Exploring the Changes: A Study of Post-COVID Educational Challenges of Peripheral University in Bangladesh

Farhana Kamal & Md. Ahsan Habib

Abstract
Post-COVID educational systems in developing countries like Bangladesh face tremendous changes due to the institutional implementation of online classes, distance learning, and hybrid education models. The study utilizes the phenomenological method to delve into the lived experiences of peripheral university students. Thematic analysis, grounded in the Colaizzi model, presents a comprehensive understanding of the data. The study unveils the challenges faced by peripheral university students, ranging from economic hardships, psychological pressures, and academic struggles to disruptions in learning, increased screen time, and sociocultural constraints; the complexities of post-pandemic university life and sheds light on the students' adoption strategies in response to these challenges. The study provides practical implications for bridging the digital divide, fortifying the teacher-student relationship, and offering targeted support to students in the post-pandemic educational landscape. The study holds significance for policymakers, educators, and institutions aiming to enhance the post-pandemic educational experience.
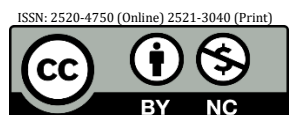
Keywords: *Technological medium, hybrid learning, digital divide, social changes, peripheral university.*

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Introduction
Throughout the pandemic, educational institutions were bound to adopt technology-medium-based learning strategies (Korkmaz et al., 2020) to ensure the continuation of academic learning. The institutional shifting of the learning process made the global world mandatorily accept all the changes in the pedagogical process found by Papanta et al. (2021) with uncertainty (Morries, 2021). Adaptation and resilience have led to a digital divide in response to our unequal social reality, expanding self-directed learning competence (Morries et al., 2021). Sudden and unprecedented disruption challenges the previous capacity to learn and maintain the continuity of achieving academic degrees on time. Bangladesh, as developing country counterparts across the globe, confronted myriad challenges to maintain continuity in education, innovate in response to the crisis, and ensure the well-being of students and faculty with our limited resources. The digitally interconnected global society with digital weapons of learning, narrated by Korkmaz et al. (2020), challenges the fundamental rights of education, personal development, economic prosperity, empowerment, social progress, and overall well-being. As Alvarez and Abel (2021) state, a digitally divided world threatens equal opportunities and highlights the prevailing gaps between privileged and underserved groups (Stocker et al., 2023). This digital competence through institutional practice mandatorily requires the digital economy, excluding the financially incapable majority, regional disparity groups (Navarro et al., 2020), disabled and physically challenged people, and limits equal civic engagement. This case study explores the student life challenges of the post-COVID time framework. This youth is the basement of the national economy and our enlightened future of Bangladesh. Equal rights in education are under threat due to the massive and rapid technological inclusion in the university learning process. Here, the study focuses on university students' life challenges in the peripheral university. Peripheral universities often face unique problems and nuanced challenges, distinct from metropolitan universities surrounding the cosmopolitan environment. They often need help with their disadvantaged position regarding resources, inadequate teachers, and insufficient facilities. Unveiling the student's unique experiences, strategies, and adaptation policies identified by Morris (2021) from personal to institutional responses are highlighted and shed light on dynamic transformation in the educational sector in the post-pandemic period.

Students' needs and primary priorities face new negotiations due to the adaptation and implication of technological and pedagogical innovations studied by Rapanta et al. (2021) in the peripheral regions. Students' personal or micro-level challenges in the post-COVID time framework broadly reflect structural changes in the education sectors (macro level). The worldwide post-COVID challenges reflect the life struggles of peripheral university students covering their own economic, political, social, psychological, and health issues. This study is significant as it relates to the new intervening variables of student life, which rapidly influence the post-COVID time framework and demand state-level policies to ensure equity education, the proper opportunity for academic potentiality, a capable workforce, and regional development. This exploration serves educational challenges in peripheral universities and emphasizes the significance of resilience, innovation, and adaptability evaluated by Navarro et al. (2020) within their socioeconomic context in Bangladesh.

The central statement of the research paper is to explore post-COVID educational challenges of peripheral universities in Bangladesh due to the technological medium of academic education and adaptation strategies. While this adaptation has been a collective effort, peripheral universities in Bangladesh, situated in less urbanized areas, confront distinct challenges that require focused attention. Due to unique geographic and resource constraints, these peripheral universities face hurdles that can impact their students and faculty's educational experience

and outcomes. Therefore, exploring the post-COVID educational challenges specific to peripheral universities in Bangladesh is imperative to inform responsive strategies, policies, and support mechanisms. The emergence of a new global order, studied by Rajib (2020), has affected people's livelihood and life choices. While digital learning platforms guarantee high-quality, enriched learning opportunities, students, academics, and university administrators are concerned about using open educational materials, ethical sustainability, social justice, and human rights (Ossian & Nilsson, 2021).

The World Health Organization (WHO) is also concerned about future alternative strategies with constraints like proper infrastructure, government policies, implementation, the activism of the student community, adequate IT and cybersecurity, and a comprehensive master plan so that technological advancement would not be a tool of demographic dividend. The government has taken necessary steps to compensate for academic loss during the pandemic (Dutta et al., 2020). The persistence of online learning, long-distance post-pandemic living, and hybrid learning systems digitally divide people and establish new power relations. This new structure altered the previously existing educational standards and student-teacher perspectives and introduced the new role of media in the education sector (IEDCR, 2020). The combination of social, psychological, and economic stressors continues in the post-pandemic academic life when the university reopens. Severe psychological pressure, anxiety disorder, and epidemic-related stressors in university students' daily lives enhance the worry about academic delay (Dhar et al., 2020). Endangered livelihood for lower-class communities face the mental and economic burden of paying educational expenses on time. Good mental health recovery requires institutions and individuals' social, collaborative effort. About 47 million women and girls were forced into extreme poverty during the epidemic (Oxfam International, 2021). Because of discriminatory practices, women and girls were deprived of access to high-quality education. They are more likely to experience pregnancy complications, early marriage, dropping out of school, domestic work disproportionately assigned to them due to their low-income families, gender construction in society, and other issues. Unlike the reputable metropolitan universities, including Rajshahi University and Dhaka University, HSTU does not embrace "Health Insurance." Health insurance can guarantee physical and emotional stability, explored by Hamid, S. A. (2021), covering financial responsibilities if any health risk arises. Insurance excludes coverage for emotional and mental illnesses, alcoholism, and drug addiction and only recognizes physical disorders as illnesses (Hamid, 2021). However, students from low-income families consider it under a social safety net to continue their academic journey.

Rationale of the study:
The study recognizes the significance of understanding the intricate challenges and adjustments this shift necessitates for university students. The focus on the HSTU campus adds specificity and depth to the study. The study adopts a comprehensive analysis by exploring various themes, including technological mediums of education, economic challenges, social dynamics, psychological stress, and political implications. The thematic analysis allows for an in-depth exploration of participant narratives, enabling the extraction of meaningful themes and subthemes that encapsulate the multifaceted nature of post-pandemic challenges. The study positions itself within the existing body of literature on post-pandemic education but identifies a gap in the specific context of peripheral universities. By addressing this gap, the research adds a valuable layer of understanding to the broader discourse on the challenges and adaptations in higher education. The research aims not only to elucidate challenges but also to identify potential solutions and adaptive strategies.

Literature Review

Mass data and artificial intelligence use in educational institutions has become a commodity driven by capitalist interests in the post-COVID era (Bortola et al., 2023). This commercialization has led to the creation of new items for commercial gain, such as instructional materials or customer service tools (Fernandez-Rovira et al., 2021). While universities are traditionally known for providing equitable treatment to all students, integrating technology into education has resulted in socioeconomic disparities and unsatisfactory situations (Arnove, 2020). Digital transformation in education, as studied by Castiglioni and Gaj (2020), has disrupted traditional curricula, necessitating a significant overhaul of the educational system to provide sustainable solutions and minimize ambiguity in post-COVID education policy (Rasli et al., 2022). Online education policies have become the mainstream medium in the post-COVID context (Haryati et al., 2021), bringing about changes in teaching, learning, and evaluation experiences (García-Alberti et al., 2021; St-Onge et al., 2022). E-learning, according to Baudrillard (2004), challenges university education by promoting "digital partition" or "digital alienation," affecting sociological, economic, and psychological aspects of human life (Manazir, 2019; Kapila, 2021). Synchronous modes of communication, conducted in real-time on platforms like WhatsApp, Zoom, Google Meet, Cisco Webex, Hangout Meet, and YouTube (Hrastinski, 2007), aim to achieve the goals of e-learning. The new global order, as discussed by Rajib (2020), has impacted people's livelihoods and life choices. Concerns about using open educational materials, ethical sustainability, social justice, and human rights persist among students, academics, and university administrators (Ossian Nilsson, 2021). The World Health Organization (WHO) also expresses concern about future alternative strategies, considering constraints such as proper infrastructure, government policies, implementation, activism of the student community, adequate IT and cybersecurity, and a comprehensive master plan to prevent technological advancement from becoming a tool of demographic dividend. The government has taken necessary steps to compensate for academic loss during the pandemic (Dutta et al., 2020). The persistence of online learning, long-distance post-pandemic living, and hybrid learning systems have digitally divided people and established new power relations. This new structure has altered previously existing educational standards and student-teacher perspectives, introducing a new role for media in the education sector (IEDCR, 2020). The combination of social, psychological, and economic stressors continues in the post-pandemic academic life when the university reopens. Severe psychological pressure, anxiety disorders, and epidemic-related stressors in university students' daily lives enhance concerns about academic delay (Dhar et al., 2020). Endangered livelihoods for lower-class communities face the mental and economic burden of paying educational expenses on time. Good mental health recovery requires social and collaborative efforts from institutions and individuals. As discussed by Atlam et al. (2022), some psychological effects of utilizing digital gadgets include sleep difficulties, social communication with strangers, irritated mental states, and skewed academic performances.

Nonetheless, university students with learning disabilities require specialized attention and physical support, and they are unable to replace traditional classroom instruction (Onyema et al., 2019; Yadav et al., 2020), with online learning still providing high-quality education. The emotional health of teachers and students is positively affected by online and web-based learning models accessible through smartphones and tablets (Mishra et al., 2020). Onyema et al. (2020) and Matulessy A. et al. (2021) investigate the dependency factors of successful online learning: network access, power, infrastructural arrangements, internet connections, high-quality learning software, cost maintenance, and accessibility to technology. All these factors can create an environment of better academic excellence in this post-pandemic education sector.

The abrupt shift to online learning and assessment encourages youth to use technological opportunities for unethical behavior and academic dishonesty (Amzalag M et al., 2021). Some everyday unethical actions include sharing information via the Internet, talking to friends, and readily copying content (Peytcheva-Forsyth et al., 2018; Sarwar et al., 2018). Additionally, assisting others in unethical practices, such as stealing research, has been discussed in studies like those by Stearns (2001), Ahmed (2018), and Grira & Jaeck (2019). Contributing factors to nonfaithful actions include unhappiness with the teaching and learning environment, time constraints, the perception of cheating, and peer influence (Bretag et al., 2019; Foltýnek & Králíková, 2018). In addition to the individual motivations behind unfair methods, external factors include time constraints that may encourage students to develop criminal tendencies in their academic work. Dissatisfaction with how they are taught and the lack of disciplinary consequences for cheating are notable factors (Murdock & Anderman, 2006; Amigud & Lancaster, 2019; Birks, Krou, and colleagues, 2020). The perception building regarding academic unfairness involves viewing cheating as a regular or daily life activity, blaming the teacher, or considering it everyone's task (Stephens et al., 2007; Stevens, 2013; Blau et al., 2020; Kiekkas et al., 2020). The rate of teachers' affiliation with academic dishonesty is greater than that of students (Murdock & Anderman, 2006). After the global epidemic, academic dishonesty has become more common in unsupervised learning environments. Due to the persistence of unsuitable rules using digital tools, a lack of monitoring measures, and inadequate evaluation (Etgar et al., 2019; Sarwar et al., 2018). The flexibility of using technological tools and the institutional inclusion of hybrid courses (Sarwar et al., 2018; Gunes K et al., 2020). This academic dishonesty is seen as a "white crime" in the online community (Etgar et al., 2019,43-44). The new education model cannot ensure digital equity, resulting in a much more competitive and fragmented education sector (Cunha et al., 2020). However, gender disparities worsen when socioeconomic environments become more challenging and divided (Kumari, DR R, 2022). Kumari also draws attention to how society constructs the social perception of gender division of work inside and outside the home. This perception advocates accepting family responsibility for a girl's marriage and a boy's schooling. Families desire to spend their savings on the education of their sons because online education is expensive and forces an embargo on female education.

Theoretical framework
Unlike functional perspectives (Durkheim, 1925; Parsons, 1956), which claim education promotes meritocracy based on 'achieved status' in society, conflict perspectives express that public institutions reinforce and perpetuate social inequalities by endorsing the 'marketization of education' (Gewirtz et al., 1995), the 'Banking model of education' (Freire, 1970), and 'Passive consumption' (Illich, 1973). Some conflict theorists argue that 'language codes' and 'linguistic skill' (Bernstein, 1975) and 'Cultural reproduction' (Bourdieu & Passeron, 1977; Bourdieu, 1986, 1988) prioritize students from socially advantaged positions over disadvantaged positions. The inclusion of technology in the post-COVID era suggests that education models have become a profitable package and material item for capitalists and cannot ensure the 'right to all.' Digital devices create educational divisions based on class, gender, geographical location, and culture. Culture-oriented technology both produces and reproduces inequalities, both formally and informally. Expensive education can be the only product for economically capable people. In addition to conflict perspectives, postmodern thinkers approach education from a consumerist perspective. The fragmented and media-saturated (hyperreal) nature makes education a highly individualistic, uncertain, and risky freedom of choice. The consumerist education market promotes education that is highly media-controlled. The circulation of information and knowledge through technology created a

'computer underclass' group in poorer countries. Bourdieu claims that technology blurred the difference between time and space. Technology use in education needs to be clarified. Postmodern thinkers expose the educational institution, curriculum, and teaching process, which all have a political ideology and demand the deconstruction of educational paradigms (Edwards & Usher, 1994). While technology promotes digital skills in the institutional learning process, it promotes flexibility and the practice of authoritative forces (Foucault) and legitimizes the narrative of technology in education. Lacan (1977) was conscious of the psychoanalytical perspective of language exchange, while the educational institute took English as a communication medium. Derrida and Fairclough (1989) claim the deconstruction of language and the power of the game of language use.

Research methodology:

Using a phenomenological approach, credible and trustworthy data are obtained through in-depth observation and document analysis to explore the post-COVID landscape of peripheral universities in Bangladesh. This study employs a phenomenological approach to uncover the lived experiences of students and faculty amidst this transformative era, reflecting the student community experiences in the post-COVID reality (Creswell, 2007; Praveena et al., 2021).

The narratives emerging from this exploration offer valuable insights into the resilience and adaptability of peripheral universities, highlighting the transformative potential of phenomenological research in shaping educational policy and practice (Creswell, 2007; Praveena et al., 2021). All respondents have a certain level of academic standing, and 30 students from Hajee Mohammad Danesh's science and technology program, covering different faculties such as Science, Engineering, Agriculture, and humanities, were selected. The sample includes students from the first year (6), second year (6), third year (6), final year (6), and masters (6), encompassing all levels with a semi-structured questionnaire. This questionnaire covers all sectors, from personal areas to social circumstances, chosen to provide a complete narration of every stage of student life and explain the complete consciousness of student life associated with the post-COVID period. An in-depth interview process with semi-structured questionnaires allows respondents to express themselves and provide a detailed description of their life experiences. In analyzing the data, we systematically coded, categorized, and identified themes in the participants' responses. Ensuring the validity and reliability of the data involved checking (participants reviewing and validating the findings), peer debriefing, and triangulation of data sources. Thematic presentation of data is presented after clustering, summarizing, and decoding. Ethical considerations, including confidentiality, informed consent, and sensitivity, are maintained throughout the study.

Research Design:

Here, Colaizzi's phenomenological method is taken for research design as a qualitative method to represent the lived experiences of students and academicians experiencing post-COVID educational challenges in peripheral universities. Thematic presentation of data makes it possible to identify common patterns of meaning rather than unique characteristics of data in this research, ensuring the validation of information gathered from respondents Praveena K.R et al. (2021), Shosha (1857) and Sanders (2003).

Table 2: Colaizzi's phenomenological data analysis

Serial of the steps	Following tasks
1.	Read and reread the transcript: getting general concepts and building comprehensive content.
2.	Selecting significant statements from the data or transcript
3.	Formulating meaning from the statement,
4.	Organizing the meanings and clusters of themes and subthemes
5	Integrating the findings and making an exhaustive description
6	Providing a description
7	validating

N: B: Tasks follow step by step.

Characteristics of respondents:

All the respondents we selected from the HSTU campus are students of different academic grounds from various levels of study life to collect the live experiences of post-corona educational challenges. To ensure enough data, we have taken the required number of respondents so that themes become complementary, and no new data would generate any new theme, ensuring data saturation for safety. Some criteria are followed to ensure the inclusive nature of the research; all the respondents are students involved with education in the periphery university, and respondents have a long history of corona-affected educational institute closure and introduction of hybrid learning processes. Significant changes they face and explore with new dimensions of educational life in the post-corona period ranging from micro to macro (economic, psychological, political, social, and health issues).

Table1. The basic characteristics of the respondents

Codes	Year of the study	Gender	Ages (In range)	Marital status
R1- R6 = 6	1st year	males and 3 females	19-21	All single
R7-R 12= 6	2nd year	3 males and 3 females	20-22	All single
R13- R17=6	3rd year	3 males and 3 females	22-24	2 married(F) and 4 unmarried
R18- R24=6	4 year	3 males and 3 females	24-26	3 married (2F and 1M) and 3 unmarried
R25- R 30=6	Master	3 males and 3 females	24- 28	3 married (2 F and 1M) and 3 unmarried

Interview process:

After a considerable literature review concerning issues, we performed an in-depth interview with a semi-structured questionnaire. The questions mainly range from the micro to the macro level and ask about the traditional learning process, new online and hybrid learning processes and their coping mechanism, life challenges with new modes of the education process, evaluation, and integration with their societal life.

Data collection:

The interviewer obtained the consent of all respondents involved in the study at a convenient place and time. The semi-structured questionnaire was flexible to collect their life experiences in the running post-covid educational life. Each interview is a face-to-face interview lasting 30-40 minutes in Bangla. Audio recordings are conducted with the permission of the respondent.

Data Analysis:
Each interview is translated and integrated into thematic analysis. Audio recordings are transcribed, and after multiple reviews, significant lines are selected, and meaning is formulated under common themes. A list of themes is formulated on a preliminary basis, and lines of the interview are connected to shape a common theme area (cluster meaning). Subthemes are pinned under themes to create a comprehensive exploratory narration. Coding was done to protect the respondent's privacy. The supplementary questions about post-corona educational challenges validated the participants' point of view regarding research findings.

Ethical consideration:
The Helsinki Declaration serves as the ethical agreement, considering participants' rights to withdraw from the research, ensuring the anonymity of their names, and protecting data confidentiality through coding. Research respondents and researchers establish and maintain a strong bond for collecting vast data with clarity and live experience sharing.

Table 3. Major themes and sub-themes

Major theme	Sub-themes	Meanings of theme and subthemes
A) Academic changes in the 'new normal' life	a) Technological medium of education	Transformation from face-to-face learning method to virtual and hybrid learning medium
	b) Academic expenditure and economic challenges	Loss of job, previous source of income, high cost of living, raising price of study supportive materials, digital tools, personal budget shortage
	c)Social challenges in peripheral campus	Academic dishonesty, distraction from education, online game addiction, Building criminal tendency, social pressure building professional identity, marriage during academic life, cyberbullying, violence in family, online shopping, hygiene budget
	d)Psychological challenges of post-COVID student life	Depression, anger, frustration, isolation, tension
	e) Political restrictions and health issues	Centrally formed political strikes, local decisions, campus politics
B) Institutional response and adaptive strategies	a) University policies and adaptive strategies b) Safety protocols c) faculty support d) Student support center e) Student Health insurance	Institutional Arrangements and Actions to Combat post-COVID educational challenges
c)Recommendation solutions: Resilience, future preparations		

The table is made to consider all the issues that support the research objectives. The respondents are mainly students ranging from 22 to 26 years old. Among the 30 respondents, 15 are male students, and 15 students are female. About 26 % of students are married, and 76% are single. However, the respondents share their life experiences in the post-Corona

period through phenomenological techniques. Three significant major themes and multiple sub-themes emerged from the findings. The analysis of the participant's responses is outlined below.

Theme one: Academic changes in the 'new normal' life
Exploring the subtheme: "Technological medium of education and Blended learning methods:

Changes in pedagogy with Different platforms: barriers
The discourse of the new normal explored by Agarwal (2020) and Corpuz (2021) in the education sector is characterized by technocentric thinking (Xiao, 2021) or affordances (Lambert, 2018). However, it is hard to accept student concentration stricken with poverty and anxiety (Bozkurt et al., 2020). This pedagogical change is discussed by Megahed et al. (2022). In a post-pandemic society, affordability, accessibility with digital security, and privacy are demanded in the globalized world. Online platforms such as Zoom, Microsoft Teams, Google Meet, and others enable university students to attend lengthy classes without being physically present. Using these platforms for class attendance, receiving lectures, discussions, and assignment submissions remains one of the best options in academics in Bangladesh despite facing various socioeconomic barriers and structural inefficiencies. The reopening of the university after the pandemic in Bangladesh came with some strategies for melting differences between time and space by offering both synchronous (real-time) and asynchronous (recorded) classes. Thus, skilled professors can take classes from long distances. Recording classes and uploading videos through online platforms can save time and energy. Recording class and student concentration correlation could be better for peripheral students as they have deficiencies in understanding. In recorded classes, professors use many standard academic words and focus on English as a medium for communication.
"We returned to campus enthusiastically, but the conditions were unlike before. Structural differences like using digital platforms on a massive scale give us flexibility. The use of digital tools sometimes distracts us, and we feel bored. We still need to update mobile phones and high-speed networks. The pressure of learning new digital tools is frustrating. They express that sometimes they think learning how to use these digital tools is much more important than understanding the study material. The digital tools provide very speedy delivery, and some of us with low understanding capabilities cannot pace with lectures."

Changes in teaching and impact on learner's attention: student-teacher interaction
Holley et al. (2010) raises questions about widening gaps in university student life with technology and their struggle. As Blended learning requires complex settings of both face-to-face and online support (Greener, 2008), both settings are shaped by social and cultural influences (Holley et al., 2010), resulting in distractions (Crook, 2002). Alshahrani (2023) highlights the use of artificial intelligence in blended learning, which is directed toward self-directed learning for assistance. Respondents expressed satisfaction with traditional lecture delivery, citing the warmth and in-person conversations with classmates and teachers as valuable. However, peripheral university students need help understanding lectures. Some students say they miss their classroom-oriented education, while teacher students directly converse in their original reality. The shifting context and mixing of real-time and real-time configuration make a hyperreal world for students. Confusion about continuing makes life dull and less attractive for learning. Teachers were directed to hunt online resources for study, and all the supplements' teachers provided were pdf for research work. Students need supplementary materials online to understand all the concepts in the syllabus. Remaining on the Internet for a long time causes students much anxiety and stress due to their previous habit of visiting the library. Going to the library and maintaining its discipline is a life-changing

opportunity to fulfill ambition. In online education, a discussion platform is employed where students ask questions through chatting and commenting while teachers provide lectures. Collaboration and interaction creation are significant challenges for peripheral students while teachers give speeches continuously, but student participation could be higher.

"The whole learning process in our university is like class delivery: using a projector, laptop, and digital screen is common. The supplementary materials are PDFs, recorded classes, and telegram files. All the teachers' working areas are too involved with digital devices, and that is a place of mind distraction. When we go to use digital tools, study time is generally converted into leisure time. We get tempted to use devices for entertainment and will cover our studies later. However, study takes a back seat in daily life."

During the post-Corona period, they accepted online assignments, quizzes, and exams in their academic life with the risk of cheating. Some security issues of observation, monitoring, and evaluation remain challenged in peripheral universities; protecting software, institutionally approved gateways for taking classes, final exams, exam sheet scrutinizing, re-securitizing, unfair means identification, and retake exam all need very classified ways and legal procedures. Due to the lack of structural management, all affiliated steps must be adequately maintained in peripheral universities. Virtual labs are online platforms that have many tools for engineering students. The tools are only sometimes available in our peripheral universities. Thus, virtual labs become part of peripheral universities as our physical labs have many limitations; university life in Corona is associated with many opportunities like national and international webinars and expert guest teacher appearances that create alarming conditions like physical presence and mental association of students. Professors provide one-on-one support for commercial purposes that also produce social inequality. Only affordable students can get paid for online classes.

'We noticed the prevalence of cheating in post-COVID time, as students complain they do not have much time for preparation, questions are hard, the syllabus is huge, and teachers take insufficient classes. Some seniors think carrying a phone in the Exam center and using the Internet for coping is trivial, and they are not sorry for this academic distrust.'

Device use and much screening time: entertainment vs study
Post-COVID education experiences are incorporated with technology studied by Raltan, V (2023) and Alarabiat A (2023), and different intentions are noticed among students, resulting in changes in performances and behavior (Zhu, 2023). Hybrid learning procedures throw a circle that takes much time for screen sharing. Students -and teachers join this step of the most significant time of sharing with the screen. Increased screen time forcefully draws attention to catchy items, marketing items, digital entertainment items, and social media, especially Facebook and YouTube. These long connectivity hours for peripheral university provokes addiction towards a fake world, double identity, and identity crisis confronting the real world, reducing productivity and learning capacity. The learning flexibility from online education changes the direction of paramount education and directs focus from the main text to the entertaining world. The trend of being modern, energetic, innovative, and exceptional in the Facebook profile is the primary target of most peripheral students. The academic purpose for using technology becomes a trap for students to become addicted to screen fatigue. Potentials to enhance capacity chase students to invest time in online education, but deviations through entertainment and excitement waste time. Digital distraction through online gaming negatively influences youth productivity, and the allure of life from reality to real life feels dull and less charming. Many health complications like eye strain, disrupted sleep patterns, less physical activity, and longtime concentration on light affect student's academic performances.

'We, by habit, use mobile phones and put all our attention on phones. Sometimes, the whole night, especially before the exam, we lose our attention and destroy our exam preparation time.

Thus, physically, we face irritation, severe headaches, and clumsiness, so we play shortcut tricks to achieve passing marks.

Subtheme II: **Academic expenditure and Economic challenges:**
Monthly budget management
Although digital tools promise multilayer opportunities in the Gig economy in the future, university students face mental pressure (Wang, Xi et al., 2023) to use digital tools in education. Psychologically, students deal with this additional cost relating to their family income and computer proficiency. Thus, the additional cost forces them to drop out (Ware, N, D 2023) from education. Peripheral universities are associated with some part-time earnings, tuition, research assistance, part-time company delivery men, tea makers, and food bloggers in towns. During the corona, they had to move to their hometowns, and their long break changed their income sources and snatched opportunities from them. Thus, the academic expenses get covered by peripheral students as more than their family earnings are needed to support them. Death of family members who are the breadwinner and fear of death hampered the post-corona economic and mental recovery. The general source of money for every monthly expenditure for a student is parental support. Corona mainly introduced damaged businesses, loss of private jobs, death, ill health, and long-term organ damage. According to these factors, families' monthly income deteriorates and cannot pace with price hikes.
'The foremost problem is buying a smartphone, which is out of our parent's budget. Sometimes, the family picks loans, or students buy them from earning from tuition, etc. The increasing package of internet buying and other associated costs cannot balance our monthly budget.'
Lack of resources and the running price hike make the post corona life unaffordable and create a limited circle of access. The oil price hike makes the market unaffordable, and the continuous price rise makes the food menu and study materials much more costly. Peripheral students in post-corona get the point that they need skills (Computer programming, gaming, computer languages, data analysis, freelancing, management) for earning. Online platforms give income sources for students. However, these courses are paid courses. Some unpaid courses are also available on YouTube.
"I first download the reading supplements and then print them from a computer shop; many of our friends do not print because it will be double as expensive as in the pre-pandemic era. I do not have a computer; I need printed material for the final exam. I can only print some materials for a small amount of money.'

Hygiene management to a monthly budget
The post-COVID life of students is overburdened with low budget allocation and puts extra importance on hygiene maintenance. Specific products used for particular purposes and priorities on handwashing, sanitizer, medicated product use, regular doctor's visits, and using many vitamins as over-the-counter medicine all are preventing measures from germs, viruses, and bacteria in contemporary situations.

Female student: family priority
Female students express that they have increased the use of medicated products in their daily use: germ-killing soaps, avoiding fragrance soaps, increasing cloth wash frequency, and sanitizer. They have separated a portion of monthly expenses for hygiene health management. Preventive vaccinations, screenings (tests) for healthy lifestyles, and emergency health-related issues concern university students and their financial wellness. Health covering insurance offers are not applied for peripheral university students in Bangladesh.
'We spend much time on our phones and regularly follow many online beauty pages and people's reviews. Thus, we order online using cash on delivery payment method. Cosmetics,

beauty products, dresses, and health care products mainly of organic nature are our buying priority.'

Subtheme 3: Social challenges in peripheral campus:
New social chaos in campus life: The temped environment post-COVID educational life exposes students to numerous challenges of social processes. COVID-19 did not directly create pressure on student life's social challenges but indirectly mixes much chaos. Criminal tendencies surrounding campus, like addiction rate increase, availability of local drugs due to stress, depression, isolation, uncertainty, anxiety, and other mental health issues in periphery university, are found in this research. Further empirical investigations are needed to understand the complexities of addiction, considering socioeconomic factors, mental health, and local conditions.

'Some of our respondents express that the surrounding environment becomes much trickier; everyone asks for money for borrowing, gambling, and addiction purposes. After the evening, we have some hotspots for drug buying. Students are afraid of unsafe people dealing with social media, but they do it regularly. Some online and offline games are conducted among youth on money being.'

Online gaming
Both paid and unpaid online gaming is the platform and subscription service provider gaining popularity among youth. High-quality gaming and impressive graphics on the premier version need a one-time purchase. The colossal time consumption habit during COVID anxiety continues in post-COVID time, resulting in monthly expense investment and social isolation. Social isolation rather than real gaming and community involvement disturbs the academic attention of students. Future research should explore the dual nature of online gaming, acknowledging both the risks and potential benefits, such as social connections and skill development.

Early marriage: Choosing between family demands vs. personal aim early marriage is due to the most extended closure of educational institutes among peripheral universities. The average target of a female student's family is getting married to a settled guy. The *'corona'* pushed the girl's parents to transfer family honor and legacy by marrying their young girls.

'We who have started our married life must prioritize family work over study. As a female, our first and foremost duty goes to family, and study becomes a secondary choice. In our digital network life, females with digital devices spend much time with phones and laptops, rather than real books.'

Bullying online: The post-Covid life is an open space through social networking sites like *Facebook, What's App, emo, video broadcasting, live telecast*, TikTok, and so on. Online images, story making, status making, online newspapers, and so on promote appraisal and wrong perception regarding any picture, body size, or particular attitude.

'Students are very much aware of online images and how people perceive them. Sometimes, body shape, dress, lifestyle, words, and video can be the weapon of the personal weapon of cyberbullying.'

Subtheme 4: Psychological stress of students in post-covid:
Students' mental health faces a profound impact due to depression and anxiety. The most extended closure and uncertainty about completing their degree on time, getting a desired job in a competitive market, and relationships running in complex social ground targets of fulfilling commitments in a relationship impact much on young mental health. The young hope is full of expectations, relying on academic pressures and extensive semester work in a changed university campus post-COVID life, including hybrid learning procedures for online education. Copeland (2021) explores college students' emotional functioning, behavioral patterns, and

well-being and mentions less attention and stability in their regular classes due to routine disturbance.

Gender issues in explaining psychological pressure:
'In post-COVID life, we face an era of uncertainty of completing our degree on time and getting recruitment in our desired job. The speedy network provides much excellence in digital works, females have fewer options to go out for online training, and economic expenditure for learning is also a concerning issue for female students. Social interaction patterns changed in the post-corona social context. During 3rd year, final year, and master feel much more depressed compared to the first and second year. Notable shifts from traditional connection methods to new technological methods create imaginary social cohesion and less community bond. These youth groups for periphery universities are free from cultural and geographical constraints but remain app-based and up-to-date for everyday routine maintenance. Social interaction methods like Facebook, WhatsApp' App, Twitter, texting, Zoom, email, skype, and other ways of communicating with the other world. Virtual networking impacts peripheral university campuses. Cyberbullying, false calls, and misconceptions all formulate a risky society and imaginary world with no reality or material conception. The gap between online illusion and hard reality produces depression.

Subtheme 5: political restrictions and mass media use
Political pressures on post-Corona academic life are associated with having campus political fair/unfair practices and national and international political context. In HSTU, no legal or political student group, national political decision, transport strikes, opposite party role, or local context shapes students' academic life post-corona period. The rapid use of technology in student life concerning the political entity of self also faces tremendous challenges. Much screening and involvement in social media in youth life is widespread for post-corona life. Young students have to follow any political party, and they have to be updated about their political movements and political activities. Thus, media use in post-COVID student life is under the spell of technology. One-centric ideology creates an expanse in campus-oriented political ground. Young, mainly male students face political restrictions when they enter campus. They should take shelter from senior political big brother. These political practices in peripheral universities are locality-based. Respondents expressed that they merely follow the orders of the seniors. In peripheral universities, there are few opportunities to practice alternative ideology.

'We all want to be political leaders for power practice. That is why we have to update our ideology and run political movements and events through online promotions to make connections with our followers. After reopening the university, we want to mobilize our political powers across the campus with dignity. In our digital Bangladesh, we have to keep an eye on our followers and opposite-party members. "

Theme 2: Institutional response and personal adaptive strategies
Some subthemes are explored from respondents' narration of their post-COVID experiences: university policies and adaptive strategies, safety protocols, faculty support, student support center, and student health insurance. Supporting hybrid and online activities: In HSTU, the collaboration of online and offline activities is encouraged and launched. Academic works like online classes in limited numbers are allowed to cover the syllabus on time. Official and unofficial works like seminar attendance and workshops online are allowed to enhance academic excellence. Both the teachers and students face flexibility while using digital tools. Students express their experience using digital platforms for class attendance during a pandemic and integrating technology into regular academic work. Students express that they feel the total influence of technology in their regular lives. University authorities provided

mobile loans of a 10thousand taka package for disadvantaged students for their online classes and solved the issue of needing updated mobile phones. Mobile data packages are costly for students, but they are bound to buy them. Some students say they do their work by downloading on the campus to use the free WIFI. The faculty head (dean) and administrator arranged many new routers to maintain the speedy internet flow. The departments arrange many small-scale teams like' DEV TALK,' SOC Research Team,' and ENG Literature Team, the digital platforms formulated by the chairman and enthusiastic teachers to keep the students under charms for hunching academic excellence and maintain connectivity among students and teachers.

'We have our classes on BEREN and zoon meeting on official pages with no interruption, and the balanced routine can save us time, so we are prioritizing our aims. We cannot take back time, but target achieving in the post-COVID era requires digital skill, and we are preparing ourselves with technological knowledge for employment.'

Remote teachings are also part of some students' lives. Sometimes, guest teachers from different renowned universities take classes from their convenience places. These guest teachers are conducting both face-to-face and online classes based on their convenient time. Health maintenance in the post-Covid era also concerns HSTU administrators and students. Students, especially female students, are very conscious of this health consciousness. The coronavirus pandemic is very deadly and aggressive by nature. Students express that the university arranged many campaigns about raising consciousness by wearing masks, keeping distance, using sanitizer, washing hands frequently, and maintaining health and personal hygiene. In post-Corona time, some deadly diseases like dengue, smallpox, and other skin problems become prevalent in the campus area. Here, doctors provide free consultation and remain active with immediate response and ambulance service 24 hours daily. The campus environment remains active and alert when someone complains about any disease. Students visit doctors and do not hesitate about blood, urine tests, and X-rays.

'Authorities of HSTU handle the rising food price in the local market '*Basher hat* .'They could not tolerate one plate of rice more than 10 taka and decided to boycott the restaurants that raised the price of rice. They use social media to mass boycott the restaurants. The result comes under student favor.'

E-shopping opportunities allow us to buy quickly from any web page or social media. However, young university students get addicted to online shopping. Students of the HSTU campus visit for counseling and mental support from the student support center to keep themselves mentally active and sound. Sports like running, cricket, football, and diverse indoor and outdoor are arranged to keep this young physically and mentally strong. Students here take the term counseling as an odd word and address it as a mental disorder.

'During the pandemic, some of us changed and adored religious lifestyles, giving us healing power. Our teachers are supportive, but they and we both have limitations. We seldom visit support centers to get mental support. Only family and friends help us recover from mental stress.'

The authority tries to maintain equity regarding academic issues by making scholarships and providing enough material for exam preparation. As a peripheral university, it has its limitations in dealing with these digital gaps of students. Including digital equipment in academic work in an official format creates an economic burden on students and their parents and limits their area of exploration. The potentiality with less economic capabilities majorly needs to improve with this transformation. The underprivileged background cannot ensure the new budget allocation for students.

'We have some tensions about returning ten thousand taken at finishing academic courses as this loan was provided to us for buying smartphones. Otherwise, we still need to get our certificates. We got some advantages of not taking the full hall residence fee during the

pandemic and getting relief from at least half of the semester final fee was not taken for maximum who performed well in last semester result.'

Accepting Hybrid and Online Learning: Like other institutions, HSTU has expanded its online and hybrid learning offerings. This enables them to continue education flexibly, accommodating students who prefer remote or blended learning. Students accepted the reality of using digital tools like cameras, digital textbooks, digital pads, smartboards, projectors, and laptops, which are common on our campus. Teachers use recorded necessary materials and presents before them. Students are delighted to have the graphical and pictorial presentation of the classes. However, some problems still need to be solved, as when mathematics is presented on the digital board, students become dependent on digital solutions and automated results, not using their calculation power. HSTU students express that, in the post-Corona era, the authority provided a flexible calendar to cover their academic loss: the short semesters, quick evaluation, and result publication. Authority becomes much more flexible for retake exams, evaluation, and monitoring.

Discussion:

Digital platforms present diversions and socioeconomic constraints along with flexibility. Students' opinions regarding digital tools were mixed; some thought they were annoying and distracting, while others needed to catch up on traditional classroom environments' connections and coziness. The transition to digital learning has also led to problems with student participation and engagement. The increasing number of online tests, quizzes, and assignments led to worries about cheating, making monitoring and evaluation extremely difficult. These academic difficulties are made worse because remote universities lack virtual labs.

Furthermore, the enticement of online gaming and longer screen times have affected students' health and productivity. After COVID, problems, including eye strain, irregular sleep patterns, and physical inactivity, have become commonplace in students' lives. The interruption of school closures affected their part-time income, which is essential for paying school-related expenses. The financial load has increased due to the rising prices of study materials, internet connections, and smartphones. Maintaining cleanliness and taking preventative measures against illnesses have also increased costs, particularly for female students prioritizing personal hygiene and health items. Social issues have emerged in the post-COVID educational environment, including a rise in criminal inclinations like drug addiction as a result of the stress and isolation caused by the epidemic. Social media and online gaming have aided in diverting students from their studies, decreasing productivity and leading to academic distractions. The equilibrium between family expectations and personal aspirations has been upset by the pressure to adhere to cultural norms, which includes early marriage for female students. Cyberbullying has increased in the post-corona atmosphere, causing worry and raising questions about one's reputation and personal image. The extended shutdown of educational institutions, the uncertainty surrounding degree completion, and the competitive job market have all had a significant negative impact on the mental health of students. The psychological stress has been exacerbated by gender inequalities, such as the limited options available to female students for accessing online instruction and financial restraints. Students now confront additional obstacles due to their involvement in political activities and the necessity of keeping up with political developments.

Recommendations:

The institution has implemented several adaptive techniques, such as incorporating technology into coursework regularly, lending students' smartphones to underprivileged

students, and offering flexible class schedules to make up for missed classes. Along with promoting hybrid and online learning, the university has improved health and safety on campus.

Digital Literacy Programs: Implement digital literacy programs to enhance students' proficiency in using digital tools through workshops, tutorials, or integrated courses.

Diversify Learning Materials: Encourage faculty members to diversify learning materials, including video lectures, interactive quizzes, and engaging presentations, to cater to various learning preferences.

Provide Access to Resources: Ensure students have access to essential resources by offering loans or subsidies for purchasing laptops, improving internet connectivity on campus, and creating digital resource centers.

Financial Assistance: Financial aid programs and scholarships should be expanded to support students from underprivileged backgrounds. Additionally, universities should explore options for reducing the financial burden on students, such as providing accessible or affordable digital resources.

Affordable Learning Resources: Collaborate with publishers to negotiate discounted rates for e-books and other digital learning resources, making educational materials more affordable for students.

Student Employment Opportunities: Create part-time job opportunities on campus or through remote work to help students cover their educational expenses and gain valuable work experience.

Anti-Cyberbullying Measures: Students need to be educated on safe and responsible online behavior, and mechanisms for reporting and addressing cyberbullying should be established.

Flexibility in Academic Schedules: Universities should maintain flexibility in academic calendars, offering shorter semesters, quick evaluation, and result publication to help students recover from academic losses. Retake exam opportunities and flexible evaluation processes can reduce academic stress.

Media Literacy Programs: Implement media literacy programs to help students critically evaluate political information, promoting a more informed and discerning student body.

Counseling and Support Services: Strengthen counseling and mental health support services on campus to address stress, anxiety, and other mental health issues. Promote awareness of available resources.

Anti-Drug Awareness Campaigns: Launch campaigns to raise awareness about the dangers of drug abuse, collaborating with local authorities and organizations to ensure a safer campus environment.

Mental Health Workshops: Conduct regular workshops on stress management, coping mechanisms, and maintaining mental well-being to help students navigate the challenges of the post-COVID academic environment.

Conclusion:
In conclusion, this study sheds light on the multifaceted challenges faced by peripheral university students in the post-COVID era, emphasizing the critical need for targeted interventions and policy adjustments. The unique issues students confront in peripheral universities, including limited resources, inadequate infrastructure, and socioeconomic disparities, underscore the urgency of comprehensive reforms. The findings not only unveil the micro-level adaptation struggles of students but also illuminate the systemic shortcomings in institutional and national policies. Despite the commendable efforts of students to adapt to the digital medium of education, the lack of proper support structures and conducive policies hinders their enriching opportunities. The post-COVID educational landscape has inadvertently exacerbated socioeconomic disparities, extending the pauperization process.

The significance of this study lies in its potential to inform and guide policymakers in crafting future national policies that foster a conducive environment for the effective utilization of digital resources in peripheral universities. By addressing issues of limited resources, inadequate faculty support, and socioeconomic disparities, policymakers can contribute to creating a more equitable education system.

Moreover, the study serves as a valuable addition to the existing body of literature by providing comprehensive and in-depth insights into the lived experiences of peripheral university students in Bangladesh. It bridges the gap in understanding the nuanced challenges faced by students in the post-COVID era and emphasizes the importance of promoting equity in education for fundamental rights. The contributions of this study extend beyond a mere exploration of challenges; it advocates for systemic changes that can pave the way for a more inclusive and accessible education system. Researchers and policymakers can collaboratively work towards creating a more resilient and equitable educational landscape for peripheral university students in Bangladesh.

Applications:
Policy Formulation and Implementation: The study's insights can inform the development and implementation of policies tailored to address the unique challenges faced by students in peripheral universities. Policymakers can use this information to create more inclusive, supportive, and adaptive educational policies.
Infrastructure Development: Universities can utilize the study's findings to strategically plan and allocate resources for infrastructure development, focusing on improving digital facilities, enhancing internet connectivity, and providing necessary training for both faculty and students.
Faculty Development Programs: The challenges highlighted in the study underscore the importance of investing in faculty development programs, including training in digital pedagogy, to enhance the effectiveness of online and hybrid learning methods.

Limitations:
Generalizability: The study focuses on a specific context of peripheral universities in Bangladesh, limiting the generalizability of findings to other global settings. Different sociocultural contexts may influence the challenges and experiences of students.
Sample Size and Diversity: Though representative, the study's sample size might not capture the full diversity of experiences within peripheral universities. Future research could explore a more extensive and diverse participant pool.
Temporal Factors: The study is situated in the post-COVID period, and the challenges identified may be influenced by the unique circumstances of this time. Long-term impacts and evolving challenges need to be explored in future studies.
Methodological Considerations: The reliance on qualitative interviews may introduce a level of subjectivity. Combining qualitative findings with quantitative data in future research could provide a more comprehensive understanding.

Future Research Directions:
Building on the insights gained from this study, future research directions could include:
Comparative Analyses: Comparing students' experiences across different geographical regions, educational systems, or economic backgrounds could reveal variations in challenges and coping mechanisms.

Technology Adoption in Education: Investigating the effectiveness of specific technological interventions and their impact on student learning outcomes could guide the strategic integration of technology in education.

Innovative Pedagogical Approaches: Exploring and evaluating innovative pedagogical approaches, such as gamification, personalized learning, and virtual labs, could enhance the effectiveness of digital education in peripheral universities,

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