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The challenges of digitalization of higher education

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Abstract

Digitalization means transformation of all information types (texts, sounds, visuals, video and other data from various sources) into the digital language. Digital Learning is learning facilitated by technology that gives students some element of control over time, place, path and/or pace. Digital learning requires a combination of technology, digital content and instruction. Digitalization has no doubt changed and revolutionized our higher education system, but we cannot say that it has diminished the value of our old time classroom learning. According to its experts, digital technologies should only complete, but not supersede traditional teaching methods, with their full potential to be used by slow-learning students or students with special needs. Technology dynamism has played an important role in the development and expansion of digitalization. The best results can be achieved if IT is used at certain intervals, approximately three times a week, since frequent use of innovative and primarily digital methods can gradually decrease the students' information processing efficiency. In this paper we will discuss the challenges which are emerged due to digitalization because people commonly resist change, even if the changes are superior to what they had previously. They might not trust that a technology-based learning program will be as effective as interacting with an instructor. There are many challenges like dependency, addiction, senseless use, negligence of basic skills, physical and psychological threats etc. due to digitalization which are discussed in this paper. In conclusion, we can point out that digitalization has helped to transmit education faster, more efficiently and at a lower cost, but the challenges for its future delivery are unspecified and somewhat unpredicted. It will be interesting to see how we tackle these challenges in future. The success or failure of higher education system not only in India, but world over, is dependent upon our effective answers to these challenges.

Keywords: Digitalization, Higher Education

1. Introduction

Information is a driving force in the world and intensely making impact on economy, development and social growth of any nation. Even though the higher education system of India is third largest in world next to United States and China but access to the higher education system is currently restricted to a small portion of the society. Indian higher education is far away from the global educational standard. Despite growing investments and reforms in higher education, India faces varied challenges at all levels from quality in higher education, skill development and Research. Since a country's social and economic progress hinges largely on its people having access to the vast area of knowledge gained through modern channels of learning, it is important to ensure that education sector keeps up with the times. With science and technology evolving at such a rapid rate, the conventional classroom education we offer can hardly be described as sufficient. Information is a driving force in the world and intensely making impact on economy, development and social growth of any nation.

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Institutions and Organizations in Digital Age

After the evolution of computer technologies and the internet, the process of digitalization of information and knowledge has made higher education easy to reach, interactive and robust. The technological revolution of Information and Communication technology (ICT) has brought a revolutionary change in the management of higher education institutions. The role, need and expectations of the students, academic and administrative staff members have been redefined. In the digital era, India has to re-structure and re-focus the Institutions and Organizations. Meaning of teaching with technology is learning the content by using all electronic technology, which may include the internet, satellite broadcasts, video conferencing, audio and video tape, video and audio conferencing, internet conferencing, chat rooms, e-bulletin boards, web casts, computer-based instruction, and CD-ROM.s Digitalization is a process of communication and tool of technology. Technology allows us to communicate faster with the use of e-mail, personal digital assistants, and a host of other devices designed to make the exchange of information and interaction.

To change over to the Digital Age is a long term planning which requires innovating and transforming the structure and processes of the institution/organization. Inside the organization, the employer need to communicate, provide training, change the work process/structure, connect, collaborate and deliver to consumers (employees)/suppliers/buyers, bring transparency, make the strong relations, bonding and earn trust and respect from the society. There is a need not only to digitalization of educational information, digitalization of libraries but also to digitalize various support systems of institution or organization. In the digital age, it is needed to empower the students, teachers and staff with the ICT skills, develop their capacities through training and development and should be recognized. It is a continuous process and institutions have to take the advantage of the digital age and stay relevant for their academics, staff and the students.

It is important to be aware of the problems and misunderstandings that can occur when technology serves as our primary means of communication. These may be due to improper infrastructure, lack of awareness, skills and training to use the technology.

The Issues and Challenges Of Digitalization Of Higher Education

Higher education plays a pivotal role in the development of a country, as it is viewed as a powerful means to build knowledge based society. The educational systems and processes are greatly influenced by the incredibly rapid technological changes in this digital era. Information and communication technologies including newer digital technologies have been touted as potentially powerful enabling tools for educational change and reform. Using technology to enhance our classroom teaching may allow us to conduct novel activities that would be impossible without it. But sadly, current state of affairs in Indian higher education presents a gloomy picture and education sector is struggling with various problems. Following are some challenges for digitalization of higher education-

1. Rapid developments in computing and communication are changing all aspects of life. These swift changes are having significant effects on many aspects of higher education-teaching, research directions, the

applications, the way data and information are analyzed, the way research is concluded and reported. The salient aspects of the transformation of higher education are that of- the knowledge explosion, globalization, high performance workplace, diversity, technological change, knowledge transfer etc. so the institutions/organizations have to meet the pace of changes and growth.

2. Despite the growth of the Internet, India has to provide a robust telecommunication infrastructure with suitable, sufficient and reliable bandwidth for Internet connection along with necessary hardware and software. Faster network with sustainable funding for their necessary updating is the need of the hour to improve the quality of higher education because the gap is growing wider as the technological standard grows even higher.
3. Technology and digital resources are expensive. Therefore, teachers and schools should be prepared to seek grants and community support for funding.
4. There are still many in education who is resistance to change. For instance, it is hard to change the way you teach when you have been using the same tools for your entire teaching career. Therefore, it is important to provide plenty of information, statistics, and examples to show the higher education community why these tools should be implemented in the classroom. Resistance to technology comes in many forms, but one of the key resistance challenges identified in the report is "comfort with the status quo." According to the researchers, teachers and organization leaders often see technological experimentation as outside the scope of their job descriptions.
5. Key among all challenges is the lack of adequate, ongoing professional development for teachers who are required to integrate new technologies into their classrooms yet who are unprepared or unable to understand new technologies.
6. New models for teaching and learning are providing "unprecedented competition to traditional models of schooling." In particular, the MOOC (massive open online course) — probably the hottest topic in higher education right now — was identified as being "at the forefront" of discussions about new modes of delivering K-12 education (The K-12 education is the term used to denote the education imparted in the primary and secondary phases of a school life, including K or kindergarten to12 which stands for the 12th standard. This particular system covers the education from kindergarten till the 12th grade). Related to this challenge, rigid lecture-and-test models of learning are failing to challenge students to experiment and engage in informal learning. But, according to the report, opportunities for such informal learning can be found in non-traditional classroom models, such as flipped classrooms, which allow for a blending of formal and informal learning.
7. Faster networks, higher level machines, more complex software and more capable professionals are required but in India the funding is not available to support these developments. Unfortunately, technology is always changing, so one should not expect to be using the same tools forever. Instead, you should have a plan and budget in place for upgrading technology.

8. In the digital age, the government has to empower the students, teachers and staff with the ICT skills, develop their capacities through training and development and should be recognized.
9. Education in information literacy will play an important role in keeping the society from fragmenting into a population of information haves and have-nots. The lack of skill in using computer and communication technology also prevents students and even teachers from accessing digital information. Poor access to computers and communication technology also causes a digital divide.
10. Lack of accommodation for people with disabilities causes a gap in those people's abilities to access to technology.
11. Even if your institution has WI FI and a great collection of digital tools, it does not mean the student population has these devices (or WI FI) when they go home. To overcome this challenge, some schools are providing students with laptops or tablets.
12. Today a large percentage of information content on the internet is in English, which is a barrier for the people whose primary language is not English or people having poor knowledge in English.
13. Even as humans begin to use virtual assistants more regularly, there is still no replacement for human interaction. Teachers should not step aside and let the digital tools 'take over.' Instead, teachers should use digital resources as supplemental and complementary tools for the classroom.
14. Libraries have a long held value of people's universal access to information. These are structurally and programmatically prepared to address the digital divide issues. The libraries in higher education institutions should provide the infrastructure for connectivity, technical support, provide major contribution to the content, through digitalization programmes and provide national portals to digitalize information resources. Libraries should have a responsibility to see that their services reflect the need of the higher education. E-libraries are the need of the digital era having e-books. Online catalogues, online journals, abstracts/full-text, articles, reports or news by using electronic computer based devices.
15. More activity online also leads to more security issues. To combat security issues, the institution should invest in security. Additionally, students and teachers need to be taught the basics about internet safety.
16. Plagiarism is turning out to be a big challenge to various researchers and academicians due to the easy availability of resources anytime from anywhere now-a-days poses a serious threat to the integrity of their work. There are several inherent causes of plagiarism identified that is (i) lack of writing skills; (ii) lack of proper understanding on the nature of plagiarism; (iii) paternalistic culture; (iv) the relative light punishment towards plagiarism; (v) the emergence of instant culture; and (vi) the accessibility of internet that influence the Ctrl C + Ctrl V practice. There is of paramount to change the mind set among academicians on the nature of plagiarism and how to prevent it as the current condition perhaps only the tip of an iceberg of academic dishonesty regardless of geographical or national identity.

Conclusion

Although India has made encouraging efforts to bridge the gap by initiating a number of projects and programmes for rural and remote locations, a lot more needs to be done to bring the people into the information society and to improve the quality of higher education in global perspective. Digital initiatives of Govt. have given a fillip to higher education in India. Students are getting used to e-content and its acceptability is growing day by day. As per prevailing trend various social media sites like Facebook, Twitter, Skype, etc. should be integrated within e-content to make learning more fruitful. The e-content should be translated to regional languages so that people from every walk of life may benefit from it. The colleges in remote and rural parts should be provided with broadband connectivity and smart classrooms to embed the e-content in teaching. Teachers should be trained to be technology savvy and adapt to incorporate the e-content in university curriculum. Students should be made aware about the free availability of digital content by organizing special campaigns and promotional events. To achieve the World class standards in the Higher education, it is necessary to change the workplace culture into the digital workplace culture that makes the higher education institution environment vibrant. There is no single way to transform the higher education through digital technology. It is a continuous process. It is up to the higher education institutions/organizations to take the advantage of the digital age and stay relevant for their academics, staff and the students.

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