




## Analyzing Virtual Learning Challenges for Media and Communication Studies Students Amidst the Pandemic in Pakistan

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ARTICLE INFO	ABSTRACT
<b>Article history:</b> Submitted 05.06.2024 Accepted 10.11.2024 Published 31.12.2024 <b>Volume No. 11</b> <b>Issue No. II</b> <b>ISSN (Online)</b> 2414-8512 <b>ISSN (Print)</b> 2311-293X <b>DOI:</b> <b>Keywords:</b> Media & Communication Studies, COVID-19, Diffusion of Innovation, Remote Learning Challenges, Educational Technology Accessibility, Academic Realm	<p><i>This study examines the dynamic realm of online education in the thick of the COVID-19 pandemic in Pakistan. An online survey (N=401) of five universities: the University of the Lahore (UOL), the University of Punjab (PU), the University of Sargodha, the Government College University Faisalabad (GCUF), and the University of Central Punjab (UCP) respectively evaluated the efficacy of online education tools and their impact on students' grasp of media courses under diffusion of innovation strategies. A questionnaire comprised of 38 items of close-ended questions on the Likert Scale with Cronbach Alpha value (<math>\alpha = 0.759</math>) was administered among media and communication studies (M&amp;CS) students of selected universities. Findings show student dissatisfaction (83.8%) with the accessibility of educational technology and student preference (89.5%) for campus classes more efficient for learning fulfillment, emphasizing the challenges associated with online education. This research offers valuable insights into the social shaping of media education in the universal design of learning in the academic realm.</i></p> 

### Introduction

In 2019, the COVID-19 pandemic revolutionized education systems globally, pushing Pakistan into an unprecedented shift toward online learning. This transition exposed significant challenges, particularly regarding accessibility, digital preparedness, and parity. In Pakistan, the digital divide has become a glaring barrier where artificial intelligence is growing speedily but still, only 34% of households have internet access, and even fewer own personal computers for effective online education (Jamil & Muschert, 2024). Unfortunately, rural areas and socio-economically disadvantaged communities, especially female students face the brunt of these challenges. However, innovative solutions, such as government-led initiatives like TeleSchool (Niaz, et al., 2023) and private-sector startups like Edkasa, attempted to bridge the gap by providing digital and distance learning opportunities (Dawn.Com, 2021). These efforts laid the groundwork for a hybrid education model that continues to evolve post-pandemic (Ejaz, et al., 2024).

Despite these advancements, the transition was not without its setbacks in Pakistani educational institutions; unprepared for the rapid shift, struggled to provide quality instruction using online platforms. Students, too, grappled with issues such as social isolation, and a lack of interactive learning environments particularly in low-income and gender-imbalanced unequal access to resources (Akram & Majid, 2024). Yet, the pandemic also spurred innovation, encouraging the adoption of blended learning models and digital tools in classrooms across Pakistan (Ejaz, et al., 2024). Online learning developments can offer a glimpse into the potential for a more inclusive and resilient education system in Pakistan under a more robust infrastructure

and policy frameworks (Meng, et al., 2024).

Moreover, during COVID-19 a rapid shift to online learning (OL) profoundly raised concerns about student engagement and retention as learners were struggling to remain motivated in the absence of in-person interaction. This shift prompted the need to investigate the challenges and effectiveness of online education in its emergence stronger than before the pandemic (Emiliana & Rebecca, 2020).

The COVID-19 pandemic is a global health crisis caused by the spread of the novel coronavirus (SARS-CoV-2) which has had widespread and severe impacts on public health, economies, and daily life (Peeri, et al., 2020) is fundamentally a biological and public health event rather than a natural disaster (Di Pietro, 2018; Zheng, 2020), affecting various aspects of society, including healthcare systems, economies, education, and social interactions and media's role in disseminating government-led public service announcements (Bhatti, et al., 2024). This study aims to investigate before and after the pandemic scenario of online education of media and communication studies students, comparing the pre-pandemic conventional classroom model with the post-pandemic virtual classroom settings in five universities in Pakistan.

Education originating from Socrates, Plato, Aristotle, Confucius, Jean-Jacques Rousseau, John Locke, Maria Montessori, Ivan Illich, John Dewey, Martin Luther King Jr., and Nelson Mandela as a fundamental societal need, imparts values, skills, and cultural heritage (Tate, 2015; Gruwell, 2016), shaping individuals' behavior and contributing to their success (Sesha, 2012; Seale, 2020). Undoubtedly, the contributions of innovators like Reshef (2013); Agarwal (2022); Mitchell Baker (2024); Downes (2005); George (2005); Davidson (2017); Ng (2017); Koller & Friedman (2009); Thrun and Pratt (1998); and Khan (2012) are outstanding for online resources and platforms. This research embarks on an essential exploration of the distinctive role played by higher education institutes and universities during the distance-provoking health emergency (Keshavarz, 2020; Deshmukh, 2021; Mujtaba Asad, et al., 2022).

While online platforms offer valuable tools, the unique contributions of educational institutions and degree programs in fostering comprehensive learning experiences cannot be understated (Rahiman & Kodikal, 2024) in facilitating holistic education, encompassing not only academic knowledge but also nurturing critical thinking, collaboration, and a sense of community. The comparative analysis has further explored the role of education in providing financial security, fostering self-dependency, and creating employment opportunities, particularly in the Media & Communication Studies sector (Nussbaum, 2009; Black, 2021; Lawson, 2021; Eduhutch, 2021; Sharma, 2023).

Moreover, Education, a linchpin for societal growth, has witnessed a shift to online learning in Pakistan during COVID-19 as challenges including digital literacy gaps and motivation issues (Neendoor, 2023) emerged along with benefits like accessibility (Ahshan, 2021; Moore, et al., 2011; Lee, 2010; UCAS, 2019). Students as “beneficiaries” the primary recipients of knowledge, skills, and experiences on the other hand appreciate the flexibility and accessibility of online education, citing the convenience of self-paced learning while missing the in-person interaction, collaborative atmosphere, and immediate clarifications possible in traditional classrooms (Concannon, et al., 2005).

The present study has also discussed digital fatigue, technical issues, and a perceived lack of engagement that influences students' preferences. Ultimately, individual learning styles, preferences, and the quality of the educational experience contribute to diverse perspectives on the two modes of learning (Purdue, 2019).

## **Objectives**

- To investigate challenges media and communication studies students encounter in Pakistan during the transition to online education amid COVID-19.
- To evaluate the effectiveness of online media education compared to traditional campus classes of M&CS before the pandemic.
- To examine the disparity in access to digital resources between urban and rural areas during online M&CS education in Pakistan.

## **Literature Review**

The global discourse on the impact of the COVID-19 pandemic on education and academic gains from “no-face-to-face education” (Kong, et al., 2024) is richly portrayed in a myriad of studies spanning diverse regions such as online classes, distance learning, media education, and mediated communication towards digital platforms for teaching and learning. The similarity of sentiments also echoes in the Pakistani context, where educational institutions were compelled to adopt online teaching methods (Dhawan, 2020; Di Pietro, 2018) rapidly despite the adoption, many still cling to outdated practices, posing challenges to the efficacy of e-Learning (Jamie, 2018; Singh & Thurman, 2019).

Along with other countries like Pakistan OL issues and challenges have shown drastic similarities in the academic achievements of primary school students of Southeast Nigeria with the absence of electricity,

lack of digital teaching training, and language barriers (Meze, 2024). Duraku and Hoxha (2020) explored in their study the impact of the pandemic on both students and teachers by utilizing interviews to understand the well-being of parents and professors (Betty, 1998). Aljaraideh & Bataineh (2019) and Coleman (2011) describe how a country's experience with ICT integration in education, revealing policies and mechanisms introduced to support students in backward areas (Addah, et al., 2012).

Probing of Ghanaian Colleges of Education illuminates the pandemic's profound effect on academic work dynamics (Adzaku et al., 2022), especially, the absence of a learning management system in the higher education landscape of India during the pandemic (Roy & Brown, 2022). Challenges due to visual impairment (Amponsah & Bekele, 2023) have been remodified through online education, experiencing transformative changes (Mohammadpour, et al., 2023) necessitated by the pandemic. European perspective assessed the broader implications of the pandemic on education in the region to see the whole picture of online learning, and school closures to figure out what lessons can be learned from how education has been affected (Grek & Landri, 2021).

Wekullo, Kabindio, and Juma (2023) have explored faculty and students' perspectives on online learning in Kenyan universities; Mann, et al., (2020) shed light on the transformative impact of the pandemic on education in Saudi Arabia; Cahaya, Yusriadi, and Gheisari (2022) discuss Indonesia's educational-shift during the pandemic while emergency remote learning in higher education in Cyprus (Meletiou-Mavrotheris, et al., 2022) underscores the multifaceted effects of the pandemic on education that Pakistani education also witnessed (Sharjeel, Dool & Shah, 2020).

Within this global context, this research focuses on contributing a nuanced examination of the challenges and opportunities (access to resources, teacher readiness, discussion & feedback, and technological supplements) faced by media and communication studies students in Pakistani universities during COVID-19.

The current generation is capable of working with computers and smart devices but that does not mean that they are digital literates. To efficiently learn on an online learning system it is required to understand how different software works. Moreover, students must understand how to communicate online with proper etiquette and what are the rights and responsibilities of students in an online learning classroom (Gray, et al., 2023).

Individuals adopt innovations according to their varying degrees of perceptions under certain social systems in the form of different channels being early adopters or early majority (Dale, et al., 2021) within existing cultural discourses and social networks of the society. The present research has utilized the diffusion of innovations as a conceptual apparatus that explicates the adoption and dissemination of innovative ideas, behaviors, or products within a social context (Rogers, et al., 2014; Jayasundara, 2021; Mehra, et al., 2021). Developed by E.M. Rogers in 1962, this theory transcends temporal constraints, offering a comprehensive understanding of how novel concepts navigate societal structures (Rogers, 1962; 1971; 1983; 1995; 2001; 2003) holding a particular relevance in elucidating the intricate relationship between online M&CS education and its reception during the COVID-19 pandemic in Pakistan.

Asserting that adopting innovations, like online education is influenced by factors such as relative advantage, compatibility, complexity, trialability, and observability (Valente, 1996) as it classifies adopters from innovators to Laggards and captures varied responses (Kolsi, 2023). Unveiling societal dynamics in innovation adoption, Innovators drive change, 'Late majority' are individuals who slowly adapt and do not adopt a new idea until everybody has tried it, while Laggards resist ((Simonds & Rudd, 2016; Ruokamo, et al., 2023), showcasing the theory's relevance with the present study. DOI's evolution, spanning Native American dance to the World Wide Web (WWW) attests to its versatility while acknowledging its limitations of historical focus, the study leverages its analytical strength (Singhal & Rogers, 2012; Greenhalgh, et al., 2004). Moreover, seamlessly integrating this theory into this research illuminates the complexities of "digital social innovation" (Qadir, 2024) among Pakistani media and communication studies students recognizing its enduring significance across diverse fields.

### **Research Hypotheses**

- There is a significant relationship between students' challenges in online education and the technology availability during COVID-19 in Pakistan.
- A discernible distinction exists between challenges in online education and traditional campus classes during COVID-19 in Pakistan.
- There is a significant difference in the dispersion of digital resources for online education between urban and rural areas in Pakistan during COVID-19.

## Research Questions

- What challenges of technology availability, shape students' experiences in online education during COVID-19 in Pakistan?
- What subtle distinctions characterize challenges in online education compared to traditional campus classes during COVID-19 in Pakistan?
- How does the distribution of digital sources impact challenges faced in online education in urban and rural areas of Pakistan during COVID-19?

## Methodology

Employing a quantitative approach, the study's design hinges on the interplay between online media and communication studies education, and the challenges faced in media education departments, schools, or institutions at the university level (Stockemer & Bordeleau, 2023). A meticulously structured online survey was disseminated among 422 with a response rate of 401 students from five universities: the University of the Lahore (UOL), the University of Punjab (PU), the University of Sargodha, the Government College University Faisalabad (GCUF), and the University of Central Punjab (UCP) respectively. The population, comprising students from both private and government universities, with a focused lens on discerning urban-rural disparities, bolsters the study's breadth (Story & Tait, 2019).

Through the purposive sampling technique (Campbell, et al., 2020) the sample size of 401 respondents, strategically selected from those enrolled during the pandemic, to ensure reflectiveness with Cronbach (1951) Alpha Value ( $\alpha$ ) 0.759 of 38 items of the questionnaire with close-ended questions on the Likert scale (Likert, 1932) that is acceptable (Taber, 2018). Moreover, the research questionnaire exhibits face validity (Broder, et al., 2007) as it draws inspiration from (Zalat, et al., 2021) aligning with the content and construct of that study, selected questions are relevant and appropriate for measuring the intended construct.

## Results and Discussion

The first set of frequencies, presented in Table 1, establishes the eligibility and demographic characteristics of the participants (Piedmont & Hyland, 1993). Moving forward, Table 1 delves into the challenges related to technology and resources during online media education by exploring students' satisfaction levels with online classes, revealing that a significant percentage (83.8%) expressed dissatisfaction. Further, it elaborates on the difficulties faced in setting up virtual classrooms, arranging internet connectivity, and dealing with electricity shortfalls. According to the results, a substantial portion of respondents faced challenges in these aspects, indicating potential barriers to effective online learning.

The subsequent Table, 1, assesses the differences in perceptions between online media education and campus classes. These frequency tests highlight that a majority of students (89.5%) prefer and find campus classes more efficient for learning fulfillment, emphasizing the challenges associated with online education.

**Table 1: Descriptive statistics of the respondents' online media and communication studies education. (n = 401)**

Variables	Sub Category	Frequency	Percent %	Mean	Std. dev
<i>Frequency Test for the Eligibility of M&amp;CS Students in Survey</i>					
Residence	Rural	196	48.9		
	Urban	205	51.1		
	Total				
University	GCUF	112	27.9		
	UOL	15	3.7		
	PU	65	16.2		
	UCP	73	18.2		
	UOS	135	33.7		
	System	1	.2		
<i>Significance between Online M&amp;CS Education and Technology Availability</i>					
Online class effectiveness perception	Strongly Disagree	6	1.5	2.27	.726
	Disagree	336	83.8		
	Neutral	9	2.2		
	Agree	45	11.2		
	Strongly Agree	5	1.2		
Ease of virtual classroom setup	Strongly Disagree	2	.5	2.37	.845
	Disagree	327	81.5		

	Neutral	10	2.5		
	Agree	46	11.5		
	Strongly Agree	16	4.0		
Internet setup for classes	Strongly Disagree	3	.7	2.31	.728
	Disagree	325	81.0		
	Neutral	23	5.7		
	Agree	45	11.2		
	Strongly Agree	5	1.2		
Online classes during power shortage	Strongly Disagree	3	.7	2.47	.825
	Disagree	287	71.6		
	Neutral	32	8.0		
	Agree	77	19.2		
	Strongly Agree	2	.5		
Managing power during classes	Strongly Disagree	5	1.2	2.24	.667
	Disagree	339	84.5		
	Neutral	12	3.0		
	Agree	44	11.0		
	Strongly Agree	1	.2		
<i>Difference between Online M&amp;CS Education and Campus Classes Regarding Challenges Faced</i>					
Efficiency: Online vs. Campus	Campus Classes	359	89.5	1.10	.304
	Online Education	41	10.2		
	System	1	.2		
Challenges: Online vs. Campus	I faced more issues while having online classes	359	89.5	1.10	.307
	I face more issues while having campus classes	42	10.5		
Preference: Online or On-Campus	Campus Classes	358	89.3	1.11	.307
	Online Education	42	10.5		
	System	1	.2		

Finally, Table 2 employs analysis of variance (Fisher, 1935) ANOVA to explore the differences in broadband service satisfaction between urban and rural areas. The non-significant result suggests that students from both areas faced similar challenges with internet connectivity, emphasizing a nationwide issue. The analysis not only validates the eligibility and characteristics of participants but also provides a comprehensive overview of the challenges faced by students during online media education in Pakistan. Moreover, the results offer valuable insights for addressing these challenges (Hamid, SENTRYO & HASAN, 2020) and contribute to the broader discussion on the effectiveness of online education, especially during times of crisis like the COVID-19 pandemic (Adedoyin, & Soykan, 2023).

**Table 2: ANOVA analysis results**

Availability of online resources in Urban and Rural areas		Sum of Squares	Df	Mean Square	F	Sig.
Satisfactory broadband service	Between Groups	.015	1	.015	.029	.864
	Within Groups	207.810	399	.521		
	Total	207.825	400			
Area experience load shedding	Between Groups	.110	1	.110	.290	.590
	Within Groups	151.396	399	.379		
	Total	151.506	400			
Online classes, power interruptions	Between Groups	3.347	1	3.347	5.638	.018
	Within Groups	236.828	399	.594		
	Total	240.175	400			
Missed classes due to outages	Between Groups	.041	1	.041	.064	.800
	Within Groups	255.450	399	.640		
	Total	255.491	400			

In addressing the research questions and hypotheses, the study employed One-Way ANOVA tests to scrutinize the disparities in challenges faced by students in online media education across urban and rural



areas of Pakistan. The findings revealed that issues such as electricity shortfall and inadequate broadband services were pervasive, irrespective of geographic location. This underscores a critical gap in the understanding of the challenges associated with online education in a developing context like Pakistan.

High levels of disagreement in perceptions of online class effectiveness (83.8% disagreed) and ease of virtual classroom setup (81.5% disagreed) highlight the lack of readiness while rural students particularly struggled with internet availability and power interruptions indicated significant differences in challenges ( $F = 5.638, p = .018$ ). This finding underscoring the uneven technological infrastructure across Pakistan shaping student experiences describes that H1 is partially accepted. Most students (89.5%) reported facing greater issues with online classes compared to campus-based education, citing lower efficiency and disruptions due to power outages and internet instability, and only 10.5% preferred online education over traditional learning. These findings emphasize that online classes cannot yet replicate the effectiveness of on-campus learning environments, particularly in developing contexts by accepting H2. Moreover, while internet availability differences between rural and urban areas were not statistically significant ( $p = .864$ ), power interruptions during online classes were disproportionately reported in rural areas ( $F = 5.638, p = .018$ ) highlighting the digital divide and unequal access to resources critical for effective online education and partially rejecting H3.

Furthermore, the study identifies major challenges, such as inadequate internet, power outages, and difficulties in virtual classroom setup, as central to shaping online education experiences. Students' feedback on the ineffectiveness of online platforms reveals that technology availability significantly influenced their learning outcomes (supported Q1). The primary distinctions between online and traditional learning were identified as disruptions in engagement, power issues, and the unavailability of stable internet while, campus learning's reliability (preferred by 89.5%) contrasts sharply with online education, which most students found ineffective due to logistical barriers (supported Q2). Rural areas were more affected by power interruptions and resource disparities compared to urban settings while broadband availability did not show notable statistical variation, qualitative evidence suggests rural students faced more barriers to equitable online learning experiences (partially supported Q3). These findings collectively emphasize the need for stronger infrastructure, digital equity (Akther, 2020), and targeted policy interventions (Ahshan, 2021) to address the gaps revealed during the shift to online education in Pakistan.

## **Conclusion**

The study sheds light on the challenges faced by media and communication studies students in Pakistani universities during the COVID-19-induced shift to online media education. Despite encountering obstacles, students navigated through this unprecedented phase, emphasizing the global impact of the pandemic on education.

However, this study's scope is circumscribed to M&CS students of selected public and private universities who transitioned from regular classes to emergency online education during the pandemic. Future research should diversify by including disabled students and those accustomed to online learning before the pandemic. Recommendations include improving online education infrastructure, providing affordable internet packages, and optimizing energy resources for synchronous learning periods.

## **Future Implications**

To address future challenges, policymakers must collaborate with experienced online institutions, devise innovative assessment tools, and explore ways to impart practical subjects effectively in a virtual setting. This study emphasizes the need for proactive measures, such as uninterrupted electricity for designated study hours, to enhance the online learning experience serving as a clarion call for a holistic, collaborative approach to fortify educational infrastructure to ensure the continuity and quality of learning in an ever-changing global landscape of formal, informal, and non-formal learning (Manolescu, et al., 2018). In the realm of complex research, it is imperative to consider these findings as a springboard for further exploration as an ongoing commitment to refining online education strategies in the post-pandemic period (Baker, 2020), particularly in developing countries like Pakistan.

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