

# LIBRARY SCIENCE DIGITAL TRANSFORMATION IN EDUCATION

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## Abstract

Digital transformation in the education sector has implied the involvement of sustainable management, in order to adapt to the changes imposed by new technologies. A dedicated unit for the purpose of orchestrating the building of digital infrastructure, digital content and capacity building will be created in the Ministry to look after the e-education needs of both school and higher education. Since technology is rapidly evolving, and needs specialists to deliver high quality e-learning, a vibrant ecosystem has to be encouraged to create solutions that not only solve India's challenges of scale, diversity, equity, but also evolve in keeping with the rapid changes in technology, whose half-life reduces with each passing year. This centre will, therefore, consist of experts drawn from the field of administration, education, educational technology, digital pedagogy and assessment, e-governance, etc.

Empirically explored digital transformation of the basic education of the young generation initiated by the COVID -19 pandemic. Reveals a variety of digital divides emerging and being reinforced as well as barriers to digital transformation encountered. Makes visible children's basic education as a significant area of concern for information management research. Argues we can offer a valuable contribution to children's basic education and teacher education our expertise on digital transformation.

**Key words:** digital transformation, digital divides, e-learning, educational technology, digital infrastructure.

## INTRODUCTION:

In the 21st century known as the digital age, with globalization, structures in almost every area is influenced rapidly by developing and changing information and communication technologies. It is impossible for education to remain insensitive to these developments and changes. Digital learning is replacing traditional educational methods more and more every day. With how rapidly classrooms are changing, it is best to forget methods you may remember from when you were in school and start thinking about newer teaching and learning techniques based on digital learning tools and technologies. 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.

The pandemic forced us to take an extraordinary digital leap in our everyday life and practices, including our children and their education. In a flash, their education was transformed from a traditional classroom practice to a remote, digitalized one. Suddenly, an entire generation of children had to start managing and mastering with

digital tools to participate in their compulsory basic education. This required significant adjustments not only from children and their teachers, but also from their families, school administration and the entire society. Teachers and schools had to take the lead in this sudden, unexpected digital transformation of children's basic education, without being well prepared for it. Even if digitalization in education has been a hot topic already for ages within different disciplines and digital tools are extensively already utilized in schools, teachers, schools and educational administration have been poorly prepared for acting as leaders and change agents in digital transformation.

The teachers have showed great resilience, creativity and perseverance in responding to the challenging situation of the COVID-19. Some have identified valuable digital practices that they wish to utilize also in the future. Schools and educational administration of the city may have provided valuable support. However, the teachers expressed worries regarding their pupils, having lack of access to some of them and having a fear of the problems caused by the lock-down for their future education.

This could entail using sites, services, programs, teaching tools, and technologies like study aids built for at-home use. Even social networks and communication platforms can be used to create and manage digital assignments and agendas. Irrespective of how much technology is integrated into the classroom, digital learning has come to play a crucial role in education. It empowers students by getting them to be more interested in learning and expanding their horizons. Here is how digital learning is a setup from traditional education methods.

Digital transformation of our education system will require commitment from all stakeholders. There is a growing need to integrate the smart use of digital technologies to enhance the teaching-learning experience. New technologies in education such as cloud computing, MOOCs, smart boards etc. are already impacting the teaching-learning process in a big way. Leadership support will play a crucial role to make digital transformation in education is effective in schools and colleges.

Academic leaders need to adopt new working ways and approaches that involve the use of innovative technology. Adoption of new educational technologies will enable teachers to make drastic improvements in academic delivery and students' assessment process. It can enable a better learning experience for students and improve job prospects. One of the major reasons for the inclusion of digital technologies in education transformation is the development of more personalized content with greater access to courses for skill development. However, digitalization will only be effective if the technology is used as a tool to drive systemic and institutional changes to impart knowledge and develop job skills and not merely to automate and fast track the process of learning.

Digital transformation is slow process in education which became an urgent topic in the spring of 2020 due to COVID-19. In mid March, the Government closed the schools and universities and the classes were held in online form. This faced both students and teachers with unexpected challenges.

## ADVANTAGES OF DIGITAL TRANSFORMATION

Online education can enhance instructional learning, especially in higher education by creating a blended learning experience that combines both traditional classroom-based methods and modern technology. Another important advantage of the digital transformation in education is in the management of education itself.

## CHALLENGES IN DIGITAL TRANSFORMATION

Meanwhile, millions from Government schools and colleges, especially in rural areas, will not even have access to education due to Covid -19 the lockdown. According to the Key Indicators of Household Social Consumption on Education in India report, based on the 2017-18 National Sample Survey, less than 15% of rural Indian households have Internet (as opposed to 42% urban Indian households). A mere 13% of people surveyed (aged above five) in rural areas just 8.5% of females could use the Internet.

The poorest households cannot afford a smart phone or a computer. Several parents are not happy with this new set-up. “They complain of increased screen time for children. There are a few parents who aren’t comfortable with technology themselves they crib about it. So, their children, too, might look at it negatively. At times, classes get disturbed due to Internet issues. In nuclear families, especially, parents might have to miss work to take care of their children. Some of them could be healthcare professionals, who are desperately needed to mitigate the pandemic.

## A CULTURE OF TRANSFORMATION

A Culture of Transformation Digital Transformation is not about technology, it’s about culture. Through a digitalization of the learning experience, both teachers and students are able to improve their skills, with a common goal: to create a more engaging and effective education process. Here are some ways that digital tools are shifting education

## PHILOSOPHY OF TEACHING

Every teacher has a unique teaching style. Over a period, they would have built a rapport with the children. This is done through observing their body language in class, their interaction with classmates how it is different in small groups and large groups. Now, they just see them on computer screens and there could be a lot of disturbances.

### Digital infrastructure:

There is a need to invest in creation of open, interoperable, evolvable, public digital infrastructure in the education sector that can be used by multiple platforms and point solutions, to solve for India’s scale, diversity, complexity and device penetration. This will ensure that the technology-based solutions do not become outdated with the rapid advances in technology.

### **Online teaching platform and tools:**

Appropriate existing e-learning platforms such as SWAYAM, DIKSHA, will be extended to provide teachers with a structured, user-friendly, rich set of assistive tools for monitoring progress of learners. Tools, such as, two-way video and two way-audio interfaces for holding online classes are a real necessity as the present pandemic has shown.

### **Addressing the digital divide:**

Given the fact that there still persists a substantial section of the population whose digital access is highly limited, the existing mass media, such as television, radio, and community radio will be extensively used for telecast and broadcasts. Such educational programmes will be made available 24/7 in different languages to cater to the varying needs of the student population. A special focus on content in all Indian languages will be emphasized and required; digital content will need to reach the teachers and students in their medium of instruction as far as possible.

### **Online assessment and examinations:**

Appropriate bodies, such as the proposed National Assessment Centre or PARAKH, School Boards, NTA, and other identified bodies will design and implement assessment frameworks encompassing design of competencies, portfolio, rubrics, standardized assessments, and assessment analytics. Studies will be undertaken to pilot new ways of assessment using education technologies focusing on 21st century skills

## **WHY DIGITAL TRANSFORMATION FOR EDUCATION?**

Gone are the days when students sit in the classroom and learn solely by listening to lectures. Today, education must be collaborative and interactive. Teachers are making drastic changes to the way they approach instruction, with technology in the classroom playing a major role. Digital transformation positively impacts student learning by opening a world of endless possibilities and collaboration.

### **What is digital transformation?**

It is NOT a basic hardware or software upgrade (although that can play a part). Digital transformation is a physical and philosophical change designed to meet the ever growing demands of your students, faculty and campus to create a learning environment where everything connects. This is an ecosystem that combines technology, services and security to bridge the digital gap to create collaborative, interactive and personalized learning experiences.

### **What issues are driving digital transformation?**

- ✓ Campus security
- ✓ Information security
- ✓ Student success

- ✓ IT strategy
- ✓ Data enablement
- ✓ Student centric services
- ✓ Affordability
- ✓ Digital integration
- ✓ Artificial intelligence

### How do you create a digitally transformed campus?

- Build a strong IT foundation
- Foster successful students
- Create a safe campus
- Deliver state-of-the-art cyber security
- Deploy operational efficiencies

### What do I need to do in order to digitally transform?

Digital transformation starts with a strategy. A clearly defined strategy that leverages opportunities presented by the new technology while meeting the objectives.

The following four steps will help you develop a digital transformation strategy for education:

- ✚ Connect everything to support tomorrow's digital world Set up strong strategic partnerships and build an ecosystem connecting your people, processes and things to build a communications network that is high capacity, secure and smart.
- ✚ Deploy analytics to automate, understand and save money Use real life, real-time data to drive strategic initiatives that improve performance, roll out upgrades and make infrastructure decisions.
- ✚ Roll out new business models "Freemium" software and on-demand services are cheaper, more flexible and simpler to manage than traditional systems, and may be just the ticket for your campus.
- ✚ Move towards a single, simple platform whether it is on-premises or in the cloud, the ultimate goal of digital transformation is to provide a single platform as the foundation of your network and communications infrastructure.

## Digital transformation in education: The challenges

To understand how a full and sustainable digital transformation can take place, it's important to examine the potential challenges or roadblocks an institution might face. By understanding such issues it will be possible to overcome them.

1. A reluctance to adapt
2. A reluctance to adapt
3. Data silos
4. A lack of direction or strategy
5. System-based compatibility

## Digital transformation in education: The solutions

- 1) Develop a strategy
- 2) Train and invest in skills
- 3) Integrate and leverage digital data
- 4) Automate
- 5) Embrace the power of mobile
- 6) Experiment with emerging technologies
- 7) Focus on digital citizenship

The digital transformation due to the COVID-19 was not smooth and without challenges but half of the students liked it and they would prefer it in the future. Our analysis allows drawing a few remarks and conclusions. Firstly, half of the students preferred online education and they are willing to continue it. Secondly, the students who had no technical issues would prefer to use their own devices during the tutorials. Finally, the students who will not prefer online education are divided by technical issues and other concerns.

Online education was considered successful because about half of the students would prefer it in the future. Almost all of these responses agreed upon that weekly class are necessary. Hence, they would like to learn from home with the well established schedule of semesters. Acceptance of rescheduled training like intensive courses would require further investigation because there were no specific questions about it. Current results show that the students think that weekly classes are indispensable. These students did not mention technical issues and had the necessary infrastructure.

## Conclusion

Digital transformation is creating a world of difference by rethinking the digital tools that are used in the classroom. Digital tools are driving new levels of collaboration and innovation to create a campus of endless learning possibilities.

At present, education institutions worldwide are faced with multifaceted challenges, including the growing impact of digitalization and changing expectations from students, staff, and faculty. Thanks to the brutality of the corona virus pandemic, digital transformation in education have shifted from important to essential within a few months. It has highlighted the gap that is prevalent in this community between the necessities and 'not' in this period. Further, as this sector becomes competitive, digital transformation is now becoming a must for survival as this new digital world requires educators to adapt and adopt digital technologies, methodologies, and mindsets.

Students enjoyed the digital education and half of them are willing to continue it in the future. Students would prefer to use their own devices during on tutorials which allow some changes in the labour environments. Unfortunately, some students had technical issues which may be caused by the heterogeneous software environment and can be solved with support material. Therefore, the successful utilization of the digital education can be achieved in the near future.

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