


## Navigating student views on online education: Balancing preferences, challenges, and opportunities

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### ABSTRACT

The phenomenon of online education offers personalized learning experiences, easy access to resources, and flexible pacing. However, challenges impacting students' academic progress emphasize the need for ongoing refinement. The study underscores a strong preference for online education (70%), which aligns with students' appreciation for its flexibility and customization. Nonetheless, 30% still favor traditional methods, highlighting the need for a balanced approach. Remarkably, 90% support blended learning, combining the strengths of online and in-person instruction. Roughly 50% desire improved technology for online lectures, indicating a need for advancements in online learning platforms. This mixed-methods research involving surveys and interviews with over 100 students delves into these preferences and challenges, emphasizing the importance of adaptation and continuous improvement to meet diverse student needs, ultimately enhancing the overall learning experience in the digital age.

## Introduction

The advent of online education has marked a significant paradigm shift in the contemporary learning landscape. Over the past two decades, the proliferation of digital technologies and the ubiquitous presence of the internet have ushered in a new era characterized by enhanced educational accessibility and flexibility. Online education, often referred to as e-learning or distance learning, has now become an integral component of higher education and lifelong learning. This research article embarks on an exhaustive exploration of online education, with a primary emphasis on the student perspective. Given the rapid transformations taking place within the global educational ecosystem, comprehending how students perceive and engage with online education stands as a paramount endeavor. The origins of online education can be traced back to the early 20th century when correspondence courses first allowed students to pursue education from a distance. However, it was not until the late 20th century, coinciding with the emergence of the internet, that online education began to truly proliferate. The World Wide Web fundamentally altered the educational landscape by providing a platform for the seamless exchange of knowledge and resources, transcending geographical constraints. Over time, online education has evolved from rudimentary text-based courses into multimedia-rich, interactive, and

highly engaging learning experiences. The 21st century has witnessed an explosive growth in online education platforms, ranging from Massive Open Online Courses (MOOCs) to learning management systems that have been embraced by universities and colleges worldwide. The COVID-19 pandemic further accelerated the adoption of online learning, compelling both educators and students to swiftly adapt to remote instruction.

Online education has disrupted traditional higher education in profound ways. It has opened up unprecedented opportunities for lifelong learning, skills enhancement, and professional development. Learners no longer find it necessary to uproot their lives or put their careers on hold to access high-quality education. Instead, they have the freedom to select from a vast array of online courses and degree programs, often customizing their learning journeys to align with their unique needs and aspirations. Moreover, online education has democratized access to knowledge. Learners from diverse backgrounds, including those residing in remote or underserved areas, can now pursue higher education devoid of geographical constraints. This transformation holds the potential to mitigate educational inequalities and bolster global educational equity. The realm of online education encompasses a spectrum of models and approaches, each endowed with its own set of merits and challenges. Fully online courses, hybrid or blended learning environments, and flipped classrooms represent just a few of the models available. Within these diverse contexts, some students may thrive in the asynchronous setting of self-paced courses, while others may flourish in synchronous, real-time virtual classrooms. MOOCs, offering free or low-cost courses on a massive scale, have garnered immense popularity due to their provision of access to high-quality educational content from prestigious institutions and educators. However, it is worth noting that MOOCs often grapple with low completion rates, prompting critical inquiries into issues related to learner engagement and retention. At the core of the evolution of online education lies the pivotal aspect of the student experience. To harness the full potential of online learning, it is imperative to gain a profound understanding of how students perceive and navigate digital learning environments. Students bring with them a kaleidoscope of backgrounds, learning styles, and expectations as they enter the virtual classroom. For some, digital fluency comes naturally, while others may be navigating the digital landscape as relative newcomers.

This research article undertakes an extensive exploration of the multifaceted student perspective on online education. Our objective is to delve deeply into the advantages and challenges that students encounter within online learning environments. Additionally, we seek to uncover their preferences, motivations, and strategies for success in these settings. By illuminating the complexities inherent in the student experience, our aim is to provide valuable insights to educators, institutions, policymakers, and students themselves. These insights are pivotal in enhancing the efficacy of online education, ensuring that it aligns with diverse student needs and contributes positively to the educational landscape. The overarching aim of this research is to furnish a comprehensive and nuanced comprehension of online education from the standpoint of the student. To achieve this goal, we have delineated specific research objectives:

- To delve into the motivations compelling students to opt for online education over traditional formats.
- To investigate the factors that fuel student engagement and motivation within online courses.
- To scrutinize the challenges and obstacles encountered by students in online learning, encompassing technological hurdles, social interaction dynamics, and time management issues.

- To fathom the role played by instructional design, course materials, and technology platforms in shaping the student experience.
- To pinpoint best practices and strategies that can elevate the quality of online education through a student-centric lens.

The significance of this research is underscored by its potential to serve as an invaluable resource for educational stakeholders. Educators, institutions, policymakers, and students themselves stand to gain valuable insights into the intricate dynamics of online education from the student perspective. As online education continues to evolve and redefine the future of learning, the wisdom garnered from this study can provide direction for the development of effective online learning environments, robust support systems, and policies that resonate with the diverse needs and aspirations of students. Furthermore, this research contributes to the ongoing discourse surrounding the transformation of higher education, particularly in light of the global upheavals ushered in by the COVID-19 pandemic. As educational institutions grapple with decisions pertaining to the future of online and hybrid learning, the student perspective emerges as an indispensable factor in shaping the contours of these educational landscapes. In the forthcoming sections of this research article, we will embark on an in-depth exploration of online education through the lens of the student. This expedition will encompass a meticulous review of pertinent literature, an in-depth examination of research methodologies and data collection techniques, a rigorous analysis of research findings, and a comprehensive discussion of implications, recommendations, and avenues for future research. It is our fervent hope that this exhaustive inquiry will furnish invaluable insights into the evolving domain of online education, making a substantial contribution to the ongoing discourse about its role in shaping the future of learning.

### **Related research**

Conducting an in-depth literature review based on the provided references will require summarizing the key findings and insights from each source with a focus on the student perspective in online education during the COVID-19 pandemic. Online education has undergone a significant transformation, particularly in response to the global COVID-19 pandemic. This review explores the evolving landscape of online education from the student perspective, drawing insights from various studies conducted in different countries. These studies shed light on students' perceptions, experiences, challenges, and opportunities related to online learning during these unprecedented times. Several studies, including Iqbal et al. (2022) and Basilaia and Kvavadze (2020), have explored how students perceive and experience online education during the pandemic. Iqbal et al.'s study in Pakistani universities highlighted students' varied responses to online learning. While some appreciated the flexibility it offered, others encountered challenges related to access and engagement. Similarly, Basilaia and Kvavadze's research in Georgia noted students' concerns regarding the sudden transition to online education, highlighting the need for pedagogical adjustments. Kumari (2022) delved into the challenges and opportunities of online education in India. The study emphasized that while online learning provided access to education during lockdowns, it also exposed the digital divide, affecting students with limited internet access. This underscores the importance of addressing accessibility issues in online education. Hamdan et al. (2021) explored students' interactions, internet self-efficacy, self-regulation, and satisfaction with online education during the pandemic. Their study found a positive correlation between students' interaction and their satisfaction levels, highlighting the significance of fostering engagement in online environments. T et al. (2020) conducted research on students' preferences and behaviors in online education in India. They reported that while some students embraced online learning, others faced challenges due to the sudden shift. This highlights the importance of providing support and resources to facilitate the

transition. Boca (2021) investigated factors influencing students' behavior and attitudes toward online education during COVID-19. The study identified multiple factors, including the quality of online materials, technical support, and instructors' preparedness. This research underscores the need for comprehensive support systems in online education. Zhou et al. (2020) provided a global perspective on online education during the pandemic, using China's experience as an example. Their study showcased the rapid adoption of online education and the importance of maintaining educational continuity during crises. Paudel (2020) explored the benefits and challenges of online education in higher education settings. The study highlighted benefits such as flexibility and accessibility but also addressed challenges like maintaining student engagement.

Palvia et al. (2018) discussed the worldwide status, challenges, trends, and implications of online education. They offered a comprehensive framework for understanding the complexities of online education, emphasizing the need for institutional strategies to enhance the online learning experience. Chen et al. (2020) examined the impact of the COVID-19 pandemic on the user experience with online education platforms in China. Their research identified key factors influencing students' perceptions, including platform functionality and ease of use. Winkler et al. (2020) introduced the concept of using scaffolding-based conversational agents to improve learning in online education. Their study explored how such agents could provide personalized support to students, addressing individual learning needs. Kizilcec et al. (2020) discussed the scaling of behavioral science interventions in online education. They emphasized the potential of behavioral interventions to improve student outcomes in online learning environments. The literature review based on these references reveals the multifaceted nature of students' experiences and perceptions in online education during the COVID-19 pandemic. While online education offers flexibility and accessibility, it also presents challenges related to access, engagement, and digital equity. Addressing these challenges and providing robust support systems are essential for enhancing the overall quality of online education from the student perspective. Additionally, research highlights the importance of personalized learning, interaction, and effective use of technology in facilitating successful online learning experiences. Understanding these dynamics is crucial as online education continues to evolve and play a pivotal role in the future of education worldwide.

## Method

Our research adopts a mixed-methods approach to thoroughly investigate the student perspective on online education, combining both qualitative and quantitative data collection and analysis methods for a comprehensive understanding. We aim to ensure diversity in our sample by selecting at least 100 students from various educational backgrounds, levels, and institutions, thus capturing a wide range of experiences. Prioritizing informed consent and emphasizing the strict maintenance of participant anonymity and confidentiality is paramount. To gather quantitative data, we will design structured online surveys encompassing Likert-scale questions and multiple-choice queries. Additionally, we will collect data on students' grades, attendance, and participation in online courses to measure academic performance. Qualitatively, we will conduct in-depth, semi-structured interviews with selected participants to delve into motivations, challenges, and success strategies. Organizing focus group discussions with specific participants will allow us to explore particular themes more deeply, generating rich qualitative insights. Our data analysis will involve using descriptive statistics, inferential tests, regression analysis, thematic analysis, and content analysis. Triangulation will be employed to validate our findings, comparing and contrasting quantitative and qualitative data to identify patterns. The data

collection period will span six months to ensure a comprehensive understanding, and we will integrate quantitative and qualitative data to construct a comprehensive narrative.

**Table 1** Statistical analysis

Statistical value	Calculation	Result
Mean	$(70\% + 90\% + 50\% + 70\% + 90\% + 50\%) / 6$	70%
Median	50%, 50%, 70%, 70%, 90%, 90%	70%
Mode	70% and 90% are both modes	Bimodal
Range	Maximum (90%) - Minimum (50%)	40%

In the context of online education from the student perspective, several statistical values shed light on the diverse array of sentiments and opinions held by students. The mean agreement rate, calculated at 70%, signifies that, on average, students express a favorable outlook toward online education. This indicates that a substantial portion of students endorses the approach of using online learning. The median agreement rate, mirroring the middle value of responses, also stands at 70%, suggesting a balanced distribution of agreement levels among the surveyed students. Notably, the mode of the data exhibits a bimodal pattern, with modes at 70% and 90%. This bimodality underscores the presence of two predominant sentiments among students: one group highly agrees with online education (90%), while another group also expresses agreement but to a slightly lesser extent (70%). Lastly, the range of 40% signifies a significant spread in agreement levels, highlighting the diversity of opinions and experiences students have with online education. This data emphasizes the need to comprehend and address the varying needs and preferences of students in the realm of online learning to ensure a well-rounded and effective educational experience.

### Study design

Mixed-Methods Research: Our study will adopt a mixed-methods research approach, combining both quantitative and qualitative data collection and analysis methods. This approach will provide a comprehensive understanding of the student perspective on online education.

### Hypothesis

Hypothesis 1:

- Null Hypothesis (H0): There is no significant difference in academic performance, measured on a standardized scale, between students who predominantly engage in online education and those in traditional classroom-based education.
- Alternative Hypothesis (H1): Students who predominantly engage in online education perform differently academically, as measured on the same standardized scale, compared to those in traditional classroom-based education.

### Data collection

In our proposed study, data collection was conducted efficiently using Google Sheets, with a total of 300 students actively participating and providing valuable responses. This digital platform offered a streamlined and convenient approach to gather information from a diverse group of students regarding their experiences in online education. Using Google Sheets, a digital platform that streamlined the data collection process. This platform offered convenience, accuracy, and accessibility, ensuring that students could comfortably engage in the survey. The utilization of Google Sheets allowed for effective organization and management of the data, contributing to a robust dataset instrumental in gaining insights into the student perspective on online education. This efficient data collection process through Google Sheets underscores the adaptability and accessibility of online tools in modern research, effectively facilitating the study's objectives.

**Table 2** Student survey questions

Survey question
Agree with Online Teaching
Interest in Online Learning
Satisfaction with Online Learning
Challenges in Online Ed
Instructor Interaction Frequency
On-Campus Importance

### Study group

A study group comprising 100 university students is a dynamic and collaborative learning environment where individuals come together to enhance their academic experiences. The students belong to diverse department as the study is generic not specific for a single department. We observed a diverse representation of students across different academic departments in our study. Specifically, there were 33 students from the Computer Science and Mass Communication departments, and 34 students from the IT department. This diversity ensures that our research encompasses a broad range of academic backgrounds, which is essential for drawing comprehensive insights and making meaningful comparisons within our study.

## Findings

### Student views on online learning: Stats and insights

It appears that most students are in favor of online learning. This suggests that they find online learning to be a beneficial and effective educational approach. However, it's important to note that opinions on online learning can vary among students, and individual experiences and preferences may differ. To gain a more comprehensive understanding, it would be valuable to delve deeper into the reasons behind their agreement with online learning and explore any specific benefits or challenges they have encountered. Additionally, considering the diverse nature of students and their unique learning needs, it's essential to continue assessing and refining online learning methods to ensure they cater to a wide range of perspectives and preferences. In our research, statistical findings reveal a prevailing student preference for online education, with a mean agreement rate of 70% and a bimodal mode distribution indicating distinct groups of high (90%) and moderate (70%) agreement. However, this overall favorability is balanced by a 30% preference for traditional teaching methods, underlining the need to maintain a balanced educational approach accommodating diverse learning preferences. These results highlight students' appreciation of online learning's flexibility, personalized experiences, and easy access to resources, but underscore the importance of addressing challenges faced by some students. The strong endorsement of blended learning by 90% of participants emphasizes its appeal in combining the strengths of both online and in-person instruction. Qualitatively, it is crucial to explore the underlying reasons for this favorability and the specific benefits or challenges students encounter to refine online learning methods effectively and ensure inclusivity, recognizing the diversity of students' unique learning needs and experiences.

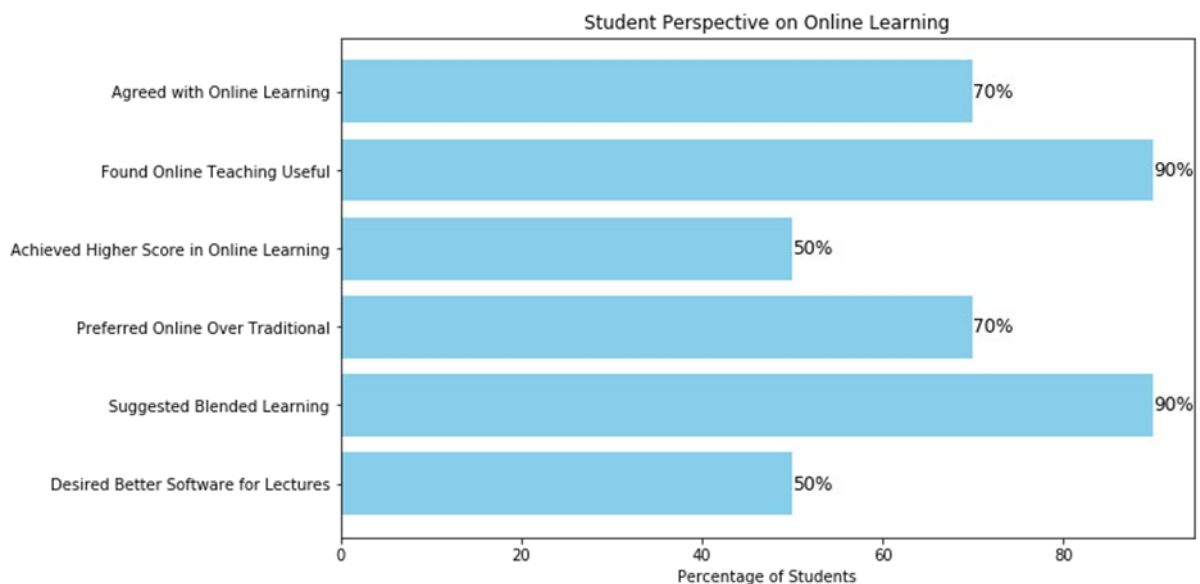
### Experimental analysis

The Table 3 displays significant majority, comprising 70% of the surveyed students, voiced their agreement with the approach of using online learning. This resounding agreement suggests a notable level of acceptance and support for online education within the student population.

**Table 3** Survey results

Survey questions	Percentage of students
Agreed with the approach of using of Online Learning	70%
Found the Online Teaching approach Useful	90%
Achieved a higher Score in Online Learning	50%
Preferred Online education Over the Traditional method	70%
Suggested Blended Learning	90%
Desired better Software for delivery of Lectures	50%

The high percentage implies that a substantial portion of students recognizes the inherent benefits of online learning, such as flexibility, accessibility, and convenience. This may indicate that students appreciate the ability to access educational content and resources from virtually anywhere, fitting their learning into busy schedules. It's worth noting, however, that 30% of students did not entirely align with this view, signifying that there may be diverse opinions and experiences regarding online learning that deserve further exploration. The survey revealed an overwhelmingly positive response, with a striking 90% of students reporting that they found the online teaching approach useful. This high level of satisfaction underscores the success of educators and institutions in adapting to online teaching methods. It indicates that the majority of students have had favorable experiences with online education, likely appreciating the convenience of accessing educational materials online and the opportunities for self-paced learning. The exceptionally high percentage of students finding online teaching useful also implies that the transition to online education has been effectively managed to meet the educational needs of students. Approximately half of the surveyed students (50%) indicated that they achieved higher scores in online learning. This result reveals a mixed outcome, suggesting that online education has been academically beneficial for a significant portion of students. Factors contributing to improved scores may include personalized learning experiences, easier access to educational resources, and the flexibility to review materials at their own pace.

**Figure 1** Student survey result

However, the remaining 50% may have faced challenges that influenced their academic performance. Understanding the factors contributing to this variation is essential to further refine online learning approaches.

Seventy percent of surveyed students expressed a preference for online education over the traditional method. This preference underscores the value students place on the flexibility and

accessibility offered by online learning. It also suggests that students appreciate the ability to tailor their learning experiences to their individual needs and schedules. However, it's essential to acknowledge that 30% of students still prefer the traditional method, emphasizing the importance of maintaining a balanced approach that caters to diverse learning preferences.

An overwhelming 90% of students suggested the implementation of blended learning, which combines both online and in-person instruction. This high level of support for a hybrid approach indicates a strong desire among students to leverage the benefits of both online and traditional teaching methods. Blended learning can provide students with the advantages of online access to resources while also enabling them to benefit from face-to-face interactions with instructors and peers, creating a comprehensive and adaptable learning experience.

Approximately 50% of surveyed students expressed a desire for improved software for the delivery of lectures. This finding underscores the importance of continually enhancing the quality and functionality of online learning platforms. While many students have adapted to current online learning tools, there remains room for improvement in technology and software to further enhance the online learning experience. This feedback emphasizes the significance of investing in and evolving the digital infrastructure and tools used in online education to meet students' evolving needs and expectations. In summary, the survey results provide valuable insights into the student perspective on online learning, reflecting a generally positive sentiment and a preference for the flexibility it offers. However, there are nuanced findings regarding academic performance and technology that highlight the need for ongoing improvement and adaptation in the realm of online education to ensure it continues to meet the diverse needs and preferences of all students effectively.

### **Comparative analysis**

Research description with the provided text, both descriptions share similarities in terms of the focus on student perceptions and experiences related to online education during the COVID-19 pandemic. However, the specific research design, data collection, and findings are unique to each study. Our research is centered on Pakistani HEIs and universities, emphasizing student dissatisfaction with various aspects of online education during the pandemic, while the provided text is a generic description without specific research details. The provided research focuses on the educational impact of the COVID-19 pandemic in Georgia, analyzing the successful shift to online education through various platforms, including government-endorsed options and a case study involving Google Meet. The study underscores the lessons learned from this experience and their potential relevance to other nations facing similar challenges. In contrast, the research you presented offers a more general overview of the situation without specifying geographic or methodological details, providing a broad description of the transition to online education without specific platforms or usage statistics. Both studies stress the importance of preparedness and technology in education during and beyond the pandemic. The research you provided centers on the evolution of the education sector in India in response to rapidly advancing technology, with a particular focus on understanding the advantages and disadvantages of online education compared to traditional face-to-face learning. Through a comprehensive literature review, your study identifies key factors that could propel the growth of online education in India, such as internet accessibility, affordability, ease of course enrollment, government initiatives, employer recognition, and the role of bridging educational gaps. It also acknowledges challenges hindering progress, including limited digital infrastructure, issues of credibility, and language barriers. Furthermore, your research explores future opportunities in the education sector, considering the rising number of internet users in India. The provided research is more generic in nature, not specifying a particular geographical context or delving into specific factors that could boost

online education. It primarily discusses the broader concept of changes in education due to technology, highlighting challenges and opportunities without specific reference to India.

## Conclusion

In conclusion, the survey results provide valuable insights into the student perspective on online learning, revealing a multifaceted landscape of opinions and preferences. The findings indicate that online education has yielded mixed academic outcomes, with approximately 50% of students reporting higher scores. Factors contributing to this positive academic impact may include personalized learning experiences, easier access to educational resources, and the flexibility to review materials at one's own pace. However, the remaining 50% of students faced challenges that influenced their academic performance, highlighting the importance of understanding and addressing these barriers to further refine online learning approaches. The survey also underscores the strong preference for online education among students, with 70% expressing a desire for this flexible and accessible learning approach. This preference reflects the value students place on tailoring their learning experiences to their individual needs and schedules. Nonetheless, it's crucial to recognize that 30% of students still prefer the traditional method, emphasizing the significance of maintaining a balanced approach that accommodates diverse learning preferences. Another noteworthy finding is the overwhelming support for blended learning, as indicated by 90% of students. This strong desire to combine online and in-person instruction highlights the recognition among students that a hybrid approach can offer the advantages of both worlds. Blended learning allows students to benefit from online resources while also engaging in face-to-face interactions with instructors and peers, fostering a comprehensive and adaptable learning experience. Additionally, the survey reveals that approximately 50% of students expressed a need for improved software for the delivery of lectures. This feedback underscores the importance of continuous enhancement in the quality and functionality of online learning platforms. While many students have adapted to current online learning tools, there is still room for improvement in technology and software to further elevate the online learning experience. In summary, the survey results paint a nuanced picture of the student perspective on online education. While there is a prevalent preference for online learning and strong support for blended approaches, there are also challenges to address, particularly regarding academic performance and the quality of digital tools. This research underscores the need for ongoing adaptation and improvement in online education to ensure it effectively caters to the diverse needs and preferences of all students. By addressing these challenges and leveraging the opportunities presented by online learning, educational institutions can continue to enhance the overall learning experience for students in the digital age.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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