

Journal of Educational Research & Social Sciences Review (JERSSR)

Examine the Online Learning Challenges at the University Level amidst the COVID-19 Pandemic

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Abstract



The COVID-19 pandemic has impacted every aspect of society. Governments worldwide temporarily shifted physical classes online to curb the virus's spread, seriously disrupting the global education system. The main objective of the study was to highlight the challenges faced by university students during the Covid-19 pandemic. The study was descriptive. Students enrolled in university-level courses made up the population of the current study. A sample of 200 students was. This was accomplished using the simple random sampling technique. Data were gathered using a student questionnaire that was self-developed. The results were presented using frequency tables. The study's findings show that pupils face a lot of challenges while learning online. Challenges include technological barriers, environmental distractions, emotional well-being concerns, resource accessibility issues, and academic hurdles. In light of the findings, it may be recommended to introduce a course relating to the use of information technology or the holding of specific training sessions before online classes may be recommended. To better understand the difficulties experienced by college students, instructors, and administrators, further research may be conducted in the future.

Keywords: Challenges, Covid-19 Pandemic, Online Learning, University Level, Students' Perception

Introduction

In December 2019, a previously unidentified outbreak of "pneumonia" emerged in Wuhan, China, and was quickly determined to be caused by a novel coronavirus (Dong et al., 2020). By June 19, 2020, the nation had reported 3,229 fatalities and 165,062 cases of COVID-19 (COVID-19 Stats, 2020). The advent of online learning and teaching has become a pivotal method for disseminating knowledge, utilizing the internet as a medium for distance education, involving educators and students from diverse geographical locations (Kim, 2020). Before the COVID-19 outbreak, e-learning was perceived as a non-formal educational approach. However, with the onset of the pandemic, it swiftly became an indispensable tool for maintaining the continuity of the education system through digital means. Post-COVID-19, a plethora of educational applications have emerged to facilitate online teaching and learning. These include Neo, Zoom, and Start.me, Google Classroom, Shift, Edmodo, Class Dojo, Outs, We Video, Ted-Ed, LAN School, Blackboard, and numerous others (Mishra et al., 2020).

Abbasi et al. (2020) found that most Pakistani students preferred traditional in-person instruction over online learning. This study addresses the scarcity of research on challenges faced during the COVID-19 pandemic. Its primary goal is to explore students' perspectives on the difficulties encountered with online education during this crisis, potentially informing future educational planning. Additionally, the research is expected to benefit stakeholders by equipping Pakistani educational institutions and students with contemporary tools and training to respond effectively to similar situations.

Research objectives

The objectives of the study are as follows:

1. To assess the technological challenges encountered by university students during the pandemic.

2. To investigate the environmental challenges faced by university students during the pandemic.
3. To examine the motivational and emotional challenges experienced by university students during the pandemic.
4. To explore the challenges related to accessing essential learning resources that university students faced during the pandemic.
5. To investigate the academic and learning challenges university students encountered during the pandemic.

Literature review

In March 2020, WHO declared a pandemic caused by a novel coronavirus (COVID-19), prompting travel restrictions, social distancing, and a shift to remote learning, bringing challenges, like technology gaps and socio-economic disparities (Heng & Sol, 2020; Rajab et al., 2020). Learners also faced issues like loneliness and stress. Mezirow's transformative learning theory underscores how the pandemic spurred global educational disruptions, fostering awareness and adaptation (Mezirow, 1997), and emphasizing personal experiences in education for cognitive transformations. This perspective advocates for students to tackle challenging tasks to demonstrate comprehension during paradigm shifts, as proposed by Hashemi et al. (2021). Integrating new technology into education requires considering pedagogical theories and instructional strategies, influenced by various educational theories. Rasheed et al. (2020) conducted a comprehensive review of students' online learning experiences, forming the basis for exploring challenges within this study's typology. Learning environment challenges encompass issues related to the quality of the learning environment, influencing students' educational experiences, attitudes, and beliefs. Students also encounter difficulties in utilizing learning resources and instructional materials, as highlighted by (Drane et al., 2020; Suryaman et al., 2020). Expanding upon (Rasheed et al. 2020) review, additional clusters were introduced to address a broader range of potential issues in online education, including learning resource challenges and learning environment challenges (Buehler, 2004; Recker et al., 2004; Seplaki et al., 2014; Xue et al., 2020). Furthermore, (Rasheed et al., 2020) categorized challenges such as technological difficulties, financial constraints, and issues related to physical and mental health, in line with (Barrot, Llenares, & Del Rosario, 2021). Overall, these challenges collectively encompass a spectrum of obstacles students face concerning the quality of their learning environment and their holistic educational experience. Studies like Basar (2021) and Barrot (2021) highlight technological hurdles, including internet connectivity issues and technical problems, which hinder effective online learning (Basar, Mansor, Jamaludin, & Alias, 2021; Barrot, Llenares, & Del Rosario, 2021). Environmental aspects are often overlooked. The environmental impact of increased device usage and reduced outdoor activities during online learning has not been extensively studied but should be considered (Barrot, Llenares, & Del Rosario, 2021). Learner motivation and emotional well-being are affected due to isolation and a lack of face-to-face interactions, as highlighted by various studies (Barrot, Llenares, & Del Rosario, 2021). Resource accessibility issues encompass access to required materials and services. The digital divide and challenges faced by students with disabilities have been discussed in the literature (Basar, Mansor, Jamaludin, & Alias, 2021; Barrot, Llenares, & Del Rosario, 2021; Zamani, Mohamad, Reesha, & Kamarudin, 2022). The transition to online education necessitates the development of self-regulation skills and the use of effective assessment methods to ensure academic integrity, as highlighted by various studies (Basar, Mansor, Jamaludin, & Alias, 2021; Pokhrel & Chhetri, 2021). According to Mezirow, complex problems alter the brain in ways that produce cognitive distinctions and significant alterations in education. The current paper, which examines how students perceive the teaching and learning process following a sudden change in higher education, is a good fit for this idea. The transformational learning theory places a strong emphasis on the experiences a person has in a learning setting. According to this, students who are actively engaged in their learning modify their attitudes, actions, and concepts as a result of the meaning they generate. This idea contends that to demonstrate their understanding of the learning process, students should be required to complete challenging tasks when a paradigm shift occurs (Hashemi et al., 2021).

Research Methodology

The researcher chose the quantitative research methodology and a descriptive survey design. The population consisted of all the universities in the Rawalpindi and Islamabad regions. The study

was delimited to 4 universities and their B.Ed. Hons students. These four universities were selected randomly. A sample of 200 students from the B.Ed. Hons program was selected randomly to collect the data. In this way, fifty students were selected from each university. The self-developed research questionnaire was used in the study for data collection. The questionnaire used in this study contained two sections. The first section aimed to examine the challenges of online learning. It consisted of 20 items (see table 1). The second section contained an optional comment space in which students could write about other challenges they face during online learning. Most of the items were taken from (Rasheed et al. 2020; Barrot, Llenares, & Del Rosario, 2021) articles. The questionnaire was based on a five-point Likert scale. An item bank was created. The validity of the instrument was checked by experts in the field. The instrument was modified according to the instructions of the expert. The reliability of the instrument was ensured through Cronbach Alpha. Its value was found .854. The analysis focused on the frequency and percentage of responses and word clouds.

Finding

Table 1

Examine the challenges of online learning during the COVID-19 pandemic encountered by university students.

No.	Items	YES	NO
Technological Challenges:			
1	I experience slow internet speeds, which can be frustrating for online learning.	112(56)	88(44)
2	I lack knowledge and training in technology use, making it challenging to navigate online resources.	126(63)	74(37)
3	I'm using outdated technology, which affects my ability to keep up with modern online learning tools.	118(59)	82(41)
4	I face electricity troubles at times, disrupting my online learning activities.	120(60)	80(40)
5	I encounter login problems when trying to access learning resources, causing delays in my studies.	117(88.5)	23(11.5)
Environmental Challenges:			
1	I struggle with distractions at home during lectures, making it difficult to concentrate on the material.	108(54)	92(40)
2	I find it challenging to select the best time and area for effective learning in my home environment.	101(50.5)	99(49.5)
3	I often contend with background noise during online learning sessions, which can be distracting.	84(42)	116(58)
4	I have limited access to a suitable learning environment, impacting my study experience.	104(52)	96(48)
Motivational and Emotional Challenges:			
1	I experience a lack of cooperation and motivation from those around me at home during online learning.	127(63.5)	73(36.5)
2	I sometimes feel emotionally disconnected or isolated when studying remotely, affecting my motivation.	118(59)	82(41)
3	I admit that I occasionally feel disinterested during online learning sessions.	102(51)	98(49)
4	I suffer from eye problems due to exposure to bright light, which can be uncomfortable.	108(54)	92(46)
5	I feel uneasy and uncomfortable when using video projection, microphones, and speakers during online learning.	124(62)	76(38)
Resource Accessibility Challenges:			
1	I have limited access to books and instructional materials, which can hinder my research and learning.	101(50.5)	99(49.5)
2	I struggle with insufficient access to digital library resources, making it challenging to find necessary materials.	112(56)	88(44)
3	I face difficulties due to insufficient access to online learning resources, affecting my education.	127(63.5)	73(36.5)
4	I sometimes run low on funds for phone credit recharge, which affects my connectivity to online resources.	123(61.5)	77(38.5)

Academic and Learning Challenges:			
1	I often encounter difficulties completing assignments and tasks, which can be frustrating.	108(54)	92(46)
2	I find it challenging to stay focused during online learning sessions due to various distractions.	93(46.5)	107(53.5)

Table No. 1 result shows that more than half of the respondents (56%) have reported experiencing slow internet speeds, which is a significant technological challenge for online learning. This issue can lead to frustration and hinder the effectiveness of online learning. A majority of participants (63%) indicated that they lack knowledge and training in technology use, making it challenging to navigate online resources. This underscores the importance of providing support and training to learners to enhance their digital literacy. A notable proportion (59%) reported using outdated technology, which can impact their ability to keep up with modern online learning tools. Upgrading technology infrastructure may be necessary to address this issue. As (60%) of respondents faced electricity troubles at times, disrupting their online learning activities. This highlights the need for reliable power sources or backup solutions to ensure uninterrupted learning. A notable proportion (88%) reported login problems, this issue can still cause significant delays in studies. It's essential to investigate and resolve these issues to optimize the online learning experience. More than half (54%) of the participants struggled with distractions at home during lectures, affecting their concentration. Strategies for creating a conducive learning environment at home may be beneficial. A nearly equal split (50.5% vs. 49.5%) indicates the challenge students face in selecting the best time and area for effective learning in their home environment. Guiding in creating suitable study spaces could be helpful. A majority (42%) contended with background noise during online learning sessions, which can be highly distracting. Implementing noise-cancellation technology or suggesting noise-reducing strategies may improve the learning experience. A slight majority (52%) reported limited access to a suitable learning environment, which can negatively impact their study experience. Institutions may consider offering alternative study spaces or resources to address this issue. Moreover, (63%) of respondents reported a lack of cooperation and motivation from those around them at home during online learning. This highlights the importance of emotional support and motivation in remote learning environments. A majority (59%) sometimes felt emotionally disconnected or isolated during remote studying, which can significantly affect motivation. Implementing peer interaction and support systems may help alleviate this issue. Slightly more than half (51%) admitted to occasionally feeling disinterested during online learning sessions. This underscores the need for engaging and interactive online learning materials. A significant portion (54%) suffered from eye problems due to exposure to bright light, which can be uncomfortable. Providing guidelines for ergonomic setups and screen brightness control may help mitigate this issue. A notable percentage (62%) felt uneasy and uncomfortable when using video projection, microphones, and speakers during online learning. Training and technical support can address this discomfort and enhance the overall learning experience. Half of the participants (50.5%) reported limited access to books and instructional materials, hindering their research and learning. Initiatives to expand access to educational resources are essential. A majority (56%) revealed that participants struggle with insufficient access to digital library resources. Improving digital library infrastructure and access can enhance research capabilities. A significant majority (63.5%) faced difficulties due to insufficient access to online learning resources. Ensuring equitable access to online materials should be a priority for institutions. A significant portion (61%) reported running low on funds for phone credit recharge, impacting their connectivity to online resources. Offering financial assistance or affordable connectivity options may alleviate this challenge. More than half (54%) of the participants often encountered difficulties completing assignments and tasks, indicating the need for additional support or resources to address these challenges. A minority (46.5%) found it challenging to stay focused during online learning sessions due to various distractions. Strategies for enhancing concentration and time management could be beneficial.

environments, and enhancing resource accessibility are essential steps. Addressing emotional disconnection and motivation is vital. Financial constraints affecting connectivity must be mitigated. Moreover, students highlighted different challenges such as time management, lack of socialization, family interruption during learning, lack of basic facilities, lack of clarity and direction, slight awareness of online learning platforms, and low motivation. Time management is the most highlighted challenge found in open-ended questions. Ultimately, a holistic approach to online education is crucial to provide an inclusive and effective learning experience for all students.

Recommendations

Practical recommendations are categorized into Higher Education Commission (HEC), universities, university administration, teachers, students, and parents.

Higher Education Commission (HEC):

Collaborate with universities to provide technology loans and internet connectivity solutions for students in need.

Universities: Universities may create and maintain a library of online tutorials and guides to assist students with technology-related issues. Establish a dedicated technology support service within the university to address students' technical problems effectively. Promote and facilitate the formation of virtual study groups among students to enhance collaboration and mutual support. Implement a peer mentoring program to connect experienced online learners with newcomers for guidance and emotional support. Universities may schedule regular check-ins with students to monitor their well-being and provide necessary resources for stress management. Negotiate agreements with publishers to secure affordable or free access to digital textbooks and educational materials for students. Create and maintain a centralized online portal where students can access a wide range of digital learning resources. Organize virtual workshops on academic skills, time management, and study techniques to help students improve their learning strategies. Offer online tutoring services in various subjects to provide academic support for students facing challenges.

University Administration: Develop and oversee a technology loan program for students who lack access to essential devices and internet connectivity. Establish a dedicated support team to assist students with technology-related issues through a 24/7 hotline or chat service. Implement and manage the peer mentoring program to ensure students receive guidance and emotional support. Coordinate regular well-being check-ins with students and provide access to mental health resources.

Teachers: Create engaging and interactive online learning materials and activities to maintain student interest and motivation. Share practical tips for creating productive study spaces and minimizing distractions during online classes. Encourage students to form virtual study groups and provide guidance on effective collaboration.

Students: Participate in Study Groups: Actively participate in virtual study groups to enhance collaborative learning and mutual support. Attend virtual study workshops to improve academic skills, time management, and study techniques. Seek help from university support services, including technology assistance and tutoring, as needed.

Parents: Create a supportive home environment for online learning, including minimizing distractions and ensuring a quiet study space. Encourage your children to actively engage in virtual study groups and utilize available academic support services. Further, research on instructors' opinions and experiences with online classes during the pandemic, as well as an evaluation of the difficulties encountered by college students, professors, and administrators, may be opined.

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