



# International Journal of Advanced Academic Studies

E-ISSN: 2706-8927

P-ISSN: 2706-8919

[www.allstudyjournal.com](http://www.allstudyjournal.com)

IJAAS 2022; 4(4): 222-229

Received: 07-09-2022

Accepted: 13-10-2022

**Priyanka Kaushik Sharma**  
Associate Professor, Rajdhani  
College, University of Delhi,  
New Delhi, India

## Online learning during the COVID-19 pandemic: A qualitative study of students' perspective

**Priyanka Kaushik Sharma**

DOI: <https://doi.org/10.33545/27068919.2022.v4.i4c.1056>

### Abstract

The researcher conducted a study at Delhi University to better understand students' opinion about online education. Data was collected through observations, interviews, and document review. The study included 88 under graduate final year students who attended online classes during the COVID-19 outbreak. The majority had never taken an online course before. The study aims to compare students' perceptions of online learning to face-to-face learning, identify benefits and challenges, generate a SWOT analysis of online education in India, and identify measures for improvement. It also aims to identify challenges and obstacles during COVID-19, and develop strategies to enhance online education in India. It was found in the study that the COVID-19 pandemic has influenced attitudes towards online learning in India, highlighting its strengths like accessibility and flexibility but also facing challenges like the digital divide and lack of discipline. Opportunities include government initiatives and global outreach, while threats include digital infrastructure, data privacy, and regulatory issues. A comprehensive strategy for enhancing online education is needed.

**Keywords:** COVID-19, digital literacy, online learning, SWOT analysis

### Introductions

During the COVID-19 pandemic, online learning emerged as a crucial lifeline for educational continuity worldwide. Due to the abrupt closure of schools, education policymakers, school and college principals, university authorities and instructors were forced to discover alternatives to face-to-face instruction in order to ensure students' right to an education. Schools, colleges, and universities, institutions and educators swiftly pivoted to digital platforms to ensure that learning could continue. This transition, while necessary, brought about a myriad of challenges, including issues of technology access, student engagement, and the need for educators to adapt their teaching methods. It also underscored the digital divide, as not all students had equal access to the required devices and internet connectivity. Despite these challenges, the pandemic forced innovations in online education and prompted a reevaluation of traditional learning models. It served as a catalyst for the development of digital literacy skills and may have a lasting impact on the future of education, as elements of online learning are likely to persist in post-pandemic education landscapes.

Carliner (2003) <sup>[3]</sup> defines online learning as "access to learning experiences through some technology." Hodges *et al.* (2020) <sup>[5]</sup> described distance education as "all arrangements for providing instruction through print or electronic communications media to persons engaged in planned learning in a place or time different from that of the instructor or instructors." Online learning, also known as e-learning or digital learning refers to a mode of education where learners use the internet and digital technologies to access educational content, resources, and interact with instructors and peers remotely. It is a form of distance education that enables students to pursue academic, professional, or personal development goals without being physically present in a traditional classroom or educational institution. Online learning is a diverse approach to education that includes synchronous, asynchronous, blended, Massive Open Online Courses (MOOCs), Learning Management System (LMS) platforms, and microlearning. Synchronous learning occurs in real-time, allowing students to interact with instructors and peers. Asynchronous learning allows students to access pre-recorded materials at their own pace, while blended learning combines online and face-to-face instruction. MOOCs are free or low-cost online courses with a large global participant base. LMS platforms like Moodle, Canvas, or Blackboard provide a centralized location for course materials, assessments, and communication.

**Corresponding Author:**  
**Priyanka Kaushik Sharma**  
Associate Professor, Rajdhani  
College, University of Delhi,  
New Delhi, India

Micro learning is short, focused modules designed for quick consumption. Online learning offers flexibility, accessibility, and the ability to acquire new skills without geographical constraints. However, it also requires self-discipline, internet access, and digital literacy. Online learning gained prominence during the COVID-19 pandemic and is expected to continue evolving in the future.

### Review of Literature

The present study examined prior studies in order to better understand various aspects of online learning and to identify research gaps. Some of the most prominent studies on online learning are as follows:

Curelaru M., *et al.* (2022) <sup>[4]</sup> in their study investigate nursing students' and faculty members' opinions on online learning in the COVID-19 era. The descriptive-phenomenology approach was used to perform this qualitative investigation. Using a purposive sample technique and telephone semi-structured interviews, data were gathered in August 2020 based on the nursing students' and faculty members' actual experiences with online learning during the COVID-19. The three steps of Spielberg's methodology were used to thematically examine the data after verbatim transcription. During the COVID-19 epidemic, nursing students and faculty members were somewhat happy with online education. However, the favored method of instruction was traditional. The three primary study domains-advantages, problems, and recommendations-were used to classify the data. The findings identified three topics for benefits, four themes for difficulties, and four themes for suggestions. Academic success, a flexible learning environment, and student-centered learning are among the themes of the benefits. Inadequacy, academic integrity, the learning environment, and parental responsibility were the themes of the problems. The topics for the suggestions in study were training, instruction, evaluation, and quality control. The utilization of online learning during this lockdown is supported by the current study. For more students to get high-quality education, improvements to online learning must be made.

As per several studies, there are a number of benefits of online learning. Such as Marc (2007) <sup>[7]</sup> cited several benefits of online learning in his book on "Review on e-learning strategies" some of them are flexible in time and place, motivates students to interact with others, provides opportunities for relationships between learners through the use of discussion forums, cost-effective, helps eliminate barriers that have the potential to hinder participation, such as the fear of talking to other learners, allows each student to study at his or her own pace and speed, whether slow or fast, takes into account individual learner differences. Anderson (2008) <sup>[11]</sup> also notes several benefits of online learning for students: Asynchronous online learning allows students to access online materials at any time, regardless of time zones, location, or distance, whereas synchronous online learning allows students and teachers to interact in real time. Students can use the internet to access up-to-date and relevant learning materials, as well as communicate with experts in the field they are studying. Another advantage of online learning for teachers is that tutoring can be done at any time and from any location, online materials can be updated, and learners can see the changes right away. Phutela, N., & Dwivedi, S. (2020) <sup>[8]</sup> in their paper explore how e-learning is changing the face of the education sector.

Additionally, it will include the views and e-learning experiences of the students. In this study, interpretive phenomenological analysis (IPA) was used to closely examine the participants' lived experiences. The respondents for the current study were chosen from India's Delhi NCR region. To gather the basic information needed to comprehend students' viewpoints on how information and communications technology (ICT) has affected the educational sector, semi-structured interviews with students were undertaken. The findings have been divided into two "themes," including "drivers for e-learning adoption" and "inhibitors which restrict the adoption of e-learning."

Khan, M. A. *et al.* (2020) <sup>[6]</sup> in their study's conclude that students have a favorable opinion of online education and have accepted this new method of instruction. Additionally, it has scientifically shown the value of online education during the COVID-19 crisis. In reality, social media may help to further enhance learning outcomes as e-learning emerges as a new method of strengthening the learning process. 184 university students from Delhi University, Jamia Millia Islamia (Central University), and Guru Gobind Singh Indraprastha University in the National Capital Territory (NCT) of Delhi, India, provided their responses to an online questionnaire for the current study, which used a quantitative approach. From June to August 2020, this research investigation was carried out.

Rahayu, R. P., & Wirza, Y. (2020) <sup>[9]</sup> their study demonstrated that participants had a favorable opinion of the value and simplicity of online learning platforms during the Covid-19 epidemic. Nevertheless, more than half of educators disagreed with regard to its efficacy. Even if there are numerous issues with the online teaching process, the teachers might adopt the proper mindset while employing technology to deliver online instruction. Three components of their perceptions-perceived usefulness, perceived ease of use, and attitude toward online English language learning-were examined. In this study, a descriptive design and a qualitative methodology were used. This study employed an interview and survey to get the opinions of 102 junior high school English instructors in Bandung.

Wang, Y. *et al.* (2021) <sup>[10]</sup> survey the present situation of online medical education and identify the underlying obstacles and potential solutions in order to better understand how to improve and develop medical education in China. Researchers used WeChat and Wenjuanxing to deliver self-administered and piloted surveys about the deployment of online medical education. They find out that online medical education was carried out smoothly in China. After a month, little had changed in the satisfaction rate of 76% of the students with their online medical education. Courses that included a quiz and live-streaming were uncommon as compared to courses that included other features. Most parents would remind their children to do their homework online at home. The lagging platform was first the most difficult aspect of online learning. Nonetheless, as time passed, the main problem remained learning drive. The majority of students believed that it was important to re-teach face-to-face following online education.

### Justification for Study

Research on online learning during the COVID-19 pandemic is crucial for understanding its impact on students, educators, and institutions. It helps identify best practices in

online teaching and learning, leading to the development of more effective courses and teaching strategies. The pandemic highlighted disparities in access to technology and the internet, which can inform policies and initiatives aimed at bridging the digital divide. Online learning can have psychological and social implications, such as increased feelings of isolation and stress. Research can help institutions implement strategies to support students' mental health and well-being.

Pedagogical innovation in online teaching can be documented and analyzed, potentially leading to new and more effective teaching methods. Research can also help develop better methods for assessing and evaluating online learning, such as alternative forms of assessment, plagiarism detection, and academic integrity. Policymakers need research findings to make informed decisions about online education policies, funding, and regulations.

Understanding the strengths and weaknesses of online learning during the pandemic can inform strategies for future crises or disruptions in education, helping institutions better prepare for emergencies and ensure continuity of education.

### Research Objectives

Keeping in mind the justification for the study, conclusions obtained from the literature review, and after assessing the research gap, we developed the following research objective:

1. To find out how students perceive online learning in comparison to conventional face-to-face learning.
2. To identify the benefits of online learning experiences from the students' point of view.
3. To identify challenges and obstacles of online learning during COVID-19 from the students' point of view.
4. To generate a SWOT analysis of online education in India.
5. To discover measures for improving online education in India.

### Research Methodology

For the purpose of study present research employs grounded theory. Grounded theory is a qualitative research methodology and approach to data analysis that was developed by sociologists Barney G. Glaser and Anselm L. Strauss in the 1960s. Grounded theory is a systematic approach to qualitative research that focuses on developing theories based on empirical data rather than pre-existing theories.

The researcher conducted his investigation at Delhi University. Data collection methods included observations, interviews, and document review. The purpose of this study was to encourage participants to express their impressions about the quality of online education based on their own experiences. Ranges of questioning tactics were used. The interviews were place whenever it was most convenient for the participants, whether it was in a classroom, library, campus location, or over the telephone. The observation period was between September 2021 and April 2022. The perception of students about online learning modalities, its benefits, drawbacks, and suggestions were investigated using an interview guide. Field notes were taken and transcribed during the observation procedure. All participants were asked to provide documents pertaining to online education. These materials included tests, study

notes, assignments, emails, ppts, online class attendance, and so on. Implementing observations, interviews, and records served to give the data credibility and accountability. The researchers wanted to see if the individuals' activities and interview answers were consistent.

This study employed convenience sampling. Due to the COVID-19 outbreak and the fact that other semester' midterm examinations were on the same day as their lectures, 88 final-year undergraduate students who were attending online classes were included in the sample. The majority of the students had never taken an online course before COVID-19 outbreak. During the COVID-19 epidemic, the participants in this research attended all of their tutorials, lectures, and mentoring assignments entirely online. Microsoft Teams was used for formal online teaching and meetings. In addition to the University-approved programs, several teachers used Zoom, WhatsApp, and Google Meet.

### Questions include in the interview are

1. How does your experience with online learning compare to traditional face-to-face learning as a student? How do you feel about it?
2. What advantages does online education have?
3. What disadvantages does online education have?
4. What are the strengths, weaknesses, opportunities, and threats of online learning? (Two for each)
5. What could be done to improve the effectiveness of online education?

### Result and Discussion

The researchers compared and contrasted the interviews, observations, and archive data. This information was then organized into five key categories. These topics included comparative analysis of online learning vs. face-to-face learning, positive and negative online learning experiences, SWOT analysis of online learning, and suggestions for improving online learning in India.

Following observations are revealed under a separate heading:

#### A. Comparative analysis of online learning vs face-to-face learning

Participants were asked to name five differences between face-to-face and online learning. After conversation, a comparison of online and face-to-face learning was made. This analysis is broken out as follows:

**Learning Environment:** Online learning takes occur in a virtual setting that is reachable from any location with an internet connection. That result in flexibility. Online learning offers high flexibility, allowing learners to set their own schedules. Face-to-Face learning, however, takes place in actual classrooms or academic institutions. Face-to-Face learning generally follows a fixed schedule and location.

**Interactivity:** Online education frequently makes use of recorded lectures, ppts, email, and discussion boards for asynchronous communication between teachers and students. While face-to-Face learning provides immediate, in-person interaction with instructors and peers.

**Engagement:** Online Learning requires self-motivation and

discipline; some learners may struggle with staying engaged during class. While face-to-face learning offers a structured environment that can help maintain learner engagement.

**Communication:** In online learning communication between students and teacher primarily occurs through written text and digital tools. While face-to-face learning involves verbal and non-verbal communication, allowing for more nuanced interaction.

**Learning Materials:** Digital resources are commonly used in conjunction with multimedia components in online learning in order to give excellent lectures. While face-to-face learning typically relies on physical textbooks, printed materials, and classroom aids.

**Assessment:** Online learning often involves online quizzes, assignments, and discussion participation for the purpose of assessment of students. While face-to-face learning includes traditional exams, group projects and in-class assessments.

**Accessibility:** Online learning provides accessibility to a global audience, regardless of geographical location. While Face-to-face learning may be limited by geographical constraints, necessitating physical presence.

**Costs:** Online learning can be cost-effective for both students and teachers due to reduced commuting, housing, and material expenses. However, for low-income students, online learning is expensive due to the cost of the device that will be used for the class and the cost of the internet. While face-to-face learning typically involves commuting costs, and potentially higher living expenses.

**Learning Outcomes:** As per responses got during interview it is suggest that outcomes can be comparable to or even better than face-to-face learning when well-designed in online learning. Face-to-face learning offers immediate feedback and hands-on experiences that can enhance certain learning outcomes.

**Personalization:** Online learning allows for personalized learning paths and self-paced progress to learners. While face-to-face learning offers more opportunities for personal interaction and one-on-one guidance from instructors.

**Social Interaction:** Online learning often lacks face-to-face social interaction but may include virtual discussion forums and collaboration tools. While face-to-face learning fosters in-person socialization, networking, and relationship-building.

**Adaptability:** Online Learning can be adapted for learners with various needs, including those with physical disabilities. While face-to-face learning may have physical barriers that can limit accessibility.

**Safety and Health:** Online learning provides a safe option during health emergencies, like COVID-19 pandemics. While face-to-face learning can pose health risks during outbreaks or other safety concerns.

**Teacher and Student Role:** Online learning shifts some responsibility onto learners for self-directed learning. While

face-to-face learning emphasizes direct guidance and interaction from instructors.

Ultimately, the effectiveness of online learning versus face-to-face learning depends on factors such as individual learning preferences, the subject matter being taught, and the quality of instruction in each mode. Both approaches have their strengths and weaknesses.

### **B. Positive aspects of online learning**

Participants were asked to name five benefits of online learning. Following the dialogue, the following benefits of online learning emerge. These are:

**Flexibility:** Online classes often allow students to create their own schedules. This flexibility is especially beneficial for those with jobs, family responsibilities, or other commitments. Students can learn at their own pace and during hours that suit them best.

**Accessibility:** Online classes make education accessible to a wider audience. Students can participate from anywhere in the world, eliminating the need for relocation or a lengthy commute. This can also increase diversity in the classroom.

**Diverse Learning Resources:** Online classes can incorporate a variety of multimedia resources such as videos, interactive simulations, and virtual field trips, enhancing the learning experience.

**Customization:** Many online courses offer personalized learning experiences. Adaptive learning technologies can adjust the pace and content to match each student's needs, ensuring that nobody is left behind or held back.

**Recorded Lectures:** Recorded lectures are often available for students to revisit. This can be a great study aid, as students can review complex topics as many times as needed.

**Reduced Environmental Impact:** Online classes can reduce the need for physical transportation, which can help lower the carbon footprint associated with commuting to a physical campus.

**Safety and Health:** Especially relevant during times of public health concerns, online classes can keep students and educators safe from contagious diseases. They provide a way to continue education without risking exposure to illness.

**Enhanced Communication:** Online platforms often provide multiple channels of communication, including discussion forums, email, chat, and video conferencing. This can encourage shy or introverted students to participate more actively.

**Career Advancement:** For working professionals, online classes can be a convenient way to upgrade their skills or earn additional certifications without interrupting their careers.

**Lower Costs:** Online classes may be more cost-effective for both students and institutions. Students can save on commuting, housing, and meals, while institutions can reduce overhead related to maintaining physical facilities.

**Global Networking:** Online classes often bring together students from diverse geographical locations and backgrounds, allowing for the development of a global network of peers.

**Continuous Learning:** Online classes can foster a culture of continuous learning, as students are encouraged to develop self-discipline and time management skills.

**Increase students presence:** The online programs could be engaged from household or situation of special, it is very less chances of students missing out on lessons.

**Reducing anxiety and shyness:** Another positive aspect that emerged from interview was reducing anxiety and shyness. Students who described as introverted or socially shy reported that online learning assisted them in overcoming these challenges. Being in the protection of their own houses gave them a sense of security and enhanced their self-esteem.

### C. Negative aspects of online learning

Participants were asked to name five drawbacks of online learning in order to identify and address these issues in order to improve the online learning experience. The following are some of the most commonly negative elements of online learning:

**Isolation and Lack of Social Interaction:** Online learning can be isolating, as students miss out on face-to-face interactions with peers and instructors. This lack of socialization can lead to feelings of loneliness and reduced engagement.

**Technical Issues:** Technical problems such as poor internet connectivity, software glitches, or hardware issues can disrupt the learning process and cause frustration for both students and educators.

**Lack of Accountability:** Without in-person supervision, some students may struggle with self-discipline and time management, leading to procrastination and a lack of accountability.

**Limited Hands-On Experience:** Certain subjects, like laboratory-based sciences or hands-on skills, are challenging to teach effectively online. Students may miss out on essential practical experiences.

**Difficulty in Building Relationships:** Building meaningful relationships with instructors and peers can be more challenging in an online setting. This can impact the quality of feedback, support, and mentorship.

**Increased Screen Time:** Online learning requires extended screen time, which can lead to eye strain, fatigue, and potential health issues, especially if students do not take regular breaks.

**Access and Equity:** Not all students have equal access to technology and a stable internet connection, which can create disparities in educational opportunities. This issue highlights the digital divide.

**Distractions at Home:** Learning from home can be distracting due to household chores, family responsibilities, or noisy environments, making it difficult for students to concentrate.

**Reduced Non-Verbal Cues:** In online classes, non-verbal communication cues, such as body language and facial expressions, can be limited. This can hinder effective communication and understanding. Cameras being off generated a lack of nonverbal feedback that caused communication difficulties.

**Teacher Burnout:** Educators may experience increased stress and burnout when transitioning to online teaching, as it often requires additional time and effort to adapt to new technologies and teaching methods.

**Assessment Challenges:** Ensuring the integrity of assessments and preventing cheating can be more difficult in online settings. This can raise concerns about the validity of grades and qualifications.

**Loss of Campus Resources:** Students may miss out on access to campus resources like libraries, labs, and extracurricular activities, which can contribute to a well-rounded education. Change in attitude and behavior of students such as participants talked about the high levels of stress, exhaustion, and anxiety experienced during this time. Lastly, frequency of cheating, malpractices has gone up during online classes and assessment.

### D. SWOT analysis of online learning in India

In relation to online learning in India, participants were asked to list two strengths, two weaknesses, two opportunities, and two threats. A SWOT analysis of online education in India is then developed in the current study to evaluate its strengths, weaknesses, opportunities, and threats. This analysis helps to understand the current state of online education in the country and identify areas for improvement and growth.

#### Strengths

**Accessibility:** Online learning provides access to education for a vast and diverse population, including those in remote areas and people with disabilities.

**Flexibility:** Learners can choose when and where to study, allowing for greater flexibility to balance education with work or other responsibilities.

**Cost-Effectiveness:** Online courses are often more affordable than traditional classroom education, making education more accessible to a broader range of students.

**Diverse Course Offerings:** Online platforms offer a wide variety of courses, including professional development, skill enhancement, and academic programs, catering to various interests and needs.

**Customization:** Online learning allows learners to choose courses that align with their specific goals, making education more personalized.

### Weaknesses

**Digital Divide:** A significant portion of the population lacks access to reliable internet and suitable devices, limiting their participation in online learning.

**Quality Control:** Ensuring the quality of online courses and assessments can be challenging, leading to concerns about the rigor and recognition of online degrees.

**Digital Literacy:** Many learners, particularly in rural areas, may lack the digital literacy skills necessary to navigate online learning platforms effectively.

**Teacher Training:** Not all educators are adequately trained to transition to online teaching, resulting in variations in the quality of instruction.

**Engagement and Motivation:** Online learners may struggle with motivation and engagement due to the absence of face-to-face interaction.

### Opportunities

**Government Initiatives:** Government-sponsored programs like SWAYAM have the potential to enhance the quality and accessibility of online education in India.

**Global Outreach:** Online learning platforms can attract international learners, providing an opportunity for Indian institutions to reach a global audience.

**Skill Development:** Online courses can play a significant role in upskilling and reskilling the Indian workforce, addressing the skills gap in various industries.

**Innovation:** Online education encourages innovative teaching methods, including the use of multimedia, simulations, and interactive learning tools.

**Integration with Traditional Education:** A blended learning approach, combining online and face-to-face instruction, can provide a more holistic education experience.

### Threats

**Digital Infrastructure Challenges:** The digital divide, unreliable internet, and inadequate devices can limit the scalability and effectiveness of online learning.

**Data Privacy and Security:** Concerns about data privacy and cyber security may deter some individuals from participating in online education.

**Regulatory Challenges:** Ensuring that online courses and institutions adhere to regulatory standards and accreditation requirements is an ongoing challenge.

**Acceptance by Employers:** Some employers may be hesitant to recognize and accept online degrees, potentially limiting job opportunities for online learners.

**Quality Assurance:** Ensuring consistent quality in online courses and assessments remains a critical challenge, as does addressing concerns about cheating and plagiarism. To capitalize on the strengths and opportunities while

mitigating the weaknesses and threats, stakeholders in online learning in India should collaborate on initiatives that focus on improving digital infrastructure, promoting digital literacy, and enhancing the quality and recognition of online education.

### E. Suggestions to improve online learning in India

A comprehensive strategy including educators, institutions, legislators, and technology suppliers is needed to improve online education in India. Following the interviewer's comments, the following recommendations are made to improve the caliber and efficacy of online instruction in the nation:

**Access to Technology and Internet:** The first problem is that online learning is only available to students who have access to a high-speed internet connection at home. Address the digital divide by providing affordable access to devices and reliable internet connectivity to learners, especially in rural and underserved areas. Partner with government and private organizations to expand internet infrastructure and offer subsidized or free devices to students in need. Furthermore, students must have access to equipment such as laptops and the requisite software to engage in online learning activities, which can be difficult for low-income families.

**Teacher Training and Professional Development:** Some teachers face challenges to adjust to online teaching so abruptly due to a lack of basic digital abilities, thus contributing to a wide disparity in the quality of online teaching among schools. Invest in training programs for educators to help them become proficient in online teaching methods, tools, and best practices. Provide ongoing professional development opportunities to keep educators updated with the latest trends and technologies in online education.

**Quality Content Development:** Encourage the creation of high-quality, engaging, and culturally relevant digital learning materials and resources. Develop content that aligns with national and international standards, ensuring its quality and consistency.

**Interactive and Engaging Pedagogy:** Promote interactive teaching methods, such as live video lectures, virtual labs, simulations, and collaborative online projects. Encourage instructors to use multimedia, gamification, and other engagement strategies to make online courses more interesting.

**Digital Literacy Programs:** Implement digital literacy programs for both educators and students to ensure they are proficient in using online learning platforms and tools. Include digital literacy as part of the school curriculum to equip students with essential digital skills.

**Student Support Services:** Offer comprehensive student support services, including online counseling, academic advising, and technical support. Establish virtual help desks and support hotlines to assist students with their queries and challenges.

**Regular Assessment and Feedback:** Implement

continuous assessment methods to monitor student progress and provide timely feedback. Encourage peer and self-assessment to promote active learning and self-evaluation.

**Collaboration and Networking:** Promote collaboration among educational institutions, industry stakeholders, and edtech companies to share best practices and resources. Facilitate virtual networking events, conferences, and webinars to foster professional connections among educators.

**Data Privacy and Security:** Implement robust data privacy and security measures to protect learner information and ensure compliance with data protection regulations. Educate teachers and students about online safety and responsible use of technology.

**Accessible Learning Materials:** Ensure that all online course materials are accessible to individuals with disabilities, following accessibility standards and guidelines.

**Feedback Mechanisms:** Create mechanisms for students to provide feedback on courses, instructors, and the online learning experience to identify areas for improvement.

**Regulatory Framework:** Develop clear and standardized regulations for online education to ensure quality, accreditation, and recognition of online degrees and certifications.

**Research and Evaluation:** Promote research in online education to assess its impact, identify effective practices, and drive continuous improvement.

**Community Engagement:** Foster a sense of community and social interaction among online learners through virtual clubs, discussion forums, and social networking platforms.

**Government Support:** Collaborate with government bodies to create policies and funding mechanisms that support the growth and sustainability of online education.

**Blended Learning:** Blended learning is the concept of implementing both face-to-face learning and online learning together into a hybrid approach, allowing learners to benefit from both methods of learning. This learning style is also common in corporate settings, where learning and development directors will utilize data to construct an adaptable learning style that is tailored to the demands of various positions and departments.

## Conclusion

The COVID-19 epidemic has had a tremendous influence on students' and instructors' attitudes regarding online learning. Students have diverse opinions about online learning, with some finding it difficult to adjust and others enjoying it. The epidemic has brought to light the need of bridging the digital gap and ensuring fair access to education for all. In present study researchers conducted interview and classified result into comparative analysis of online learning vs. face-to-face learning five major categories: positive and negative aspects, SWOT analysis, and recommendations to improve online learning in India. As found in present study online education reduces distance,

provides new experiences, and allows instructors to easily communicate data throughout COVID-19, bridging year gaps and allowing access at any time. However, there are several disadvantages to online learning, such as a lack of interest, distraction, internet connection problems, punctuality problems, technological problems, and a lack of discipline. While online classes have many advantages, it is essential to highlight that they may not be appropriate for everyone, and they can have drawbacks such as the need for self-motivation, the possibility of isolation, and technological concerns. Online lessons, on the other hand, may give a productive and enjoyable learning experience when used properly.

Online learning in India offers various strengths such as accessibility, flexibility, cost-effectiveness, diverse course offerings, and customization. However, it faces weaknesses such as the digital divide, quality control, digital literacy, teacher training, and engagement and motivation issues. Opportunities include government initiatives like SWAYAM, global outreach, skill development, innovation, and integration with traditional education. Threats include digital infrastructure challenges, data privacy and security concerns, regulatory challenges, employer acceptance, and quality assurance. To capitalize on these strengths and opportunities, stakeholders in online learning in India should collaborate on initiatives focusing on improving digital infrastructure, promoting digital literacy, and enhancing the quality and recognition of online education. Addressing these challenges will help India capitalize on its potential for growth and development.

The study suggests a comprehensive strategy to enhance online education in India, involving educators, institutions, legislators, and technology suppliers. The recommendations include investing in teacher training and professional development, promoting quality content development, promoting interactive teaching methods, addressing the digital divide, implementing digital literacy programs, offering student support services, implementing continuous assessment and feedback, promoting collaboration and networking, ensuring data privacy and security, making online course materials accessible to individuals with disabilities, creating feedback mechanisms, developing a standardized regulatory framework, promoting research and evaluation, fostering community engagement, and collaborating with government bodies to create policies and funding mechanisms. Blended learning, which combines face-to-face and online learning, is also suggested, allowing learners to benefit from both methods. The article concludes by highlighting the importance of fostering a sense of community and social interaction among online learners.

To summarize, improving online education in India is a continuous effort that involves collaboration and dedication from a variety of stakeholders. By implementing these recommendations, India would be able to fully realize the potential of online education in terms of providing accessible, high-quality learning opportunities to its varied population.

## Future Implication

The COVID-19 pandemic has prompted research on online learning, which can significantly impact the future of education. Research helps us to understand the impact of the sudden shift to online learning on students, educators, and institutions. This includes assessing the effectiveness of

online teaching methods, identifying challenges, and measuring learning outcomes. COVID-19 highlighted disparities in access to technology and the internet, which had a direct impact on online learning. Research can shed light on these disparities and inform policies and initiatives aimed at bridging the digital divide. The lessons learned from this period will shape the future of education, focusing on digital learning tools and strategies. Furthermore, Policymakers can use research to craft policies and regulations related to online education. This may include guidelines for quality assurance, funding allocation, and technology integration in education.

## References

1. Anderson T. The Theory and Practice of Online Learning. Second Edition. AU Press Canada. Athabasca University; c2008.
2. Almosa A. Use of computer in education, (2nd ed). Riyadh: Future Education Library; c2002.
3. Carlner S. Overview of online learning. Amherst, MA: Human Resource Development Press; c2004.
4. Curelaru M, Curelaru V, Cristea M. Students' perceptions of online learning during COVID-19 pandemic: A qualitative approach. Sustainability. 2022;14(13):8138.
5. Hodges CB, Moore S, Lockee BB, Trust T, Bond MA. The difference between emergency remote teaching and online learning; c2020. Retrieved from <https://vtechworks.lib.vt.edu/bitstream/handle/10919/104648/facdev-article.pfd>
6. Khan MA, Nabi MK, Khojah M, Tahir M. Students' perception towards e-learning during COVID-19 pandemic in India: An empirical study. Sustainability. 2020;13(1):57.
7. Marc JR. Book review: e-learning strategies for delivering knowledge in the digital age. Internet and Higher Education. 2007;5:185-188. Retrieved from <https://doi.org/10.1002/pfi.4140410512>
8. Phutela N, Dwivedi S. A qualitative study of students' perspective on e-learning adoption in India. Journal of applied research in higher education. 2020;12(4):545-559.
9. Rahayu RP, Wirza Y. Teachers' perception of online learning during pandemic COVID-19. Journal Penelitian Pendidikan. 2020;20(3):392-406.
10. Wang Y, Yu R, Liu Y, Qian W. Students' and teachers' perspective on the implementation of online medical education in China: a Qualitative Study. Advances in medical education and practice; c2021. p. 895-903.