISC or union parishad, it can be said that rural citizens have sufficient access to the e-services of UISC. 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 UISC. Their perception about the extent of accessibility to e-service 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):

Level of Access	Frequency	Percent	Mean Value(out of 5 scale) of accessibility
Very Poor	2	4%	3.58
Poor	7	14%	
Somehow good	7	14%	
Good	28	56%	
Very Good	6	12%	
Total	50	100%	

Table: 4.2.4 (i) Extent of accessibility to e-service

The above table shows that 56% respondents viewed that the extent of accessibility to e-service of rural people are 'good' and 14% respondents opined that the accessibility to e-services are 'somehow good', Again, 12% respondents considered the accessibility to e-service is 'very good' while 14% considered the extent of accessibility to e-service are 'poor' and 4% considered that the accessibility to e-service is 'very poor'. These can be shown as follows:

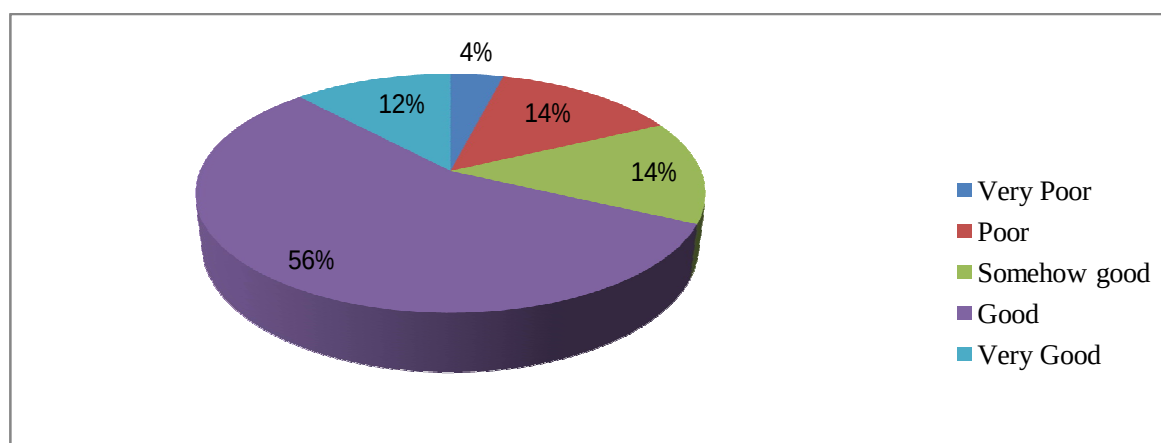


Figure: 4.2.4: (i) Extent of accessibility to e-service of community people

Accordingly, the above table (Table: 4.2.4: i) indicates that the mean value of ‘accessibility to e-service’ of UISC is 3.58 according to the presumed scale 5.

Analyzing the above table it is clear that the overall extent of accessibility to e-service of two UISCs are in-between of ‘**effective**’ and ‘**somehow effective**’ level (as the mean value 3.58 lies between ‘somehow effective’ and effective level according to previously assumed 5 scales) for the rural community people. The above interpretations are the scenario of two UISCs as a whole, according to the respondents view.

4.2.4 (ii): Different Scenario of Extent of Accessibility to E-service

The comparative scenario regarding the extent of accessibility to e-service of Bhelumiah and Dhania UISC can be presented through the table below (Table: 4.2.4.ii)

Name of UISC	N	Mean(out of 5 scale)
Dhania	25	4.08
Bhelumiah	25	3.08
Total	50	3.58

Table: 4.2.4 (ii): Different scenario of extent of accessibility to e-service

The above table interprets the comparative mean value (out of previously assumed 5 scale) for the sub-variable ‘extent of accessibility to e-service of Dhania and Valumia UISC (Table 4.2.4: ii) according to the data collected from the respondents. According to the assumed scale, it appears that the mean value of ‘extent of accessibility’ of Dania UISC is 4.08 (out of previously assumed 5 scales) and ‘extent of accessibility to e-service’ in Bhelumiah UISC is 3.08 (out of scale 5). These interpretations can be displayed by the following figure:

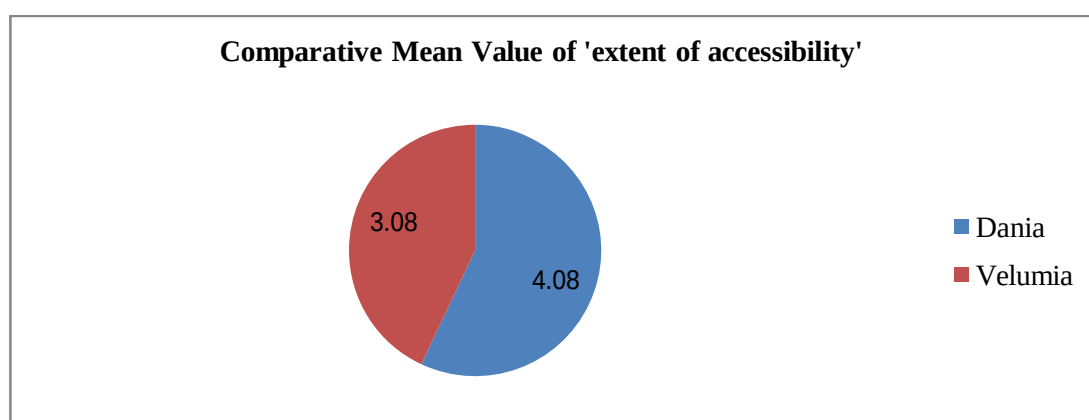


Figure: 4.2.4 (ii) The Comparative mean value of ‘extent of accessibility to e-service delivery’ of 2 (two) UISCs

So, it is explicit that Dania UISC has **‘effective’** (as the mean value 4.08 lies in the ‘effective’ level according to previously assumed 5 scales) level of accessibility to e-services among the rural citizen. On the other hand, Bhelumiah UISC has **‘somehow effective’** (as the mean value 3.08 lies at ‘somehow effective’ level according to previously assumed 5 scales) level of accessibility to e-services to the rural people.

Thus, it can be said that the ‘extent of accessibility to e-service’ of Dania UISC is better than that of Valumia UISC.

4.2.5 (i): Success of E-service Delivery

For measuring effectiveness of UISC, it is important to know about the satisfaction of the rural citizens that how do they consider about the success of e-service delivery of UISC. Under this variable e-service success mainly depends on quality e-service system, availability of updated information in the Web-portal and Web-site of union parishad, perceived usefulness of e-services, and perceived ease of use of e-services and citizens’ trust to the e-services. Citizens’ satisfaction about the success of e-service delivery is explained 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):

Level of Success	Frequency	Percent	Mean Value(out of 5 scale) of accessibility
Poor	6	12%	4.02
Somehow good	1	2%	
Good	29	58%	
Very Good	14	28%	
Total	50	100%	

Table: 4.2.5: (i) Success of e-service delivery(n=50)

The above table indicates that 58% respondents opined that the success of e-service delivery is ‘good’.Accordingly,2%respondents responded that the success of e-service delivery is in ‘somehow good’ level.Again,28%respondents of 2(two) UISCs opined that ‘success of e-service delivery’ is in ‘very good’ level while 12%respondents considered the success level is poor. From this table, it is also observed that though the success of e-service delivery is at ‘very good’/ ‘good’ or ‘somehow good’ level, it is also seen that a large portion of respondents (about 12%) responded that success of e-service delivery is at ‘poor’ level. From the above table, it is also seen that the mean value of the success of e-service is 4.02 according to the presumed scale 5regarding e-service delivery.

From the above table it is said that the ‘success of e-service delivery’ of Dhaniah and Bhelumiah UISCs are at **‘effective’** level (as the significance of scale 4.02=‘effective’ level of e-service delivery according to previously assumed scale 5) about the e-service delivery among the rural community people. These are the combined scenario of the ‘success of e-service delivery’ of UISCs according to the respondents view, the comparative scenario is something different. These interpretations can be presented through the table below (Table: 4.2.5.ii)

4.2.5(ii) The Comparison between Success of E-service Delivery of 2(two) UISCs

According to the collected data, the success of e-service delivery of 2(two) different UISCs are as follows:

Name of UISC	N	Mean value of success(out of 5 scale)
Dhaniah	25	4.56
Bhelumiah	25	3.48
Total	50	4.02

Table 4.2.5(ii):The Comparison between success of e-service delivery of 2(two) UISCs

The above mentioned comparative table portrays that the mean value of ‘success of e-service delivery of Dhaniah UISC is 4.56 (out of previously assumed 5 scales) and ‘success of e-service delivery’ in Bhelumiah UISC is 3.48 (out of scale 5) level.

So, it is evident from the above table that the ‘success of e-service delivery’ of Dhaniah UISC is in-between of **‘very effective’** and **‘effective’**(as the mean value of 4.56 lies in between of ‘effective’ and ‘very effective’ according to previously assumed 5 scales) level for the rural citizen. Contrarily, the ‘success of e-service delivery’ of Bhelumiah UISC is in-between of **‘effective’** and **‘somehow effective’** (as the mean value 3.48 lies in between of ‘somehow effective’ and ‘effective’) level. Thus, it can be said that the success of e-service delivery of Dhaniah UISC is better than that of Valumia UISC.

4.3: Citizens’Satisfaction: Overall Effectiveness Performance of 2(two) UISCs

Citizens’ satisfaction is a principal variable for this study to measure the effectiveness of UISC. According to the presumed scale 5 (i.e. very effective=5, effective=4 Somehow effective=3, Less effective=2, Not effective at all=1), the effectiveness of two UISCs in respect of citizens’ satisfaction can be presented as follows:

Sub-Variables	Mean Value of each variable		Mean & level of effectiveness		Overall Mean	Level of effectiveness
	Dhania UISC	Bhelumiah UISC	Dhania UISC	Bhelumiah UISC		
Standard of e-service delivery	4.00	3.00	4.13 Effective	3.14 Somehow effective	3.64	Near to effective Level.
Skill of UISC entrepreneurs for e-service delivery	4.00	3.16				
Entrepreneurs regularity at UISC	4.04	3.00				
Extent of accessibility to e-service of UISC	4.08	3.08				
Success of e-service delivery	4.56	3.48				

Table: 4.3: Citizens' perception: overall performance of 2(two) UISCs (n=50)

From the above table, it is seen that in respect of citizens' satisfaction the overall performance of UISC for e-service delivery is at near to effective level (as the scale 4=effective level according to presumed scale).

4.4 Data Obtained from UISC Personnel (Questionnaire Type-B)

The study was conducted from February 2013 to April 2013. The aim of presenting the descriptive statistics was to summarize the collected data. The Respondents were 10 UISC personnel and local-body representatives from two Unions of Bhola Bangladesh. The following tables display the demographic profiles.

4.4.1 Age Distribution of Respondents

The age distribution of the 10 (Ten) respondents were as follows:

Age group	Frequency	Percent
21-25	3	30%
26-30	2	20%
31-35	2	20%
36-40	2	20%
41+	1	10%
Total	10	100%

Table 4.4.1 Distribution of respondents in terms of Age (n=10)

The above table portrays the age distributions of the respondents. The above table shows that 20%+20%+20%=60% respondents fell in the age group of (26-30), (31-35), (36-40) years while 30% fell in the age group of (21-25 years), 10% fell in the age

group (41-50) and 30% fell in the age group (21-25). Again, 10% fell in the age group of 41+.

4.4.2: Infrastructure and Logistic Support: Findings and Analysis

Again, the effectiveness of UISC about the e-service delivery in this study also depends upon the Infrastructure and logistic support situation i.e. what are the present convenient environment situations for e-service delivery through UISC. The variable Infrastructure & logistic support situation is explained in this study on the basis of seven attributes to analyze the effectiveness of UISC for e-service delivery. The indicators are: existing e-service providing equipments, workable e-service providing equipments, speed of Internet, status of electricity supply, training of entrepreneurs for providing e-services, existing support to UISC from UP for providing e-services, the entrepreneurs' satisfaction with their income.

4.4.2 (i) Existing E-Service Providing Equipments:

Sufficient e-service equipments are very necessary for the smooth e-service delivery of UISC. If the UISC does not have necessary e-service providing equipments like computer, printer, scanner, internet connection, web-cam, it cannot render its services properly.

According to respondents view the existing e-service equipments of two UISCs were explained according to the following way in respect of presumed scale (i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1):

Level of sufficiency of equipments	Frequency	Percent	Mean value of equipments (out of scale 5)
Less sufficient	2	20%	3.60
Somehow sufficient	2	20%	
Sufficient	4	40%	
Very sufficient	2	20%	
Total	10	100%	

Table: 4.4.2 (i) E-service providing equipments of UISC

The above mentioned table reveals that 40% of the total respondents consider that the existing e-service equipments of UISC are 'sufficient'. Accordingly, 20% respondents considered that the prevailing equipments are 'somehow sufficient'. Again, 20%

respondents considered that the equipments are ‘very sufficient’ while 20% respondents considered that the e-service equipments are ‘less sufficient’.

Again, the above table (Table: 4.4.2 (i)) indicates that the mean value of e-service equipments of UISC is 3.60 according to the presumed scale 5.

From the above table it is clear that the existing e-service providing equipments of two UISCs for e-service delivery are in-between of ‘**effective**’ and ‘**somehow effective**’ level (as the mean value 3.60 lies in between of ‘somehow effective’ and effective level according to previously assumed 5 scales). Though these are the overall existing e-service equipments of two UISCs (according to the respondents views), the different scenario of two UISCs are more different.

4.4.2(ii): The Comparative Status of Existing E-service Providing Equipments

E-service delivery varies due to availability and non-availability of e-service equipments. If the service delivery is not ensured in right time due to non availability of equipments, rural people suffer ultimately. According to the respondents view, the existing e-service equipments scenario of two UISCs was as follows (According to the presumed scale: 5)

Name of UISC	N	Mean Value (out of 5 scale)
Dhanias	5	4.20
Bhelumiah	5	3.00
Total	10	3.60

Table: 4.4.2 (ii): The Comparative status of existing e-service equipments of two UISCs:

The table focuses the comparative mean value of the variable ‘existing e-service equipments of Dhanias and Valumia UISC (Table 4.4.2.ii) according to the data collected from the study area. According to the assumed scale, it appears that the mean value of Dhanias UISC is 4.20 (out of previously assumed 5 scales) and e-service equipments of Valumia UISC is 3.00 (out of scale 5).

From the above table it is clear that Dhanias UISC has ‘**effective**’ level (as the significance of scale 4.00=‘effective’ level of e-service delivery according to previously assumed scale 5) of e-service equipments whereas Bhelumiah UISC has ‘**somehow effective**’ level (as the significance of scale 3.00=‘somehow effective’) of e-service equipments for service delivery. So, it can be said that the e-service equipments of Dhanias UISC is better than that of Valumia UISC in terms of e-service delivery.

4.4.3(i) Workable E-service Providing Equipments' Scenario.

To assess the effectiveness of UISC, workable e-service equipments are necessary. If the e-service equipments like computer, printer, scanner, internet connection, webcam of UISC do not work properly, service delivery activities will be hampered. Workable e-service equipments of the two UISCs are explained according to the following way in respect of presumed scale (i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1)

Level of Sufficiency	Frequency	Percentage	Mean value (out of scale 5)
Less sufficient	1	10%	3.60
Somehow sufficient	2	20%	
Sufficient	7	70%	
Total	10	100%	

Table 4.4.3 (i): Workable E-service equipments' scenario

The above table represents that about 70% respondents considered that the workable e-service equipments of UISC are at 'sufficient' level. Accordingly, 20% respondents considered that among the existing equipments of UISC are at 'somehow sufficient,' while 10% considered that the workable e-service equipments are at 'less sufficient' level. Moreover, it is also observed from this table that the mean value of workable equipments of two UISCs is 3.60 (according to the previously calculated out of 5 scale).

From the above table it can be said that the workable equipments for e-service delivery at two UISCs are in-between of '**effective**' and '**somehow effective level**' level (as the mean value 3.60 lies in between of 'somehow effective' and 'effective' level according to previously assumed 5 scales).

4.4.3 (ii): The Comparative Status of Workable E-service Equipments.

Workable e-service delivery equipments are not equal in two UISCs. The variation of workable e-service equipments in two UISCs are as follows (i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1)

Name of UISC	N	Mean Value of e-service equipments (out of 5 scale)
Dhania	5	4.00
Bhelumiah	5	3.20
Total	10	3.60

Table: 4.4.3 (ii): The Comparative status of workable e-service equipments.

The table focuses the comparative mean value for the variable ‘workable e-service equipments’ of Dhania and Valumia UISC (Table 4.4.3(ii)). According to the previously assumed scale, it appears that the mean value of Dania UISC is 4.00 (out of previously assumed 5 scales) and the mean value of workable equipments of Valumia UISC is 3.20 (out of scale 5).

The above table indicates that Dhania UISC has ‘**effective**’ level (as the significance of scale 4.00=‘effective’ level of e-service delivery according to previously assumed scale 5) of workable e-service equipments but Bhelumiah UISC has ‘**somehow effective**’ level (as the significance of scale 3.00=‘somehow effective’) of workable e-service equipments for service delivery. So, it is said that the workable e-service equipments of Dhania UISC is better than that of Valumia UISC for e-service delivery. The Comparative mean value of workable equipments of two UISCs can be shown through the following figure:

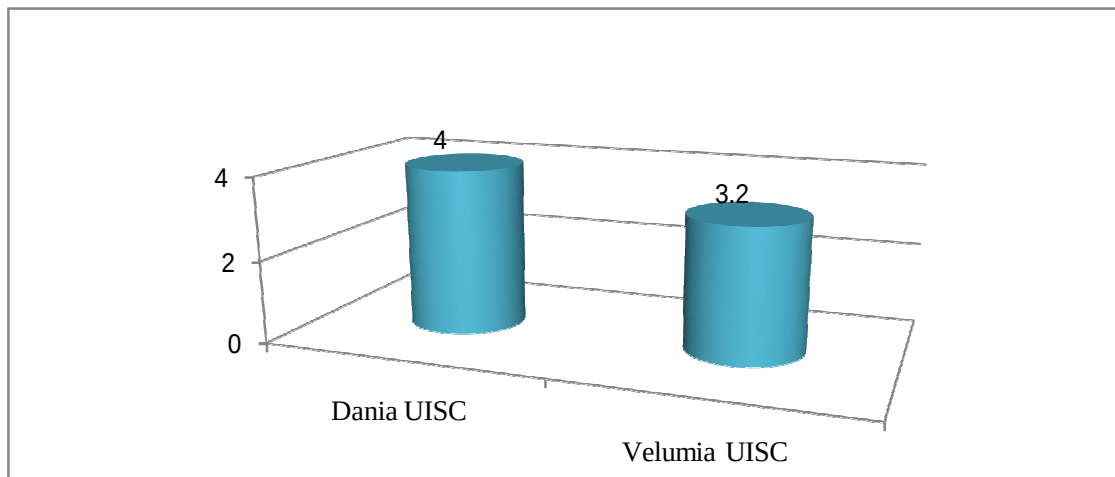


Figure 4.4.3(ii) Workable e-service equipments’ scenario

4.4.4 (i) Speed of Internet

To determine the effectiveness of UISC, internet speed is very necessary. All types of e-service activities like e-mail, Skype, internet browsing, on-line banking, on-line shopping etc. largely depend upon the internet speed. If the internet speed is at satisfactory level, service delivery can be provided according to the customers need. Internet speed for e-service delivery is explained according to the following way in respect of presumed scale (i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1)

Level of Sufficiency	Frequency	Percent	Mean value of internet speed (out of scale 5)
Not sufficient at all	1	10%	3.20
Less sufficient	1	10%	
Somehow sufficient	3	30%	
Sufficient	5	50%	
Total	10	100%	

Table:4.4.4 (i) Speed of internet

The above table shows that 50% respondents responded that the internet speed for providing e-service to the rural people are at 'sufficient' level and 30% respondents opined that the speed of internet is 'somehow sufficient'. Again, 10% respondents consider the internet speed is 'less sufficient' for delivering e-service to the rural community people while 10% consider the internet speed is 'not sufficient at all'. These interpretations can be shown as follows:

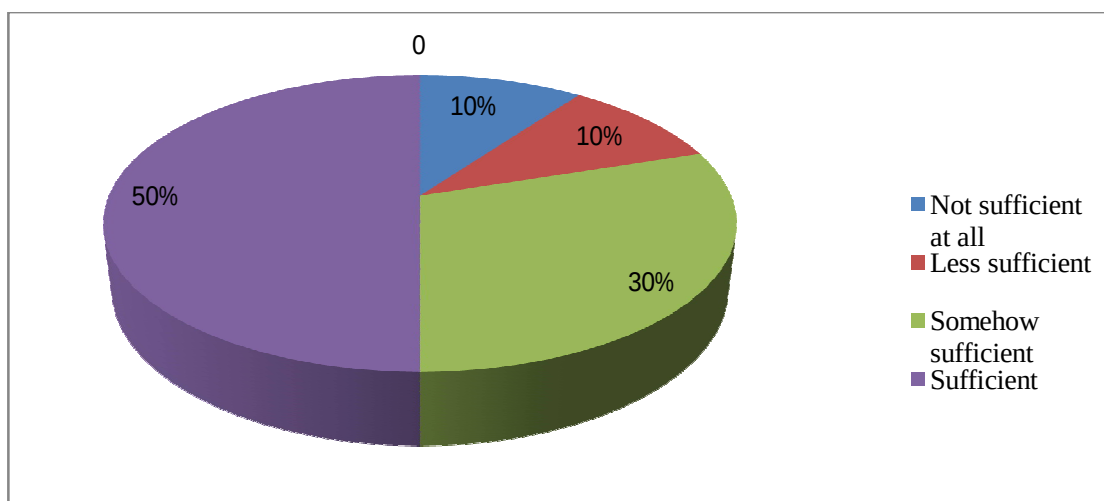


Figure: 4.4.4 (i): Internet speed of UISCs for e-service delivery.

Accordingly, the above table (Table: 4.4.4 :(i) indicates that the mean value of 'internet speed' of UISC is 3.20 according to the presumed scale 5.

So, it is clear from the above table that the overall 'internet speed' of two UISCs are more than '**somehow effective**' level as the mean value of internet speed is 3.20 (as the mean value 3.20 lies more than 'somehow effective' level according to previously assumed 5 scales) for the rural community people. The above interpretations are the scenario of two UISCs as a whole, according to the respondents view. The comparative scenario is something different. These can be presented through the table below (Table: 4.4.4.ii)

4.4.4 (ii): The Comparative Status of Internet Speed of two UISCs

According to the respondents view, the comparative status of internet speed of two UISCs is as follows, according to the previously collected data and assumed scale: (i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1)

Name of UISC	N	Mean Value (out of 5 scale)
Dhaniah	5	3.60
Bhelumiah	5	2.80
Total	10	3.20

Table: 4.4.4(ii): The Comparative status of internet speed of two UISCs

The above mentioned table implies that the mean value of 'internet speed of Dhaniah UISC is 3.60 (out of previously assumed 5 scales) and 'internet speed' in Bhelumiah UISC is 2.80 (out of scale 5) level.

So, it is explicit from the above mentioned table that the 'internet speed' of Dhaniah UISC is in-between of '**effective**' and '**somehow effective**' (as the mean value 3.60 lies in between of 'somehow effective' 'effective' according to previously assumed 5 scales) level for the rural community people. On the other hand, the 'internet speed' of Bhelumiah UISC is near to '**somehow effective**' (as the significance of scale 3.00= 'somehow effective' and the mean value of Dania UISC is 2.80 according to previously assumed 5 scales) level.

Thus, it can be said that the 'internet speed' of Dania UISC is better than that of Valumia UISC. These interpretations can be presented by the following figure:

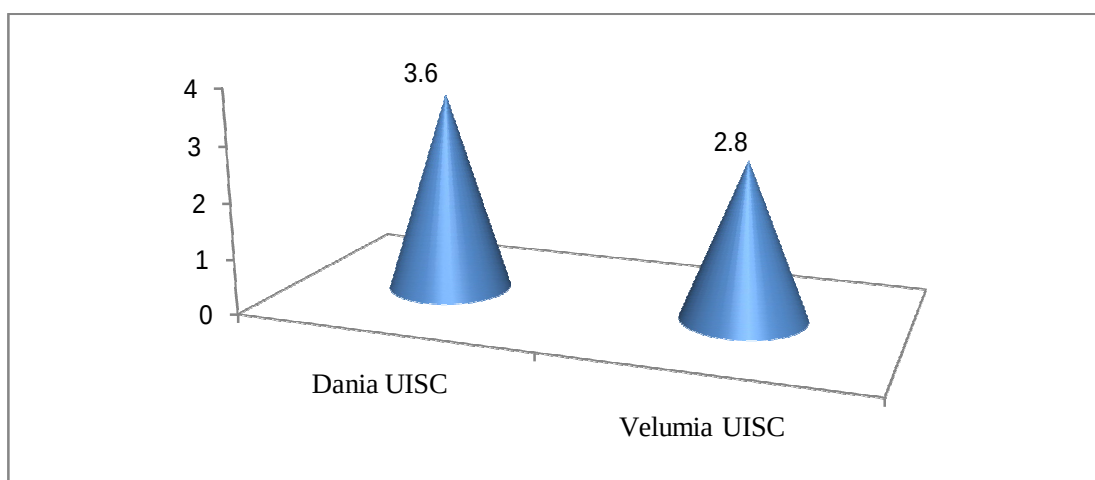


Figure: 4.4.4(ii): The Comparative status of internet speed of two UISCs

4.4.5 (i): Status of Electricity Supply of two UISCs

To measure the effectiveness of UISC, electricity supply is very necessary. Though some of the UISCs have some alternative way of electricity by using solar panel, generator etc, it does not work for speedy e-service works. Thus uninterrupted electricity supply plays a vital role for smooth functioning of UISC. Electricity supply of two UISCs is explained according to the following way in respect of presumed scale (i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1)

Status of electricity	Frequency	Percent	Mean value (out of scale 5)
Somehow sufficient	1	10%	4.10
Sufficient	7	70%	
Very sufficient	2	20%	
Total	10	100%	

Table: 4.4.5 (i): Status of electricity supply of two UISCs

From the above table (Table-4.4.5-i), it is observed that most of the respondents i.e. 70% considered that the existing power supply of UISC is ‘sufficient’ 20% considered that the electricity supply is ‘very sufficient’ and 10% respondents considered that the electricity supply is ‘somehow sufficient’.

From this table it is seen that the power supply situation of UISC is more or less sufficient for providing the e-services smoothly among the rural community people. This can be displayed by the following figure:

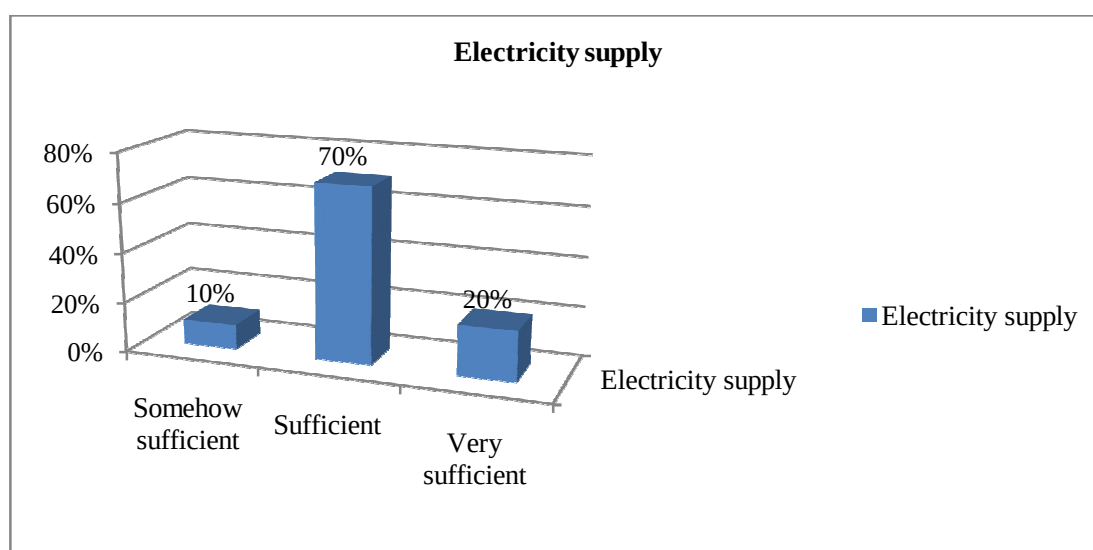


Figure: 4.4.5 (i): Status of electricity supply of two UISCs

Again, the above table (Table: 4.4.5 (i)) indicates that the mean value of electricity supply for the delivery of e-services of UISCs is 4.10 according to the presumed scale 5.

From the above table it is clear that the existing electricity supply to deliver the e-services at **‘effective’** level (as the value of scale 4.00= ‘effective’ level according to previously assumed 5 scales). Though these are the overall existing electricity supply of two UISCs (according to the respondents vies), the different scenario of two UISCs are more different according to the collected data.

4.4.5 (ii):The Comparative Status of Electricity Supply.

According to the respondents view, the comparative status of electricity supply of two UISCs is as follows according to collected data and presumed scale(i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1

Name of UISC	N	Mean Value (out of 5 scale)
Dhania	5	4.20
Bhelumiah	5	4.00
Total	10	4.10

Table: 4.4.5 (ii): The Comparative status of electricity supply.

The table highlights the comparative mean value of ‘electricity supply’ of Dhania and Valumia UISC (Table 4.4.5(ii) according to the collected data from the study area. According to the previously assumed scale, it appears that the mean value for the mentioned variable ‘electricity supply’ of Dhania UISC is 4.20 (out of previously assumed 5 scales) and the mean value for ‘electricity supply’ of Valumia UISC is 4.00 (out of scale 5).

From the above table it is evident that Dhania UISC has more than **‘effective’** level (as the significance of scale 4.00=‘effective’ level of electricity supply according to previously assumed scale 5) of electricity supply, while Bhelumiah UISC has just **‘effective’** level(as the significance of scale 4.00=‘effective’) of ‘electricity supply’ for e-service delivery. Again, it can be said that the ‘electricity supply’ for e-service delivery of Dania UISC is a bit better than that of Valumia UISC which can be shown as follows:

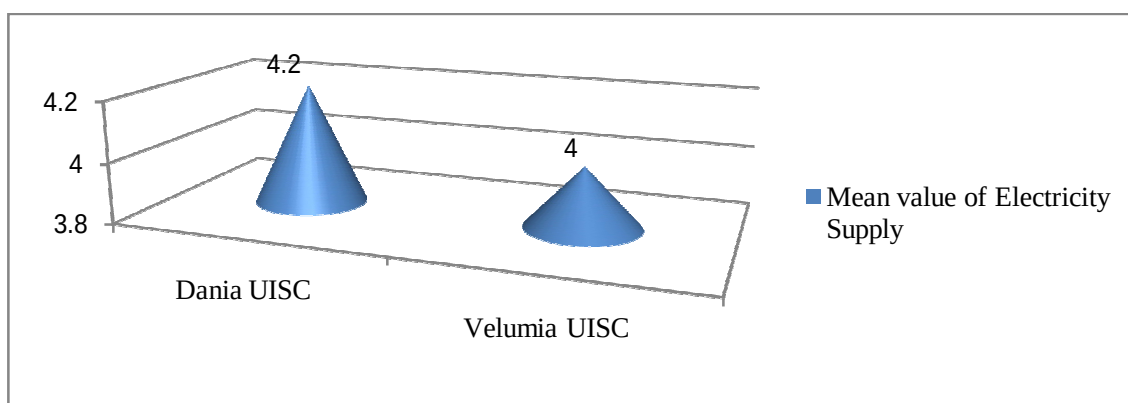


Figure: 4.4.5 (ii): The Comparative status of electricity supply.

4.4.6 (i) Training of Entrepreneurs for Providing E-services

The UISC entrepreneurs are the key personnel for providing the e-services among the rural community people. To make the UISC effective, trained entrepreneurs are very much essential. The UISC 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 UISC entrepreneurs for providing e-services is explained on the following way using presumed scale (i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1)

Level of Sufficiency	Frequency	Percent	Mean value (out of scale 5)
Somehow sufficient	4	40%	3.70
Sufficient	5	50%	
Very sufficient	1	10%	
Total	10	100%	

Table: 4.4.6 (i) Training of entrepreneurs for providing e-services

According to the collected data, 50% respondents considered that the entrepreneurs of UISC have the training which is at 'sufficient' level. Accordingly, 40% respondents opined that UISC "entrepreneurs' training" are at 'somehow sufficient' level, while 10% considered that the UISC entrepreneurs have the training which are at 'very sufficient' level. The respondents' view on entrepreneurs' training can be showed by the following figure:

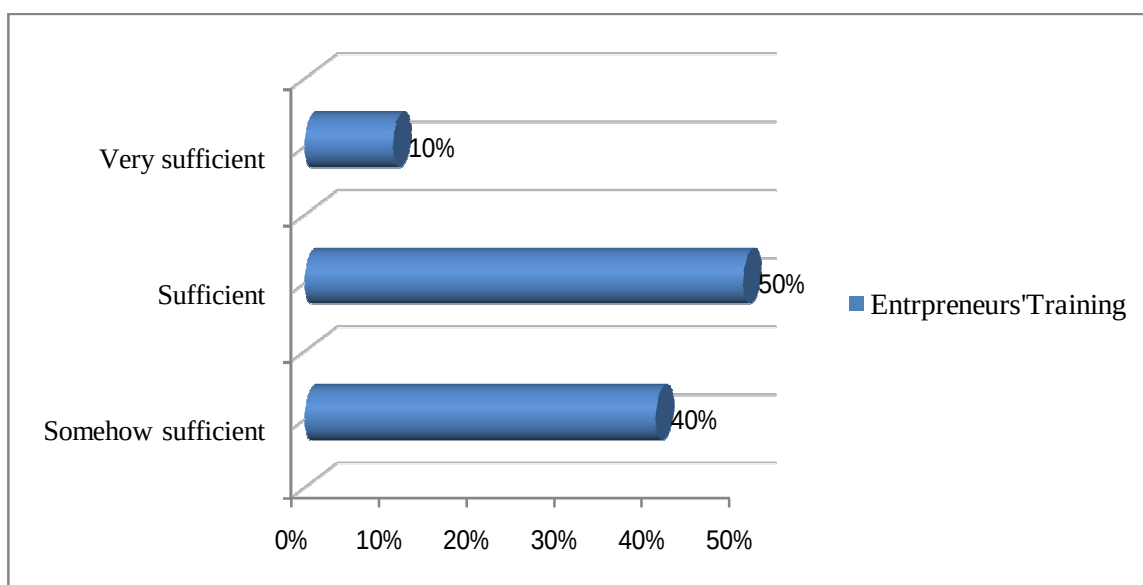


Figure: 4.4.6 (i) Training of entrepreneurs for providing e-services

Thus, it is also observed from the above table (Table4.4.6-i) that the mean value of entrepreneurs' training of two UISCs is 3.70 (according to the previously calculated out of 5 scale)

From the above table it can be said that the "entrepreneurs' training" for e-service delivery of two UISCs are **near to 'effective'** level as the two UISC's mean value on entrepreneurs' training is 3.70 (as the significance of scale 3.00='somewhat effective' and scale 4.00='effective' level according to previously assumed 5 scales). Though these are the comparative scenario on entrepreneurs' training of two UISCs according to the respondents view, the separate scenario is quite different. These are presented through the table below (Table: 4.4.6.ii)

4.4.6(ii): The Comparative Status of Entrepreneurs' Training

According to the respondents' opinion, the comparative status of entrepreneurs' training two UISCs are as follows according to collected data and presumed scale (i.e. very sufficient=5, sufficient=4, somewhat sufficient=3, less sufficient=2, not sufficient at all=1)

Name of UISC	N	Mean (out of 5 scale)
Dania	5	4.00
Bhelumiah	5	3.40
Total	10	3.70

Table: 4.4.6 (ii): The Comparative status of entrepreneurs' Training

The above mentioned table portrays that the mean value on ‘entrepreneurs training’ of Dhania UISC is 4.00 (out of previously assumed 5 scales) and the mean value on ‘entrepreneurs training’ in Bhelumiah UISC is 3.40 (out of scale 5) level.

So, it is evident from the above table that the ‘entrepreneurs training’ of Dhania UISC is at **‘effective’** level (as the significance of mean value 4= ‘effective’ according to previously assumed 5 scales) for providing e-services to the rural community people. On the other hand, the ‘entrepreneurs training’ of Bhelumiah UISC is **near to the ‘effective’** (as the mean value 3.40 lies near to ‘effective’ according to previously assumed 5 scales) level . Thus, it can be said that the ‘entrepreneurs training’ of Dhania UISC is better than that of Valumia UISC.

4.4.7 (i) The Existing Support to UISC from UP for Providing E-services

Support from Union Parishad is very important to make the UISC effective. Here, UP support includes all financial support and support from Union Parishad chairman also. As Union Parishad chairman is the local guardian of UISC, he/she should have proper care to UISC. It is observed that the UISC 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 UISC from UP for providing e-services is explained on the following way using presumed scale (i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1)

Level of Sufficiency	Frequency	Percent	Mean value (out of scale 5)
Not sufficient at all	1	10%	3.60
Less sufficient	2	20%	
Sufficient	4	40%	
Very sufficient	3	30%	
Total	10	100%	

Table: 4.4.7 (i) The Existing support to UISC from UP for providing e-services

According to collected data, the above table (Table-4.4.7-i) depicts that majority of the respondents i.e.40% pointed out that the present UP support status to UISC is ‘sufficient’, accordingly, 20%respondents considered that the present UP support is ‘less sufficient’ for smooth e-service delivery.Again,30%respondents considered the present UP support to UISC is ‘very sufficient’ while 10%respondents opined that the UP support to UISC is ‘not sufficient at all’.

Again, the above table (Table: 4.4.7(i)) implies that the mean value of existing UP support to UISC fore-service delivery is 3.60 according to the presumed scale 5.

From the above table it is clear that the existing UP support to UISC for e-service delivery is in-between of **‘effective’** and **‘somehow effective’** level(as the mean value 3.60 lies in between of ‘somehow effective’ and ‘effective’ level according to previously assumed 5 scales).

4.4.7 (ii): The Comparative Status of UP Support to UISC

According to the collected data, the comparative scenario of two UISCs regarding the UP support is as follows:

Name of UISC	N	Mean Value (out of 5 scale)
Dhania	5	4.60
Bhelumiah	5	2.60
Total	10	3.60

Table: 4.4.7 (ii): The Comparative status of UP support to UISC

The table (Table 4.4.7(ii)) represents the comparative mean value for the attribute ‘UP support status to UISC for e-service delivery of Dhania and Valumia UISC. According to the collected data and previously assumed scale, it appears that the mean value of Dhania UISC is 4.60 (out of previously assumed 5 scales) and UP support status to Bhelumiah UISC is 2.60 (out of scale 5).

From the above table it is clear that Dhania UISC is getting in between of **‘very effective’** and **‘effective’** level(as the mean value 4.60 lies in between of ‘very effective’ and effective level of e-service delivery according to previously assumed scale 5) of UP support to provide the e-services whereas Bhelumiah UISC is getting in between of **‘somehow effective’** and **‘less effective’** level(as the mean value 2.60 lies in between of ‘somehow effective’ and less effective) of UP support to provide the e-services for the rural community people. So, it can be said that Dhania UISC has better UP support than that of Valumia UISC in terms of e-service delivery.

4.4.8(i) The Entrepreneurs’ Satisfaction with Income

As the entrepreneurs are key personnel and service provider of UISC, their satisfaction with income is very necessary. If they are not financially satisfied, they will not concentrate to their activities. According to the respondents view, satisfaction level with their income is as follows:

Level of Sufficiency	Frequency	Percent	Mean value (out of 5 scale)
Not sufficient at all	2	20%	3.10
Less sufficient	1	10%	
Somehow sufficient	1	10%	
Sufficient	6	60%	
Total	10	100%	

Table: 4.4.8(i) The Entrepreneurs' satisfaction with income

The above table shows that 60% respondents considered that the entrepreneurs' satisfaction with their income are at 'sufficient' level. Accordingly, 10% respondents opined that their satisfaction with the income are at 'somehow sufficient,' and 10% considered that entrepreneurs' training are at 'less sufficient' level while 20% respondents considered that entrepreneurs' income are 'not sufficient level.

Again, it is also seen from this table that the mean value for "entrepreneurs' training" of two UISCs are 3.10 (according to the previously calculated out of 5 scale).

From the above table it can be said that the entrepreneurs' training for e-service delivery at two UISCs according to collected data are at '**somehow effective**' level (as the significance of scale 3.00 = 'somehow effective' level according to presumed 5 scales). Though these are the combined scenario of two UISCs, the separate scenario is something quite different. These are presented through the following table (Table: 4.2.3.ii)

4.4.8 (ii): The Comparative Scenario of Entrepreneurs' Satisfaction with Income

According to the collected data i.e. respondents' opinion, the comparative scenario of entrepreneurs' satisfaction with income of two UISCs is as follows in respect of presumed scale (i.e. very sufficient=5, sufficient=4, somehow sufficient=3, less sufficient=2, not sufficient at all=1)

Name of UISC	N	Mean Value (out of 5 scale)
Dhania	5	4.00
Bhelumiah	5	2.20
Total	10	3.10

Table: 4.4.8 (ii): The Comparative scenario of entrepreneurs' satisfaction with income

The above table shows the comparative mean (out of previously assumed 5 scales) for the variable entrepreneurs' satisfaction with their income of Dhania and Valumia UISC (Table 4.4.8.ii) according to the respondents' views. From the presumed scale it appears that the mean value for the variable entrepreneurs' satisfaction with their

income is 4.00 (out of previously assumed 5 scales) and entrepreneurs' satisfaction Bhelumiah UISC is 2.20 (out of scale 5).

From the above table it is evident that entrepreneurs' satisfaction with income of Dhaniah UISC is at '**effective**' level (as the significance of scale 4.00='effective' level of e-service delivery according to previously assumed scale 5) about the e-service delivery to the rural community people whereas entrepreneurs' satisfaction with income of Bhelumiah UISC is at '**less effective**' level (as the significance of scale 2.00=less effective) of e-services to the citizens of the rural community people. So it can be said that the entrepreneurs' satisfaction with income of Dania UISC is better than that of Valumia UISC.

4.5: Infrastructure and Logistic Support: Overall Performance of 2(two) UISCs

Infrastructure and Logistic Support is another variable for this study to measure the effectiveness of UISC. According to the collected data and presumed scale 5 (i.e. very effective=5, effective=4 Somehow effective=3, Less effective=2, Not effective at all=1), the effectiveness of two UISCs in respect of Infrastructure and Logistic Support can be presented as follows:

Variables	Mean Value of each variable		Mean & level of effectiveness		Overall Mean	Level of effectiveness
	Dhaniah UISC	Bhelumiah UISC	Dhaniah UISC	Bhelumiah UISC		
Existing e-service Providing equipments	4.20	3.00	4.09 Effective	3.03 Somehow effective	3.56	In-between effective and somehow effective level
Workable e-service equipments	4.00	3.20				
Internet Speed	3.60	2.80				
Electricity Supply	4.20	4.00				
Entrepreneurs' Training	4.00	3.40				
Existing UP support to UISC	4.60	2.60				
Entrepreneurs' satisfaction with their income	4.00	2.20				

Table: 4.5: Infrastructure and logistic Support: overall performance of two UISCs (n=10)

From the above table, it is clear that in respect of infrastructure and logistic support, the overall performance of UISC for e-service delivery is in-between of effective and somehow effective level (as the scale 4=effective & 3=somewhat effective level of e-service delivery according to presumed scale).

4.6 Critical Factors for Better Performance of Dhania UISC than Bhelumiah UISC

- **Better Communication Factor:** Between the two, in the study area, Dhania UISC is in better communication position. The Dhania UISC is very near to Upazila headquarter. Moreover, most of the area of this Union Parishad (the lowest local government tier) are well communicated with this UISC. As a result, the service receiver can easily come to the UISC to receive the e-services. On the other hand, Bhelumiah UISC is not well communicated. So, people come to this UISC ever and anon.
- **Leadership of Chairman:** The researcher talked with the UP⁶ Chairman, UP secretary, entrepreneurs and concerned UNO as well. Through talking, he came to know that regarding the management and to expedite the e-service delivery activities of Dhania UISC the initiative of the chairman is much better than that of Bhelumiah union parishad. As a result, the UISC runs smoothly and very well.
- **Infrastructure Situation:** Infrastructure support is mainly responsible for better e-service delivery. During the visit to study area, it is observed that the existing infrastructure situation like e-service Providing equipments, internet speed, power supply condition, workable e-service providing equipments in Dhania UISC are much better than Bhelumiah UISC. As a result, Dhania UISC is providing more effective level of e-service delivery than Bhelumiah UISC.
- **Literacy Rate:** It is evident that literate people are more interested in using e-services than illiterate people. As the literacy rate of Dhania UISC is higher (38.63% according to Banglapedia) than Bhelumiah (26.73% according to Banglapedia) UISC, the e-service providing performance of Dhania UISC in respect of effectiveness is much higher than Bhelumiah UISC.
- **Positive Attitude:** Rural citizens of Dhania and Bhelumiah UP are the stakeholders of the two UISCs. By informal talking with the beneficiaries of two

⁶ UP means union parishad which is the lowest tier of local government in Bangladesh.

union parishad, it was known that the two entrepreneurs of Dhania UISC are always more positive than Bhelumiah UISC regarding the customers' e-service delivery. The two entrepreneurs of Dhania UISC always give the importance on customers' need which ultimately makes the more success for their UISC.

- **Citizens' Trust:** The Beneficiaries of Dhania UISC have the trust to get any type of e-service delivery without any hazard. Moreover, the stakeholders also believe that they will get their desired service at any time even after the official hour when they call the entrepreneurs which is absent from the Bhelumiah UISC. This reason also makes the success factor for Dhania UISC.
- **Trained Entrepreneurs:** Trained entrepreneurs are very much necessary for the smooth functioning of UISC. They are the life of UISC as the performance of UISC mainly depends upon the well trained entrepreneur's. If they are trained enough to provide the e-service according to customers' need, the UISC must be effective. Talking with the beneficiaries and UISC management authority like UNO, AC(ICT), it was known that the entrepreneurs of Dhania UISC is more skilled than those of Bhelumiah UISC. In a question to the entrepreneurs of both UISCs, it was known that the entrepreneurs of Dhania UISC got around 12(twelve) different trainings where the entrepreneurs of Bhelumiah UISC got only 4(four). This was happened due to random change of entrepreneurs in Bhelumiah UISC.
- **Availability of Skilled e-service Provider:** Geographically and communication ally Dhania UISC is established at a convenient place for the people of all corners. As a result, it gets skilled, smart and young entrepreneurs at any time than Bhelumiah UISC which ultimately made comparatively well performance for Dhania UISC.
- **Entrepreneurs' Handsome Income:** Due to geographical, communicational, better educational factors of and for the skill of the entrepreneurs, Dhania UISC entrepreneurs' income is much higher than that of Bhelumiah UISC.
- **Community Awareness:** Due to better education rate factor, the people of Dhania UP are well aware about the benefits of e-services. So they cannot think except the e-services for their daily activities.
- **Local Administrative Support:** Being located very nearer to the district & upazila headquarters and for good e-service providing activities Dhania UISC gets

more administrative support than Bhelumiah UISC. The financial support, supervisory support, training support etc are all provided sufficiently by the local administration.

- **Entrepreneurs' Co-ordination Power:** Both of the entrepreneurs of Dhania UISC have good academic qualification having better co-ordination capabilities among their beneficiaries. As a result, the UISC performs well.
- **Better Monitoring System:** Because of being located very nearer to district and upazila headquarter, Dhania UISC is monitored randomly by the DC, ADC (G), UNO and sometimes by the upazila chairman also. Moreover, UP chairman is very much aware about achieving the better performance of UISC which leads the Dhania UISC in better position
- **Publicity Activates:** Because of having good initiatives of two entrepreneurs, UP chairman, up secretary e-service activities are known to all. Dhania UISC management committee worked at the door to door of the community level people. They led the publicity activities at every school, madrasah, market of the Union Parishad area. As a result, people gather at Dhania UISC for their daily e-service activities which make the UISC to reach at the better position.
- **Unchanged Entrepreneurs:** It was known from the beneficiaries, entrepreneurs and UP chairman of Dhania UISC that no entrepreneurs left his/her entrepreneurship or any entrepreneur was bound to leave the entrepreneurship. As a result, these entrepreneurs became expert in disposing his/her responsibilities.

Chapter-5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

5.2 Recommendations

5.2.1 Provide Available E-service Delivery Equipments

5.2.2 Engage Available skill Personnel

5.2.3 Strong Internet Speed

5.2.4 Uninterrupted Power Supply

5.2.5 Strengthen Monitoring System

5.2.6 Raising Awareness of the Citizens

5.2.7 Make UISC AS Center for All Services

5.2.8 Initiate Outsourcing system

5.2.9 To Initiate the Partnership Activities

5.2.10 Capacity Building and Service Expansion Strategy for UISC

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Actually, there is no alternative of using e-service even in rural areas of our country. To ensure good governance in Bangladesh, we must concentrate to the people of our rural areas where 80% people live. When e-service opportunity will be easier among the rural areas of our country, people will be more aware about their rights, demands and responsibilities easily.

To keep this in mind, the researcher led this study to review the effectiveness of UISC about e-service delivery where the research question was to know the implication of e-services to the Union level people. The Research was conducted two UISCs at Bhola Sadar Upazila, Bhola, Bangladesh.

The findings obtained from the study were more different. The study reveals that Dhanias UISC provides 'effective' level (according to previously assumed scale 5) whereas Bhelumiah UISC provides 'somehow effective level' of e-services among the community level people. The study also shows the reasons for providing 'somehow effective' level of e-service (instead of effective or very effective level) by the Bhelumiah UISC which are lack of sufficient e-service providing equipments, scarcity of skilled manpower, slow internet speed, lack of uninterrupted electricity supply, lack of proper monitoring activities. Accordingly, Dhanias UISC could provide 'very effective level' of e-services instead of providing the 'effective level' if the infrastructural facilities would be more available.

The study also shows that the e-service delivery activities of UISC are not as sufficient as the demand of beneficiaries. Though Dhanias UISC is fulfilling the e-service demand of citizens in some extent, the performance of Bhelumiah UISC is below the standard level. Moreover, it is also seen that because of not having much skill, training of the entrepreneurs of Bhelumiah UISC, the e-service providing activities are interrupted. It is also found that the trend of using e-services among is increasing but lack of citizens' satisfaction in some extent and lack of proper infrastructure & logistic support, the effectiveness of UISC is not fully at satisfactory level.

Though the overall e-service delivery scenario of two UISCs (Dhanias & Bhelumiah) is not at satisfactory level, the individual performance of Dhanias UISC is much better

than Bhelumiah UISC. The Study result shows that Dhania UISC is providing **effective level of e-service delivery** but Bhelumiah UISC is providing **somehow effective level of e-service delivery**. As UISCs are the outlets to bring the rural people in the mainstream of development through e-service delivery, it should have proper attention to develop the citizens' satisfaction and the infrastructure & logistic support to make the UISC effective.

5.2 Recommendations:

With a view to providing smooth e-service delivery, the following recommendations are made based on the findings of the study:

5.2.1 Provide Available E-service Delivery Equipments

E-service providing equipments like computer, scanner, web-cam, internet connection are not available in UISC. Without sufficient equipments, it is not possible to provide the e-services among the people in time. So, these mentioned equipments should be available as much as the demand of UISC for smooth functioning of UISC.

5.2.2 Engage Available Skill Personnel:

Bangladesh has many young potential with IT skills in rural areas. Those personnel can be engaged for providing e-services in the UISC as they are satisfied with a minimum cost for providing e-services. Moreover, they can be paid with commission basis incentives. Thus it is possible to run the UISC very efficiently with a minimum level of efforts.

5.2.3 Strong Internet Speed:

The present internet speed in the UISC is very low. Generally, EDGE or GPRS modem are used in the UISCs which are very slow in providing high speed of internet. Rather it can be used 3G/WIFI modem or broadband connection for providing quick e-services among the rural people.

5.2.4 Uninterrupted Power Supply:

The UISCs are using traditional electricity to run the e-service equipments like computer, scanner, printer, web-cam etc. Generally, the UISCs are using desktop computer for e-service delivery. As a result, the service delivery activities are interrupted during electricity fall. So, there should be alternative power supply system through providing generator, solar panel and IPS etc.

5.2.5 Strengthen Monitoring System:

Strong monitoring team should be made by the government under the leadership of UNO to his office to supervise the daily activities of UISC. As UNO is very busy with different development works, the monitoring team will supervise the real e-service delivery activities and the information uploaded at the monitoring tool of UISC.

5.2.6 Raising Awareness of the Citizens:

The UISCs were started their activities in 2010 but all people are not aware about the service delivery activities still now. These are happened due to lack of awareness program. E-service delivery activities through UISC will not be effective if people are not fully aware of it.

5.2.7 Make UISC AS Center for All Services

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

5.2.8 Initiate Outsourcing System

UISC is a new concept as an e-service provider. It means there are many unexplored areas of business. The attractive business prospects are bound to encourage local and international investors in the near future for the rural people. This will be helpful for smooth functioning of UISC which will encourage the freelancers to run the business in UISC.

5.2.9 To Initiate the Partnership Activities

UISC has the opportunity to make partnerships with public and private sectors to provide services to citizens. The services will involve the E-banking, utility services like electricity bill, gas bill, telephone bill, E-postal services, E-transaction of foreign currency, E-SME, partnership alliance towards UISC and outsourcing in consultation with relevant stakeholders. These services will be based on market analysis, profit motive and revenue earning.

5.2.10 Capacity Building and Service Expansion Strategy for UISC

Firstly UISC management authority will install some digital devices with latest and update technology of hardware and software. Afterwards, it can be appointed a few unemployed volunteers from the youth having minimum education or a few retired employees who have skill on ICT. As the recruited volunteers do not have sufficient

knowledge on technology, they can be provided training and prepare them as skilled human resources.

Secondly, it will be given advertisement at door to door by the volunteers as an innovative technique. Citizens have the opportunity to take services, make comments, evaluate and suggest for further development of UISC activities. After taking feedback from the citizens, UISC management authority will redesign the services and their techniques. The service providers never show power, authority, legitimacy rather than services. They have to develop citizen centric and service oriented manner and etiquette for the betterment and sustainability of UISC. For a dynamic system, the management authority always conduct analysis of current services, find inadequacy, make incremental solutions, radical changes, innovative entrance, system development, latest technology and finally research and development. UISC management will fix up daily, weekly, fortnightly, monthly, yearly target and deeds for implementing the tasks. Then UISC Management will vest responsibilities among the different volunteers evaluate and monitor performance. Finally, redesign its services for citizen's satisfaction and its proactive sustainability.

Thirdly: For the expansion of service sector the management of UISC will take the steps for providing some easier services.

E-education service: UISC can conduct online admission support, admission advertisement, application form, payment of admission fees, exam date and time, qualification and result of different educational institutions and so on. For the promotion of e-education, UISC can collect all types of information of different educational institutions willingly .UISC also provide e-learning especially to the primary schools under its jurisdiction. For this reason, UISC will support the teachers regarding web based e-book via internet, model lecture, power point presentation etc. The learning paradigm remains the same.

E-health services: UISC may preserve the name of all health centers of the concerned UISC area and contract service system, treatment, transport support, and its expenditure, doctors costs and capacity among the vicinity and countrywide. On the other hand, UISC 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 UISC as well as hospitals. UISC also brings first aid to give treatment through medical assistant.

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

Utility Services: UISC will provide some utility service like electricity bill, gas bill, telephone bill, E-postal services etc. Regarding the raising of CSR (Corporate Social Responsibility), UISC will take responsibility to create the awareness building program in different sectors. UISC peruses a competitive advantage based on low cost, product superiority and unique organizational capabilities.

As UISC is a new concept in the context of Bangladesh, there are very few studies regarding the institutional assessment of UISC. So, there is still a lot of opportunity for further in- depth research, find out the missing links and knowledge gap in this area,

REFERENCES

A2i Program (January, 2014). Prime Minister's Office, UISC: *Connecting the Bottom Millions*, P-1

Access to Information Program (February, 2014). Prime Minister's Office, *Digital Bangladesh E-Sheba Sobar Jonno*.

Access to Information Program (January, 2014). Prime Minister's Office, *Partnerships: Mobilizing Comparative Advantages*, P-1

Ahsan,H., Roy, P.K., Akbor, S.U., Mahmood, M., Monon, S.S.A., Uddin&Rahman, A (2010). *Union Tathayo o Sheba Kendra: Guidebook*, Prime Minister's Office, Dhaka, P-11.

Aryal, S. (2000). *Rural Transformation by the Establishment of Community Information Centers (CICs) in the Rural Areas of Nepal: A Pilot Project*. Nepal Rural Information Technology Development Society, NRIDS, Nepal.

Asgarkhani, M (2005). The Effectiveness of e-Service in Local Government: A Case Study, An Electronic Journal of e-Government Volume 3 Issue 4 (175-184), New Zealand.

Bangladesh Enterprise Institute (July, 2010). *Realizing the Vision of Digital Bangladesh through e-Government* <<http://www.bei-bd.org>>

Beep Knowledge System and case owners (2002-2005). Village Information Centres, Pondicherry (India). A Case study of 10(ten) poor villages.Available at <http://unpan1.un.org/intradoc/groups/public/documents/unpan/unpan023756.pdf>

Bhattacharjee, S.(2002,). *Community Information center Project in North East India:connecting the far flang*. Working Group 9.4 Volume 12,No.2

Breitenbach, M.C (2013). *Telecenters for Sustainable Rural Development: Review and case study of a South African Rural Telecentere*.Vol.30, No. 2,262-27

Dictionary.com, LLC. "Effectiveness | Define Effectiveness at Dictionary.com." Dictionary.com | Find the Meanings and Definitions of Words at Dictionary.com(2011). <<http://dictionary.reference.com/browse/effectiveness>

DictionaryB.(n.d). "Effectiveness.<<http://www.businessdictionary.com/definition/effectiveness.html>> [Accessed on 25th November,2014]

Goldkuhl,G.&Persson, A.(2006a). *From E-Ladder to E-diamond- Re Conceptualising Model For Public E-Services*, Accepted on the 14th European Conference on Information Systems(ECIS2006),June 12-14,2006,Goteborg,Sweden.

Islam, M. A.& Islam,M.M. (2008). *Community Information Centers: A Step to Bring Connectivity of the Rural Communities in Bangladesh*

Islam,M.S. & Uddin, M.H. (July 2005). *Information Support Surrices of the Rural development libraries in Bangladesh. Malaysian Journal of Librry& Information Service*,Vol-10 , No.1, July 2005

ISSAS (2009). *Scale Construction, Methods, Statistics and Models*, Fridtjof Nussbeck, University of Zurich (P-3)

Jeong Chun Hai @ Ibrahim (2007). *Fundamental of Development Administration*. Selangor: Scholar Press.

Lofstedt, U. (2005). *Assessment of current research and some proposals for future direction*, International Journal of Public IS

Mahmood, k. (2005). *Multipurpose Community Telecenters for Rural Development in Pakistan*, The Electronic Library, Vol.23 Iss: 2, 2005. PP-204-220.

Marshall C. and Rossman G.B. (1999). *Designing Qualitative Research*,3rd edition, Sage Publication: International Educational &Professional Publisher, P-27

Mahiuddin, K.M and Hoque, S. M. S (2013). *Enabling E-Services for Rural Community through Union Information and Service Centers (UISCs)*, Published in Asian Studies, Journal of the Department of Government and Politics, JU, No. 32, pp 49-57

Oxford Learner's Dictionary (2014). *Implication*, Oxford University Press, UK.

Rowley, J. (2006). *An analysis of the e-service literature: towards a research agenda*. Internet Research, 16 (3), 339-35

Saugata, B.and Masud, R.R. (2007). *Implementing E-Governance Using OECD Model (Modified) and Gartner Model (Modified) Upon Agriculture of Bangladesh*. IEEE.1-4244-1551-9/07.

Swiss Consulting Company Ltd. (2001), Hanoi, *Institutional Assessments* http://www.swissconsulting.com.vn/s_ins_as.htm>[Accessed on 5th November,2014]

The Library Association,Working Party on *Community Information:What Libraries Can Do:A Consultation Document* (London:The Library Association,1980) p.12

APPENDIX-A: QUESTIONNAIRE FOR BENEFICIARIES



Institute of Governance Studies, BRAC University, Dhaka.

A Survey on Institutional Assessment of UISC

[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]

SECTION-1:

(Personal Information)

1. Name of the respondent (Optional).....
2. Gender.....
3. Age.....
4. Occupation
5. Educational Status.....
6. Address.....

SECTION-II

[Please put tick mark (✓) in the respective boxes]

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

Questions based on Variables		Scale				
1.	What do you think about the level of satisfactions of citizens regarding the e-service delivery through UISC?	1	2	3	4	5
2.	How do the existing e-services of UISC meet the quality/standard according to the customers' demand?	1	2	3	4	5
3.	What level of e-service delivery skills of UISC entrepreneurs have?	1	2	3	4	5
4.	How much the citizens are satisfied with the present skill of UISC entrepreneurs?	1	2	3	4	5
5.	What extent of regularity the entrepreneurs are maintaining for the purpose of e-service delivery?	1	2	3	4	5
6.	Should the entrepreneurs ensure further more regularity to enhance the confidence level of citizens?	1	2	3	4	5
7.	What are the levels of accessibility of people at UISC for e-service delivery?	1	2	3	4	5
8.	How much the entrepreneurs positive towards ensuring the accessibility of citizens to e-service of UISC?	1	2	3	4	5
9.	What extent of success has UISC gained by this time regarding the e-service delivery?	1	2	3	4	5

10.	Do the citizens think that the present success of UISC is enough for the smooth functioning of UISC?	1	2	3	4	5
11.	What are the extend of attitude of citizens about the effectiveness of UISC?	1	2	3	4	5
12.	Do you think the present level of e-service delivery is enough for making the UISC effective?	1	2	3	4	5

APPENDIX-B: QUESTIONNAIRE FOR UISC PERSONNEL



Institute of Governance Studies, BRAC University, Dhaka.

A Survey on Institutional Assessment of UISC

[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]

SECTION-1:

(Personal Information)

1. Name of the respondent (Optional).....
2. Gender 3. Age.....
4. Occupation 5. Educational Status
6. Name of Organization..... 7. Address.....

SECTION-II:

[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.	How much e-service providing equipments you have at UISC for smooth service delivery?	1	2	3	4	5
2.	Is the UISC able to fulfill the demand of citizens with the Existing equipments?	1	2	3	4	5
3.	How workable the e-service providing equipments are?	1	2	3	4	5
4.	Do you get enough budgets to run the e-service providing Equipments workable?	1	2	3	4	5
5.	Do you think the present speed of internet is sufficient for providing e-service to the citizens?	1	2	3	4	5
6.	Is it needed to change the present internet connection for smooth e-service delivery?	1	2	3	4	5
7.	What extent of electricity is supplying to the UISC for uninterrupted e-service delivery?	1	2	3	4	5
8.	Does the UISC have sufficient alternative source of electricity supply system for e-service delivery?	1	2	3	4	5
9.	Have you got any training to operate all of the e-service providing equipments of UISC?	1	2	3	4	5

10.	Do you think that you need further more training for smooth e-service delivery?	1	2	3	4	5
11.	How much support are you getting from Union Parishad for proper delivery of e-service?	1	2	3	4	5
12.	Do you think that you need further more UP support than the present?	1	2	3	4	5
13.	Are the entrepreneurs satisfied with the present income which they are getting through providing e-service?	1	2	3	4	5
14.	Do you think that the existing e-service price should be increased for the enhancement of entrepreneurs' income?	1	2	3	4	5
15.	Do you think that the present e-service infrastructure is enough for providing effective level of e-service?	1	2	3	4	5

APPENDIX-C: QUESTIONNAIRE FORKII-1 (Key Informant Interview)



Institute of Governance Studies, BRAC University, Dhaka.

A Survey on Institutional Assessment of UISC

[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]

1. What is your opinion about the extent of use of e-service through UISC?
2. Do you notice any existing problem to run the UISC?
3. What is your suggestion for the further improvement of UISC?