A STUDY ON THE ROLE OF GOVERNMENT IN DIGITALIZATION OF HIGHER EDUCATION IN INDIA

By
DR. S. NAGABHUSHANA
Assistant Professor of Commerce
Government First Grade College, Harohalli,
Kanakapura Taluk, Ramanagara District, Karnataka - 562112

DR. C. M. ESHWAR REDDY
Principal & Associate Professor of Commerce,
V.V.Puram Arts & Commerce College
KR Road, V.V.Puram, Bangalore, Karnataka – 560 004

DR. K. NANJE GOWDA
Assistant Professor of Commerce
V.V.Puram Arts & Commerce College, KR Road,
V.V.Puram, Bangalore, Karnataka – 560 004

Abstract

With the appearance of innovation and its flooding worthiness in the public eye everywhere, there is a tremendous extension to take instruction to the remotest piece of the nation, for upgrading mindfulness and improving comprehension. Indian higher education sector is currently undergoing rapid transformation process. Digitization has transformed the education sector and modern classrooms with smart boards, virtual classroom and E-text books have taken over blackboards, chalks and dusters. The 21st century has been rightly termed as the digital era. Internet is bringing a substantial change in our lives as we are dependent on the usage of technology to even complete simple tasks. The modes of teaching in higher education have drastically changed in last 15 years. Abundant information on any subject is available on such sources as "YouTube", "Face book", "Wikipedia" and "Google". The online education therefore has added new options of teaching, has created a wide variety of new courses, and has increased the enrollment in many academic institutions. Govt. of India has made huge investment in higher education to digitize the educational content and delivery using information and communication technology. Different digital initiatives of Govt. of India for enhancing quality of higher education have been discussed in this paper.

Keywords: *Higher Education, Technology, Digitalization of Education, Government Initiatives, Ministry of HRD*

Introduction

"The use of technology coupled with bold decisions can help India leapfrog into inclusive growth and improve the quality of health and education."

-   Bill Gates

India's advanced education framework is the world's third biggest as far as understudies, alongside China and the United States. In future, India will be one of the biggest training center points. India's Higher Education division has seen a colossal increment in the quantity of Universities/University level Institutions and Colleges since freedom.

The contribution of private area in advanced education has seen exceptional changes in the field. Today over 60% of advanced education establishments in India are advanced by the private division. This has quickened foundation of establishments which have started in the course of the most recent decade making India home to the biggest number of Higher Education organizations on the planet, with understudy enrolments at the second most noteworthy (Shaguri, 2013).The number of Universities has expanded from 20 out of 1950 to 993 out of 2019. According to the study report of AISHE-2019 as of now, in India, there are a sum of 993 colleges out of that 46 are focal colleges, 689 state colleges, 124 considered colleges, 15 open colleges, and 132 different colleges. Notwithstanding these numbers, global instruction rating organizations have not set a significant number of these foundations inside the best of the world positioning.

Advanced education framework in India has experienced quick development. At present, India's propelled instruction structure is the greatest on earth choosing in excess of 70 million understudies while in less than two decades, India has made sense of how to make additional point of confinement with respect to in excess of 40 million understudies. At present, advanced education part observers spending of over Rs 46,200 crore (US\$ 6.96 billion), and it is relied upon to develop at a normal yearly pace of more than 18 percent to arrive at Rs 232,500 crore (US\$ 35.03 billion) in next 10 years. India's IT firms are working with scholastic foundations and setting up in-house organizations to prepare the correct ability as these organizations move to Social media, Mobility, Analytics and Cloud (SMAC) advancements.

Digital Learning in Higher Education

In the present time, the wide reach of internet and smart gadgets for digital access to learning resources happens to be the potential saviour as it brings learning resources to the learners. Truth be told, due to expansive effect of computerized learning at worldwide just as at neighborhood level, it has become a method for learning. The student's reaction on the utilization of various computerized learning stages shows that the utilization of advanced learning innovation builds understudy commitment in course, boundary free access to learning materials and the utilization of versatile innovation in advanced substance shows clear improvement in their presentation. Be that as it may, the viability of computerized learning stage relies on the nature of substance, content accessibility and speed of web.

In later past, number of advanced learning stages have come up and are in effect effectively utilized by understudies and educators the same. The degeneration in the homeroom showing quality due to non-accessibility of educators in both amount and quality has made it inescapable for the understudies to search for good quality learning assets through various e-learning stages like edX by Harward and MIT; Connect, ALEKS - versatile counterfeit astute learning framework, LearnSmart, Create and so on. by Mc Graw Hill, NPTEL and online courses by IITs and top Universities of world, Coursera. As per a report, the India's education market is likely to grow upto $180 billion by 2020 due to the expanding digital learning market and the demographic dividend. The portion of advanced learning market alone is probably going to go upto $5.7 billion by 2020 because of quick growing number of web clients, which may stretch around 550 million by 2020 with around 40 percent infiltration in the nation's populace. Along these lines, clearly there exists amiable air for development of advanced learning and its basic assessment with regards to our country is the need of hour.

The present reality is feeling overpowered by swarms of advanced innovations, particularly in the man-made brainpower space. Emerging technologies have always followed risk routes before these are finally assimilated in a society. Governments can't forestall presentation of innovations, whose opportunity has arrived. Advanced innovation procedures are talked about in all meeting rooms, be it an assembling concern or an administrations area. This also entered the educational space in the 80s when management information system (MIS) and networks were being set up across our universities. While India is *numero uno*, as regards to the information technology (IT) enabled service delivery is concerned, application of these services within Indian educational institutes has been highly restrictive. This has generally changed; the same number of private players are entering the instructive area as edupreneurs

and legislature of the day is taking numerous activities to create incorporated training conveyance systems for a typical use.

Advanced transformation is acquiring major developments in the Higher Education scene. Each establishment is taking different activities in advancing computerized instruction. MHRD has taken up novel activities like SWAYAM (India's very own MOOCs), Swayam Prabha, National Digital Library (containing 6.5 million books), and National Academic Depository. UGC has drafted New Online Education Regulation and rules for the equivalent have likewise been encircled.

The innovation of online instruction and all the computerized activities have the likelihood to reform advanced education situation sooner rather than later. Other than the previously mentioned activities MHRD has additionally begun activities like "Cashless Campus" and Digital Financial Literacy of network by understudies.

Government initiatives in the field of Digitalization of Higher Education

The Government of India emphasis on the Digital India Campaign looks to increase the scope of technology across the country and also has helped transform the education system in the country. The campaign aims to ensure better connectivity and maximize the potential of India's much talked about demographic dividend. India is at the cusp of the following development upheaval. The major **Government initiatives in the field of Digitalization of Higher Education are as discussed below:**

1. SWAYAM (Study Webs of Active learning for Young Aspiring Minds)

Under the 'Digital India' Initiative of Government of India, one of the trust areas is 'Massive Online Open Courses (MOOCs). MHRD, Government of India has embarked on a mo initiative called Study Webs of Active learning for Young Aspiring Minds to provide an integrated platform and portal for online.

2. SWAYAM PRABHA

The SWAYAM-PRABHA is a socialistic activity owed to 32 DTH frequencies notations subsequent in broad-casting huge modes oriented to knowledge facilities on 24 x 7 pertaining with GSAT-15 satellite. Every day, there will be new content for at least four hours which would be repeated 5 more times in a day, allowing the students to choose the time of their convience. The channcels are uplinked from BIGSAG, Gandhinagar. The contents are provided by NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS. The INFLIBNET Cengtre maintains the web portal.

3. National Academic Depository (NAD)

The vision of NAD is born out of an initiative to provide an online store house of all academic awards. National Academic Depository is a 24x7 online store house of all academic awards viz certificates, diplomas, degrees, mark sheets etc duly digitized and lodged by academic institutions/boards/eligibility assessment bodies. NAD not just guarantees simple access to and recovery of a scholastic honor yet in addition approves and ensures its genuineness and safe stockpiling.NAD comprises of two interoperable digital depositories viz CDSL Ventures Limited (CVL) and NSDL Database Management Limited (NDML). These computerized stores have guaranteed equipment, arrange offices and programming of recommended quality for smooth and verified operationalisation of NAD.

4. National Digital Library of India (NDL India)

National Digital Library of India (NDL India) is an all advanced library that stores data (metadata) about various sorts of computerized substance including books, articles, recordings, postulation and other instructive materials important for clients from changing instructive levels and abilities. It gives a solitary window search office to get to advanced substance right now existing in India just as other computerized sources under a solitary umbrella.

5. E-Shodh Sindhu (eSS)

The MHRD has shaped e-Shodh Sindhu combining three consortia activities, to be specific UGC-INFONET Digital Library Consortium, NLIST and INDESR-AICTE Consortium to give access to peer-assessed diaries and number of bibliographic, reference and authentic databases in various controls to the Research and scholastic network in the nation.

6. e-Yantra

Venture e-Yantra is an activity to spread instruction in implanted frameworks and Robotics by IIT Bombay supported by Ministry of HRD through Nation Mission of Education through ICT (NMEICT). This undertaking was conceptualized by Prof. Kavi Arya and Prof. Krithi Ramamritham of the Dept of Computer Science and Engineering at IIT Bombay

7. e-Acharya

A portal to host all e-content project, developed/funded under the NME-ICT. There are more than 70 projects on e-content under NME-ICT which are developed/being developed in various subject disciplines (Science, Arts, Engineering, Social Sciences etc) through various Indian institutes/ universities / colleges. The entrance would give office to look and peruse all facilitated substance wherein a less fatty can without much of a stretch access the ideal material including sound/video learning material, printed material, interactive media improved materials and so forth however a solitary interface.

8. E-Kalpa

This undertaking on 'Making Digital learning Environment of Design' additionally called 'e-kalpa' is supported by the MHRD, Government of India as a major aspect of the NME-ICT.

9. FOSSEE (Free/Libre and Open Source Software in Education)

FOSSEE (Free/Libre and Open Source Software in Education) project promotes the use of FLOSS tools to improve the quality education in India. It plans to lessen reliance on restrictive programming in instructive foundations. It encourages the use of FLOSS tools through various activities to ensure commercial software is replaced equivalent FLOSS tools. The FLOSS project is a part of NME-ICT of MHRD, Government of India.

10. Spoken Tutorial

The Spoken Tutorial project is the initiative of the 'Talk to a Teacher' activity of the NME-ICT, launched by MHRD, Government of India.

Spoken instructional exercise is a multi-grant winning training content gateway. Baadal is a cloud plan and virtualization the load up programming began by MHRD under It is independently directed, multi-ligual course guarantees that anyone with a PC and a craving for learning, can gain from wherever, whenever and in a language of their decision. All the substance distributed on this site are shared under the CC BY SA permit. The verbally expressed instructional exercise venture is being created at IIT Bombay for MHRD, Government of India.

11. BAADAL

BAADAL is a MHRD initiative developed as NMME-ICT Cloud for academic purpose. Baadal is a cloud coordination and virtualization the board programming started by MHRD under NMEICT plot and created and kept up by IIT Delhi. It guarantees ideal usage for the framework and accelerates the improvement and sending of eGov applications scholarly needs. Under this task, it helps government and semi government foundations to oblige their framework needs without dealing with the board issues.

12. Global Initiative of Academic Network (GIAN)

Administration of India has endorsed another program title Global Initiative of Academic Network (GIAN) in Higher Education planned for tapping the ability pool of researchers and business visionaries, universally to empower their commitment with the organizations of Higher Education in India in order to enlarge the nation's current scholarly assets, quicken the pace of value change and raise India's logical and innovative ability to worldwide greatness.

13. National Institutional Ranking Framework (NIRF)

National Institutional Ranking Framework (NIRF) was approved and launched by the MHRD on 29th September 2015.

This structure traces a philosophy to rank foundations the nation over. The philosophy draws from the general suggestions expansive comprehension landed at by a Core Committee set up by MHRD to distinguish the wide parameters for positioning different colleges and establishments. The parameters comprehensively over "Educating, Learning and Resources", "research and Professional Practices", "Graduation Outcomes", "Effort and Inclusivity" and "Observation".

14. IMPRINT IMPacting Research Innovation and Technology)

Engraving is the first of its sort MHRD bolstered Pan-IIT+ IISc joint activity to address the significant science and building difficulties that India must deliver and advocate to empower, enable and encourage the country for comprehensive development and self-solid. Engraving gives he overall vision that aides examination into regions that are overwhelmingly socially pertinent.

15. SAKSHAT: A One Stop Education Portal

The pilot venture SAKSHAT, a One Stop Education Portal propelled on 30th October 2006 to encourage long lasting learning for understudies, instructors and those in business or in quest for information liberated from cost to them. The substance improvement task for SAKSHAT was created by NCERT and other Content Advisory Committee individuals who are conspicuous academicians in the field.

The vision of SAKSHAT to cater to the learning needs of more than 50 core people through a proposed scheme of NME-ICT. The plan is to give availability to all organizations of higher education in figuring out how to universe of information in the internet, to use the capability of ICT, in furnishing great information modules with right e-substance, to deliver to the customized needs of students, so as to deal with their goals.

16. KNOW YOUR COLLEGE

Know Your College (KYC) is a web portal about the colleges and Technical colleges detailed information portal launched by MHRD of Government of India in 2014. The main aim of this portal is to help students to select the right colleges as per his / her ambition. KNOW YOUR COLLEGE portal is the final destination of all kind of higher education information's to students and parents.

Students can search the course details as per his / her wish in their own place, they cannot get their District / State all recognized education institutions details information's and the course

details. In this link students can find the college facilities like college providing courses, Lab, Hostel Facility, faculty details and Library etc.

In this application students will get detailed information about colleges, Universities offering scholarship and fees details. At present KYC is providing 23 countries education institutions details.

17. DigiLocker

DigiLocker is a stage for issuance and confirmation of reports and testaments in a computerized manner, consequently taking out the utilization of physical records. Indian residents who pursue a DigiLocker account get a devoted distributed storage space that is connected to their UIDAI (Aadhar) number.

Associations that are enlisted with Digital Locker can push electronic duplicates of records and testaments (eg. driving permit, Voter ID, School authentications) straightforwardly into resident's storage spaces. Residents can likewise transfer checked duplicates of their inheritance records in their records. These heritage records can be electronically marked utilizing the eSign office.

18. The National Programme on Technology Enhanced Learning (NPTEL)

The National Programme on Technology Enhanced Learning (NPTEL) was initiated by seven IITs of India. Five core disciplines were identified, namely civil engineering, computer science and engineering, electrical engineering, electronic and communication engineering and mechanical engineering and 235 course in web/ video format were developed in this phase.

19. OSCAR (Open Source Courseware Animations Repository)

OSCAR provides a repository of web-based interactive animations and simulations that it refers to as learning objects (LOs). The learning objects span topics in science and engineering at the college level and mathematics and science at the school level. Understudies and instructors can view, run and download these learning objects.

20. ShodhGangotri

ShodhGangotri, explore researchers/examine managers in colleges are mentioned to store electronic form of affirmed outline presented by look into researchers to the colleges for enlisting themselves for the Ph.D program. The store on one hand, would uncover the patterns and headings of research being led in Indian colleges, then again it would keep away from duplication of research. Outline in "ShodhGangotri" would later be mapped to full content propositions in "ShodhGangotri". In this way, when the full substance recommendation is submitted for an overview, an associate with the full substance hypotheses would be given from ShodhGangotri to "ShodhGangotri".

21. e-PG Pathshala

e-PG Pathshala is an initiative of the MHRD under NME-ICT being executed by the UGC. The substance and its quality being the key segment of instruction framework, top notch, educational program based, intelligent e-content in 70 subjects over all orders of sociologies, expressions, expressive arts and humanities, normal and numerical sciences, semantics and dialects have been created by the subject specialists working in Indian colleges and other R and D establishments the nation over. Each subject had a group of head specialist, paper organizers, content essayists, content analysts, Language editors and media group.

Benefits and Drawbacks of Digital Education

Benefits:

1. With digital education, classroom teachings have become more fun and interactive. Children tend to be more attentive.

2. Interactive online introductions or pragmatic sessions in instructive substance through intuitive screen time help the understudies to give more consideration to subtleties which empower them to finish their exercises without anyone else.

3. Using tabs, laptops or notepads, instead of pens and pencils, motivates children to complete their tasks quickly.

4. The digital classrooms have helped increase student attention; teachers maintain that there has been a reduction in absenteeism and school dropouts.

5. Active online screen time helps students develop language skills. By perusing eBooks or getting to think about materials on the web, they adapt new words and extend their jargon.

6. Many multiple times, an understudy dithers to pose an inquiry to his instructor in homeroom preparing. Be that as it may, with advanced instruction, regardless of whether he doesn't comprehend anything at one go, he can go to the recorded sessions to clear his questions.

7. The best thing about digital education is that it is user-friendly.

8. Online study materials are easily available.

Disadvantages of digital education

- It is expensive.

- To have digital education means, there is a need to have a proper infrastructure at home as well.

- Online learning requires much better administration and unbending calendars.

- Getting all answers on the net effectively additionally decreases the youngsters' own imaginative capacities.

- Digital instruction can likewise cause kids to overlook the fundamental method for contemplating.

CONCLUSION

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.

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