Challenges and Prospects of E-governance in Education

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Abstract:

Electronic Governance (e-Governance) is the use of Information and Communication Technologies (ICT) for the planning, implementation, and monitoring of government an academic institution, the real time information processing and knowledge management of the institution is made possible. E-Governance solution is an integrated programs, projects, and activities. E-Governance is expected solution that facilitates the processing and maintenance of to help deliver cost-effective and easy-to-access citizen large volumes of information - including student, faculty, services, and improve processing of transactions both within inventory, asset management, facility management, the government, and between the government and other transport, library, staff details, and payroll and student agencies. The National e-Governance Plan (NeGP) which is fees among various departments in an academic the flagship e-governance programme of the Central institution. Government, was approved by the Government of India in E-Governance solution in the field of educational sector May 2006 comprising with 27 Mission Mode Projects(MMPs) at the Central, State and Local Government level. But the incorporates whole data and processes of an educational number of mission mode projects is going to be 30 which are Institution into a unified system, making the process under process on the cabinet where education sector is one of uncomplicated, well-organized and error proof.

The them. Under the NeGP, the state 'Mission Mode Projects' are solution is designed to make the system user-friendly, Land Records, Road Transport, Property Registration, time saving and cost saving also. Many of them are Agriculture, Treasuries, Municipalities, Gaon Panchayat, flexible enough to adapt to the changing educational Commercial Taxes, Police, Employment Exchanges, environment efficiently and quickly. WCD&SW, Cooperation. By inclusion of education in the Educational institutions may have various requirements State level MMPs of NeGP,

The concept of effective that include computerization and management of governance of education sector is thoroughly innovated; for processes such as registration, admission, student effective handling of new challenges confronting the information, classes, time table, transport, attendance, education sector. Educational e-governance can facilitate in library, salary and expenses, examinations, performance, improving transparency, providing speedy information dissemination, improving administrative efficiency and public grades, hostels, security and reports. Many of the software services in all aspects of the education. It is beyond doubt that providers allow their clients to choose from the available for the quantity and quality of output of our education system modules to grab their needs. to substantially improve, there is no option but to introduce e-governance in this sphere.

1. INTRODUCTION

conveniently, allowing more to be done for more people E-governance, meaning 'electronic governance' is using The point essentially is to Deploy Information and information and communication technologies (ICTs) at Communication Technology (ICT) to drive efficiency and various levels of the government and the public sector and transparency in the systemand improve the quality of beyond, for the purpose of enhancing governance.

1.1 E-governance vision and mission

governance is somewhat poor because of which the NeGP is Establishing a Networked environment for greater **setup, but it is furthermore poor in the education sector** transparency and accountability in delivery of public **which is one of the key pillars for the rapid growth of** services to facilitate moral & material progress of all **economy of the country. The challenge is therefore to bring e-**citizens. **Governance into educational sector. This research aims at** The purpose is to: **bringing ICT for e-governance of the education sector.**

• Make government more efficient by increasing the accountability and transparency of government
• Deliver information and services to constituents more
• Increasing citizen participation in governance

Governance solutions in educational sector incorporates
       Government to Government Communication (G2G)
       Government to Citizens Communication (G2C)
       Government to Business Communication (G2B)

1.2 E-governance components

Administrative and university management functions that The main components of E-governance are are necessary for successful handling of all issues relating to the academic affairs and the challenges for smooth functioning of an educational institution. Through implementation of e-Governance solution in every unit of The basic requirements of e-governance components are High and affordable Information and Internet infrastructure within Government Ministries, private sector and citizens Extensive ICT Human Capacity development in Government, Private sectors and citizens Legal Framework that recognizes and supports digital communication.
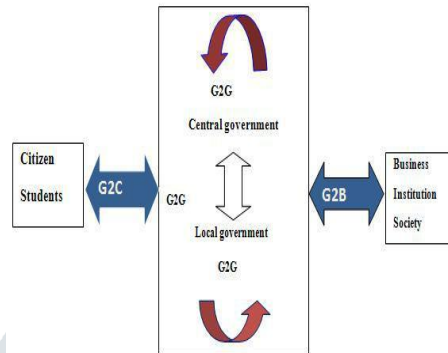
1.3 E-governance model

Figure 1: E-governance model

1.4 E-governance in india

Union Government has approved the National e-Governance Plan (NeGP), comprising of 27 Mission Mode Projects (MMPs) and 8 components on May 18, 2006 to give a boost to e-Governance initiatives in India. Moreover, three sector education, health and Public distribution system is under process on the cabinet. Department of Information Technology (DIT) and Department of Administrative Reforms and Public Grievances (DAR&PG) has formulated the National e-Governance Plan (NeGP). The main vision of National E-governance Plan is:

"Make all Government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency & reliability of such services at affordable costs to realise the basic needs of the common man."[17]

2. NATIONAL MISSION ON EDUCATION THROUGH ICT

Under this Mission, a proper balance between content generations, research in critical areas relating to imparting of education and connectivity for integrating our knowledge with the advancements in other countries is attempted. For this, what is needed is a critical mass of experts in every field working in a networked manner with dedication. Moreover, the ICT can be utilized as a tool in education to enhance the current enrollment rate in Primary and Higher Education. It will be a great opportunity for all the teachers and knowledgeable

learners in the institution or organization to enrich their collective wisdom through this holistic approach. The Mission is also necessary to sustain a high growth rate of economy through the capacity building and knowledge empowerment of the people and for promoting new, upcoming multi-disciplinary fields of knowledge. In order to enhance our knowledge resources and to maintain the competitive edge in the world, a system of identification and nurturing of talent and lifelong learning Knowledge modules based on the personalized needs of the learner would need to be delivered to him /her at the right time with the right content interactively to take care of his / her aspirations. [14]

Such a system would have to be developed in a cost effective manner over a period of time, integrating, and the following objectives:

      Effective utilization of intellectual resources, minimizing wastage of time in exploring opportunities or desired objects of knowledge appropriate to the requirement. Certification of attainments of any kind at any level acquired through formal or non-formal means in conventional or non-conventional fields.

  Any-time availability of desired knowledge at appropriate levels of comprehension to all for self-paced learning.

Platform for sharing of ideas and techniques and amalgamating of knowledge resources.

Systematically building a huge database of the capabilities of every individual human resource over a period of time.

Nurturing of scholars and learners.

Support to all the learners or workers for any of their perceived learning needs.

Extensive leveraging of the advancements in the field of ICT for taking the resources to the door steps of the learner.

Providing e-books & e-journals, utilizing the repository of contents generated so far and the automation of evaluation processes. Creating a high impact brand for e-Journals in leading disciplines with a provision for good incentive-based payment to the researchers publishing their high quality papers in these e-Journals.
Improving teachers' training and course curriculum.

3. E-GOVERNANCE IN EDUCATION

The Mission of the National e-Governance Plan (NeGP) is to focus on Education sector that Provide greater opportunities of access to higher education with equity to all eligible persons and in particular to the vulnerable sections. It can be extended to various existing institutions, new upcoming institutions supported by State Governments and Non-Government Organizations/civil society to supplement public efforts aimed at removing regional or other imbalances that exist at present. The plan can initiate policies and programs for strengthening research and innovations and encourage institutions –
public or private – to engage in stretching the frontiers of knowledge. NeGP can promote the quality of higher education by investing infrastructure and faculty, promoting academic reforms, improving governance and institutional restructuring. [25]

4. OBJECTIVES

To expand the higher education sector in all its modes of delivery to increase the Gross Enrolment Ratio (GER) in higher education to 15% by 2011-12 and to 21% by XII Plan and 30% by the year 2020[18].

To expand institutional base of higher education (including technical, professional and vocational education) by creating additional infrastructure in existing institutions, establishing new institutions and incentivizing through state governments and Non-Governmental Organizations / civil society. [20].

To provide opportunities of higher education to socially deprived communities and remove disparities by promoting the inclusion of women, minorities and differently-abled persons.

To remove regional imbalances in access to higher education by setting up of institutions in un-served and under-served areas.

To enhance plan support for infrastructure and faculty development in the institutions of higher learning and to attract talent towards careers in teaching and research.

To create conditions for knowledge generation through improved research facilities in universities and colleges. To promote collaboration with International community, foreign governments, universities/institutions and regional and international institutions, for the advancement of universal knowledge and intellectual property rights.

To promote autonomy, innovations and academic reforms in institutions of higher learning.

To undertake institutional restructuring for improving efficiency, relevance and creativity in higher education.

5. PROPOSED EDUCATION GRID

Vision & Opportunity
VISION--"*Enable, Educate and empower every students and Community through Knowledge.*
OPPORTUNITY

5.1 Education grid

The proposed educational grid has the following areas for promoting knowledge and information. The education grid will be governed by quality management of Content, supported Learning and Teacher Training Processes.

1)The Grid provides a Network supporting the various services as shown in the figure2.
2)Resource Centres in various institutions.
3)Develop and maintain pedagogically sound refereed courseware in identified subjects.
4)Subject specific Portals as Course Knowledge and Collaboration Space.
5)Develop & Deploy Scientific & Computer Portals backed by PG Schools
6)Introduce an IT facilitation layer in the University/ Higher Education System.

Figure 2: Proposed grid layout
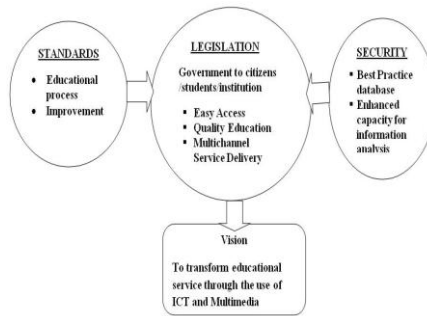
5.2 Proposed grid model

Figure 3: Context model

From literature we observe the following easy available resources
Broadband connectivity even in remote area.

   Open resources like open courseware and web accessible resources, open database etc.

The proposed Educational Grid shall use the available resources in order to make the information available to the common people through this grid. Competent teacher, learner or institution who seeks knowledge empowerment can utilize this grid and also as a tool for dissemination of information. Indian education sector happens to be the third largest sector globally. Government of India has taken many steps for encouraging more and more usage of ICT in the education sector. To strengthen this move, the proposed grid context model provides multiple policies and programs along with the existing standards of educational process in a web based portal in a secured environment. The security is strengthened through the usage of best practice database. The purpose of the model is to transform the educational service through the usage of ICT and multimedia by means of a service delivery portal

having easier access for imparting quality education. The service delivery portal shall adhere to the available legislations for such purposes.

5.3 Sample database architecture
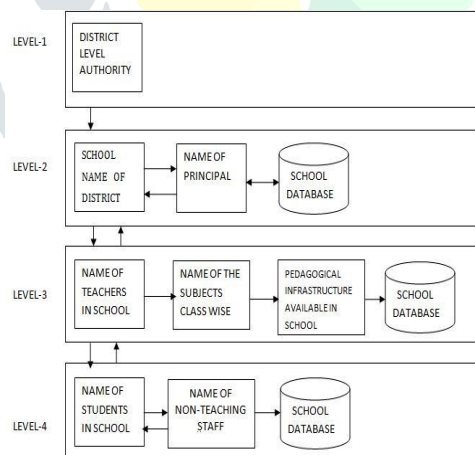
Figure 4: Database architecture

The web portal will facilitate the various educational institutions, government as well as the people who are directly or indirectly related to this model by means of sharing of resources and learning environments, and opening up classrooms as well as the promotion of collaborative learning and a general move towards greater learner autonomy.

The sample database architecture described above demonstrates the various levels of architecture of all primary schools and also provides a way of sharing resources among various schools. The first level is concerned with all the dissemination of government rules and regulation and manipulation any required in the next level. The second level describes the name of various schools and associated authorities along with their information stored in the database. The level-3 and level-4 describes the various resources shared among all the schools, which includes teachers, staffs, students and other infrastructural resources that are stored in the databases and are being maintained by the various resource centers as described in the grid layout under the district level authority. Students and teachers enjoy the facility to share information wherever they are in the school. Strategically placed television monitors provide details of time-tables, projects and assessment, meal-time menus and a host of other useful up-to-the-minute information. Resources can also be accessed outside the school. Education website offers educational materials for all

ages from pre-school to adult and continuing education. ICT in the classroom also change the role of the learner, enabling students to exert more choice over how they approach study, requiring less direction from teachers. Students can be able to direct their own studies to a greater extent, with the teacher acting as a guide or moderator rather than as a director.

6. CONCLUSION

This paper is an approach that encompasses policies, processes and proposed model designed to provide its services in the education sector wherein it facilitates a better opportunity for the educational institution to grow and prosper. E-governance initiates several programs and policies which promote the usage of ICT in education. It predicts that there are many benefits for both the students, learner and the teachers, including the promotion of shared working space and resources, better access to information, the promotion of collaborative learning and radical new ways of teaching and learning.

E-governance and education is an institutional thinking that seeks to entrust in building, managing and sustaining students, teacher, learner and others for achieving the larger benefits of e-government system. The probable benefits are: for service users in terms of reduced cost of transmitting information and resources accesses, lesser time and cost for services; for service provider, reduced processing time, error rates, complaints; and for government, improved service consistency and equality; and finally, the benefits lead to enhance the outcomes, as well as the performance criteria e.g. better informed students or learners leading to improve delivery of objective, greater information collection related

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