

# Artificial Intelligence: Issues & Challenges

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## ABSTRACT

In an environment of growing technology, it is important to understand 'Artificial Intelligence'. It is a buzz word today in technology sphere. This is being used in improving efficiency without changing structure of an established process. This process can be imparting education at any level.

Artificial Intelligence (AI) is best used during e-Governance (it can be in business, manufacturing or education). E-Governance best used can be in education at any level.

Today India is one of the countries in the world in use of internet. It is a known fact that many Higher education institutions are making sincere efforts to embrace e-governance into their education systems for effective and efficient delivery to all the stakeholders. However, their domain of operation, issues and challenges are quite different from that of other type of users. In this paper we try to explore the approach, phases and issues & challenges faced by an institution of higher learning in implementation of an e-governance system.

## 1. Introduction

Establishing Artificial Intelligence through Electronic governance or "E-Governance" is the appropriate use of information and communication technologies in an organization, to improve work efficiency, within regulatory framework. An e-Governance system is advantageous over the traditional system. E-Governance managed systems bring transparency and efficiency in the working in order to meet the demand of the ever-increasing aspirations of the information age.

Educational Institutions in India have been feeling immense pressure to reform the way they work and deliver in order to fulfil growing aspirations of students in general. This requires ways and means for providing students with all the required information and knowledge on one hand and improving the way of working by way of providing for more efficient and cost-effective methods.

E-Governance is little bit different from a common computer-based system because it is not just about hardware and software, but it is about managing people and processes. A successful E-Governance system is dependent upon the way it is perceived by the target audience. The story of success starts right from efficient planning, execution and implementation of E-Governance systems from a diverse set of domains. Each sector or domain has some inherent characteristics, challenges and opportunities built in their processes. This can be attributed to the varying goals, issues and challenges in both the systems.

Taking an example of Universities their characteristics could be:

- An exclusive portal with multiple channels to access services from university including faculties, students and authorities.
- Easily manageable, accessible and operative process for submitting various applications and tracking the

same e-payment facility for remitting various fees, dues, etc.

- Simplified process for accessing general services such as requests for certificates, verifications, etc.
- Simplified process for registering grievances against university services
- Simplified process for placement

This can also be considered for other levels of education, e.g., Instead of Universities, this model can also be considered by various Education Board, as appropriate, for primary, secondary and Sr. Secondary.

## 2. Development of an E-Governance System

The development of an E-Governance system can be perceived as comprising of a set of phases. These phases should not be considered as hard boundaries with clear cut separation but a general guideline which can be tuned according to the efficiency and effectiveness of the processes it is going to manage. In addition, these phases can be treated as fixed in numbers but they can be merged depending upon the presence state of automation and use of information and communication technology in the existing system. In general, for example, the development and deployment of an e-Governance system for a higher education institution goes through the following phases:

a) **Information:** Starting with, to present on a website displaying static information. The information may include, introduction of the organization, it's aims and objectives, basic information about leaders (working in the institution) and its structure, information related to various activities and events, etc.

b) **Interaction:** Second part is to provide user with the specific information he may require (within or outside of the institution). This phase requires databases to support user queries and information needs. An Institution can be considered under e-Governance, if the system is capable of

supporting activities like individual student results and mark sheets, payslips of individual staff members, syllabi of specific courses, forms and formats as per user requirements, specific guidelines and policies, minutes of meetings of academic bodies, etc.

c) **Transaction:** Third is to provide a mechanism where user (within or outside the institution) can interact with the system without need to visit any office personally. This phase may require integration of systems like payment gateway / other financial transactions. A consideration can also be given to improving the capability of the system for supporting activities like online admissions and application forms, editing and updation of faculty profiles, online fee payments, correction in student profiles, feedbacks, status tracking, etc.

d) **Transformation:** When all above phases are integrated and the user can get all type of services on a virtual platform and it becomes a single point of delivery, the e-Governance system can be said to be in this phase. This phase requires data integration from different sections or department of an Institution which may include facilities like online file processing and tracking, online NOCs (no objection certificates), integrated reports, etc.

### 3. E-Governance Challenges and Issues

As talked earlier in this paper, an E-Governance in education system is different from a routine computer-based system in several ways; Therefore, the issues and challenges faced are different from others. The issues and challenges in implantation of an E- Governance are not of technology, machines or internet but are of policies and procedures. The commonly issues and challenges that may be faced during implementation of e-governance in the Indian context can be, but not limited to:

- Lack of Clarity of Objectives,
- Inadequacy of Funds,
- Dearth of talented workforce,
- Data Backlog,
- Management and availability of earlier manually generated data
- Change Management,

- Information Security
- Lack of Coordination among different departments
- Lack of will for information dissemination
- Maintenance Challenge and

### 4. E-Governance System, change in behaviour

As we shift from manual processes to e-governed processes, this may turn out to be resource intensive for any organization. However, this shifting is not that costly. This can be attributed to the age of the University which has two folds advantage. On one side the manual records accumulated over a period of time may not take that much amount of resources; however, converting current staff to computer savvy, ready to adopt and use a computer-based information system, is a huge effort oriented but no way costly.

Keeping in view the present status of artificial intelligence in operations of the educational institutions, a planned approach is required to move from present state to fully functional e-Governance system. That's why a phased implementation, as discussed earlier in this paper, is important in today's context

### 5. Conclusions

Several benefits are there for educational institutions from implementation of E-Governance systems, such as, they will be able to make their processes transparent, convenient and efficient. This may require some cost but lots of efforts. They have to overcome the challenge of change from tradition methods of operations to e-Governance (Artificial Intelligence). In this changing world, educational institutions have to embrace the emerging trends and technologies to keep pace with the expectations. In this paper I havetried to highlight some of the issues and challenges in planning, execution and implementation of an E-Governance system, also listed some of major activities and the phases in which these activities can be initiated and implemented different phases. It can be said that if the identified institution follows these general guidelines it may be able to plan, execute and implement an effective and efficient E-Governance system.

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