RESEARCH ARTICLE

DIGITAL INCLUSION IN THE UNIVERSITY ADMINISTRATION

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ARTICLE INFO	ABSTRACT
	With the emergence of technology and growing demand of the society, digital inclusion became a key issue and developed nations started adopting it to better serve their citizens through efficient and effective services, with accountability and transparency. Digital inclusion addresses the issues related to the access of ICT (Information and Communication Technology). It is the policy-driven approach that encompasses internet access and the availability of digital content, services, hardware, software, and training skills required for its practical usage. ICT has changed the style of functioning of the educational system and itsgovernance with the help of digital data, its storage, retrieval, manipulation andtransmission. It has emerged as a cost-effective and time saving tool. New demands in higher education prevail in developing innovative curriculum, facilitating online, distance, and blended education.There is a dire need to widen the access to higher education, provide technical support and guidance for universities to include provision for technology based online learning management system supporting lifelong learning along with online administration and management activities; also catering the needs of researchers and academicians. Adoption of digital technology can change the present trend of the management of higher education sector by transforming their working culture. For good administration and management of university system it is essential, to accelerate the decision-making process with better planning by eliminating the barriers of time and space in communication.

INTRODUCTION

Technology has played an important role in every aspect of human life and education is directly related with human life. Being of rapid technological change, the Indian education system is also facing many new challenges with providing lots of new educational opportunities. The new National Education Policy 2020 focuses to bridging the existing digital gap by providing proper infrastructure for online learning. It also recommends the pilot studies on online education, change in pedagogy for digital education, training and incentives for teachers, online assessment and examinations, use of divyang friendly education software and e-learning platforms such as SWAYAM, DIKSHA (one nation, one digital platform), NISHTHA (National Institute for School Heads and Teachers Holistic Advancement) etc. Policy proposes virtual labs, blended mode of learning and to set up a platform National Education Technology Forum (NETF) for exchange of ideas on the use of technology to enhance learning.ICT has changed the style of functioning of the educational system and itsgovernance with the help of digital data, its storage, retrieval, manipulation andtransmission. It has emerged as a cost-effective and time saving tool.

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To accomplish growing educational demands, we must adopt the best possible methods to include digital technology in our education system to transform our educational institutions into potential learning centers to cater the growing needs of global learners. Due thanks to the emergence of a new set of technological tools i.e. communication, visualization, and simulation, we can offer students a more authentic learning experience ranging from experimentation to real world problem solving. Higher education has a significant transformation in recent years like student mobility, internationalization, online and blended learning, etc. However, these improvements should guarantee the quality of the institutions. New demands in higher education prevail in developing innovative curriculum, facilitating online, distance, and blended education. There is a dire need to widen the access to higher education, provide technical support and guidance for universities to include provision for technology based online learning management system supporting lifelong learning along with online administration and management activities; also catering the needs of researchers and academicians.

DIGITAL INCLUSION

With the emergence of technology and growing demand of the society, digital inclusion became a key issue and developed

nations started adopting it to better serve their citizens through efficient and effective services, with accountability and transparency. Digital inclusion addresses the issues related to the access of ICT (Information and Communication Technology). It is the policy-driven approach that encompasses internet access and the availability of digital content, services, hardware, software, and training skills required for its practical usage. It embraces and guides the community for the digital age. Digital Inclusion which is also referred here as e-governance or electronic governance when used for management and administration purposes for the ease of work and to bring transparency in providing services. It is concerned with inter-related concepts like usability, empowerment, participation, awareness, affordability, accessibility and adoption of digital technology. When appropriately applied, digital inclusion could effectively improve the over-all functioning of higher education system, too. The fundamental goals for adopting e-governance practices are to ensure improved quality in disseminating education and administration, conforming to regulations as per the university statutes and acts. The exercise of a digital inclusion model is required to incorporate independent yet interconnected units, whose activities should be clear, accountable, responsible, and especially regular in order to reduce the inequalities in terms of access to the services that are made available by public institutions. UNESCO, the international organization, defines digital inclusion/ e-governance as "E-Governance is the public sector's use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective. E-Governance involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organizing and delivering information and services".

Mahapatra (2006) explained that it is established that E-governance is the application of information and communication technologies to transform the efficiency, effectiveness, transparency and accountability of informational and transactional exchanges with in government, between government & government agencies of National, State, Municipal and Local levels, citizen & businesses, and to empower citizens through access & use of information.Our former visionary president Dr. A. P. J. Abdul Kalamonce said that "E governance has to be citizen friendly. Delivery of services to the citizens is considered a primary function of the government. A transparent smart e-Governance with seamless access, secure and authentic flow of information crossing the interdepartmental barrier and providing a fair and unbiased service to the citizen." According to Anil Srivastava "E-Governance is a process of enabling connections between concerned groups and the government through multiple channels by linking all connection points, decision points, enforcing/implementation points and repositories of data using ICTs, to improve the efficiency, transparency, accountability and effectiveness of government". With the help of e-governance citizen services could be transformed, easy access to information could be provided to citizens which may empower them; it also provides an opportunity to increase citizen partnership in governments functions and processes which in turn may enhance their socio-economic prospects and lead them towards a better life.

NEED OF DIGITAL INCLUSION IN EDUCATION: ICT tools enable the end to inequalities in the case of the university education system. The development promotes the inclusion of students at all levels expanding their knowledge capacity. Digital inclusion reconfigures our concepts by shifting the experiences of time. The idea behind it is time serving. It provides digital calendars, to-do lists, cloud-based storage facilities, auto reminders, etc., Thus giving the impression of triumph over forgetfulness cautiously navigating our personal and professional identities (Third et al., 2019). Digital technologies have improved the higher education quality. In higher education, ICT offers virtual learning platforms, Massive Open Online Courses (MOOCS), etc. Researchers have found that differences in access and experience in ICT usage vary their competencies from the literature. In higher education, ICT usage has become a prerequisite. The use of digital technology by teachers gains confidence and attitude as they are a relevant part of the education system. Universities invest in digital infrastructure for supporting teachers to develop learning materials (Vicente et al., 2020). The development and supply of e-learning materials are the major focus of universities today.Digital technologies enhance people to promote citizen participation enabling individuals with disabilities to access skill development, employment, and education. It supports direct interactions between all the stakeholders in any considered environment. Many organizations promote workshops and training to employees in improving their digital literacy (Hamburg & Lütgen 2019). The various indicators added to check the level of digital inclusion in education include:

- Faculty qualification
- Digital technology-based subjects
- Computer and internet-assisted instructions.
- Students to computer ratio
- Public access to digital contents

Digital inclusion interactively creates opportunities for distance education. This supports the needs of each student. For example, inclusive education has made progressive education in countries like Germany, especially towards disabled adults. Thus, it will develop an equal approach of education to the disabled and place them in classrooms (Hamburg & Lütgen 2019). To improve the quality of higher education system and make them a good competitor in global educational scenario it becomes imperative to introduce digital inclusion in the management and administration of higher education system at the fastest possible pace. Inclusion of ICT in university administration will enable their effective & real time monitoring by government and other stakeholders including their own managements, students and their parents & the society, thereby compelling them to maintain quality, transparency, accountability & above all more responsible.

DIGITAL INCLUSION IN ADMINISTARTION OF UNIVERSITIES: Digitalization of higher education system by inclusion of ICT and related digital technologies is a notion that can empower the governing bodies to manage the advancement of any educational and managerial plan and reforms in the whole nation and provide service in a much better manner to all stakeholders of education. Higher education institutions throughout the world are progressively using these digital technologies. Digital inclusion in administration of universities, or the concept of e-governance when applied to a university is related to the practices of

digitally controlling the functions and process of various departments and offices which are part of the university. Thus, creating an appropriate system which performs at different levels of university in an efficient and effective manner. Universities operate on autonomy, they are forced to subjective convergences redefining their goals and policies (Rodríguez-Abitia et al., 2020). Norms framed in universities include internal rules such as employee standards, incentives, student scholarships, etc. but include various external standards related to resource allocation, quality, and performance evaluation. These universities are the key elements of digital inclusion. As there are not only the spaces for training individuals, they are the creators of economic culture and a significant productive business source. The digital age relates to the possession of buildings, libraries, and laboratories and influences the flow of information. Until the early digital inclusion era, the universities were dealing with knowledge production and accumulation.According to Balasubramanian (2009), ICTs in higher education are being used for developing course material; delivering and sharing content; communication between learners, teachers and the outside world; creation and delivery of presentations and lectures; academic research; administrative support, student enrolment. Inclusion of digital technologies enhance teaching and learning and can be "well integrated into teaching and learning strategies." Along with the use of ICT in the process of teaching and learning, now a day's universities and colleges usually use ICT and e-governance for many administrative and supportive tasks also.

The four Es of Higher Education viz., Excellence, Expansion, Equity and Employability increases the prospects of digital inclusion in the universities. Vashishtha& Gupta (2014) had highlighted the rapid growth of gross enrolment ratio and quality of higher education institutions. According to them the inclusion of latest technology in educational sector is must of present scenario. They conclude that advent of myriad innovative E- governance practice has the potential of revolutionizing the governance in higher education system.

The inclusion of information and communication technology ensures the increase in participation and involvement of employees in the process of governance at all levels. It allows them to share their views and opinions by participating in on-line discussion groups and it also enhances the efficiency of work groups. Affiliated and associated colleges, situated in remote areas may get an opportunity to work from their place and give their inputs online; this will increase their participation in governance, they may provide better service in terms of time, making governance more transparent, efficient and cost effective by lowering the transaction costs and services become more accessible.E-governance initiatives around the world are certainly playing an important role to redefine, improve as well as to change the traditional governance institutions and regimes globally. Digital Inclusion (e-governance) in administration of university is concerned with inter-related concepts like usability, empowerment, participation, awareness, affordability, accessibility and adoption of digital technology. It refers to the application of digital technologies to transform the efficiency, effectiveness, transparency and accountability of services (information) exchange with in administration and management of universities with their stakeholders and vice-versa. In the field of education, the major initiative is in the process of teaching and learning and not much has been done in introducing e-governance and digital inclusion in university system. When

appropriately applied, digital inclusion could effectively improve the over-all functioning of higher education system, too. The fundamental goals for adopting e-governance practices are to ensure improved quality in disseminating education and administration, conforming to regulations as per the statutes and acts of universities. It may play an important role in supporting powerful and efficient management and administration in education sector. Digital inclusion of university system enabled administrative and managing tasks to be completed more quickly and efficiently and in turn enabled university stakeholders to more actively participate in the organization and use services/information to make more effective educational decisions. The digital inclusion in administration of university system may enable the universities to submit their documents online for approvals, grants, utilization certificates, feedback mechanism etc. it may remove the duplication of work at many levels and also reduce the time and cost of procedures. All the governing bodies of higher education and other related agencies needs to have internal coordination so that they may access the required details from a common pool, so that universities and colleges need not to submit separate copies to each and every governing body which results in wastage of time and lot of stationary and the unnecessary duplication of work will be reduced. Apart from this there may be a number of other services that can be provided with the introduction of such type of governance i.e. Online admission, Management Information System (MIS), Online Enquiry, Online Fee Submission and other related transactions, Biometric attendance of students, teachers and administrative staff, digitalization of library, office automation, use of social networking sites for communication and dissemination of information etc. are some of the initiatives taken by universities for digitalization of administration. The quest to implement e-governance is motivated by policy goals of increased effectiveness, efficiency, and information quality, improved interaction mechanisms, and in turn better governance tools (Grant, 2005 and Gronlund, 2005).

AREAS OF IMPLEMENTATION OF DIGITAL INCLUSION IN ADMINISTRATION OF UNIVERSITY SYSTEM

With the tremendous advancements in ICT in the current century has led to extensive developments in all the fields of higher education system including administration and management. To enhance efficiency and effectiveness of educational administration ICT could be used extensively in the following areas-

- General Administration
- Pay Roll and Financial Accounting
- Administration of Student Data
- Inventory Management
- Personnel Records Maintenance
- Library System
- Online Admission,
- Issuing On-Line Id Cards
- Online Lectures and E- Content Delivery
- Online Fee Submission
- Digital Evaluation
- Online Results,
- Request for Degrees and Certificates

The above areas where digital inclusion could be implemented in the management and administration of university could be categorised as under

- **E-Administration:** It involves the use of ICT and e-Governance practices to improve administration processes and the internal working of the departments within the university.
- **E-Services:** it refers the improvement in the delivery of services to the stakeholders of education system by providing interactive services. Such as: Online admission process and brochure, online syllabus and study material, pay slips and online leave application system, online results etc.
- **E-Democracy:** it implies greater, more active and direct participation of stakeholders through digital inclusion in administrative and decision-making process.

The above discussed areas of implementation of digital inclusion in administration of university system are shown in the figure 1. Digital inclusion through Information and Communication Technology (ICT) and use of appropriate digital tools plays a vital role in supporting powerful, efficient management and administration in education sector. It is specified that technology can be used right from student administration to various resource administration in an education institution (Maki Christiana, 2008).
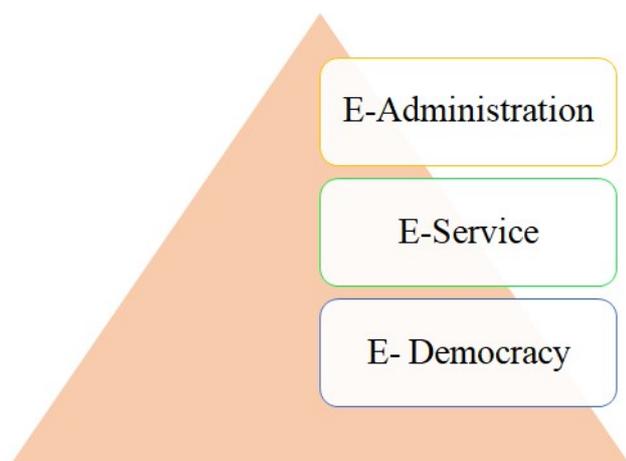
Figure 1. Areas of implementation of digital inclusion in administration

ADVANTAGES OF DIGITAL INCLUSION IN ADMINISTRATION OF UNIVERSITY SYSTEM

Digital inclusions in management and administration make the educational system flexible enough to acclimatize efficiently and quickly with the changing scenario of education. It will definitely assist the higher education administration system to have improved transparency, easy and fast access to information and dissemination. It will encourage participation of stakeholders in administration and empower faculties, students and their parents etc. Enhancement in transparency, accountability and absolute clarity in administration and governance will improve administrative efficiency in no time and also increase efficiency of faculties, students and other staff of university.The multiple advantages of digital inclusion in management and administration of university system can be described as follows:

- It provides a single window system to work thus reduces duplication of work.
- Quick and easy access to online information and online submission of forms and payment makes it student friendly. Moreover, it brings university administrations closer to students. Thus, it becomes really convenient for student to get in touch with university for any query or guidance.
- Easy availability and quick circulation of educational material in form of e-content may increase the timeliness or relevance of course material being presented. Scalability, course content is easy to distribute widely with little or no cost.
- Regular course content could be enhanced and made more attractive and interactive by addition of multimedia material such as videos, 3D animated lectures etc.
- Connectivity between the management, faculty members, students and administrative staff gets increases as it becomes quick and easy to connect online; this enhanced connectivity consequently leads to heightened efficiency in delivering service by increasing participation and the way of faster dissemination of information that too on a very low cost.
- Constraints of time, distance, language and physical disability are being removed as everyone gets equal opportunity to access the information.
- It becomes cost effective, time saving, and also leads to significant reduction of space and manpower.
- It empowers the stakeholders of education system by providing easy access to information about all the relevant activities and getting them involved in the process of decision making.
- Digital inclusion strengthens the fabric of democracy by ensuring greater participation of students, faculty, official staff and parents at all levels of governance in university.
- It make each and every department of university and its employ accountable for their work; besides, they become more responsible towards their actions as they are aware that each and every act of them is being closely monitoring and audited.
- It completely revolutionizes the mode of university functioning, ensuring considerably more transparency in their functioning thus, eradicating corruption.
- Successful implementation of digital inclusion practices helps students in getting good placement opportunities as employers could easily access the desired information at a click and got to know about the skills and abilities of students and hire them accordingly.
- It provides an excellent way tie for alumni to the universities and continue with the program of lifelong learning as well get help to the institutions for placement.
- Technology deployment leads to connected learning and reforming institutional networks to social changes.

The advantages of digital inclusion in an educational system includes better delivery of services to students, enhanced efficiency, better management, increased transparency and improved accountability of educational administrative activities; greater convenience and faster access to services, improved interactions with business and industry, increase participation of stakeholders in decision making, growth in revenue and cost effectiveness for administrative services (Kapoor and Kelkar 2013).

CONCLUSION

Adoption of digital technology can change the present trend of the management of higher education sector by transforming their working culture. For good administration and management of university system it is essential, to accelerate the decision-making process with better planning by eliminating the barriers of time and space in communication. As a result of such type of governance, there may be perceptible changes in both administrative and academic output of the university. Minimization of human intervention and discretion exhibits a fair, transparent accountable and responsive system. High degree of democratization, adequate connection and co–ordination between all level of management, participation and involvement of stakeholders in administration and management process, which are going in the university, are important factor for good administration and management in university. Apart from its free flows of information to all, makes administration and management of university system more objective, accountable, uncomplicated, well-organized, error proof and transparent. It will also make the system user-friendly, time saving and cost effective also.

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