e-Governance in ODL System

Khurshid Alam Borbora[1] and Ridip Dev Choudhury[2]

[1,2]Institute of Distance and Open Learning, Gauahti University
E-mail: [1]khurshidborbora007@yahoo.co.in, [2]ridipgu2010@gmail.com

Abstract—*As per recent data, though the Gross Enrolment Ratio (GER) in India is close to 19 per cent but significantly much below the 26 per cent average GER [1] in global scenario. With the aim of attaining 30 per cent in GER by 2020 in higher education, the government has begun efforts in various dimensions. But in conventional universities, whether it may be central or state, the number of seat capacity is very less. Also the cost of education in private universities/institutions is very much expensive. So, because of the above two major reasons the targeted GER seems to be an uphill task for the government. The only other way to achieve the aforesaid target is the open and distance learning (ODL) system. Till now, there are 14 open universities and nearly 200 dual mode universities in India who offer ODL courses. In ODL system, e-governance plays a major role in providing quality and effective education. The proper application of Information and Communication Technology (ICT) makes the e-governance easier. In this paper we discuss the e-governance model applied in the Institute of Distance and Open Learning, Gauhati University as a case study.*

Keywords: GER, ODL, e-governance, ICT

1. INTRODUCTION

There has been a rapid take up and integration of the internet and other ICTs (Information Communication Technologies) by government from the 1990s. This application of ICTs to government processes is referred to as e-governance. Primary function of e-government is to support communication between governments and citizens via web-enabled computer technologies. It was assumed that e-government would lead to a range of benefits including improved service delivery; trust in government, participation, transparency and accountability. e-governance services can be shared between citizens, businessman, government, employees. These four models of e-governance are as [2]:

1. Government to citizens (G2C)

2. Government to government (G2G)

3. Government to employees (G2E)

4. Government to businessman (G2B)

2. E-GOVERNANCE IN ODL SYSTEM

In the distance education literature, the term "student support" is used as frequently as "learner support". Hence, in this volume, the term 'student' is recognized as being equivalent to 'learner' in order to simplify usage. However, it is worth noting that the term 'learner' is becoming more commonly used in the literature because it implies a more active instrumental role in the learning process than the word 'student'. Further, the term "learner" is generic, and can be applied to the wide variety of contexts within which learning takes place (e.g. public and private schools and post-secondary institutions, corporate and public employee training settings). [3]

The main objective of application of e-governance in education sector is to enhance the quality and the accessibility of education. Particularly in ODL system, with the application of ICT, e-governance provides better ways of communicating to the students, new ways of imparting education and new ways of organising and delivering information and services. The communication gap between the administrators, the teachers and the students can be minimised with the use of Internet and the mobile communications.

In ODL system, the use of e-governance will -

- Override Administrative Delays in Education System.

- Bring in Transparency, Accountability and timely resolution of process vulnerability that exist within the education system.

- Reaching the masses

- Overcoming distance and accessibility

- Enabling lifelong learning

- Leads to significant reduction of transaction costs, time, space, and manpower.

3. CASE STUDY: E-GOVERNANCE AT IDOL, GAUHATI UNIVERSITY

The Institute of Distance and Open Learning, Gauhati University, Assam , India which has been the pioneering institution offering the advantages of ODL in Assam and its sister states. The IDOL has been able to contribute to the educational history of North –East by democratizing higher education in real sense of the term. The institution with greater

accessibility provides equal opportunity to large number of aspirants, who otherwise have to drop their lifelong ambition to pursue higher education. Widely recognized as the pioneering institute in the arena of Distance and Open Learning, IDOL has successfully met the increasing demands for higher education in the region.

3.1 Background & Motivation

The IDOL has been able to contribute to the educational history of North –East by democratizing higher education in real sense of the term. The institution with greater accessibility provides equal opportunity to large number of aspirants, who otherwise have to drop their lifelong ambition to pursue higher education. Widely recognized as the pioneering institute in the arena of Distance and Open Learning, IDOL has successfully met the increasing demands for higher education in the region.

Since inception, the IDOL earned the distinction in using ICT in the support services and teaching-learning processes. The IDOL office is fully computerized and administration is managed almost paperless.

3.2 The e-Governance System Model

The e-governance system has been developed and launched by the in house personnel and faculty members of the Institute. Over the period, the technical support has been provided by the in house software professionals. Non-dependence on the outside technical support enhanced the efficiency and helped in doing the customized modification time to time. The academic support and regular academic inputs have been provided by the faculty member, which increased its popularity and reliability. The user friendly nature is another feature for the sustainability.

The e-governance system model used in IDOL, Gauhati University is shown in Fig. 1.
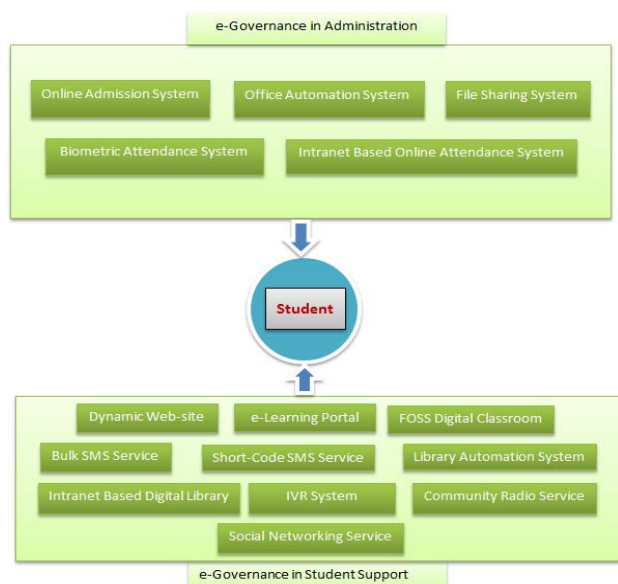

Fig. 1: e-Governance System Model in IDOL, Gauhati University

3.3 e-Governance in Administration

At IDOL, a few initiatives have been taken in the implementation of e-governance for the administration of the institution. Let us take a brief discussion below.

3.3.1 Online Admission System

With this newly added feature, IDOL has been able to reach the remote areas of North East India, and provide the facility to the learner community to be a part of Gauhati University. As the security of the system is enhancing using high end 256 bit SSL certificate, the learners are becoming confident enough to step into the virtual world.

3.3.2 Office Automation System

An office automation system is developed by the faculty members of the department of computer science of the institution. The system is developed using VB.NET platform and the database server is designed using POSTGRESQL in GNU/Linux Server.

3.3.3 File Sharing System

For the better management, accessibility and transparency of the manual file processing, a digital file sharing system is developed using drupal. The system is installed in a GNU/Linux server and through web interfaces it is accessed through LAN within the institution. Users are defined according to their roles assigned within the system.

3.3.4 Biometric Attendance System

A biometric office attendance system is installed for the staff members and the officers. Using finger print and face detection technology the attendance of the staff members of the institution are registered.

3.3.5 Intranet Based Online Attendance System

Along with the biometric attendance system, an intranet based online attendance system is also developed which basically for the attendance of the teachers and officers of this institution. In this system leave apply and grant facility is provided so that along with the teachers and officers, the staff members can also apply for the kinds of leave he/she can avail.

3.4 e-Governance in Student Support

3.4.1 "Bodhidroom" - The e-Learning Portal

"Bodhidroom" (www.bodhidroom.guidol.in), the e-learning portal of IDOL, launched in November 2009, is a pioneering step in the field of Open and Distance Learning (ODL) in the north-eastern region and an important step towards modernizing the processes of teaching-learning and it is continuously providing an "Integrated Knowledge Environment" to all its learners. The portal has been developed by the faculty members of the Institute. Over the last five years, the technical support has been provided by the

faculty members. Non-dependence on the outside technical support enhanced the efficiency and helped in doing the customized modification time to time. The academic support and regular academic inputs have been provided by the faculty members, which increased its popularity and reliability.

- The Portal has the following salient features:
- 24 x 7 Virtual Classroom
- Independent Discussion Forum for every course
- Independent News Forum for every course
- Online interaction facility with faculty members
- Online interaction between the students making the scope of collaborative learning
- Interaction through chatting of all users of all courses who are online.
- Separate Chat Room for individual course
- Message My Teacher: When a student logged on to Bodhidroom, after enrolling himself/herself to a course, he/she will see the names of the virtual class teachers. Student can directly send offline messages to the teachers. When the teacher is logged on, he will receive an alert of incoming messages. Then he can reply to the message.
- Online Study Material
- Old Examination Question Papers
- Online Self-Assessment Test: Student can test himself on a particular paper. This includes Multiple Choice, True/False, Fill in the blanks, matching type Questions. After completing the Test, the student immediately gets the results with the correct answers/wrong answers and the scores.
- Expert's Column: Provision for publication of special writings of Teachers/ Experts.
- Participants List: Student can view the list of participants in a course and then he/she can communicate with each other.
- Online/Offline Assignments: The assignments on a course/paper can be provided either online or offline to the students. Students can submit them by uploading facility. After reviewing, the teachers can send the assignments to the individual students.
- Upcoming Events

3.4.2 Dynamic Website

Dynamic website provides different facilities and information related to students and to the learning community, such as Admissions, Learning, Examination and other day to day affairs. Using this platform IDOL used to notify the students and also study center correspondence regarding different academic and administrative events, providing examination results and mark list to the students.

- Easy to upload content using dynamic GUI
- Dynamic Ajax based GUI for the enquiry of results fees etc.
- Use of different social networking based API for the better flow of information
- Secured SSL certificate based architecture for the protection of data and transactions (for online payment)

3.4.3 FOSS Digital Classroom

Adopting the new age technology for teaching and learning, IDOL has started the implementation of Free and Open Source Software (FOSS). For the IT courses like MCA/MSc-IT and PGDCA, currently at the IDOL campus, almost 100 computers are connected with a campus LAN and a virtual digital learning environment is created using a Learning Management System (LMS), moodle. All the theory and practical classes are conducted at this learning environment and the activities of the students are monitored by the teachers.

3.4.4 Bulk SMS & Short Code SMS Services

- Provides information to a bulk community using a very user friendly and efficient GUI.
- Provides a two way communication with the learner community

Alerts regarding examinations, results, contact programmes and other information. The students can enquire their results using the short code SMS at 56070. IDOL is using this facility for providing the results from last few years and delivered almost 80,000 queries every year.

3.4.5 Library Automation System

For house-keeping operations, IDOL Library uses SOUL (Software for University Libraries) software provided by INFLIBNET Centre, an IUC of University Grants Commission (UGC).

3.4.6 Intranet Based Digital Library

As a part of the e-governance project, a digital library system is developed by the faculty members of the computer science department using DSpace.

3.4.7 IVR System

The IVR System with toll-free no 1800-345-3614, provides a 24 X 7 information support to our learner. We are frequently updating the pre-recorded voice in system for the convenient of our student.

3.4.8 Community Radio Service

Community Radio is a not-for profit radio service that provide a mechanism for facilitating individuals, groups, and communities to share their own stories, experiences, and in a media rich world, enable them to become active creators and contributors of media. In many parts of the world, community radio acts as a vehicle for the community and voluntary sector,

civil society, agencies, NGOs & citizens to work in partnership to further community development as well as broadcasting aims. [4]

With this service facility, the learners as well as the community around the Gauhati University, are benefited by the various educational programmes.

3.4.9 Social Networking Service

The sites like Orkut, Facebook are giving rise in the popularity of networking between people all-over-the-world. In Facebook, there is a page and a group for IDOL. The constant monitoring of these two are the responsibility all the faculty members and officials of IDOL. The Facebook group is gaining popularity among the learners as they can share their views/ideas. The administration is now being able to get acquainted to those service sides this institute are lagging.

4. CONCLUSION

The main objective of the project is to minimize the communication gap among the students/public and the University and provide user friendly atmosphere and adequate learning resources. The administrators; and the staff monitor each and every activity of the system and provide feedback to the University. The large sections of the people of the region have been benefitted through these initiatives.

REFERENCES

[1] https://data.gov.in/keywords/gross-enrolment-ratio

[2] Yadav, N. and Singh, V.B., "E-Governance: Past, Presnt and Future in India", *International Journal of Computer Applications (0975 -8887)*, Vol. 53, No.7, September 2012.

[3] J.E. Brindley, C. Walti & O. Zawacki-Richter, "Learner Support in Open, Distance and Online Learning Environments", *Bibliotheks- und Informationssystem der Universität Oldenburg*, July 2008.

[4] http://www.idolgu.in/student_support/radio_luit_FM_90.8