The Social Science Review A Multidisciplinary Journal. Special Issue, Summer 2025. 316-319
Published by: Pather Dabi Educational Trust, (Regn No: IV-1402-00064/2023), Under Govt. of West Bengal, India

The Social Science Review
A Multidisciplinary Journal
ISSN: 2584-0789
(Open-Access, Peer-Reviewed, Refereed, Bi-Monthly, International e-Journal)
Homepage: www.tssreview.in

THE IMPACT OF DIGITAL TRANSFORMATION ON SERVICE QUALITY AND TEACHING QUALITY: IT'S EFFECT ON STUDENT SATISFACTION AND ACADEMIC ACHIEVEMENT

Monika Rabha [1] & Prof. S.C. Subudhi [2]

RESEARCH ARTICLE

Author Details:
[1] Research Scholar, Department of Education, NEHU, Tura Campus, Meghalaya, India;
[2] Professor & Head, Department of Education, NEHU, Tura Campus, Meghalaya, India

Corresponding Author:
Monika Rabha

DOI:
https://doi.org/10.70096/tssr.250307055

Abstract
Digital transformation in education is crucial in the present education system and it involves digital technologies for facilitating instruction and learning in educational institutions. In digital education, the students are provided the opportunity for engaging with digital devices, software applications and interactive content for improving their learning outcomes. Digital education enables learners to learn various educational resources and interactive content so that they can face every new challenge of their future life. Smart classrooms, tablet-based digital libraries, learning tablets and mobile applications are all good examples of tools for digital education. Digital education enhances teaching and learning experiences through the effective use of technologies and makes the learners knowledgeable and progressive in the field of technology. This paper aims to study how digital tools, platforms and technologies (like online learning, e-resources and digital classrooms) are transforming the education system and improving access to learning. This paper also tries to explore how the quality of digital services (e.g., online support systems, communication channels) affects the overall student learning experience. In the present day, interactive, dynamic and student-centered learning is popular than teacher-centered learning and digital education fosters this type of environment through adopting and integrating innovative technologies such as AI, VR and gamification etc. The role of digital platforms and resources helps for improving teaching methods. This paper also tries to highlight how digital tools and resources enhance teaching methods and student satisfaction. It analyzes the impact of digital transformation on student performance, looking at how technology improves accessibility to information, learning flexibility and personalized learning paths that can lead to better academic outcomes.

Keywords: *Digital Transformation, Digital Technologies, Innovations, Positive Outcomes, Challenges*

Introduction

In the past decades, India was under developed country and the education system was also traditional. But now-a-days, digitalization improves education system of India by replacing traditional mode of education into online mode. Indian education framework has tried for achieving highest place in all over the world by reforming creative aptitudes and new methodologies for solving the problem related phenomenon. Digital education provides various learning methods for the learners so that they can learn easily and tries to cope up with the new challenges in the present education system. Digital transformation in education plays a vital role in providing high-quality education and equal opportunities to learners all over the world. To make the learning process smooth and effective for every student, educational institutions and governments should take good initiative to develop digital transformation plans and implement necessary changes.

Education is one of the world's single largest industries, making up more than 6% of GDP. It is expected that the global spending will nearly double in the next five years, reaching $404 billion by 2025. In many ways, this contributes to the impact of digitalization on education.

Digital transformation in education helps to improve the learning experience for both students and teachers, as well as other people involved in the process and enhances for active learning and collaboration among the students. As a result, online education gets cheaper, more comprehensive and more inclusive. Digital services can affect students in various ways, both positively and negatively, depending on the quality and accessibility of those services. Service quality in education refers to the overall experience students have with administrative, support and learning services provided by educational institutions (Aisyah,

et al., 2023). As the students can get the information such as course, grades, announcements and schedules through online portal, they feel satisfied and feel motivated for engaging with their education process. However, poor condition of digital platforms can prevent satisfactory results of students learning. Automation of administrative tasks like course registration, fee payments and scheduling leads to quicker processing, reducing wait times and manual errors. This makes the administrative process smoother for students. Sometimes digital tools may cause technical issues, which can disrupt services and create unexpected situations for students for which they face many challenges in their student life (Hanelt, et al., 2021). Teaching quality in the context of digital transformation refers to how effectively teachers enhance learning experiences of the students through technology-based education, facilitate understanding and collaboration among the students. Digital tools like multimedia presentations, online simulations, interactive quizzes enhance Students learning experiences and facilitate active learning in the education process. Generally digital transformation in education brings convenience, flexibility, easy access to resources, personalized learning and more timely communication. However, when digital tools unable to function properly, problematic situation may arise and it becomes difficult to navigate or lack personal interaction. Well-implemented digital tools can help to increase student engagement and enhance learning outcomes by providing faster feedback. However, poorly designed or over-reliant digital systems can lead to disengagement, distractions and a decline in academic performance.

Objectives

1. To evaluate the role of digital transformation in enhancing the quality of teaching and learning environments.
2. To investigate how digital transformation affects the service quality of academic institutions including administrative processes, communication and student support system.
3. To analyze the relationship between digital learning tools and student satisfaction.
4. To determine the impact of digital transformation on academic achievement and student performance across different disciplines.

Methodologies

This paper is based on secondary data which are descriptive in nature and therefore collected from various journals, articles, websites and online sources.

Discussion

Role of digital transformation in enhancing the quality of teaching and learning environments

Technology-based education can significantly enhance teaching and learning in the classroom and motivates students to engage in learning and support diverse learning environment. By integrating digital tools, educators can bring a creative environment by fostering collaborative learning, providing interactive lessons, ultimately leading to a more effective and enriching educational experience. Interactive platforms can enhance student's attention through encouraging student's active participation in the classroom and make lessons more dynamic. Additionally, technology enables teachers to prepare content based on individual student progress and allows them, ensuring that each learner receives appropriate support, whether they are struggling or excelling.

Collaboration is also facilitated by technology. Tools like google classroom and online discussion forums enable students to work together on projects and share ideas, regardless of their location. Furthermore, technology provides access to a wealth of information and resources, allowing students to explore subjects in depth and fostering independent learning. Overall, technology transforms the classroom into a more engaging, efficient and inclusive learning environment.

Digital tools provide students and teachers variety of educational materials such as interactive multimedia content, e-books, online courses, videos, simulations that go beyond traditional textbooks. Technology allows for a more personalized approach to education. Adaptive learning platforms and Learning management systems (LMS) can tailor the content and pace of learning to individual students' abilities and progress. Digital transformation helps Students to access course materials and resources at their own convenience and makes learning more flexible (Broekhuizen, 2019). Online tools and platforms foster greater interaction and collaborative learning among students and between students and instructors. This digital connectivity allows for peer-to-peer learning and makes it easier for educators to provide feedback, guidance and support so that students can be benefited. Digital transformation enables the collection and analysis of data on student performance and engagement. Teachers can monitor individual progress, identify learning gaps and adjust teaching strategies accordingly. These insights ensure teachers for improving teacher effectiveness and enhance overall learning outcomes. Digital transformation opens the door for students to access to international resources and the ability to collaborate across borders through which learners can reach the highest place in the world. This diversity enriches the learning environment and prepares students for a globalized workforce.

**Effects of digital transformation on the service quality of academic institutions including administrative processes, communication and student support system`** `

Digital transformation significantly impacts service quality of academic institutions particularly in areas such as administrative processes, communication and student support systems. Digital tools help to speed up administrative tasks such as student registration, grade recording, time -table scheduling and attendance management, reducing manual errors and ensures that administrative operations are more effective for students. Centralized digital systems improve data accuracy, access and security for better management of student data, financial records and academic transcripts. This reduces the time spent on retrieving and managing information. With digital solutions, academic institutions get the opportunity to lower the costs of paper-based

processes and physical infrastructure (Gong & Ribiere, 2021). These savings can be reinvested into other areas of the institution to provide better service quality to the students.

Digital platforms like learning management systems (LMS), emails, messaging apps and video conferencing improves the flow of information and real-time communication between students, faculty and administration so that they can get proper opportunities to proceed in their work life. Students, faculty and staff can communicate more effectively through integrated platforms like shared documents, virtual classrooms and discussion forums which help for disseminating announcement, notifications and feedback to avoid miscommunication, fostering collaboration among students and between students and instructors.

Digital platforms help to provide counselling services, online workshops and mental health resources to the students with disabilities or those who face logistical barriers (such as living in remote areas) to access course materials and services more easily and to ensure comprehensive student support. It ensures that students Digital platforms can be used to gather feedback from students about their experiences, course content and faculty performance. This data helps institutions assess service quality and make improvements based on direct student input. Digital transformation allows students to interact with international students and faculty, broadening their educational and social experiences. It makes academic resources and support accessible to students, regardless of geographic location. The implementation of cutting-edge digital tools enhances the reputation of an academic institution. Students today are increasingly looking for institutions that offer advanced digital learning experiences, which can affect enrollment and institutional competitiveness.

Relationship between digital learning tools and student satisfaction

The relationship between digital learning tools and student satisfaction can be quite significant. When students have access to well-designed digital tools, such as learning management systems (LMS), interactive content and educational apps, their overall satisfaction often increases. Digital tools help students to provide learning materials anytime and from anywhere, accommodating different learning paces and schedules. This flexibility often gives the opportunity to students to learn at their own convenience. Digital Tools enhance student's motivation to make learning more interactive and engaging and help students for being interested in the subject matter. Many digital platforms use data to adapt the content to a student's learning style and pace according to their individual needs and strengths. This personalized learning experience can improve students' satisfaction. Digital tools often facilitate better communication and collaboration which fosters a sense of connection and support among students and between students and instructors, which is crucial for student satisfaction. Instant feedback and assessments of digital tools enhance student's progress and helps to understand the areas that need improvement. Digital tools can enhance students' technological and problem-solving skills, which are valuable in both academic and professional contexts and this timely feedback can boost students' confidence and overall satisfaction. This aspect of skill development can also increase their satisfaction with the learning process. However, it's important to note that the effectiveness of digital tools depends on their design and students' ability to use them effectively. Poorly designed tools or inadequate support for students in using them can lead to frustration, reducing satisfaction.

Impact of digital transformation on academic achievement and student performance across different disciplines

The impact of digital transformation on academic achievement and student performance varies across disciplines. Digital tools like online databases, e-books, academic journals and learning platforms make resources more accessible for students which helps them to proceed in their learning. Students can benefit from digital archives and virtual libraries that improve access to historical texts, primary sources and literature. Digital platforms enhance students' pace and learning styles through personalized learning experiences and increase their ability to grasp subject matter. In disciplines like mathematics or language arts, adaptive learning tools can adjust the difficulty based on student performance and they remain challenged but not overwhelmed. In contrast, more structured disciplines like law or history may benefit from content-focused platforms that offer rich multimedia resources. Tools such as discussion boards, video conferences and collaborative document editing foster engagement and teamwork, specially in humanities and social sciences where discourse is central. In science and engineering fields, digital labs and group-based problem-solving platforms allow students to collaborate on complex projects remotely. Visual and interactive tools (e.g., virtual reality in medical or engineering simulations) enhance comprehension, specially for students in technical disciplines who need to visualize abstract concepts or work in hands-on environments. In humanities or social sciences, more subjective assignments like essays may benefit from tools that help students with grammar, structure and citation formats. Digital resources encourage students to take more control over their learning. For example, in STEM subjects, students can experiment with coding or simulations independently, fostering critical thinking. In humanities, students are encouraged with a broader range of perspectives which fosters deeper analysis and independent thought. Teachers in all disciplines can focus on higher-level teaching strategies, such as guiding critical thinking or discussing complex concepts, since routine tasks (like grading quizzes or providing reading materials) can be automated. In technical fields, instructors can focus on mentoring students in labs or research projects, while in humanities or social sciences, they can facilitate richer discussions and debates. In conclusion, the integration of digital tools into academic settings has the potential to significantly enhance student performance across disciplines, though challenges such as equitable access and effective implementation remain. The key to maximizing these benefits lies in careful, thoughtful integration of technology to support both teachers and students in varied academic contexts.

Conclusion

Digital transformation has had a profound impact on service quality, teaching quality, student satisfaction and academic achievement in education. The integration of digital tools and platforms has enhanced service quality of administrative processes and improves communication and provides students with more personalized learning experiences. This, in turn, has contribute to higher teaching quality, as instructors can leverage technology to engage students more effectively, facilitate collaborative learning and provide timely feedback. Students' satisfaction has risen due to the flexibility and engagement offered by digital platforms, leading to a more student-centered approach to learning. Consequently, academic achievement has seen positive outcomes, with students benefiting from richer resources, adaptive learning technologies and instant access to educational materials.

However, challenges remain, particularly in terms of equitable access to technology and the need for continuous professional development for educators. To fully realize the potential of digital transformation, it is crucial that institutions prioritize inclusivity and provide the necessary support for all stakeholders. As digital transformation continues to evolve, educational institutions must adapt strategically to ensure that technology enhances both the quality and equity of education, ultimately empowering students to succeed in an increasingly digital world.

Acknowledgment: No
Author's Contribution: *Monika Rabha*: Data Collection, Literature Review, Methodology, Analysis, Drafting, Referencing; & *Prof. S.C. Subudhi:* Data Collection, Literature Review, Methodology, Analysis, Drafting, Referencing.
Funding: No
Declaration: All the authors have given consent for the publication.
Competing Interest: No

References

1. Aisyah, S. Nurqamarani, A. S., Wibowo, A. M., & Ulfa, C. K. (2023) How does organizational performance in the education sector iMprove? Learning and Growth-perspective. Journal of Government and Politics, 14(2), pp. 185–214, 2023, doi: 10.18196/jsp. v14i2.315.
2. Broekhuizen, T. (2019) Digital transformation: A multidisciplinary reflection and research agenda, Journal of Business Research, 122, pp 889–901, https://doi.org/10.1016/J.JBUSRES.2019.09.022
3. Gong, C., Ribiere, V. (2021) Developing a unified definition of digital transformation, Technovation, vol. 102, p. 102217, 2021, doi: https://doi.org/10.1016/j.technovation.2020.102217.
4. Hanelt, A., Bohnsack, R., Marz, D., Marante C. A. (2021). A Systematic Review of the Literature on Digital Transformation: Insights and Implications for Strategy and Organizational Change, Journal of Management Studies, 58(5):1159-1197. DOI:10.1111/joms.12639