

Role of Digital India and Digital Universities in Indian Education Sector with Special Reference to ICT Initiatives

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Abstract:

Twenty-first century education is a totally digital approach that integrates the online world of technology into classrooms. The need for technology and digital education has grown exponentially and is changing the landscape of education for all students and teachers. In fact, there is a need to change the way education is delivered as well as the style of education itself in a world that is increasingly technological and connected. The objective of the proposed digital university is to meet the goal of a student centric, participatory and open learning environment and to develop a global framework for deployment of and usage of information technology (IT) across universities. To accomplish this, it has to address the factors that impeded the adoption of digital learning. One such key barrier is the lack of user friendly and affordable technology, which is a major challenge in higher education. However, in recent times, a number of large scale projects have come up such as central and state level e-governance initiatives and digitisation initiatives for educating the youth. These initiatives, apart from assisting in enhancing access to digital learning, are likely to enhance the use of digital education in higher education.

Key Words: Digital India, Digital University, ICT, Education

1. Role of Digital India in Digital University:

As modern education is firmly anchored with collaboration and partnerships, the Government of India (GoI) under its Digital India drive has brought about a historic transformation to make this a reality through its various initiatives. At present, India has over 400 universities and 28,000 colleges running with partial or no ICT infrastructure. The Union Ministry of Human Resource Development (MoHRD) has constituted a committee under the chairmanship of Prof. B.K. Goyal, VC, Jadavpur University, to propose standards and guidelines for setting up the digital University.

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The proposed government university would have components in digital technology, as well as a strong focus on blended learning. From 'smart classrooms' to smart classrooms, with the use of ICTs for both classroom teaching and assessment, modern technology is enabling the learner to engage with the educational content without the need of using pencil and paper. Digital technology is used for pedagogy, student support, faculty support, learner support, assessment and knowledge discovery, and mobility for learning across sites. As per the authors, in this regard, the approach is to create a self-learning environment by harnessing the multiple possibilities of the digital platform to support and guide the learner.

The Government's vision of "Vision 2020: To make India a global leader in research and education" also indicates that it is envisioning to increase the number of universities from 17,000 to 30,000. The National Institutional Ranking Framework (NIRF) 2018 rankings has placed Jadavpur University 111-

150 and Bengaluru University 10-70 among universities in India. The eLearning Academy, a project of the education ministry, is also developing the pedagogy and technology required for e-learning across the country.

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One of the biggest challenges of the Ministry of Human Resource Development (MoHRD) is the heavy and growing bureaucracy. An increase in the number of programmes and institutions has strained existing infrastructure and management capabilities. To manage the logistics, the MoHRD has established the apex body of National Institutes of Technology (NITs). NITs act as the nerve centre for the youth and provide support to the students. The increasing burden on the government is such that it has already increased the total number of working bureaucrats from 11,000 to 12,000.

Although, the government does provide funds to the institutions in the form of grants and sponsorships, the decision making process is increasingly made at the state and local level. As a result, some of the best talent from the state has migrated to better funded universities and teaching institutions in other states.

Recently, the education ministry of India announced that the mission is now working towards an “equitable and inclusive education and skill development for every child”. This mission in line with this announcement seeks to strengthen the existing institutions as well as nurture the new institutes in the field of education.

Various programmes such as 1Lakh Hackathon, National Program for Learning Outcomes (NPLO) for class I to V students, National Achievement Survey (NAS), eLearning Academy, India Stack platform, e-Governance for Education are being launched. In the last few years, many schools and universities are coming up and there is great increase in the number of applications for admissions in premier schools.

However, despite this and continuous efforts, the NPTEL Report shows that in India still only 30% of primary school kids have access to quality education, only 33% of secondary school kids have access to quality education and only 60% of students with adequate skills, if they complete college. These results are far below those of the best developed nations.

The education ministry of India under the leadership of Government of India is now working towards bringing in a series of reforms to boost the existing education system and to bring in new reforms in the education sector. The government has taken several initiatives for strengthening the education system such as strengthening the infrastructure and by investing in good quality teachers. Also, they are working to increase the number of universities, providing more scholarships to meritorious students from disadvantaged sections and also by ensuring participation of students and parents in the recruitment process.

India is endowed with great talent and opportunities. However, the education system is still a major deterrent for the students to get good quality education and improve their economic status. The reforms of the government and the introduction of the Indian School Certificate (ISC) is a big step towards quality education for the youth of India. It is time we started investing in our children and youth for better educational standards, greater growth and welfare.

21.5 million total internet users in India, 1.3 million+ social media users in India, 40 million active users on Whatsapp, India's most popular mobile application, 24 percent of total internet traffic is focused on mobile. Multiple formats and platforms (desktop, mobile and social media) for students to access course material SAT and EAT scores obtained by students on digital portals are accepted by many Universities as part of the admission process.

2. Digital Education benefits to India:

Digital education is the solution to the problems faced by the education sector of India. To illustrate how this solution can benefit the country's economy, here are the main benefits:

Contribution to the Ease of doing Business. Digital education aids business productivity by providing a better learning experience for employees. The use of these technological tools enables companies to hire better quality talent at the right place and time.

It enhances Corporate Education. Digital educational tools act as a learning management system. These programs are managed in the cloud, allowing students to access materials, assignments and even quizzes and tests from anywhere. It is estimated that 75% of the world's top 1,000 companies offer digital education for employees.

The increase in digital literacy will also reduce corruption and provide better educational facilities to the people. Employees can access and complete their work as per their schedule and preferences.

Increased access to technical expertise. Technicians who work for companies often rely on books for expertise. With the use of digital educational tools, access to knowledge and information will increase significantly and thus lead to increased productivity of these technicians.

Increased cost-effectiveness. Digital educational technology reduces the cost of teacher training and education. Digital textbooks can be downloaded and used anywhere without a photocopy fee.

Improved accessibility to teachers. Teachers in the United States often cannot make their classes available on laptops for students, due to strict government regulations. Digital learning platforms such as Flipchart, allow teachers to use and share their knowledge and share it with students, enabling their teaching to be more effective.

3. The Digital University in India:

Twenty-first century education is a totally digital approach that integrates the online world of technology into classrooms. The need for technology and digital education has grown exponentially and is changing the landscape of education for all students and teachers. In fact, there is a need to change the way education is delivered as well as the style of education itself in a world that is increasingly technological and connected.

Many prominent universities and institutes in the United States have partnered with ed-tech companies that use technology in the classroom to offer free resources, devices and digital education opportunities to students and teachers across the world. It is evident that the use of technology in the classroom in the United States is of such a high standard that a large number of students look forward to coming to the university for their education.

The Online University of India provides courses in a wide range of educational disciplines that include engineering, management and medical sciences to enhance the employability of students.

OMES is an online University with its flagship campuses located in Chennai and Gurgaon. The University has been designed to cater to the large and growing demand of skilled professionals in India. Their objective is to support the transformation of higher education in the nation through the adoption of the latest technologies to deliver excellent learning experiences to students.

OMES is a not-for-profit initiative of the United Education and Research Society. The academic programmes were designed by internationally renowned education experts from Universities in the United States. The Board of Directors is composed of distinguished educational and corporate professionals from around the world. The tuition-free digital education programmes are developed and delivered by industry experts using innovative pedagogical strategies that enable the most personalized learning experience for students.

4. Future of Digital University in India:

The competition in the field of higher education is getting intense day by day. The global players are devising new ways to survive and are making new models to be successful. Here is an insight on how university models are shifting from conventional to digital:

1. **Digital & Crowd-sourcing:** Technology has changed the way we live and also taught us how to function. From home and office to farm and factory, technology has grown to be a part of the world and has transformed almost everything. From insurance to politics, healthcare to education, and all other areas; the way we live, work, and learn has changed significantly. The ever-expanding base of the internet has created a different need for an efficient and swift service. Thus, people have become more interested in their own safety and security. The danger of cyber crimes is very real. Thus, it is time to transform the way we do things today. With increasing level of digital consciousness, people are getting more and more aware of the benefits of technology. They realize that technology has given them amazing possibilities to improve their life but we don't realize how much of power technology has. Thus, the world of academia is turning digital

with the emergence of the web. Increasing demand for higher education in India and around the world has created an array of new opportunities for traditional institutions to become digital universities. These institutions are finding alternate modes of delivering the services and handling the support in an easy and interactive way. Students now are being asked to upload their requirements. Universities are making efforts to provide personalized services and getting more and more involved with the help of digital means. Crowd-sourcing is the best and easy way to improve the delivery of services. Crowd-sourcing is very simple and easy. Universities can connect with their students and the community and solve their problems or find solutions to their problems by providing the details about the issue and give instant response.

2. **Virtual Universities:** University has now become much more than what it was originally. These days, universities are outsourcing the teaching to providers who provide higher education solutions to their clients. The outsourcing companies have large teams of web developers who are managing the whole network and maintenance of the application. The organization then distributes content over the web. The company provides hosting and technical support for these portals. These service providers usually have large base of users with extensive experience and expertise. These portals are gaining popularity all over the world. The need to customize learning and make it flexible has forced universities to shift towards the use of online virtual learning. It has definitely become a very popular learning method.
3. **Cloud Computing:** Many institutions are already adopting the cloud computing to be able to get the large number of users in their application and deliver them the best services. The applications that are in the cloud are much easier to update and keep up to date. These applications are also very cost effective and productive. If the application is not updated then it will continue to run on the old version of the application. Most of the institutions are already in the progress of deploying the cloud-based solutions. The cloud is helping them by providing secure data, easy access, and faster accessibility. They are also reducing their expenses. The implementation of cloud applications is a long process but the end result is very much worth it.
4. **Open Educational Resources:** Open Educational Resources are a group of free, open and free-to-edit and share educational material on the Internet. They are already a very popular alternative to traditional educational materials. Open Educational Resources include books, online resources and videos. There are so many Open Educational Resources for various topics and every student and educational professional has a lot of options to choose from. All the ideas of this popular resource are available in the open so anybody can modify them and contribute to it. Open Education Resources are one of the best education resources that the students have and they are affordable. The benefits of Open Education Resources include flexible learning environments, high level of accessibility to the material, the possibility to integrate online learning with other forms of learning such as textbooks, demonstration videos, and tests and seamless integration with other learning platforms.
5. **Educational Technologies:** Educational technology and also educational tools has taken the future of education a step closer. This is the future of tech and children are at the forefront of this technological revolution. Virtual reality is an effective teaching tool that is used to educate children on various subjects and also offers several other benefits. More frequently, Virtual Reality (VR) headsets, apps and games are now available for children. This has made the classroom more interactive and also offers many new interactive means of teaching. E-learning has also seen a huge shift in the past few years and with the advent of such tools, the teachers' job has become much easier. Websites such as Khan Academy now allows you to learn something from your phone, computer or tablet. There are also many apps that can be downloaded on your Android or iPhone.

5. Challenges of Digital University:

Though the new approach is a welcome step, the Digital University does not include any solution for handling digital data. There is no mechanism in place to export documents that need to be saved, or access the original source to verify authenticity.

In short, unlike the main universities, Digital University campuses do not have document management systems, including labs and library. Campus managers can only save digital copies of documents that are digitally signed.

There are also no platforms to authenticate digital documents. This means that if students are to upload a sample of a paper they are working on, there is no way to tell if it is real or not. Nor are they given the tools to monitor if papers uploaded to the network are legitimate or not.

The best alternative to the new Digital University is to create a platform that can be used by teachers to manage digital student work and collaborate. The platforms should include a dashboard for tracking papers as they are shared, the ability to filter and audit the environment for copyright infringement, the ability to manage digital copies, and the ability to audit documents with a central clearing house.

For e-learning, the main university is not free of problems, either. While there is hope for self-organization of e-learning work at the institutions, there is not yet a unified system to ensure the Internet remains accessible and secure.

6. Conclusion:

Overall, the Digital University appears to be more about a transition towards a digital future. For now, it does not appear to be the kind of solution that will help the universities compete for the top students or best jobs. And for now, it does not appear to be a sustainable option that will help the institution, or country.

The Digital University may have a place in countries where digital migration has already happened. Places where it is already the norm to communicate via digital platforms, such as Indonesia and Malaysia. We can expect more like the Digital University to crop up in the future, as well as some of the other ideas that are outlined in the UN report. Whatever the solution, it is clear that with growing competition from other countries, including developing countries such as India, Malaysia and Indonesia, which has no large universities like the main US institutions, universities need to rethink their approach to global competition.

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