ORIGINAL RESEARCH PAPER

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DIGITAL TOOLS FOR LEARNING: AN ANALYSIS OF GOVERNMENT OF INDIAN INITIATIVES

Dr. Kapil Singh Hada*

Librarian, Shri Ratanlal Kanwarlal Patni Girls' College, Kishangarh Ajmer
*Corresponding Author

ABSTRACT

In recent years, digital tools have become a crucial aspect of education worldwide. India holds a significant role in this domain, ranking second globally in the adoption of digital tools for educational purposes. These tools are transforming traditional learning methods, theories, and concepts. Digital tools are essentially the integration of technology, content, and instructional methods within the educational system to enhance its effectiveness and efficiency. They offer an engaging learning experience for all students, especially children, as the innovative audio-video features stimulate cognitive processes in their brains. Educational institutions are increasingly incorporating digital tools into their teaching methods, aiming to create a more inclusive and interactive classroom setting. Digital tools are equally important for students, teachers, and parents. Numerous digital educational platforms have emerged, such as SWAYAM, SWAYAMPRABHA, NATIONAL DIGITAL LIBRARY, e-YANTRA, VIRTUAL LABORATORIES, e-GYANKOSH, Gyanvani, DISKSHA, SAKSHAT. The objective of this paper is to shed light on digital tools, their different types, their importance, and the challenges they face.

INTRODUCTION:

Education is a lifelong process, so it can be acquired anywhere and anytime. There is a lot of demand for it. Technology is used for the success and quality of any work because the use of technology makes it interesting, easy and easy to learn. Information and knowledge in education is constantly increasing. The traditional education system has prevailed in India since its inception, where the teacher and the students are in the classroom. Teaching is done orally with a blackboard and chalk, but the culture of education is changing rapidly

2. Digital Tools:

Digital tools are programmes, websites or online resources that can make task easier to complete. Nowadays digital learning sounds as a catchphrase in the present scenario. The virtual classroom is not like the traditional classroom there are a lot of differences like geography increase time and size of class and time benefits. Students and the teacher can mutually decide geographically where their virtual class will be conducted so we can say virtual classroom are "Anywhere Classroom" with the benefit of being available 24/7 so the time limit in walls cannot constrain the teaching learning to happen. So, lot of digital tools have been evolved during the corona period. MHRD has also initiated a lot of projects in the corona period to help students. Teachers in their teaching learning process projects such as SWAYAM, SWAYAMPRABHA, NATIONAL DIGITAL LIBRARY, e-Yantra, Virtual labs, e-gyankosh, Gyan Darshan, Gyan Vani, Diksha, SAKSHAT, and many more).

3. Digital Resources for Education by the Government of India:

With so many digital tools at their disposal, educators can encourage students' creativity, give them a voice, and broaden their options for where and how they learn. The governments of every state and union territory in India use various digital tools for teaching and learning to carry on during the pandemic Corona period. This ensures that instruction proceeds smoothly and that students, teachers, and lifelong learners continue to receive an education. Students can receive instruction outside of the classroom and in the comfort of their own homes. A few of the venues are discussed as per given below:

3.1 SWAYAM (Study Webs of Active Learning for Young Aspiring Minds):

It is an initiative of the Indian government that aims to accomplish the three main goals of education policy, namely. quality, equity, and accessibility. Providing the best teaching and learning resources to everyone, even the most disadvantaged, is the aim of this endeavor. SWAYAM aims to close the digital divide for students who have not been able to integrate into the knowledge economy and have not yet experienced the digital revolution.

3.2 Diksha:

Introduced in September 2017, DIKSHA is a nationwide school education platform shared by the federal government, all states, and students in grades up to 12th. Both a mobile application and web portal are available for DIKSHA. It provides access to a large number of curriculums linked e-content through several use cases and solutions such as QR coded Energized Textbooks (ETBs), courses for teachers, quizzes and others. As of July 2020, it is estimated that over 60 crore ETBs are being printed this year in India by 35 states and Union Territories, with more than 30 crore content plays and 200 crore page hits already on DIKSHA.

3.3 Consortium For Educational Communication: Http://cec.nic.in

The Consortium for Educational Communication popularly known as CEC is one of the Inter University Centres setup by the University Grants Commission of India. It has been established with the goal of addressing the needs of Higher Education through the use of powerful medium of Television along with the appropriate use of emerging Information Communication Technology (ICT).

3.4 Virtual Labs: Http://vlab.co.in

To provide remote-access to Labs in various disciplines of Science and Engineering. These Virtual Labs would cater to students at the undergraduate level, post graduate level as well as to research scholars.

3.4 E-gyankosh (ignou): Http://egyankosh.ac.in:

A National Digital Repository to store, index, preserve, distribute and share the digital learning resources developed by the Open and Distance Learning Institutions in the country.

3.5 Kishore Manch:

It was launched by Government of Chandigarh. This programme is accessible via television. Through this the head of the school, teachers and monitoring team can track the progress of the learners. It covers the students from grade 9th to 12th class. It covers all the three streams i.e., science, arts and commerce for senior secondary level and mathematics, social science and science up to secondary students.

3.6 Samarth 2.0:

It is the online professional development of primary teachers

up to 8 class in collaboration with IIM Ahmedabad government of Gujarat.

3.7 Vanchan Abhiyan:
It was launched by government of Gujarat to improve the reading and comprehension levels of learners or students of class 3rd to 8th.

3.8 Har Ghar Pathshala campaign:
It was launched by government of Himachal Pradesh to engage students during pandemic COVID-19. This programme was launched to ensure continuity of learners learning from home.

3.9 Samadhan Ai Based Educational Chatbot:
It was launched by government of Jammu and Kashmir. It was a platform developed by the government to interact with the learners regarding the runtime queries. This tool helps the students and teachers to get quick response to their educational queries.

3.10 Project SMILE:
It was launched by government of Rajasthan. It was launched to ensure continuous learning of the learners from home for grades 1st to 12th in which students received videos related to their curriculum daily by their teachers on their WhatsApp group.

3.11 National Programme on Technology Enhanced Learning (NPTEL):
The National Programme on Technology Enhanced Learning (NPTEL) was initiated by seven Indian Institutes of Technology (Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati and Roorkee) along with the Indian Institute of Science, Bangalore in 2003.

3.12 E-pg Pathshala: Https://epgp.inflibnet.ac.in:
An MHRD, under its National Mission on Education through ICT (NME-ICT), has assigned work to the UGC for development of e-content in 77 subjects at postgraduate level. The content and its quality are the key component of education system.

4. Significance of Digital-Tools
Digital Tools can increase student engagement and help teachers improve the lesson plans and facilitate personalize learning. It also helps students built essential 21st century skills digital tools can save teachers a lot of time. Test generators can create assessments in seconds and online learning management tools can help teachers provide quick feedback to learners. Some more benefits are.
- Instructors or teachers can set individual learning pathways for students based on their needs their interest or their level of proficiency.
- Digital tools caters to the shortage of teachers and lack of basic resources in rural India.
- A collaborative space for eg- Using an e-portfolio to share reflect on and evaluate a capstone project.
- Flexibility i.e no barrier of location and time. You can very well access your curriculum wherever you are.
- Consistency and transparency.
- Digital tools promote the active learning environment.
- Digital tools assures that every student get equal amount of learning.
- Digital tools are student-centred.
- With the help of digital tools, the students can learn at a fast pace.

5. Benefits of Digital Education Tools:
- **Enhanced Engagement:** Interactive and multimedia tools make learning more engaging.
- **Personalization:** Tools that adapt to individual needs provide customized learning experiences.
- **Accessibility:** Digital tools ensure that resources are available to all students, including those with special needs.
- **Collaboration:** Online tools support teamwork and communication, even in remote settings.
- **Efficiency:** Automation and easy access to resources save time for both students and educators.

Digital educational tools are transforming the learning environment, making education more accessible, engaging, and tailored to the needs of each student. By integrating these tools, educators can enhance their teaching methods and provide students with the skills they need for the future.

6. Challenges of Digital Tools
- **Internet speed and Technological challenges:**
Internet speed is a big problem in India. Internet speed is worse in rural areas, due to power outages, or the internet freezes or you can't hear or see anything. In addition, most students in the country do not have the resources to read and teach.

- **Language and Lack of e-content:**
Languages are one of the major obstacles to the development of digital education in India. There are many different languages in different states that are spoken throughout the country. Distributing all digital content in all these regional languages sometimes becomes difficult for agencies.

- **Insufficient Funds:**
Digital tools include the effective and efficient use of appropriate and latest hardware and software technologies available in the market. In developing countries like India, implementing digital technology in education systems is a difficult task as it requires significant funds and infrastructure. Under the Digital India programme, the government has promised to make available funds for the implementation of technology, but the lack or insufficiency of funds leads to redundant and outdated infrastructure and equipment in rural schools.

- **Shortage of Trained Teacher**:
One of the main obstacles to the use of digital tools in rural areas is the lack of knowledge and skills. There is a shortage of teachers formally trained in digital technology. In some rural educational institutions, teachers and university professors are not interested in using digital tools to teach their lessons.

8. CONCLUSION:
Digital learning tools are a boon to society and everyone can benefit from them at any time. Students are more interested in learning through digital tools than traditional teaching methods. The pace of technological change in society and in schools has been exponential and continues to be so. Teachers use ICT to support their role in structuring and guiding students, monitoring their progress and evaluating their success.

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