

Perception and Satisfaction of Students Towards E-Learning: A Qualitative Focus Group Analysis in Uttar Pradesh, India

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Abstract:

This research explores the perceptions and satisfaction levels of students toward e-learning platforms in three major universities in Uttar Pradesh, India: MJP Rohilkhand University, AMU Aligarh, and IFTM University. Using a qualitative research design, focus group discussions were conducted with 45 students to gather in-depth insights into their e-learning experiences. The study found that while e-learning offers significant benefits such as flexibility, accessibility, and self-paced learning, several challenges hinder its effectiveness. The most prominent challenges include poor internet connectivity, lack of interaction with instructors, and technical issues with the platforms. Additionally, student satisfaction levels varied across the three universities, with MJP Rohilkhand University reporting the highest levels of satisfaction. The findings highlight the need for improved technological infrastructure, particularly in rural areas, and more interactive e-learning environments to enhance student engagement. The study's implications are critical for policymakers and educational institutions as they work to improve the overall effectiveness of e-learning in higher education. This research contributes to filling the literature gap by providing qualitative insights into the experiences of Indian students and offers recommendations for making e-learning more accessible and effective.

Keywords: E-learning, student satisfaction, focus group analysis, higher education, India, technological challenges.

1. Introduction

The rapid growth of technology has brought about a significant transformation in the education sector, reshaping how students and educators interact with learning materials. E-learning, defined as the use of electronic media and technology for educational purposes, has grown exponentially in recent years, especially during the COVID-19 pandemic. Globally, educational institutions shifted from traditional in-person classes to virtual platforms, enabling continuity in education. This sudden shift underscored the importance of e-learning as a flexible and accessible form of education. Studies indicate that e-learning allows students to access a variety of course materials, interact with peers, and submit assignments more conveniently, leading to a positive perception of its effectiveness (Mohammad, 2013). However, the perception and satisfaction levels among students have been varied, shaped by various factors including internet access, the quality of the learning platform, and the pedagogical methods employed (Hegazy & Radwan, 2010).

In developing countries like India, where infrastructure disparities exist, the transition to e-learning presents unique challenges. Access to reliable internet, technological devices, and digital literacy are critical factors that influence students' engagement and satisfaction with e-learning platforms. In a study conducted in Malaysia, it was found that

while students appreciated the flexibility offered by e-learning, many preferred a hybrid model that included both online and face-to-face interactions (Mad et al., 2020). This preference for blended learning is indicative of the complex nature of students' experiences with e-learning, where technology acts as both a facilitator and a barrier. The study of student perception towards e-learning is essential, as it informs the design and implementation of more effective e-learning systems.

Research in the field of e-learning has explored various dimensions, such as student satisfaction, learning outcomes, and the intention to continue using e-learning platforms. Studies have shown that student satisfaction is often linked to the quality of the e-learning platform and the effectiveness of the teaching methods used (Hariyanto et al., 2023). In Iran, for instance, both teachers and students were found to have positive attitudes toward e-learning when it was supported by multimedia instructions and self-paced learning options (Naghavi, 2007). Similarly, in Indonesia, it was reported that 86.3% of students supported the use of e-learning, with 77% expressing satisfaction due to its ability to motivate and simplify the learning process (Saifuddin, 2018).

This study investigates the perceptions and satisfaction levels of students from three Universities in Uttar Pradesh: MJP Rohilkhand University, AMU Aligarh, and IFTM University. E-learning in the Indian higher education context has been gaining momentum, particularly during the pandemic. With India's vast educational landscape and significant variations in infrastructure and resources across regions, it is important to understand how students in different settings perceive and experience e-learning. In a study conducted on Jordanian university students, it was found that male students had a more favourable perception of e-learning compared to their female counterparts, indicating how demographic factors could influence perceptions of e-learning (Al-Omari & Salameh, 2012).

The significance of this study lies in its focus on understanding not just the perceptions of students, but also their level of satisfaction with e-learning platforms and methodologies. Student satisfaction plays a crucial role in the effectiveness of e-learning systems, as it directly influences their intention to continue using these platforms (Gortan & Jereb, 2007). Previous studies in Egypt have identified that a student's experience with e-learning is largely shaped by their level of comfort with the technology, the accessibility of the internet, and the competency of the educational system in using digital tools effectively (Hegazy & Radwan, 2010). Moreover, factors such as social interaction with peers and instructors, along with the pedagogical design of courses, significantly affect the learning experience and student satisfaction (Chow & Shi, 2014).

In conclusion, this study aims to contribute to the existing body of knowledge on e-learning by focusing on students from Uttar Pradesh, India. It explores their perceptions and satisfaction towards e-learning platforms, providing insights into the factors that facilitate or hinder their engagement. Understanding these factors can help educational institutions enhance their e-learning platforms, thereby improving the overall learning experience for students.

2. Literature Review

The implementation of e-learning has become an essential aspect of education systems worldwide, especially after the pandemic. Several studies have sought to explore the perceptions and satisfaction of students toward e-learning, leading to various insights about its effectiveness, challenges, and potential for future use.

Cheng (n.d.) emphasized that perceived usefulness and ease of use are critical factors that influence learners' satisfaction with e-learning platforms. His study highlighted that the more intuitive and user-friendly the system, the more likely students are to engage and perform well. Cheng's findings provide key insights for educators to enhance student satisfaction through optimized e-learning platforms that emphasize ease of use and effectiveness.

Abdel-jaber (2017) conducted a study focusing on the role of internet self-efficacy and self-regulated learning in students' satisfaction with e-learning. He identified that the level of interaction between the course content, instructors, and students plays a vital role in determining the overall satisfaction level. The study from Saudi Arabia concluded that fostering interactions within a Learning Management System (LMS) can improve the quality of e-learning. These findings underline the importance of a collaborative online environment where both student-student

and student-instructor interactions are integral to learning satisfaction.

Pham, Williamson, and Berry (2018) highlighted five critical factors influencing e-learning service quality: administrative support, instructor quality, course material accuracy, security/privacy, and overall system functionality. Their findings from a study of e-learning services in Australia demonstrated a positive correlation between these factors and student satisfaction, with a strong indication that improving service quality directly impacts the students' loyalty to the e-learning platform. This study emphasizes the importance of institutional support and the quality of course materials in shaping student satisfaction.

In another study, Umek et al. (2015) analyzed student satisfaction and performance in a Moodle-based e-learning system in Slovenia. Their research found that blended learning environments, which combine online and face-to-face instruction, were more effective in improving student satisfaction and performance than fully online models. The study's mixed-methods approach provided detailed insights into how students can better manage their learning processes when a hybrid system is in place, suggesting that educational institutions should focus on flexible learning frameworks to enhance student outcomes.

Gortan and Jereb (2007) focused on student satisfaction and persistence in e-learning courses in Europe. Their research demonstrated that students who are satisfied with their own academic performance are more likely to continue with e-learning courses. The study also indicated that e-learning systems need to ensure that students have access to sufficient academic support, which plays a pivotal role in their persistence and overall satisfaction.

Oye et al. (2012) found that e-learning positively impacts students' academic performance in tertiary institutions. Their research indicated that positive student perceptions of e-learning are crucial for fostering continued use of the technology. The study further emphasized that training sessions focusing on enhancing students' ability to use e-learning tools efficiently could contribute to greater satisfaction with the learning process.

A study by Al-Omari and Salameh (2012) compared the perception of e-learning and traditional learning in Jordanian universities. They found that male students exhibited a more favourable attitude toward e-learning compared to their female counterparts. Additionally, e-learning scored significantly higher in perceived value among students when compared to traditional face-to-face learning. This gender-based difference in perception opens up new avenues for exploring how demographic factors might influence e-learning adoption and satisfaction levels.

Lastly, Nuryatin et al. (2022) identified sociocultural differences as a significant factor influencing e-learning satisfaction. Their study, conducted across several Indonesian universities, revealed that students' satisfaction was not only tied to the technology but also to the teaching methods employed and the cultural context within which the e-learning took place. This study demonstrated the need for a more culturally inclusive approach to e-learning, suggesting that institutions must tailor their e-learning systems to accommodate the diverse backgrounds of their students.

Despite the extensive research on e-learning satisfaction and perceptions, a clear gap exists in the understanding of students' qualitative experiences with e-learning, particularly in the Indian context. While studies have predominantly focused on quantitative metrics such as performance outcomes and usage statistics, there is a lack of in-depth qualitative analysis on how students from different socio-economic and educational backgrounds perceive e-learning. This study aims to fill this gap by conducting a qualitative focus group analysis to explore students' perceptions and satisfaction with e-learning platforms in Uttar Pradesh, India, specifically focusing on institutions like MJP Rohilkhand University, AMU Aligarh, and IFTM University.

3. Research Methodology

This study adopts a qualitative research design using focus group discussions to gather data from students enrolled in three prominent universities in Uttar Pradesh, India—MJP Rohilkhand University, AMU Aligarh, and IFTM University. The primary aim of this research is to explore students' perceptions and satisfaction with e-learning platforms and methodologies. The qualitative approach was chosen as it allows for an in-depth understanding of

student experiences.

The data for this study were collected using focus group discussions. One focus group session was conducted at each university, with participants being randomly selected from undergraduate and postgraduate programs across different disciplines. Each session lasted approximately 90 minutes and was moderated by the researcher to facilitate open discussions. The focus group discussions were audio-recorded with the consent of the participants, and detailed notes were taken during the sessions to capture the non-verbal cues and reactions of the participants.

A total of 45 students participated in the study, with 15 students selected from each university. The participants were chosen to represent a diverse range of socio-economic and educational backgrounds, which is critical for understanding the varied experiences with e-learning. The participants included both male and female students, aged between 18 to 24 years, who had experienced e-learning as part of their academic curriculum.

The focus group discussions were structured around a semi-structured guide, which covered the following key themes:

1. General perceptions of e-learning.
2. Satisfaction with the e-learning platform and its features.
3. The challenges faced during e-learning.
4. The perceived benefits of e-learning.
5. Suggestions for improving the e-learning experience.

The focus group guide allowed for flexibility in the discussions, enabling participants to share their experiences in detail while keeping the discussions aligned with the research objectives.

Data Source Table

Data Source	Details
Source	Focus group discussions with students from MJP Rohilkhand University, AMU Aligarh, and IFTM University
Participants	45 students (15 from each university)
Age Group	18 to 24 years
Data Collection Method	Focus group discussions
Duration of Discussion	90 minutes per session
Moderation	Researcher-led semi-structured guide
Key Themes	Perceptions, satisfaction, challenges, benefits, and suggestions related to e-learning

The data collected from the focus group discussions were analyzed using thematic analysis, which is a qualitative data analysis technique. The audio recordings were transcribed verbatim, and the transcripts were reviewed multiple times to identify recurring themes and patterns.

NVivo 12 software was used to conduct the thematic analysis. NVivo is a widely recognized qualitative data analysis tool that allows researchers to organize, code, and analyze large volumes of text data. The software facilitated the identification of key themes and helped in managing the vast amount of qualitative data collected during the focus group discussions.

This methodological approach ensured that the data collected were authentic and representative of the students' experiences with e-learning, providing valuable insights that are critical for the subsequent analysis and discussion sections of this study.

4. Results and Analysis

In this section, the findings from the focus group discussions are presented and analyzed. The data were transcribed and coded using NVivo 12, following the thematic analysis process outlined in the methodology. The results are presented in tabular form, reflecting the key themes identified from the discussions. Each table is followed by an interpretation that explains the findings in detail.

4.1. General Perceptions of E-Learning

Theme	Frequency	Key Responses
Positive Perception	28	"E-learning is convenient and allows me to study at my own pace."
Negative Perception	17	"It can be very isolating without interaction with teachers and peers."
Mixed Perception	15	"While it's flexible, I sometimes struggle with internet connectivity issues."

The majority of students (62%) expressed positive perceptions of e-learning, citing convenience and flexibility as the main benefits. However, 38% had negative or mixed perceptions, highlighting challenges such as lack of interaction and technological barriers. These findings suggest that while e-learning is appreciated for its adaptability, improvements are needed to enhance student engagement and support, particularly in addressing connectivity issues.

4.2. Satisfaction with E-Learning Platforms

Satisfaction Level	MJP Rohilkhand (%)	AMU Aligarh (%)	IFTM University (%)
Highly Satisfied	33	27	20
Moderately Satisfied	47	60	53
Dissatisfied	20	13	27

The data show that students at MJP Rohilkhand University reported higher satisfaction levels (33% highly satisfied) compared to the other universities. The majority of students across the three universities expressed moderate satisfaction, indicating that while the platforms are functional, there is room for improvement in user experience. Factors influencing satisfaction included platform interface, ease of use, and available resources.

4.3. Challenges Faced During E-Learning

Challenge	Frequency	Key Responses
Internet Connectivity	21	"Frequent disconnections disrupt the flow of lessons."
Lack of Interaction	18	"Not being able to ask questions in real-time is frustrating."
Technical Issues	14	"Sometimes, the platform crashes or runs slowly."
Motivation and Focus	10	"It's hard to stay motivated without the classroom environment."

Internet connectivity emerged as the most significant challenge, affecting 47% of participants. Lack of interaction and technical issues also played a considerable role in diminishing the e-learning experience. Students also reported difficulties in maintaining focus and motivation, underscoring the need for platforms that support more interactive and engaging learning environments.

4.4. Perceived Benefits of E-Learning

Benefit	Frequency	Key Responses
Flexibility in Learning	30	"I can attend classes from home and manage my time better."
Access to Resources	22	"All course materials are easily accessible online, which is very helpful."
Self-Paced Learning	17	"I like that I can go over the material at my own pace."
Cost Efficiency	12	"I save a lot of money on transportation and accommodation."

Flexibility was highlighted as the most significant benefit of e-learning, with 67% of participants appreciating the ability to learn from home and manage their schedules. Additionally, easy access to resources and the ability to learn at one's own pace were important advantages. These findings suggest that e-learning has the potential to be a highly efficient mode of education when technological and engagement challenges are addressed.

4.5. Suggestions for Improving E-Learning Experience

Suggestion	Frequency	Key Responses
Improve Connectivity	20	"Better internet infrastructure is needed, especially in rural areas."
Increase Interactivity	18	"More interactive sessions with real-time discussions would improve engagement."
Provide Technical Support	12	"Having access to 24/7 technical support would make a big difference."
Enhance Platform Usability	10	"The platform should be more user-friendly with fewer technical glitches."

Participants strongly recommended improving internet infrastructure and increasing interactivity in e-learning environments. Real-time discussions, more interactive tools, and enhanced technical support were also suggested. These insights indicate that for e-learning to be fully effective, it must address both technological and pedagogical challenges, ensuring that students feel supported throughout their learning journey.

4.6. Summary of Key Themes

Theme	Frequency	Universities Reporting
Connectivity Issues	21	All
Flexibility	30	All
Lack of Interaction	18	All
Satisfaction with Platform	53% moderate	All

Across the three universities, the themes of flexibility, connectivity issues, and lack of interaction were consistently reported. While students valued the flexibility offered by e-learning, they encountered significant barriers to full engagement, particularly due to internet connectivity and the lack of interaction with instructors. These findings suggest that improving these areas could lead to higher satisfaction levels and better educational outcomes.

The results presented in this section demonstrate that while e-learning offers notable benefits such as flexibility and accessibility, it is hindered by several challenges. Improving internet infrastructure, enhancing platform interactivity, and providing technical support are key areas that need to be addressed to ensure that students can fully benefit from

e-learning platforms. These results also provide a basis for the upcoming discussion, where the implications of these findings will be explored in detail, comparing them with previous literature and identifying how they fill the existing gap in the qualitative understanding of e-learning experiences.

5. Discussion

The findings from the results section provide a comprehensive view of students' perceptions, satisfaction, and challenges associated with e-learning.

5.1. General Perceptions of E-Learning

The results indicate that the majority of students (62%) hold positive perceptions of e-learning, with flexibility and the ability to study at their own pace being key drivers of this positive attitude. These findings are consistent with the literature reviewed. For example, Cheng (n.d.) highlighted the role of perceived usefulness and ease of use in shaping student satisfaction, which was evident in the current study as students appreciated the convenience and flexibility of e-learning platforms.

However, the mixed and negative perceptions reported by 38% of the participants reflect the findings of Abdel-jaber (2017), who noted that factors such as internet connectivity and lack of real-time interaction were significant barriers to e-learning satisfaction. In the current study, these barriers were frequently mentioned, with students expressing frustration over disconnections and the isolating nature of e-learning.

Moreover, the preference for flexibility and self-paced learning in the current study mirrors the findings of Umek et al. (2015), who suggested that blended learning models enhance both student satisfaction and performance. The fact that many students in the current study expressed a desire for more interaction indicates that a hybrid learning model, as suggested by Umek et al. (2015), might be more effective in addressing the limitations of purely online education.

5.2. Satisfaction with E-Learning Platforms

The analysis of student satisfaction across the three universities shows that the majority of students were moderately satisfied with their e-learning platforms, which is consistent with the findings of Pham et al. (2018). Their research demonstrated that e-learning satisfaction is strongly tied to the quality of service provided by the platform, including factors such as administrative support, instructor quality, and course material accuracy. The relatively higher satisfaction levels at MJP Rohilkhand University compared to AMU Aligarh and IFTM University could be attributed to differences in platform usability and resource availability. This finding aligns with Gortan and Jereb (2007), who noted that satisfaction with academic performance directly influences students' persistence with e-learning. In the current study, students from MJP Rohilkhand University may have had access to better resources, which contributed to their higher satisfaction levels.

5.3. Challenges Faced During E-Learning

The results of this study clearly indicate that internet connectivity is the most significant challenge faced by students, followed by a lack of interaction and technical issues. This finding resonates with the challenges outlined by Al-Omari and Salameh (2012), who found that students in Jordanian universities also struggled with internet access and interaction in online learning environments.

The lack of real-time interaction was a recurrent theme in this study, reflecting the findings of Oye et al. (2012), who emphasized the importance of real-time feedback and interaction in fostering positive student perceptions of e-learning. In the context of Indian universities, the sudden shift to online learning without sufficient interactive features has created a disconnect between students and instructors. This lack of interaction not only affects engagement but also diminishes the overall quality of the learning experience.

Technical issues such as platform crashes and slow performance further exacerbated students' dissatisfaction. These findings are in line with Nuryatin et al. (2022), who identified technological challenges as a significant barrier to e-learning satisfaction. In the current study, students frequently mentioned that these technical issues disrupted the flow of their learning, leading to frustration and a lack of motivation.

5.4. Perceived Benefits of E-Learning

Despite the challenges, students in the current study acknowledged several key benefits of e-learning, including flexibility, access to resources, and self-paced learning. These findings are consistent with the literature, particularly Cheng (n.d.), who emphasized the importance of flexibility and ease of access in enhancing student satisfaction with e-learning.

The perceived cost efficiency of e-learning, as highlighted by several participants, is an important finding that has not been widely discussed in the existing literature. While studies like Pham et al. (2018) and Oye et al. (2012) focused on the academic and infrastructural aspects of e-learning, the current study suggests that the financial savings associated with e-learning, such as reduced transportation and accommodation costs, are also important factors influencing student satisfaction.

5.5. Suggestions for Improving E-Learning

The suggestions provided by the participants for improving e-learning platforms offer valuable insights for educational institutions. The call for better internet infrastructure, particularly in rural areas, echoes the findings of Abdel-jaber (2017), who also identified internet access as a critical factor influencing e-learning satisfaction. The participants' emphasis on increasing interactivity aligns with the recommendations of Umek et al. (2015) for implementing blended learning models that combine the flexibility of online learning with the engagement of face-to-face interactions.

The need for technical support, as suggested by several participants, points to a gap in the current e-learning systems that could be addressed through the provision of 24/7 technical assistance. This finding is supported by Nuryatin et al. (2022), who argued that providing timely technical support is essential for maintaining student satisfaction with e-learning platforms.

5.6. Addressing the Literature Gap

The current study contributes to filling the identified literature gap by providing a qualitative analysis of students' experiences with e-learning in the Indian context. While previous studies, such as those by Cheng (n.d.) and Abdel-jaber (2017), have focused on quantitative measures of e-learning satisfaction, this study offers a more nuanced understanding of how students from different socio-economic and educational backgrounds perceive e-learning. This research provides insights into the specific challenges and benefits experienced by Indian students, which have been underexplored in previous literature.

Moreover, the study highlights the importance of addressing not only the technical and infrastructural aspects of e-learning but also the pedagogical and interactive components. The findings suggest that improvements in these areas could lead to higher levels of student satisfaction and engagement, ultimately enhancing the effectiveness of e-learning as a mode of education.

5.7. Implications and Significance

The implications of these findings are significant for both educators and policymakers. For educators, the results indicate the need to design e-learning platforms that are not only user-friendly but also interactive and engaging. The integration of real-time discussions, more interactive tools, and enhanced technical support could help mitigate some of the challenges identified in this study. For policymakers, the findings highlight the importance of investing in internet infrastructure, particularly in rural areas, to ensure that all students have equal access to e-learning opportunities.

The study also underscores the potential for e-learning to become a cost-effective and efficient mode of education in developing countries like India. In conclusion, this study provides valuable insights into the perceptions and satisfaction levels of students with e-learning in Uttar Pradesh, India. By offering a qualitative perspective, it contributes to the existing body of knowledge and provides recommendations for improving the e-learning experience in higher education institutions.

6. Conclusion

The findings of this study provide a comprehensive understanding of students' perceptions and satisfaction levels regarding e-learning in three major universities in Uttar Pradesh, India: MJP Rohilkhand University, AMU Aligarh, and IFTM University. The research revealed that while e-learning offers significant advantages such as flexibility, accessibility, and the ability to learn at one's own pace, several challenges hinder its effectiveness, particularly in the Indian context. A majority of students expressed positive perceptions of e-learning, citing its convenience and flexibility. However, a significant portion of participants reported mixed or negative experiences, primarily due to technological barriers like poor internet connectivity and the lack of interaction with instructors and peers. These findings highlight the dual nature of e-learning, where its benefits are closely tied to the availability of reliable technological infrastructure and effective pedagogical practices.

Student satisfaction with e-learning platforms was found to be moderate across all three universities, with MJP Rohilkhand University showing slightly higher satisfaction levels. This suggests that while the platforms in use are functional, there is considerable room for improvement, particularly in terms of user interface, resource availability, and technical support. The lack of real-time interaction and the presence of technical glitches further diminished the students' overall satisfaction, pointing to the need for more engaging and interactive e-learning environments.

One of the key challenges identified in the study was internet connectivity, with many students reporting frequent disruptions during lessons. This challenge is particularly significant in rural areas, where access to high-speed internet remains limited. The study also highlighted the need for greater interactivity within e-learning platforms. Students expressed a desire for more real-time discussions, interactive tools, and opportunities for direct engagement with instructors, which would enhance their learning experience and also help address the feelings of isolation with online learning.

The broader implications of this research are twofold. First, it provides educational institutions and policymakers with valuable insights into the areas that require attention to improve the overall effectiveness of e-learning in higher education. This includes addressing technological barriers, improving platform usability, and incorporating more interactive elements into the online learning environment. Second, the study underscores the importance of investing in digital infrastructure, to ensure that all students can benefit from e-learning opportunities.

In conclusion, this research contributes to the growing body of knowledge on e-learning by providing a qualitative analysis of students' experiences in the Indian context. It highlights the need for targeted improvements in both technological and pedagogical aspects of e-learning to enhance student satisfaction and learning outcomes. By addressing these challenges, educational institutions can better leverage the potential of e-learning to deliver high-quality education to a diverse student population, ultimately contributing to the broader goal of making education more accessible and inclusive.

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