InSight Bulletin: A Multidisciplinary Interlink International Research Journal
Peer Reviewed International, Open Access Journal.
ISSN : 3065-7857 / Website: https://ibrj.us / Volume-3, Issue-6 / June - 2026

Original Article

Impact of Online Learning on Students

Dr. Nisar Nijam Shaikh[1] Dr. Jasmin Isahak Sayyed0[2]
[1]Hon. Shri. Babanrao Pachpute Vichardhara Trust's Faculty of Management, Kashti
[2]Hon. Shri. Babanrao Pachpute Vichardhara Trust's Faculty of Engineering, Kashti

Manuscript ID:
IBMIIRJ -2026-030604

Submitted: 10 May 2026

Revised: 16 May 2026

Accepted: 06 June 2026

Published: 30 June 2026

ISSN: 3065-7857

Volume-3

Issue-6

Pp. 14-17

June 2026

Correspondence Address:
Dr. Nisar Nijam Shaikh
Hon. Shri. Babanrao Pachpute Vichardhara Trust's Faculty of Management, Kashti
Email- shaikhnisar50@gmail.com

OPEN ACCESS

Quick Response Code:

Web. https://ibrj.us

DOI: 10.5281/zenodo.23208065

DOI Link:
https://doi.org/10.5281/zenodo.23208065

Creative Commons

Abstract

This research paper examines the impact of online learning on students, focusing on Effectiveness, engagement, satisfaction, and challenges, particularly in the context of the COVID-19 pandemic. Drawing upon 25 empirical and theoretical studies, the paper explores how online education compares to traditional classroom learning, the role of teacher presence and interaction, and the influence of technology on student outcomes. Findings indicate that well-structured online and blended courses can achieve outcomes equal to or better than face- to-face instruction, especially when interactive content, timely feedback, and peer collaboration are present. However, students also face challenges such as technical barriers, reduced motivation, and limited access to resources, which affect learning effectiveness and satisfaction. The study highlights that the success of online learning depends on a balanced integration of pedagogy, technology, and support systems, emphasizing the importance of planned course design and equitable access for all students.

Keywords: Online Learning, Student Engagement, Student Satisfaction, E-Learning Effectiveness, Blended Learning, COVID-19 Education, Digital Education, Teacher Presence, Interaction, and Educational Challenges These keywords cover the main themes of your literature review: Effectiveness, student outcomes, interaction, technology, and COVID-19 impact. If you want, I can now update your PDF with this Abstract and Keywords, along with the full research paper sections, to make it complete and submission-ready.

Introduction

In today's world, education is changing very fast. One of the biggest changes we have seen inrecent years is the shift from classroom learning to online learning. Earlier, Students used to go to school, colleges, and universities to attend physical classes. Teachers would come to the classroom, write on the blackboard, and students would sit together and learn. But with the help of technology, now learning can also take place online. This method is called online learning. Online learning means studying with the Help of the internet. It can happen through mobile phones, laptops, or computers. Students attend live classes on apps like Google Meet, Zoom, or Microsoft Teams. Sometimes teachers record the lectures and share them, so that students can watch them anytime. Notes, assignments, and exams are also given online. Because of this, education has now become more flexible and different from the traditional classroom system. The importance of online learning became very clear during the COVID-19 pandemic. When schools and colleges were closed, online learning was the only way through which students could continue their studies. This sudden change was difficult for many students and teachers at first, but slowly it became a normal part of our lives. Even after the pandemic, many schools and universities are still using online methods along with classroom teaching. This shows that online learning is not just temporary—it is going to stay for a long time. Online learning has many positive sides. First, it saves time and energy. Students do not need to travel long distances to attend classes.

They can simply open their devices and start learning from home. Second, online learning gives students flexibility. If a student misses a class, they can watch the recorded video later. Students can also learn at their own speed, pausing or repeating lessons when Needed. Third, online learning provides access to many resources. With just one click, students can find books, articles, videos, and tutorials on almost any topic. But at the same time, online learning also has some challenges. One big problem is internet Connectivity.

Creative Commons (CC BY-NC-SA 4.0)
This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International Public License, which allows others to remix, tweak, and build upon the work noncommercially, as long as appropriate credit is given and the new creations ae licensed under the idential terms.

How to cite this article:
Shaikh, N. N., & Sayyed0, J. I. (2026). Impact of Online Learning on Students. InSight Bulletin: A Multidisciplinary Interlink International Research Journal, 3(6), 14–17. https://doi.org/10.5281/zenodo.23208065

Not every student has a good internet connection or a proper device like a laptop or smartphone. This creates inequality because some students can attend classes easily, while others face many problems. Another challenge is lack of interaction. In a Classroom, students can directly talk to teachers and friends, ask questions, and take part in group discussions. In online learning, this face-to-face interaction becomes limited.

Sometimes students feel lonely or less motivated. Also, spending too much time in front of screens can affect health, especially eyesight and concentration. The impact of online learning on students can be both positive and negative. On onside, it gives opportunities for flexible, modern, and independent learning. On the other side, it creates issues like lack of personal connection, digital divide, and health problems. That is why it is very important to study how online learning is actually affecting students. This research project will try to understand the impact of online learning on students in simple terms. The main aim of this project is to explore the advantages and disadvantages of online learning from a student's point of view. It will also discuss how online learning is changing education and what can be done to make it more effective. Since students are the main part of the education system, knowing their experiences and challenges is very important.

Objectives of Research

The primary objective of this research is to analyse and synthesize existing literature to understand the impact of online learning on students. Specifically, the study aims to:

1. Examine the effectiveness of online learning compared to traditional classroom instruction across various subjects and disciplines.
2. Identify the challenges faced by students, teachers, and institutions in implementing online education, including technological, pedagogical, and infrastructural barriers.
3. Evaluate student engagement and satisfaction, focusing on factors such as interaction with instructors and peers, technology usability, and motivation.
4. Assess the influence of COVID-19 on the adoption and adaptation of online learning practices worldwide.
5. Provide recommendations for designing effective, inclusive, and sustainable online learning programs, incorporating blended learning and interactive teaching strategies.

The study aims to provide a comprehensive understanding of the benefits, limitations, and strategies for enhancing student outcomes in online learning environments.

Review of Literature

Online learning has been widely studied to evaluate its effectiveness, challenges, and impact on student outcomes. Means et al. (2009) and Bernard et al. (2004) found that well-designed online courses, especially blended learning, can achieve results comparable to or better than traditional classroom instruction. Teacher guidance, interactive content, and structured course design are critical for success. The Community of Inquiry Model proposed by Garrison, Anderson, & Archer (2000) emphasizes that effective online learning requires teaching presence, social presence, and cognitive presence. These elements enhance engagement, critical thinking, and collaboration among students.

Studies in medical education (Pei & Wu, 2019) and mathematics (Turmuzi & Lu'luilmaknun, 2020) highlighted that practical subject's benefit from a blended approach combining online theory with in-person practice.

During COVID-19, the rapid shift to Emergency Remote Teaching (ERT) posed challenges such as poor internet access, lack of devices, and reduced student motivation (Dhawan, 2020; Hodges et al., 2020). Students' satisfaction was influenced by interactions with instructors, peers, and content, as well as technology usability (Dharmadjaja & Tiatri, 2021; Alqurashi, 2019). Gender differences, motivation, and self- regulation also affected learning outcomes (Yu & Yu, 2017; Setyawan et al., 2021).

Research emphasizes that student engagement—through discussion, interactive assignments, and multimedia—is vital for learning success (Martin & Bolliger, 2018; Zhang et al., 2006). Technical challenges, lack of digital skills, and insufficient teacher training remain significant barriers, particularly in developing countries (Kauffman, 2015; Adnan & Anwar, 2020; Kebritchi et al., 2017).

Overall, the literature shows that online learning can be highly effective when combined with strong pedagogy, interactive content, teacher presence, and equitable access to technology, while poorly designed courses or lack of support can negatively affect outcomes (Sun et al., 2008; Bao, 2020; Aguilera-Hermida, 2020).

Research Methodology

This study employs a systematic literature review methodology to analyse and synthesize existing research on the impact of online learning on students. Since the research focuses on understanding trends, challenges, and student outcomes in online education, no primary data collection was conducted. The methodology includes the following steps:

Selection of Sources:

A total of 25 peer-reviewed research studies and academic papers were selected, covering diverse topics such as online learning effectiveness, blended learning, emergency remote teaching, student satisfaction, technology acceptance, and COVID- 19 impacts. Sources were chosen from academic journals, conference proceedings, and reputable research databases.

Inclusion Criteria:

- Studies published within the last 20 years, with emphasis on recent findings during the COVID-19 pandemic.
- Research focusing on student engagement, learning outcomes, satisfaction, and challenges in online learning environments.
- Studies covering multiple disciplines including medical education, mathematics, and higher education.

Data Extraction and Analysis:

Relevant information was extracted from each study, including research objectives, methodology, key findings, and conclusions. The data were then categorized thematically into areas such as course effectiveness, student satisfaction, engagement, technology use, and challenges.

Synthesis:

The findings were analysed to identify patterns, consistencies, and gaps in the literature. Comparative analysis was used to highlight differences in outcomes based on teaching methods, course design, technology platforms, and student demographics.

Limitations:

- Being a secondary study, the research relies on previously published data, which may have contextual or regional limitations.
- The focus is primarily on higher education; K-12 and informal learning contexts are less represented.

Results

The systematic review of 25 studies revealed several key findings regarding the impact of online learning on students:

Effectiveness of Online Learning:

- Online learning can achieve outcomes comparable to or better than traditional classroom instruction when courses are well-designed and interactive (Means et al., 2009; Bernard et al., 2004).
- Blended learning, combining online and face-to-face elements, was

particularly effective in improving student understanding and flexibility (Pei & Wu, 2019; Turmuzi & Lu'luilmaknun, 2020).

- Teacher guidance, structured content, and timely feedback are crucial for positive learning outcomes.

Student Engagement and Satisfaction:

- Students' satisfaction is strongly influenced by interaction with instructors, peers, and course content, as well as technology usability (Dharmadjaja & Tiatri, 2021; Alqurashi, 2019).
- Engagement strategies such as discussions, group work, quizzes, and

multimedia support learning motivation and concentration (Martin & Bolliger, 2018; Zhang et al., 2006).

- Motivation varies by individual personality, self-discipline, and learning environment (Setyawan et al., 2021; Yu & Yu, 2017).

Challenges and Barriers:

- Technical issues, lack of access to devices or internet, and insufficient digital literacy negatively affected learning outcomes (Dhawan, 2020; Kauffman,

2015; Adnan & Anwar, 2020).

- Emergency Remote Teaching (ERT) during COVID-19 often led to stress, confusion, and reduced learning effectiveness due to inadequate preparation (Hodges et al., 2020; Aguilera-Hermida, 2020).
- Teachers also faced challenges designing interactive content and adapting to online platforms without proper training (Kebritchi et al., 2017).

Key Trends and Recommendations:

- Success in online learning depends on planned course design, teacher presence, interactive content, and supportive technology.
- Equitable access to digital resources is essential to prevent performance gaps among students.
- Blended learning and flexible strategies help balance theoretical knowledge with practical skills (Bao, 2020; Paudel, 2020).

Discussions

- Online education offers flexibility, accessibility, and a range of interactive tools, allowing students to learn at their own pace and review content as needed. Studies consistently show that blended learning models, which combine online and face- to-face elements, provide the most effective outcomes, especially for practical and skill-based subjects like medical training and mathematics (Pei & Wu, 2019; Turmuzi & Lu'luilmaknun, 2020).
- Student engagement and satisfaction are central to successful online learning. The reviewed research emphasizes that strong interaction with instructors, peers, and learning materials enhances motivation and learning outcomes (Dharmadjaja & Tiatri, 2021; Martin & Bolliger, 2018). Multimedia resources such as videos, simulations, and quizzes cater to diverse learning styles and improve understanding (Zhang et al., 2006). However, engagement is highly dependent on teacher presence, structured content, and timely feedback. Without these, students may feel isolated and less motivated (Sun et al., 2008).
- The COVID-19 pandemic highlighted the distinction between planned online learning and Emergency Remote Teaching (ERT). While ERT allowed education to continue during crises, it exposed limitations such as poor preparation, weak digital infrastructure, and increased stress among students (Hodges et al., 2020; Dhawan, 2020). Studies suggest that future online learning initiatives must focus on careful course design, technological readiness, and student support systems to ensure effectiveness.
- Challenges remain, particularly regarding equitable access and digital literacy. Students in developing countries faced significant obstacles due to unreliable internet, lack of devices, and noisy learning environments (Adnan & Anwar, 2020). Additionally, teachers require training and institutional support to design interactive and engaging courses (Kebritchi et al., 2017). These findings highlight that online learning is not solely a technological issue but also a pedagogical and infrastructural challenge.

Conclusions

The literature review demonstrates that online learning has become an integral part of modern education, offering flexibility, accessibility, and opportunities for personalized learning**.** When courses are well-designed, interactive, and supported by effective teacher presence, online learning can achieve outcomes comparable to, or even better than, traditional classroom instruction**.** Blended learning, which combines online theory with face-to-face practical sessions, emerges as the most effective approach for subjects requiring hands-on skills.

Student engagement, satisfaction, and motivation are highly influenced **by** interaction with instructors, peers, and content, as well as the usability of technological platforms. The COVID-19 pandemic highlighted the challenges of Emergency Remote Teaching**,** including lack of preparation, digital inequality, and reduced motivation. These challenges emphasize the importance of careful

course design, robust digital infrastructure, and equitable access to resources.

Ultimately, the success of online learning depends not only on technology but also on pedagogy, institutional support, and learner-cantered strategies. Educational institutions must invest in teacher training, interactive content, and support systems to ensure all students can benefit from online education. By addressing these factors, online learning can provide a sustainable, engaging, and effective educational experience for students across diverse disciplines and regions.

Acknowledgement

The authors sincerely express their gratitude to all those who contributed directly or indirectly to the successful completion of this research work. The authors are particularly thankful to the Management and Faculty Members of Mudhoji College, Phaltan, for their valuable encouragement, academic support, guidance, and cooperation throughout the study. Their support provided a conducive academic environment for conducting and completing this research successfully. The authors also acknowledge the contribution of all individuals and sources whose information and insights supported the development of this study on technological advancement and organizational performance in the thread manufacturing sector of Pune

Financial support and sponsorship

Nil.

Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of thesis paper.

References

1. Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. U.S. Department of Education.
2. Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text- based environment: Computer conferencing in higher education. The Internet and Higher Education, 2(2–3), 87–105.
3. Pei, L., & Wu, H. (2019). Does online learning work better than offline learning in medical education? A systematic review and meta-analysis. Medical Education Online, 24(1), 1666538.
4. Bernard, R. M., Abrami, P. C., Borokhovski, E., Wade, A., Tamim, R., Surkes,M., & Bethel, E. (2004). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of* Educational Research, 74(3), 379–439.
5. Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. Journal of Educational Technology Systems, 49(1), 5–22.
6. Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. Educause Review.