"Digital Education - A SWOC Analysis"

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Abstract

Digital Education is the innovative incorporation of modern tools and technology to assist teaching and learning process . It is also known as Technology Enhanced Learning. It involves the application of a wide spectrum of practices, including blended and virtual learning. The System of education environments are anticipated as alleviation to unpredicted natural and artificial pandemics such as Covid-19 in 2019 by the significant changes associated with the digitalization of educational system. Due to Covid-19 Pandemic there is a great scope for emerging trends towards Digitalization of education system. This article aims to provide valuable insight of Information and Communication technology and digital education into its future opportunities, benefits, threats, and challenges of embracing the latest technologies in the digital era, and vast online open courses. The Information and Technology revolution favored open access to information. Today Classrooms have abundant of information and communication technology resources, all the teaching fraternity made great endeavour to include digital technology to access information and collaborative activities for the learners.

KEYWORDS:- Digital Education, Blended and Virtual Learning, Pandemic, Digital Technology.

Introduction:-

Digital education also referred to as Technology Enhanced Learning (TEL) or E-learning, is the creative use of E- resources while teaching and learning. Innovative use of emerging technology increases the capability of teachers in the classroom Environment. Digital education helps teachers and students fraternity get explore to a world-class learning experience when traditional higher education is not possible due to financial or personal constraints. Some may also suffer from physical or mental disabilities that make learning in a classroom impossible. Those people who are suffering from Physical and Mental Disabilities digital Education will provide a good Platform for their education. They can get plenty of opportunities to access information worldwide through digitalization of the education system. For the students Digital education provides online courses, specializations in various fields and degree programs can offer great opportunities to continue their education and build careers for themselves. Now a days Corporate world not only look for the basic skill but also they look for a long-term Cordial relationship with the organization.

There are three related terms in education that are made possible by digital technologies: **Teaching without the physical Existence of a teacher, Riveting practice, and contact on-site.** Students can use their smartphones to attend the class. Smart phones enable

students to use these digital devices as an alternative medium of contact with teachers and between students. Digital education will bring revolutionary changes in the field of education . Students can access and use online information though electronic media as the principal means of communication.

Digital Education in India

There has been number of initiatives taken by the government as well as private institutes where ICT has become an integral part in imparting the education in india. In today's world information and communication technology (ICT) is a key parameter for education development of a nation. Presently India is 121st position in ICT development raking out of total 157 countries. Many Institutions particularly private institution have entered into the online distance education using ICT Based education.

1) Brihaspati:- It is an open Platform for learning developed by IIT Kanpur, supported by the Ministry of information and communication technology , government of India. Faculties are using this E-learning platform to post lecture note, materials Etc. It is also useful for effective classroom teaching.

2) Another Computer based solution over a computer network, Vartapal Forum create an environment modelled closely on a real world classroom. Vartapal Forum is a Discussion forum for smart students and Professional

3) University Grants Commission INFONET Provides a electronics access to scholarly literature available over the internet in all areas of learning to the university sectors in india. It provides current as well as Archival access to more than 4500 core and peer reviewed journals.

4) Another project to provide web based training is the National Programme on Technology Enhanced learning jointly launched by the IIT and Indian institute of science and funded by the Ministry of Human Resource development, government of India. The main objective of the above project is providing a quality education to everyone interested to learn from IIT, it also introduces multimedia and web-technology to enhance learning of basic science and engineering concepts at the UG and PG level.

Digital Education in Karnataka

Karnataka has unique programmes for the introduction of ICT in classrooms and Digital innovative programmes for students. The ICT programme is an integrated technology-based programme, comprising Computer Assisted Learning Programme (CALC) under Sarva Shikshana Abiyan and Technology Assisted Learning Programme (TALP), which comprises EDUSAT, Radio programmes and IT@Schools. Computer Assisted Learning Programme CALC was introduced in Karnataka in 2004-2005 in 600 Government Primary schools across the state. As this programme became absolute, emphasis was given to secondary schools under the TALP (Technology Assisted Learning Programme) for Secondary schools. The list below provides a bird's eye view

of the procurement of AIOs for schools where Computer Labs are set up. These labs have a thin client-server, 10 AIOs, a laptop and a projector.

Total Number of Secondary Schools	Year	Number of schools in which Computer labs were provided	Laptops	Projectors	Computer Labs
4687	2016-17	1000	1000	400	1000
	2017-18	750	750	365	-
	2018-19	750	750	511	-
	2019-20	718	718	718	718
	2020-21	242	242	242	633
	Total	**3460**	**3460**	**2236**	**2351**

(Source: Digital Learning India Report 2020-21)

Apart from Secondary Schools, Universities and Government First Grade Colleges were also adopted Digital Learning System due to Covid-19 in the year 2019-20 onwards. Covid-19 Situations pose many problems for smooth conducting of physical classes. As we know that there was no chance for conducting physical classroom teaching, there is scope for emergence of massive use of digital technology for smooth conducting of teaching learning experience. For creating Interest in the learning process Department of Higher Education will introduce KLMS(Karnataka Learning Management System) for the students. Through the KLMS the students can access information which was already uploaded in the system. Students can test their understanding level through taking tests in the KLMS System only. Subject Experts and E-content Developers create content based on the subjects allotted to them and then uploaded into the KLMS system. For effective implementation of KLMS Programme, the department of Higher education will provide Tabs and Laptop to all the students irrespective of caste and Gender.

Training of Teachers:

Under this programme, Karnataka has provided Induction Training and refresher courses to almost all the teachers. A Module for such training has also been developed by DSERT. In the year 2020-21, 12000 teachers training was targeted. Out of which 11479 teachers have obtained training To date around 37833 teachers have been provided with the 10-day refresher course and 9629 teachers have been provided with Refresher Course. Covid-19 pandemic resulted in an unprecedented use of technology resources in all fields. In the school education sector, this resulted in a massive increase in the use of online conferencing tools, learning management systems etc. Various trainings were held in the online mode for Nalikali, SDMC members, EMTIP MRPs, vocational education, TALP and SISLEP (training for HMs). The training was provided by TALP trained teachers, community members and vocational training instructors. **(Source: Digital**

Learning India report-2020-21)

Prospective Opportunities of Digital Education:-

Rather than anything else, Education influences the growth and development of a nation. The Future of Any nation will largely depend upon the education system in the nation. Below are the some of the opportunities of Digital Education, they are as follows

1) **Strengthening Teaching and Learning** :- Digital Education will Strengthen the education system. For all of our students and young people, digital technologies will enrich the learning experience. It will help the students to be continuously involved in the learning process. Digital education clears all obstacles in the teaching learning process. It will create a conducive Environment which will increase the potentiality of both students and teachers.

2) **Increasing Parents and Students Engagements**:- There is evidence that the use of digital equipment and software for direct communication with parents would improve adherence with teacher demands for participation, behavior, and learning support among students. Parents can keep watching the learning behaviour of their children effectively and efficiently. Digital education directly and indirectly will educate learner parents through using the various digital technologies.

3) **Enhancing Student Involvement and enrichment:-** Students or learners actively involve in the learning process through the use of digital technologies. Digital technologies create interest among the learners which will increase the involvement in the learning process.

4) **Increasing ROI from Secondary education and Higher education**:- Digital education will increase the Return on investment from secondary school and higher education. A country will invest a portion of GDP in the Educational sector. Digital education will improve the education system and can contribute to the economic growth of a nation.

5) **Inculcate the Competitive strength among the student community**:- Digital education will inseminate a culture of competitive strength among the students. Which will help them to improve their strength in the respective areas.

6) **Any time Any Place and Anywhere**:- Digital Education will create opportunities for the students to learn any time, anyplace and anywhere from the world. 24/7 virtual classrooms can be accessible to improve their knowledge and strengths.

7) **Act as a Motivation Tools:-** Digital technologies in the field of education will act as a motivation tool to actively involve the students to engage in the learning process. Latest technologies in the field of education will motivate the students community to learn about the technologies and thereby be involved in the learning process.

8) **Flexibility:-** Digitalization of education system give the opportunity for the students /learners to choose the time for their learning. Students can learn and work at their

convenience. Student /learner can access study material through online whenever they need .

Challenges of Digital Education:-

Although Digital Education will provide many opportunities in the field of education, it will pose some of the challenges which must be encountered for increasing the effectiveness of digital education. Below are the some the challenges of Digital education, they are

1) **Knowledge about Computer:-** To work effectively in a virtual environment, both students and teacher must possess a basic level of computer literacy. Both student and teaching Community should have a thorough knowledge about online tools and techniques which will be helpful for gathering information. Lack of computer literacy among the learners will abruptly hinder digital education. The students or faculty members who cannot work on the system can pull the whole program down.

2) **Lack of Physical interaction between the Teacher and Students**:- There is no physical interaction between teacher and students in digital education. Students can clarify their doubts online only. It completely avoids the classroom environment. There is no emotional connectivity between the teacher and students.

3) **Technological Difficulties**:- Sometimes it is not at all possible that everyone is in a position to purchase and use laptops and smartphones. Not every student has had the same access to technology, however, even for a generation of digital natives. Financial stability of the students will matter a lot. Not all students are in the same situation. Till today some of the remote areas will access an internet facility, Wi-Fi Facility which is the base for digital education. Technological difficulties will pose challenges for effective implementation of digital education.

4) **Lack of Time Management**:- Under the Digital education system teachers will not have proper control over the students. They will not be in a position to judge the understanding capability of students. Teachers will concentrate on their teaching , they will not know whether the students will grasp the things or not. This will create challenges for effective implementation of digital education.

5) **It will not be suitable for Practical Courses**:- Digitalization of education system will not suitable for Practical courses such as Science Course. E-learning offers realistic session-related knowledge and preparation, but instead of mastering preparing, the learner does not measure their output or real-time experience.

6) **Hindrance for Creative ability**:- Collecting and obtaining all answers through the online will also reduces the children's own creative abilities. It will not motivate the children to think creatively to solve various problems.

Future Prospects of Digital Education:

Technology has become an indispensable part of our education system with the introduction of new-age digital platforms enhancing the academic landscape in India. Students at every level of education, from pre-K to graduate and professional levels, use one or the other means of technical tool to enrich their learning abilities. Among these technological advancements, online education has gain momentum and various government initiatives making inroads into our education system. The NEP (National Education Policy) 2020 which has been introduced by the indian Government will be the landmark achievement in the field of Education. NEP-2020 will provide plenty of opportunities for digitalization of education system from primary level to Post-graduation and Professional level.

Conclusion:-

Most of the countries have expose to fast technological change by reorganizing the school and college education to develop students' potentialities for working with data and computation. In spite of the above development in the field of education many nations' curriculum have lag with digital touch in the education system.

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