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DIGITAL ECONOMY OF INDIA - A PATHWAY TO DEVELOPMENT [DEIAPD - 2023] - [FULL PROCEEDINGS]

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DIGITAL LEARNING IN HIGHER EDUCATION - THE INDIAN OUTLOOK

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ABSTRACT:

This paper has an aim to describe the digitalization of the education system in India. The basic challenges in higher education system in India are resistance to change, motivation levels of students, technical skills of students, students' understanding of technology, student performance evaluation etc. Therefore, a contemporary way of imparting education is needed to manage such transformation arising as a consequence of creation of huge amount of information in a systematic manner. Digital Education can be defined as the usage of a combination of technology, digital content and instructions in the education system to make things more effective and efficient than the former traditional education system in place. Through this research paper, an attempt has been made to understand the upcoming trends in digital education system in India that will give shape to the future of our coming generations for the betterment. An attempt was made to collect the responses from the sample of 120 respondents of college teacher and parent of student who have their wards studying in colleges in various private and public colleges to understand their perceptions on the various forms of digitization introduced in the Indian education system.

KEYWORDS: Digitalization, Trends in Education System, Digital Education, Higher Education, Technology, etc.

INTRODUCTION:

Education plays an important role in the development of stable and civilized society, polishing human skills, developing the personality of individuals which makes the person knowledgeable, competent and skilful. Due to globalization, there is a flow of information, knowledge, technology and people. With technology as a catalyst, education is moving from a knowledge- transfer model to a collaborative, active, self- directed, and engaging model.

Education system creates hope and it should never aim at creating mere hypes. Over a period of time many changes have occurred in different sectors of economy including the education system. Education sector unlike any other sector has seen many stages in its evolution.

From Guru-Shishya system of conducting the class in open garden under the trees to closed class room lectures, presentation form of teaching with the aid of LCD touch-screen projector to online notes and now instant WhatsApp messages is the buzzword among the students. WhatsApp has gained the status of being authentic formal means of communication among the students and the academicians. Screenshots have taken off the business of many of the photocopy outlets operating within many school and college premises. Indian subcontinent is comprised of diverse population belonging to various ethnic and cultural groups. Apart from these differences, the most visible difference that makes a direct impact on the Indian education system is the diversity in purchasing power and affordability of the Indians.

The modes of teaching in higher education have drastically changed in last 15 years. While some old guards still stay with the "Chalk and Talk" technology, it is very rare that in these days professors do not use some modern technology in class-room delivery. Abundant information on any subject is available on such sources as YouTube, Facebook, Wikipedia, and Google. New ways of teaching may include development of new information and communication technologies such as a cable and satellite transmissions, audio and video conferencing, PC software and CD Rooms and in particular the internet sources. In India there are many institutions such as IITs and IIMs that have in recent years opened satellite

campuses abroad or have signed memorandum of understandings (MOUs) with some foreign universities to offer online education.

This article is aimed at analyzing the implements an exploratory purpose to understand how higher education can improve students' learning experience through digitalization by adopting and maintaining vital necessary technologies within their systems so that in the future, the learning experiences of students can be improved.

HIGHER EDUCATION IN INDIA:

India is among top 5 countries globally in cited research output, with 23 universities in global top 200. By 2030, India will be amongst the youngest nations in the world. With nearly 140 million people in the college-going age group, one in every four graduates in the world will be a product of the Indian higher education system.

Over the last two decades, India has remarkably transformed its higher education landscape. It has created widespread access to low-cost high-quality university education for students of all levels. With well-planned expansion and a student-centric learning-driven model of education, India has not only bettered its enrolment numbers but has dramatically enhanced its learning outcomes.

A differentiated three-tiered university system where each tier has a distinct strategic objective has enabled universities to build on their strengths and cater across different categories of educational needs. Further, with the effective use of technology, India has been able to resolve the longstanding tension between excellence and equity.

India has also undertaken large-scale reforms to better faculty-student ratios by making teaching an attractive career path, expanding capacity for doctoral students at research universities and delinking educational qualifications from teaching eligibility.

EMERGING TRENDS OF DIGITALIZATION:

1. Digitalized classroom/Flipped classrooms a growing trend:

A complete revolution in the way we learn today has been brought by Technology. Teachers teaching in the classroom can capture the students and the full strength in the class by digital screens, thus facilitating each child to get the same base content and input from the teachers. This feature of digital era has increased the student engagement as it combines various instructional styles. The aim of a teacher however should be to create such an atmosphere which makes every student want to study.

2. Video based learning:

Video- based learning is a part of digital marketing has geared up in Indian Education Sector and has made education engaging, entertaining and exploring. It enables learning with a pedigree of learning out of leisure with creativity, fun and entertainment on cards via the wonderful Apps, podcasts, video, interactive software, e books and online interactive electronic boards. Children are excited and operative with interest to manage the showcase via their intelligence, exploring the weak techno skills of teachers and assist them in public with pride and honour.

3. Massive open online course (MOOCS) & Other distant learning programs:

A massive open online course (MOOC) is an online course aimed at unlimited participation and open access via the web. India is considered to be the biggest market for MOOCs in the world after the USA. Since the population of India is huge, massive open online course (MOOC) are said to gateways for a lot of Indians in term of bringing an educational revolution. Online distant learning programs give a great opportunity to avail high quality learning with the help of internet connectivity.

THE ROAD TO PROGRESS: 2013 TO 2030:

In recent years, India has undertaken massive structural and systemic changes that have started to yield encouraging results. The country has been touted to have the best-in-class post-secondary education system at present. Some of the significant factors that have contributed to this growth and can help envision the 2030 dream includes:

- Expansion of a differentiated university system with a three-tiered formalized structure
- Transition to a learner-cantered paradigm of education

- Intensive use of technology
- Reforms in governance

Researchers have reached to this conclusion that technology integration involves the educators and students seamless use of technology as a means to complete a task in a disciplined study that promotes higher order thinking skills. The incorporation of technology in the classroom is a process that involves change in an educational system and occurs over a period of time. The combination of the Internet and multimedia make it possible that digital classrooms adjust many forms of distance learning. Classrooms too, can be thought of as a platform, and they certainly are no exception to increasing amounts of research and the pervasiveness of multimedia. The digital classroom is quickly spreading into many campuses and is increasing in visibility. The attainment of this goal entails a reform in an educator's method for the delivery of instruction with student. Digital learning is replacing traditional educational methods more and more each day. With how rapidly classrooms are changing and it is best to forget methods we may remember.

The inclusion of digital learning in the classrooms can vary from simply using tablets instead of paper to using elaborate software programs and equipment as opposed to the simple pen. Children also develop positive feelings of accomplishments from mastering new knowledge and skills using digitized learning tools giving them the confidence they need to want to learn even more new thing.

It is commendable that millions of courses by the best educators are available for free to anyone with an internet connection. The possibilities are endless. Technology evolution plays a pivotal role in improving numerous aspects in the education space. Implementation of digital technology in education necessitates substantial investment and supports the use of education related apps and social media. It enables easy learning by providing access to mobile devices, which helps students meet defined standards as well as challenges. Several learning management systems help students to learn the creative way, complete assignments with ease, perform better research, explore electronic methods and utilize wireless technology to integrate teaching and learning.

IMPACT OF DIGITAL TECHNOLOGY ON TEACHER PRACTICE:

Digital technology classrooms require a shift from a teacher-centered to student-centered environment where the instructor must take on multiple new roles. The constructivist theory that supports asynchronous learning demands that instructors become more than dispensers of knowledge; it requires that they become instructional designers, facilitators, and assessors of both grades and their teaching methods. As instructional designers, emphasis is placed on establishing the curriculum, methods and the media through which the content will be effectively delivered. Once the design is in place and executed, the instructor must then facilitate he communication and direct the learning. Through this project, teachers became involved in building their knowledge base. They took an active role by determining a wider vision for their learning journey, taking part in the process from start to finish.

IMPACT OF DIGITAL TECHNOLOGY ON STUDENTS:

The student-centered nature of asynchronous online learning requires students to be actively involved with and take more responsibility for their own learning. In addition their normal duties as learners, students are required to

- Become proficient with the technology required for the course.
- Use new methods of communication with both peers and instructors.
- Strengthen their interdependency through collaboration with their peers.

CHALLENGES IN DIGITALIZATION OF HIGHER EDUCATION:

- Resource and Internet connectivity related challenges:

One of the main challenges for digital education in India is poor internet connectivity in rural areas and some part of urban areas. Majority of population across India has still no access to internet and a large population in rural areas is still illiterate in the field of digital technology.

- Shortage of trained teachers:

A major obstacle in the use of digital education in rural areas is the lack of knowledge and skills. There is a shortage of teachers, formally trained on digital technology. In some of the academic institution in rural areas, school teacher and college professors are not interested in using digital tools for conducting classes.

- Language and content related challenges:

Language is one of the main barriers for the development of digital education in India, there are several different languages in different state have been spoken all across country, pushing all the digital content in all these regional languages some time becomes difficult for the agencies.

- Poor maintenance and up gradation of digital equipment:

In rural areas maintenance and up gradation of digital equipment is one of the major challenges. This is largely due to budgetary constraints by government. The digital education projects in rural school and colleges are not self- sustainable. An initial stage various projects have been launched by government for the development of digital education, but later they have not been taken due care for the maintenance of digital equipment which affecting the digital education development in rural areas.

- Insufficient funds:

Digital education involves effective and efficient usage of appropriate and latest hardware and software technology available in the market. In developing countries like India, digital technology implementation into education systems is a difficult task as it requires huge funds and infrastructure. As a consequence of lower funds higher education institutions were not only cutting faculty salaries, having hiring freeze, dismantling entire departments (or some programs), but also were willing to offer more and more cost saving digital classes. So by 2013 we have this unique situation for digitalization that it must help administration save funds and simultaneously improve the quality of education.

RESEARCH METHODOLOGY:

OBJECTIVE:

The objective of the study is

- To understand the various forms of digitization introduced in the Indian education system
- To evaluate the perception of teachers and parents towards digitalization in education in terms of quality.
- To ascertain the major challenges faced by instructor/learners in digital mode of education.
- To analyze an appropriate digital mode for teaching- learning process as well as assessment.

SAMPLING PLAN

A structured questionnaire was formulated and circulated amongst the teachers working in a college in Coimbatore City and convenience random sampling method was adopted to collect the data from the parents of the students studying in the college through online methods of data collection and data was collected on the same. The sample size was 120 from working professionals in colleges and parents of the students and 80 from the students studying in the college for the paper. The collected data was classified, tabulated and grouped under various heads for the purpose of interpretation.

DATA ANALYSIS AND MAJOR FINDINGS OF THE STUDY:

The responses were collected from a sample of 120 respondents. The population targeted was working professionals in colleges and parents of the students.

Analysis of questionnaires from perspective of the college teachers and parents who have their wards studying in colleges in various private and public colleges is as follows:

1. Respondents: College Teacher and Parent of Student:

Out of the 120 responses collected, 55% were teachers working in the college and 45% were parents whose wards were studying in the college.

2. Viewing timetable, class assignments, events for the students from home

Out of 55 teachers surveyed, 90% teachers feel that there is a lot of ease for students in viewing timetable, class assignments and events for students from home. Out of 45 parents who filled the survey, 70% parents feel they can easily check the timetable, class assignments and events of the college online whereas 30% parents feel that with digitization of the education system, there is no difference or betterment.

3. Taking online exams and declaring results online

Out of 55 surveyed, 91% teachers feel that digitization in education system has eased out the process of conducting exams and declaring results while 9% teachers feel that the traditional system of non-digitization was better. Out of 45 Parents surveyed, only 44% Parents feel that online system of taking exams is effective, rest 56% Parents feel that offline mode of exam and result declaration was better and manageable. They feel that their children are not well equipped with technology and are unable to manage time while taking online exams.

4. Access to online library

It was found that teachers feel that online libraries are 100% helpful for teachers as well as students. Parents were not so impressed with the concept of accessing online library. Only 40% Parents felt that accessing online library was useful.

5. Pay the school fees and other activity charges.

100% teachers feel that now with digitization, it has eased out the process of paying school fees and other charges for parents. Out of 45 parents surveyed, 89% Parents feel that it is now much easier to pay school fees and other charges whereas 11% parents feel that it is unsafe to pay school fees and other charges online and they prefer the traditional mode of making payments.

6. Track attendance of the student

Out of 55 teachers surveyed, 91% teachers feel that they can easily track attendance of the students and parents can be sent reminders for short attendance using the online system of attendance. Out of 45 parents surveyed, 75% parents responded in favour of online attendance system and track the attendance of their ward regularly.

7. Students' perception

67% indicated that online classes can be used as substitute for class room teaching to cover the syllabus. 30% respondents who were not in favour of online classes can be traced to inability to focus on curriculum. 82% of students were accepted the new educational formats. Majority of the respondents preferring recorded classes. 64% of the expressed that the access to technology, limited digital skills were the challenges for them. Mobile data pack was the source of internet for 82% of the respondents. Majority of the respondents (62%) said that WhatsApp was the best way to communicate class updates. 58% of the learners wanted online classes for twice in a week with 46% respondents preferring 45 minutes duration for each class.

SUGGESTIONS:

(1) Proper Training for using different online teaching-learning apps should be provided to the students and the teachers for smooth functioning of the Class.
(2) Evaluation mode should be done in such a way that students should not be able to do any unethical practices and the one which helps to examine their actual knowledge.
(3) The Education Institution should come up with new methods of teaching for enhancing digitalization in education.

CONCLUSION:

Digitalization has no doubt changed our education system, but we cannot say that it has diminished the value of our old-time classroom learning. The best part of digitalization of education in the 21st century is that it is combined with the aspects of both; classroom learning and online learning methods. This way the digitization of education industry in the 21st century proves to be a boon to our society.

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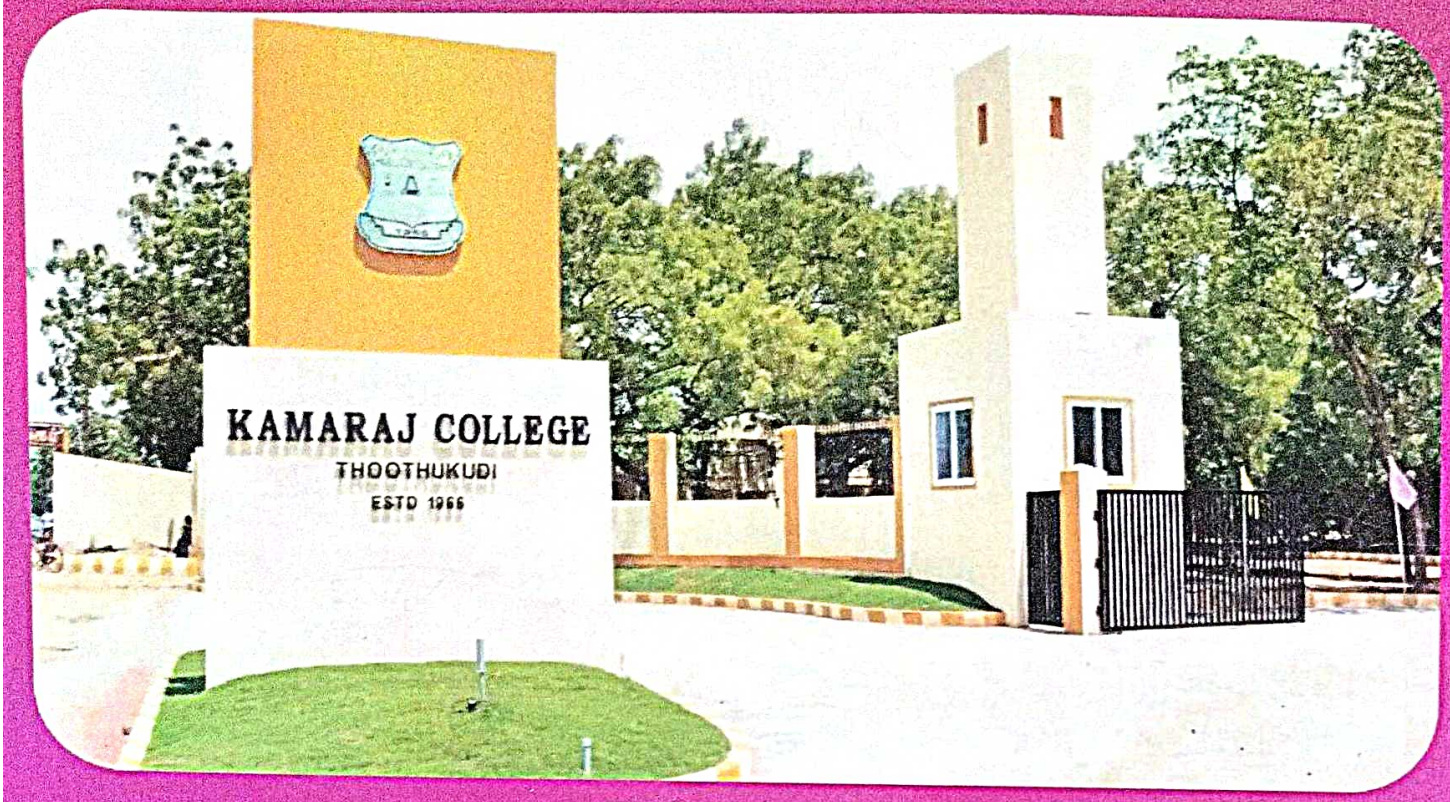

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