

Development of a2i Access Information: A Study on Digital Bangladesh

¹Dr. Md. Emdad Hasnayan ²Mst. Saria Sultana

¹Director, Kobadak Research Institute & Computers,
Kushtia, Bangladesh

E-mail: dr.hasnayan@gmail.com

²Ph.D. Researcher, Department of Government & Politics,
Jahangirnagar University, Savar,
Dhaka, Bangladesh

E-mail: sariasultana_kst@yahoo.com

Abstract

The People's Republic of Bangladesh has been taken an initiative for the establishment "Digital Bangladesh" to make government services cheaper, hassle free and responsive to the citizenry. Access 2 Information (a2i) program is being implemented by the Prime Minister's Office (PMO), Bangladesh with the technical assistance from UNDP and USAID, is providing technical and sometimes financial assistance across various ministries, divisions and agencies of the government in order to facilitate government e-service delivery. The UNDP supported Access to Information (a2i) Program started in 2007. The program, implemented by the Prime Minister's Office, heralded a mindset change within Government to embrace ICTs as a powerful enabler for the nation's socio-economic transformation. The time-frame of the project's first phase was 2006-2011. One of the best known successes of the phase was the 53 'Quick Win' initiatives that began in 2008 under the leadership of the Secretaries. These 'Quick Win' interventions, influenced significantly by the 'Service Improvement' wave, have created the first batch of citizen-focused e-services in Bangladesh and have transformed the way services are delivered to the citizen. Although it was started under the auspices of non-traditional 'Quick Win' initiatives, the government agencies are implementing large-scale e-service programs under their own steam. Access 2 Information is aiming at e-service delivery for transparency and responsiveness, is the new and improved version of the program. Similar to the first phase, the new project is being implemented by the Prime Minister's Office (PMO) to drive innovation in service delivery. At the same time, since the project is facilitating implementation of e-services across various Ministries, directorates and in field administration, it is working closely with the Cabinet Division which is more important for development of our nation.

Keywords: Digital Bangladesh, e-Service, Initiative, Innovation

Introduction

The successful e-service initiatives catalyzed by a2i program and some fast facts and figures on service beneficiaries are the be selected i.e. Union Digital Center, Union Information Service Centre (UISC), District e-Service Centre (DESC), National e-Service System (NESS), e-book, Multimedia Classrooms, Result of Public Examinations, Admission Application via Mobile Phones, Mobile keypad and text messaging in Bangla, e-Porcha, e-Purjee, National e-Tathyakosh, Online Tax Calculator and Online Tax Return, Electronic Money Transfer System (EMTS), e-postal, Postal Cash Card, Bangladesh Railway: Mobile Ticketing, Bangladesh Railway: e-Ticketing, Public Utilities Billing Payment System: Water

Bill, Gas Bill, Electricity Bill, e-Government procurement (e-GP), Online Application for Bangladesh Machine Readable Passport (MRP), Online Registrar of Joint Stock Companies, National Portal Framework (NPF) etc. In the phase, fundamental progress has been made in improving access to public services. Practically, it is critical to expand the breadth and width of such simplified services and improve the service delivery model to counter the impact of widespread outdated manual processes, resistance to change by civil service staff and a lack of transparency that still frustrates citizens in their attempts to avail of government information and services.¹ An introduction to dashboards will further improve the service delivery performance; induce the process of quality oversight by the senior government officials. The PPP based service delivery points (for example, UISCs) would play an important role to bring in private sector service providers to facilitate access to service in a transparent and accountable manner. The capacity of the service providers is being developed by introducing a CBT (computer based training) programme to enable a quick development of skill training courses. The project will also design and develop a state-of-the-art leadership development course for the government officials. The targeted training programmes are being organized to develop a platform for the ‘Chief Innovation Officers’ to identify opportunities for leveraging PPP modality for service delivery. The ‘Service Innovation Centre’, proposed in this project will be responsible for identifying scope for innovation, provide technical support to design innovative solutions and encourage innovation. Additionally, an ‘Innovation Fund’ established by the project will ensure quick implementation of pilot and to support up scaling of successful innovations. The project is instrumental in establishing a self-sustaining ecosystem required e-services to take root in Bangladesh. The programme supported the formulation of various institutional norms, including basic laws and standards and emerged as the country’s leading centre of expertise for e-government and citizen e-services solutions. This role has made it an important player in influencing the country’s ICT for development (ICT4D) policies and strategies. The objective of the project is to increase transparency, improve governance, and reduce the time, difficulty and costs of obtaining government services for under-served communities of Bangladesh.

Union Digital Center

Union Digital Centers² are newly established one stop service outlets operating at all 4,547 Union Parishads (UP, lowest tier of local government) of the country. Through use of ICT, Union Digital Centers is able to bring various types of information related to government, livelihood and private services to the doorstep of citizens in rural areas. It ensures services providers and users to save time, cost and has made operations hassle free. Operating under the Public-Private Peoples’ Partnership (PPPP) modality, these centres are run by local entrepreneurs, hosted by UPs and supported by central administration.³ Union Digital Centers have enabled citizens to easily and cost effectively access livelihood information and services that affect their daily lives. Today, a farmer in a remote location can learn about appropriate fertilizer and pesticide use for his crops; a victim of domestic abuse can access information on legal resources; a villager can apply for land records, a migrant labourer can learn English using digital resources; and unbanked people can access banking services from Union Digital Centers. All these are now possible from a Union Digital Centers located typically within walking distance or a few kilometers from the citizen’s home. Union Digital Centers⁴ began operations in 2009 in 30 Union Parishads (UP) through partnership between Local Government Division and a2i programme. The Quick Win initiative expanded rapidly culminating in a launch in all 4,501 UPs of the country on November 11, 2010 by the Hon’ble Prime Minister of Bangladesh and UNDP Administrator.

Union Information Service Centre (UISC)

The Hon'ble Prime Minister simultaneously inaugurated Union Information Service Centre (UISC) at all 4,501 Union Parishads of the country on November 11, 2010 with the view to bring the benefits of information technology to the doorstep of citizens in rural areas. These UISCs have become the hub of various types of information related to education, agriculture, healthcare, livelihood and public and private services.

District e-Service Centre (DESC)

On November 14, 2011, District e-Service Centre (DESC) was launched in all districts to ensure service delivery of local administrations at minimum cost, time and hassle. Citizens can apply for services at DESCs directly, via mail order or online. Soon the DESC system will be replaced by National e-Service System (NESS).⁵ The District e-Service Centre (DESC) is an ICT facilitated one-stop service centre which provides an efficient electronic version of the century old manual and heavily bureaucratic service delivery system at every DC office. It is located in the Deputy Commissioner's (DC) office. DESC has been designed to improve the accessibility and transparency of public service delivery system at the district level.

National e-Service System (NESS)

The National e-Service System (NESS) is an initiative to consolidate all government e-Services within one framework. The NESS framework will accommodate all services offered by the government of Bangladesh to its citizens. All stakeholders can efficiently monitor the different stages and progress of all types services delivered to the citizens. The major components of NESS are: e-Service, e-Filing, e-Communication, e-Government Directory Access Service (GDAS), Citizens' profile, e-directory, national e-service portal, e-notification and NESS web service. e-service system will be gradually introduced in 16,000 government offices, where 60,000 officials will make use of the system. Over 400 government services will be transformed into e-services through this system. The NESS prototype, termed Digital District, was launched by the Hon'ble Prime Minister on December 20, 2012 and includes 240 district and upazila offices of Jessore district. 600 government officials were trained through the prototype. The major components of NESS are: e-Service delivery, e-Forms, e-Filing, e-Communication, Government Directory Access Service (GDAS), Citizens' profile, Dashboard etc.

Moving to e-Service

The 64 District Portals are being replaced with a comprehensive portal framework called National Portal Framework (NPF) that accommodates all government and local government offices – a total of over 20,000 offices – throughout the country. Nearly 25,000 officers at the field level have been trained to update their own websites which constitute the entire NPF. The websites at the division, district, upazila and union parishads are scheduled to be in place by March, 2013 allowing e-services from NESS to be accessible through thousands of government websites.

Amar Bornomala

Most of the Bangla fonts developed for online communication have not been approved by Bangla Academy. These fonts do not follow any guideline and are not perfect.⁶ Meanwhile, 24000 websites have been developed for government offices to bring e-services to people's doorsteps initiatives have also been taken to deliver services via mobile phones. In this backdrop, initiative has been taken to create a bangle font 'Amar Bornomala' with Unicode properties in order to make online communication easier for service seekers and service providers alike.

e-Book

A rich e-Book platform (www.ebook.gov.bd) has been created to make all textbooks and interactive books, that is, books containing videos, animation and pictures, available online.⁷ Hon'ble Prime Minister Sheikh Hasina inaugurated the latest editions of the e-Books on April 24, 2011.⁸

Multimedia Classrooms

The two education initiatives by Access to Information Project aim to make teaching and learning more effective and enjoyable for both students and teachers using ICT. The multimedia classroom initiative uses 1 laptop, 1 multimedia projector and internet in addition to the regular materials (blackboards, dusters) used to deliver lectures in class. The Teacher-led Digital Content Development model equips teachers to create relevant content for students, which are later uploaded on a blog.¹⁰

The education initiatives by Access to Information Project aim to make teaching and learning more effective and enjoyable for both students and teachers using ICT. a2i has followed a 3-pronged approach in its efforts to remodel education: establishing Multimedia Classrooms in secondary schools, training teachers on making ICT aided educational content on hard-to-grasp topics and make electronic versions of text books available in primary and secondary levels including technical, vocational and Madrasa institutions. As part of the education reform driven by the Ministry of Education, a2i through public private partnership has so far established 500 multimedia classrooms in secondary schools and trained about 4500 teachers through 400 trainers of public training institutes. Bangladesh is endowed with a large pool of intelligent young citizens who, with proper education, can be turned into a valuable human resource befitting the needs of the 21st century.

Teachers' Portal: Teacher-led Quality Content Development

Teachers' Portal is a platform for all primary, secondary and higher secondary teachers. Teachers from general, vocational and madrasa education systems can become members of this Portal. Here, teachers find necessary digital contents to facilitate their lessons using the available multimedia tools. Teachers, themselves, develop and upload digital contents. The Portal is a collaboration and co-creation platform for the development of qualitative digital educational contents. The Portal also allows blogging among members. This blog enables teachers to share their experiences on multimedia classrooms, digital content and general ideas on delivery of quality education.

Result of Public Examinations

SSC, HSC, JSC and PSC examination results are being delivered through mobile phone text message service since 2009. The results are also being published online since 2010.

Admission Application via Mobile Phones

Since 2009, applications for admission at 32 public universities, 400 colleges, all public medical colleges can be sent via mobile phone text messaging service. 2.7 million applications have been processed through this service.

i. Teletalk Operation Fee

First SMS:

- CADET <space> Application ID SMS send 16222
- Back SMS Message PIN No.

Second SMS:

- CADET <space> PIN NO SMS send 16222
- Back SMS Message (Application ID & Password)

ii. **Trust Bank Mobile Money for Fee**

- User Account Number: Mobile No
- User Pin No: Trust Bank (Pin No)
- Send Authorization Code → Tab Click
- Authorization Code User Mobile
- Authorization Code → Authorization Code Option → Process Transaction (Tab)
- Next → Transaction (Back to Message)

iii. **Q Cash for Fee**

- Q Cash Icon (Next Option) & Success

Source: Teletalk Bangladesh

Mobile keypad and text messaging in Bangla

It is imperative to use information technology in local vernacular in order to make the benefits of information technology available to the wider population. Thus, to make it easy for users to communicate through various types of mobile phones, a Bangla keypad has been developed for use in mobile phones. Moreover, import of any mobile phones without Bangla keypad has been restricted since January 31, 2012.

e-Healthcare

Mobile healthcare: Citizens can now avail health information free of charge via mobile phones from doctors employed at public health complexes. All district and upazila hospitals (482 hospitals in total) have been equipped with a mobile phone for this purpose.¹¹

i. **Telemedicine:** Patients can now avail expert advice through telemedicine without having to travel to hospitals. At present telemedicine services are being delivered from 8 hospitals and 30 UISCs through Skype.

ii. **Healthcare through text message:** Patients can now seek health advice and make complaints through text messaging service. Authorities also respond very quickly. The phone numbers are displayed at all public hospitals.¹²

The process: cmp<space>dasmina<space>complain/suggestion> send to 01733077774

e-Porcha

Citizens can now easily apply online for certified copies of records of land (SA, CS, BRS), porcha/khaitiyan. The citizens are receiving documents without any hassle and at the same time the supplied records are automatically being digitised. All records available at the district record rooms are being digitised at the joint initiative of a2i, land ministry and district administration. This will achieve digitisation of .45million khatiyans.

Source: DESC Dashboard

e-Purjee

Sugar cane growers of 15 state owned sugar mills of Bangladesh are now receiving e-Purjee via text messages. This has reduced a lot of hassle on the farmers' part.¹³ Moreover, timely delivery of sugar cane at the right time has also increased sugar production in the country. The Prime Minister officially launched the e-Purjee system on December 12, 2009. As part of

its series of pilot initiatives, a2i in 2009 collaborated with Bangladesh Sugar and Food Industries Corporation of the Ministry of Industries to initiate e-Purjee service at the sugar mills in Faridpur and Mobarakganj.

Source: Bangladesh Food and Sugar Industries Corporation

Online Tax Calculator and Online Tax Return

Now tax returns can be prepared using online tax calculator through National Revenue Board's website. Moreover, since last year tax payment can be made online.

This e-Payment¹⁴ Portal is an easy and secure one stop solution for paying your Income tax, VAT and Customs duty online. A momentous step in the Government of Bangladeshes promise of a Digital Bangladesh, this website is an integrated solution for e-payment of income taxes, VAT, customs duty and other taxes. The site employs global-standard secure payment systems and is very simple to use. Register yourself and click on the Learn link to get started.

Electronic Money Transfer System (EMTS)

Money can now be transferred quickly, safely and easily via electronic money transfer system of Bangladesh Post Office. A money order for Tk 50,000 can now be sent within a minute from any of the 2,750 post offices and sub-post offices in the country. Previously it used to take 3-7 days to send a money order. Hon'ble Prime Minister officially launched EMTS on March 26, 2010.

e-Post

Bangladesh Post Office introduced Electronic Mail Service¹⁵ in the name of E-Post from 16 Aug 2000. ePost service enables people to send and receive messages or scanned images through e-mail from these Post Offices in the country. For the first time in the country, people who would not normally have access to internet would be able to send and receive e-mail messages without possessing an e-mail id thereby bridging the digital divide in the arena of public communication systems.

e-Services (Foreign Money Order)

- Bangladesh Post Office has signed bilateral money order agreement with 15 (fifteen) countries.
- The names of the countries are follows 1. Denmark 2, Fiji 3. Japan 4, Kuwait 5, Malaysia 6. Malta 7 Maldeep 8 Qatar 9 . Singapore 10. Sweden 11. United Arab Emirates 12. USA 13. UK 14. Germany 15. Yeamen

Postal Cash Card

Postal Cash Card is a type of debit card issued by Bangladesh Post Office. Through this card a customer can retrieve money from his account at the post office and transfer money to another cardholder and use it to shop from certain shops.

Bangladesh Railway: e-Ticketing

Bangladesh Railway has started e-ticketing system since May 29, 2012. Passengers can now easily buy tickets online using visa card, credit cards or debit cards through registration at Bangladesh Railway¹⁶ website (www.railway.gov.bd) or (www.esheba.cnsbd.com)

Public Utilities Billing Payment System

Bills of various public utilities such as electricity, gas and water can now be paid online or via mobile phones. This has greatly facilitated bill payment by customers.¹⁷ Water Bill, Gas Bill, Electricity Bill.

e-Government procurement (e-GP)

e-Government procurement (e-GP) as the collaborative use of Information and communications Technology (especially the Internet) by government agencies and other actors of procurement community in conducting all activities of Government Procurement Process Cycle (GPPC) for the acquisition of goods, works, and consultancy services with enhanced efficiency in procurement management. e-GP System is a web based system which encompasses the total procurement lifecycle and records the all procurement activities. The purpose of this system is to maintain complete and up-to-date Public Procurement System activities of all public agencies as well as provide tender opportunities to all potential tenderers from Bangladesh and abroad.¹⁸

Online Application for Bangladesh Machine Readable Passport (MRP)

It is a great pleasure for me to see that the Department of Immigration & Passports under the Ministry of Home Affairs, Government of the People's Republic of Bangladesh, is happily launching its own Website. In this age of information and communication technology, the necessity of a Website for this Department that has the widest public contact can hardly be overemphasized.¹⁹

Types of Bangladesh Passport

There are three types of passports that a Bangladeshi citizen may hold: Regular or Tourist passport (Green cover), Official passport (Blue cover), Diplomatic passport (Red cover).

Online Registrar of Joint Stock Companies

The previous image of Registrar of Joint Stock Companies and Firms was one of long queues, dissatisfaction, confusion and harassment in the hands of agents. To overcome the horrible situation an initiative was taken to deliver services online. As a result, general public can now avail e-service at minimum cost, time and hassle.²¹

National e-Tathyakosh

In the light of ensuring access to right information at the right time, Access to Information (a2i) programme has taken the initiative to provide a one-stop solution for sharing livelihood-related information, through an online knowledge bank, the Jatiyo e-Tathyakosh (www.infokosh.bangladesh.gov.bd). This is a national e-Content repository having the largest pool of livelihood contents in Bangla delivered through audio-visual, text and animation formats.²²

National Portal Framework (NPF)

The National web Portal Framework (NPF) is the single platform of all public information from any government organization to ensure easy accessibility for citizens, easy updating of data by non-technical personnel and sharing of data amongst various organizations. The development of 24,000 portals for all ministries, all directorates, all semi-government and all autonomous organizations, and all government offices at the division, district, upazila and union levels is at the last stage and would be in operation by September 2013.

Quick Wins Innovation in Services

Quick Wins are Information and Communication Technology (ICT) based short term initiatives adopted by various ministries and agencies of the Government of Bangladesh aimed at improving public service delivery mechanism. With advisory and technical support from the Access to Information (a2i) Programme over 707 Quick Win initiatives are currently at various stages of implementation. Among the completed Quick Wins, the successful ones are expected to be scaled up.²³ For implementing Quick Wins, a2i has partnered with all government ministries and directorates; private sector companies and projects funded by UNDP and other development partners. The private sector organizations range from IT associations, companies, telecommunications operators, banks, educational institutions, and NGOs.

Innovation Fund by a2i

In line with Government's Vision 2021, Access to Information (a2i) project has been playing a critical role in revolutionizing public service delivery in Bangladesh.²⁴ a2i's Horizon Scan Report (2007) indicated insufficient understanding and low confidence among the government officials regarding ICT usage and managing ICT projects as the major obstacles, along with a lack of innovative thinking and partnership with private sector, in bringing services to citizens' doorsteps. To address these issues, a2i supported all Secretaries (or equivalent officers) of the Government in identifying 53 Quick Win (small scale easily achievable ICT enabled initiatives focused on service delivery rather than internal automation) initiatives in 2008. Some of the successes have already been scaled up. Examples include Union Information and Service Centres (scaled up from 2 pilot Union Parishads to all 4,545), District e-Service Centres (scaled up from 1 district to all 64), e-Purjee System for sugarcane farmers (scaled up from 20,000 farmers in 2 sugar mills to 200,000 farmers in 15 sugar mills) and Multimedia Classrooms (scaled up from a handful of schools to 23,000 by 2013). Equally importantly, the Quick Wins that have not succeeded or remained limited in scope (Digital Milk Analyzer in Milk Vita, Interactive Voice Response system in Dhaka City Corporation, Cell Broadcasting for Early Warning of Disasters, Agriculture Information and Communication Centres, among others) have taught the government officers who designed and implemented them valuable lessons about process re-design and organizational change management. The Quick Wins have enabled the government to explore greater possibilities in improving service delivery through innovative and affordable methods. a2i is establishing an Innovation Fund to encourage innovative service delivery ideas and endeavors for greater public good in Bangladesh. The Innovation Fund will promote homegrown initiatives with localized solutions to achieve the slogan 'services at citizen's doorsteps' Government officials, development practitioners, private sector professionals, university students and citizens coming forward with out-of-the-box ideas can apply for this fund. The Innovation Fund will also groom the young generation of innovators and creators who will be able to assist the Government of Bangladesh in its endeavors in providing people friendly public services for poverty alleviation and equitable growth. The Innovation Fund is open for all innovators from public and private sectors with focus on: Pro-poor service delivery, Service decentralization, Gender empowerment, Rural Development, Green Initiatives, Low cost devices, Right to Information, Bangla Language Tools.

11,000 young entrepreneurs participated in Digital Centre Conference

The Digital Centre Entrepreneurs Conference-2014 held on the national parade ground here on November 11 to mark the fourth founding anniversary of Union Digital Centres (UDCs).²⁵ Around 11,000 young entrepreneurs of 4,547 Union Parishad digital centres, 321 municipality centres, and 407 ward-level centres in 11 city corporations joined the

conference, organised by the Access to Information (a2i) Programme of the Prime Minister's Office supported by UNDP and USAID. Honourable Prime Minister Sheikh Hasina was chief guest in this conference. In her speech, she called upon the country's youth force to become entrepreneurs and create employment opportunities for others with the help of information and communication technology (ICT). She also gave thanks to the UNDP Administrator Helen Clark for attending in inauguration of Union Digital Centre in 2010.

Digital Bangladesh by 2021 Govt. boasts of ICT success

The country has made major strides in achieving its vision of Digital Bangladesh and there is a likelihood that it could make the vision a reality before the 2021 deadline. The government has done more than half the job of Digital Bangladesh by 2021, one of the election pledges of the ruling Awami League, said Zunaid Ahmed Palak, state minister for post, telecommunications and information technology. Digital centres in 4,547 union parishads, 321 municipalities, and 407 wards in 11 city corporations have already been set up, according to data of Access to Information Programme of the Prime Minister's Office. Kabir Bin Anwar, project director of the Access to Information Programme and director general of the PMO, came up with the information at a PMO press briefing on Tuesday's Digital Centre Entrepreneurs Conference. The conference at the National Parade Ground would mark the fourth anniversary of the union digital centres. Prime Minister Sheikh Hasina and her IT Affairs Adviser Sajeeb Wazed Joy would be there.²⁶

The centres have already served people 12 crore times with services like registration of seven crore births, and more than 20 lakh overseas job-seekers have had services from the digital centres. Around 10,000 young ICT entrepreneurs have become self-reliant in the 4,547 union digital centres, Kabir said, adding that time and money of the people had been saved and the entrepreneurs earned Tk 140 crore.

Minister Palak said even Bill Gates praised Bangladesh in a global ICT forum recently saying that people of the country had been widely adopting new technology. "But we are not satisfied as there is still a long way to go to achieve the vision of Digital Bangladesh," he added. He said by 2016 all union digital centres would be connected via fibre optic cable with one mbps Internet connection. Within this month, digital signature facility would be introduced down to the additional-secretary-level officials and this facility would be taken to the upazila level by next year, he added. He said offices of the deputy commissioners and upazila nirbahi officers have already been digitalised and around one lakh WiFi zones would be set up across the country with the help of China.

M.A. Karim²⁷ (2010) "**Digital Bangladesh for Good Governance**" The current government's Digital Bangladesh by 2021 vision proposes to mainstream ICTs as a pro poor tool to eradicate poverty, establish good governance, ensure social equity through quality education, healthcare and law enforcement for all, and prepare the people for climate change. Remarkable to mention is the fact that over 50 Secretaries of the government, a similar number of e-Governance Focal Points who are senior policy makers one in each Ministry, all 64 Deputy Commissioners who are heads of district administration, and all 483 Upazila Nirbahi Officers who are heads of sub-district (upazila) administration have attended multi-day long orientation workshops on Digital Bangladesh. These intensive workshops led by the Prime Minister's Office were unprecedented.

M. A. Salam & M.Z. Islam²⁸ (2013) "**e-Government Service Delivery: An Assessment of District e-Service Centres in Bangladesh**" Government of Bangladesh (GoB) accepted the

pivotal role that Information and Communication Technology (ICT) has played since the last decade, in bringing government services to the doorsteps of the citizens and connecting the people. With this aspiration GoB has set-up e-service centers at Union, Upazila and District level as part of e-governance scheme. The purpose of this study is to assessment of District e-Service Centres (DESC) of Bangladesh. Both the qualitative as well as quantitative research approaches were conducted. Data was collected using self-administered questionnaire from random samples drawn from the population of service providers and service receivers from four different DESCs of Bangladesh. The e-governance service qualities were assessed by six different variables with the intention of assessing the DESC. The standard of service, choice & consultation, courtesy & consultation, entrance & information, and value for money have found the positive relation with citizen's satisfaction. The study results revealed that the DESC provides public services efficiently, the eservice centres are positively interconnected with effective e-governance service that impending to validation of hypothesis. The performance measures of DESC regarding the e-governance services promises revealed its scanty accomplishment and breach between demand and supply of service that is why e-governance service delivery needs further improvement as desire of the citizens. It is believed the comprehensive analysis on e-service centres would be imperative to assess the effectiveness of delivery of e-government services. This study has some limitations and also indicates directions for further research towards good governance.

Conclusion

The Government is committed to take ICT to the door-steps of the mass people and has, therefore, taken several significant steps to develop infrastructure and legal framework of ICT. Ministries/ Divisions and government agencies were given responsibilities for implementing the action items. Some of them were implemented immediately as quick-wins. These include payment of utility bills, purchase of railway tickets, and information on availability of seats of trains, early warning for natural disaster and e-purjee for sugarcane farmers using mobile phones. Use of mobile technologies in publication of results of various examinations and in university admission has reduced the time, hassle and cost of the students and their parents to a large extent. Information and service centres were established with a view to delivering services to the door-steps of the people and steps have been taken to expand and diversify these initiatives. The Government constituted Digital Bangladesh Task Force in 2009 by renaming the National ICT Task Force.²⁹ The aim is to expand the use and application of ICT by scaling up digital literacy at every strata of the society; ensuring service delivery to the citizens through the use of ICT; reducing poverty through expansion of ICT-based industry; generating employments in knowledge-based industry; and building a modern and developed country to be branded as Digital Bangladesh through introduction of e-commerce and e-governance. In order to ensure service delivery to the citizens through development of ICT, steps have been taken to establish a separate Department of ICT. Digital Bangladesh proposes to use modern technology to bring about impacts on every aspect of public and private life and the way citizens, businesses and the government interact to improve the quality of life.

References

- Bangladesh Bureau of Statistics. (2014, April). Statistics and Informatics Division (SID), Ministry of Planning, Government of the People's Republic of Bangladesh, p. 8.
- Bangladesh Economic Review. (2014). Finance Division, Ministry of Finance, Government of the People's Republic of Bangladesh, p. 176.

- Bangladesh Railway: e-Ticketing. (2014, November). Bangladesh Railway-Government of the People of Republic of Bangladesh, Retrieved from www.railway.gov.bd or www.esheba.cnsbd.com
- Central Procurement Technical Unit (CPTU). (2014, December 01). IMED, Ministry of Planning, Government of the Peoples Republic of Bangladesh, <http://www.cptu.gov.bd>
- Digital Bangladesh by 2021 Govt. boasts of ICT success. (2014, November 10). The Daily Star, Retrieved from <http://www.a2i.pmo.gov.bd>
- DESC Dashboard. (2016). District e-Service Centres. Access to Information (a2i) Programme, Retrieved from www.a2i.pmo.gov.bd/content/district-e-service-centres
- Digital Cane: e-Purjee. (2014, December). Bangladesh Sugar & Food Industries Corporation, Retrieved from <http://www.bsfc.gov.bd>
- Digital Centers Entrepreneurs Conference: content. (2014, November 11). Retrieved from <http://www.a2i.pmo.gov.bd/content.html>
- e-Healthcare. (2011). Retrieved from http://app.dghs.gov.bd/inst_info/mobile_search.php
- e-Services: Foreign Money Order. (2014, December). Bangladesh Post Office Online, Retrieved from <http://www.bangladeshpost.gov.bd>
- e-Service for Everyone. (2013, July). “Digital Bangladesh”. Access to Information (a2i) Programme, Prime Minister’s Office.
- Health Department. (2015). Access to Information (a2i) Programme, Retrieved from www.a2i.pmo.gov.bd
- Innovation Fund by a2i. (2014, November 28). Access to Information (a2i) Programme, Retrieved from <http://a2i.pmo.gov.bd/content/innovation-fund-a2i>
- Karim, M.A. (2010). “Digital Bangladesh for Good Governance”. Bangladesh Development Forum 2010, Prime Minister’s Office, The Government of the People’s Republic of Bangladesh, p. 2.
- Multimedia Classrooms. (2013). Access to Information (a2i) Programme, Retrieved from www.a2i.pmo.gov.bd/content/education
- National Curriculum & Textbook Board. (2011, April 24). e-Book platform, Access to Information (a2i) Programme, Retrieved from <http://www.ebook.gov.bd>
- National e-Tathyakosh. (2014, November). Access to Information (a2i) Programme, Retrieved from www.infokosh.bangladesh.gov.bd
- Online application for Bangladesh machine readable passport, Department of Immigration & Passport, Government of the Peoples Republic of Bangladesh, <http://www.passport.gov.bd>, visited on December 2, 2014.
- Online Support. (2014, December). Access to Information (a2i) Programme, Retrieved from <http://www.ebook.gov.bd>
- Online Tax Calculator and Online Tax Return. (2014, December). Retrieved from <http://www.nbr-bd.org>
- Passport Application Enquire, The Government of the Peoples Republic of Bangladesh, http://www.immi.gov.bd/passport_verify.php
- Public Utilities Billing Payment System. (2011, March). WASA, Titas gas, Power Development Board, DESCO, DPDC, Palli Bidyut and West Bengal Electricity Regulatory, Retrieved from dwasa.org.bd
- Quick Wins Innovation in Services. (2007). Access to Information (a2i) Programme, Retrieved from <http://www.a2i.pmo.gov.bd/content/quick-wins-innovation-services>

- Registrar of Joint Stock Companies. (2015, September 14). Office of the Registrar of Joint Stock Companies and Firms, Retrieved from <http://www.roc.gov.bd/site/page/b0796bbc>
- Salam, M.A. & Islam, M.Z. (2013). "e-Government Service Delivery: An Assessment of District e-Service Centres in Bangladesh". *JU Journal of Information Technology (JIT)*, Vol. 2.
- Staff Correspondent. (2014, November 28). Union Digital Center. *The Daily Star*, Retrieved from newspaper homepage URL
- Textbooks and Interactive Books. (2014, November). Access to Information (a2i) Programme, Retrieved from www.ebook.gov.bd
- Union Information and Service Centre (UISC). (2014, January 09). Access to Information (a2i) Programme, Retrieved from www.a2i.pmo.gov.bd
- 11,000 young entrepreneurs participated in Digital Centre Conference. (2014, November 12). Retrieved from <http://www.a2i.pmo.gov.bd>