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Importance of Developing Students Digital Skills for the Digital Transformation in Today's Education

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ABSTRACT

As the world becomes increasingly digitized, the importance of digital skills in the education system cannot be underestimated. From increasing productivity to fostering innovation, having a well-versed in digital technologies is essential to staying competitive in today's economy. Learning digital design skills is smart whether you want to enhance your career prospects or stay competitive in the education. In this article the authors explore why digital skills are vital in today's education and how it can help students to advance in their careers. In this study the authors tries to explain the challenges and opportunities of the Digital learning effect in the 21st century in India. In the Indian education system influencing many things are required, like population, poverty, teacher's skills, teaching method, pedagogy, and finances. Digital learning is one of the most affected ways of education. Education is the Nation's Strength. In Indian, education conducted different stages in primary school, secondary school, higher secondary school, and university. The Indian education system is that the third-largest within the world, first is the USA and the second is the China. Since independence, India as a developing nation is contentiously progressing within the education area. There are a lot of challenges to the education system in India that equally gives a lot of opportunities to beat these challenges and to form education systems far better education for the Digital learning of the 21st century. The authors analyzed the importance of digital education to the students in India. in appropriate use of technology in all levels of education – to improve student learning outcomes, teaching, learning and evaluation processes at scale; enhancing educational access to disadvantaged groups, increasing availability of data to enhance understanding of how children learn and streamline educational planning, administration and management.

Keywords: Digital skills, Digital learning, Indian Education System, Disadvantaged groups, Educational planning.

INTRODUCTION

The way that students learn, teachers teach, and an educational institution run has all changed dramatically as a result of the digital revolution in education. The effects of the digital revolution on education are examined in this article, including increased efficiency, tailored learning, better evaluation and feedback, improved accessibility, and the development of new skills. It also addresses the drawbacks and restrictions of the digital transition, including the need for teacher preparation, the digital divide, and privacy issues and also understands the current trends of digital transformation in the

education sector. Digital skills have become more relevant in the last 20 years, as technological advancements have impacted different spheres of work and life. During lockdown teachers, parents, and students found remote schooling extremely challenging, partly due to their low level of digital skills. More than 48% of teachers reported a high need for professional development in Information and Communications Technology (ICT) for teaching. Conversely, on average, 52% of 15-year-old students attended schools, whose principals considered that teachers did not have the necessary technical and pedagogical skills to integrate digital devices into their school curricula. In line with reaching the Sustainable Development Goal, defines digital literacy as "the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship. It includes competences that are variously referred to as computer literacy, ICT literacy, information literacy and media literacy." Indeed, being digitally skilled, a report entails being able to use digital technologies in a critical, collaborative, and creative way. It includes the following five domains: information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving. As seen below areas and competences:-

1. Information and data literacy
2. Communication and collaboration
3. Digital content creation includes
4. Data Safety
5. Problem solving

The education sector is still evolving and growing. Digital transformation in education enhances the experience of learners, mentors, alumni and helps in institution management of student admissions and other administrative tasks. It does so by leveraging technology to simplify business processes.

Review of Literature

According to Verma *et al*. (2022) research examining how the digital revolution has affected teaching and learning outcomes in Indian higher education has shown both subtle and positive effects. Anderson *et al*., (2021), in their paper states, student empowerment is a multifaceted concept encompassing aspects such as autonomy, critical thinking, and active participation in the learning process. According to Joshi & Gupta, (2020), analyzing student viewpoints and experiences is essential to assessing the benefits and drawbacks of digital transformation projects. Pulkit (2020) explains the current education system in his paper. He wrote that India holds a very important place all over the world in the education industry. The nation has more than 1.5million schools with more than 260 million students enrolled and around more than 800 universities and 65,000 colleges. Korableva (2019) highlighted the benefit of online courses over the traditional classroom based teaching. In addition to the study, more insight was found on the latest two online platforms, MOOC and Coursera, to understand which more user convenience is as well as give the best solution in terms of knowledge. R.Raja (2018) did research on the importance of technology in the education system with reference to schools in Chennai and found that with the onset of latest technology like ICT, and other digital tools are very helpful to impart knowledge to our students and the process of teaching and learning can be more enjoyable. Smith (2018) in his paper states that Digital transformation has emerged as a transformative force in higher education globally, redefining traditional teaching and learning methods. Dr. Radhika Kapur (2018) in her study focussed on the problems faced in Indian education system like importance of quality education,

challenges in the traditional mode of Education system, lack of Student engagement etc. In addition, the study author found education quality, trained teachers, the curriculum & instructional methods are not well developed and these are also contributing as major issues in the Indian education system. Arnab Kundu, Dr. Kedar Nath Dey (2018) in their article wrote that the Government of India has played a major role in the development of e-learning in India and the Department of Electronics and Information Technology is developing tools and technologies for promotion of e-learning by supporting Research and Development projects at various academic and educational institutes revolving around content development, Research and Development technology initiatives, human resource development projects and faculty training initiatives to improve literacy through distance education in order to improve general literacy and education levels in the country. Omer (2018) in his research on academicians' view on the need of transformation digitally in the education sector focused on that academicians strongly feel that as the world is moving towards complete digitalization; it's also required to take a step forward in the education system and transform in digital education. In terms of study, academicians give their viewpoint on how effective learning can also be achieved through digital tools like Artificial intelligence, learning analytics, online learning, virtual learning as well as its also required to redesign the physical environment & infrastructure equipped with Information and Communication Technology. Arvind Kaur (2018), in his Ph.D thesis mentioned about the limitation in our academic curriculum, like many government universities do not update the syllabus as compared to Private Universities. Skill education is lagging, less focus on industry academia interaction in our curriculum, many colleges and schools still go with typical traditional mode of classes, less focus on improving the quality of higher education in India. Chen & Chen (2017), in their paper states the integration of digital technologies in educational settings has led to increased accessibility, flexibility, and efficiency Chahal (2015) found in her study that due to many problems like poor teaching methods are, less number of professional and trained teachers, the curriculum, the old teaching-learning methods are not well organized, no proper and appropriate communication between the teachers and students regarding the lectures, shortage of modern and innovative techniques and financial problems, the teaching in our educational institutions is not better quality due to above mentioned reasons and some strong measures need to get implemented to make our education system more effective.

Statement of the Problem

The integration of digital skills into higher education has become pervasive, reshaping traditional teaching and learning paradigms. While the potential benefits of digital skill transformation are evident, there exists a critical gap in understanding how these technological advancements impact the empowerment of students, teachers and parents within higher education institutions. Furthermore, the potential impact on collaborative learning, real-time interaction, and adaptive learning experiences remains underexplored, representing a critical gap in our knowledge. **In light of these considerations, this study aims to address the following key questions:** To what extent have higher education institutions embraced digital skill transformation in teaching, learning, and administrative processes? How do digital skills and platforms impact student engagement, participation, and interaction in the learning environment? What are the perceptions of students, parents and faculty regarding the effectiveness of digital transformation initiatives in promoting student empowerment? In what ways does digital transformation contribute to or impede inclusivity, considering the accessibility of digital resources and accommodation of diverse learning needs? What recommendations can be formulated

based on the findings to optimize digital strategies and enhance student empowerment in higher education? By addressing these questions, the study aims to fill the existing gaps in the literature and provide actionable insights for educational institutions, policymakers, and stakeholders striving to leverage digital transformation for the holistic empowerment of students in higher education.

Significance of the study

The study's significance lies in its potential to inform educational policies, optimize institutional practices, and guide educators in leveraging digital tools effectively. By exploring the impact of digital skill transformation on student engagement, participation, and inclusivity, the research contributes to enhancing the overall learning experience, addressing educational disparities, and preparing students for the future.

Objective of the Study

- To investigate how digital skills and platforms impact student engagement, participation, and interaction in the learning environment.
- To analyse data on student experiences with digital learning resources and technologies.
- To examine the perceptions of students, parents and faculty regarding the effectiveness of digital transformation initiatives in promoting student empowerment.
- To analyse the challenges and opportunities for making digital skill education more inclusive.
- To understand the current trends of the digital education sector.
- To explore the effectiveness of digital transformation in education in India.

Research Methodology

After a thorough evaluation of the literature done to carry out this study. The principal aim of the literature review was to compile pertinent data and perspectives from knowledge and add to the wider academic conversation about the influence of digital transformation on student empowerment in Indian higher education.

The impact of digital tools and platforms on student engagement, participation, and interaction in the learning environment. The impact of digital skills and platforms on student engagement, participation, and interaction in the learning environment is multifaceted and varies based on the nature of tools, instructional design, and the overall educational context.

Sources of Data Collection: The data for the study has been collected through relevant research journals, magazines and present available literature on websites. Various government reports have also been considered.

Area of Study: The area selected for the present study is 5 schools, 5 colleges and 10 higher educational institutions in Bengaluru.

Scope of the Study

In Bengaluru various digital tools are piercing heavily day by day, close to million students and many of them connected to the internet. In the education industry also, there is a huge potential to educate the students to give better knowledge.

KEY AREAS OF DIGITAL TRANSFORMATION IN EDUCATION

After the pandemic, all institutions have been adapted to digital education approaches. This has pushed institutions to accept the digital educational transformation. Some of them can be underlined as follows:

1. Sanitation and thermal screening.
2. Contactless attendance.
3. Social distance control system.
4. Use of admission technology.
5. Transforming the EdTech models.
6. Learning from Augmented Reality (AR) and virtual reality (VR).
7. Intellectual exam portals.
8. Learning Experience Platform (LXP).
9. Transformation **in Teaching and Learning Methodologies**

ADVANTAGES OF DIGITAL SKILLS IN EDUCATION

1. **Cooperative learning:** Collaboration is forced by digital learning.
2. **Future-focused curriculums:** An institution teaches potential curricula, robots, artificial intelligence, automation, science-fiction films.
3. **Enhance cooperation between parents and teachers:** Study indicates that children do better at school and are much healthier in general when parents participate in the academic success of their children. Automation supplies progress notes and reports to parents electronically and advises them to take part in their ward's progress.
4. **Tracking of student results:** One impact of digital skill transformation on education is that it provides a more realistic way of monitoring the success of students.
5. **Improved results with data analytics:** Schools may use analytics to monitor and enhance results.

CHALLENGES OF THE DIGITAL TRANSFORMATION IN EDUCATION

1. **Unequal Access:** Considering the costs associated with modern technology, not every student could possibly afford it. This is why, if overall digital skill transformation is to succeed, then classes need to provide students with all the necessary tools and materials in a universal manner.
2. **System-based compatibility:** A major problem with digital transformation in education systems is not compliant with modern digital technologies to advance them. This incompatibility means that a current integration system must be upgraded, customized or replaced, which inevitably requires time and resources.
3. **Resistance to change:** People prefer to get acquainted with what they do and reject moving out of their comfort zone which leads to slow growth and development. Many in the education sector fear failure and are hesitant to learn new skills or processes if they adjust to new technology, culture or mentality.
4. **Inferior knowledge or skills:** An adequate level of trust, expertise and skills is important for driving innovation in the organization.
5. **Data reliability:** In this digitally rich age, numerous measurements provide insights into future learners, internal efficiencies, and user experiences and much more from schools, universities, and trainers.
6. **Lack of strategy:** One of the key challenges to progress today is to know where to proceed with

digital transformation in any sector or industry.

MAJOR GOVERNMENT INITIATIVES

1. **New Education Policy:** National Education Policy, 2020 aims at making India a global knowledge superpower by introducing several changes from the school to college level in the Indian education system with special emphasis on digital education.
2. **Digital Infrastructure for Knowledge Sharing (DIKSHA) platform:** DIKSHA is the national platform for school education available for all states and the central government for grades 1 to 12 and was launched in September 2017. As part of Prime Minister eVidya announced under the AatmaNirbhar Bharat Programme, DIKSHA is the 'one nation, one digital platform' for school education in India.
3. **Swayam Prabha TV Channel:** To support and reach those who do not have access to the internet.
4. **Online Massive Open Online Course (MOOC):** MOOC courses relating to National Institute of Open Schooling have started and more than 1.5 Crore students are enrolled.
5. **On Air:** Shiksha Vani, Digitally Accessible Information System (DAISY) by National Institute of Open Schooling for differently abled students, e-PathShala, Radio broadcasting is being used for children in remote areas who are not able to join online.

THE WAY FORWARD FOR INDIA

Though there were many challenges being faced by the education sector, there is also an optimistic blow which could take the education system and its methods a step higher. Many efforts were made to continue education at all levels with online methods, but it could not be made available to everyone. Soft technology, online webinars, virtual class rooms, teleconferencing, digital exams and assessments became common phenomena, where otherwise we might have merely defined them or they might have come into practical use a decade later or more.

CONCLUSION

Education sector has transformed from a traditional classroom practice to a remote, digitized one. Suddenly, an entire generation had to start managing and mastering digital tools to participate in education. A great burden was placed on students and their parents who suddenly had to possess a variety of skills, competencies, and resources. Digital learning is going to be the key face of future education in the subcontinent. It is surprising to see how smart technologies are changing the overall educational framework in the country. The diffusion of digital education into the rural market is evolving fast. Affordable high speed internet and direct to device technologies are empowering rural students to study online and improve their skills and knowledge. The education industry will witness the proliferation of small, medium and large scale start-ups who will offer a variety of innovative digital products to academic institutions in the coming days. The government is also taking radical steps to come up with policies that will boost the digital education market in the country. Thus, digital skills are essential for success in today's education, seeking to increase productivity, foster innovation, advance your career, or adapt to new technologies and changing job roles. Investing in your digital skills and staying up-to-date can position you for success in a rapidly evolving job market. As the education landscape evolves and new technologies emerge, the ability to effectively navigate and leverage digital tools will only become more valuable. So, if we want to stay competitive and succeed in our career, prioritize learning digital

skills.

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