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# NAVIGATING CRISIS: UNDERSTANDING UNDERGRADUATES' PERCEPTIONS AND CHALLENGES DURING THE COVID-19 PANDEMIC

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## ABSTRACT

In light of the increased concerns regarding the impact of the COVID-19 pandemic on higher education and the United Nations' acknowledgment of the threat of future pandemics, this retrospective study explores undergraduate students' perceptions and challenges during emergency remote learning (ERL) imposed by the pandemic. The study sample comprised 262 second-year university students who participated in ERL. Data were analysed using descriptive statistics (Mean and Standard Deviations), t-tests, and One-Way ANOVA. Results indicate that although students generally held a positive perception of ERL (Mean = 2.51), they also encountered notable challenges (Mean = 3.91) during the COVID-19 lockdown. Additionally, a significant difference in perceptions of ERL was found based on gender (t-cal = 2.641, p = .009 < 0.05), while no significant difference was observed based on the course of study ($F_{261}$ = .122, p = .885 > 0.05). These findings underscore the necessity of improving online instructional methodologies to better prepare for future pandemics.

**Keywords**: *Emergency remote learning; Perceptions; Challenges; COVID-19; Higher education*

## INTRODUCTION

Online learning encompasses using Internet technologies to deliver educational content to students (Siemens et al., 2015). Within this framework, students typically access various learning materials hosted on the platform utilized for instruction. These materials may include recorded lectures, reading materials, and supplementary notes provided by instructors. Additionally, online learning platforms facilitate ongoing feedback on students' progress, foster interaction between facilitators and students, and encourage peer-to-peer engagement for academic and social purposes (Stauffer, 2020). Some of the benefits of online learning, according to Mahyoob (2020) include increased access to diverse educational resources, reduced instructional planning time, immediate feedback mechanisms, enhanced convenience, and flexibility in accessing learning materials irrespective of geographical or temporal constraints, among others. Despite the benefits accrued to online learning, some limitations

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such as inadequate internet access and connectivity, limited proficiency in information and communication technology (ICT) among both educators and learners and issues related to student motivation and self-discipline, among others (Mahyoob, 2020; Bączek et al., 2020; Niebuhr et al., 2014; Dyrbye et al., 2009) have been identified.

In many educational institutions in Nigeria, particularly at the tertiary level, the adoption of online learning was not entirely novel nor widespread. Traditionally, conventional universities in Nigeria have primarily relied on face-to-face instructional methodologies before the COVID-19 pandemic, with online learning serving as a supplementary tool in some institutions. However, with the outbreak of the COVID-19 pandemic in early 2020, online teaching and learning swiftly gained unprecedented traction, becoming imperative across virtually all educational establishments. The emergence of the COVID-19 disease and the subsequent global lockdown that came with it declared a global pandemic which profoundly reshaped the landscape of education worldwide, and in Nigeria in particular. The rapid transmission rate of the COVID-19 virus prompted governments worldwide, including Nigeria, to swiftly implement the closure of all higher education institutions as a preventive measure to contain the disease.

Consequently, traditional face-to-face classroom settings, where educators and students convene for academic purposes, were significantly disrupted. As a response, educational activities were transitioned to online platforms to ensure the continuity of teaching and learning processes amidst the pandemic-induced restrictions. This move was not unique to Nigeria but was a global phenomenon aimed at minimizing disruptions to education. School closures were recognized as an effective measure in slowing down the transmission of the virus, particularly in the absence of vaccines or antiviral treatments (Sadique et al., 2008; Glass et al., 2006; Institute of Medicine, 2006; Moscona, 2005).

As the pandemic posed significant threats to societal well-being and economic stability, the educational sector was also profoundly impacted, leading to an abrupt transition to online learning, colloquially referred to as emergency remote teaching and learning (ERL). According to Adelana et al. (2024), research needs to explore ways to deepen students' understanding of current health challenges to promote health literacy and contribute to preparedness for future health crises. This is essential because the more educated the citizens of a nation, the higher the chances that such a nation will experience unprecedented growth and development (Odufuwa, et al., 2022). This study is also important in Nigeria because the COVID-19 pandemic forced many universities to suddenly embrace remote and hybrid modes of instruction without giving room to examine students' choices. It therefore becomes necessary to examine students' perceptions of ERL and the challenges encountered. The insights from this are likely to improve learning outcomes (Olurinola & Adelana, 2022).

The objectives of this study therefore are to examine undergraduates' perceptions of ERL and the challenges encountered during ERL's usage during the COVID-19 pandemic lockdown, and to also determine if there are significant differences in ERL perceptions among undergraduates based on gender and course of study. This study focuses on undergraduate pre-service teachers due to their critical role as the future architects of educational systems (Ayanwale, et al., 2024; Ayanwale, et al., 2022).

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***Emergency Remote Learning***

According to Rahiem (2020), Emergency Remote Learning (ERL) characterizes the educational provision during crises, exemplified by the Covid-19 pandemic. Emergency remote learning entails a transient and alternative adaptation of instructional delivery to remote formats in response to the COVID-19 pandemic (Hodges et al., 2020). From the foregoing, it can be inferred that it constitutes an unforeseen and abrupt transition of instructional activities from traditional face-to-face modalities to remote formats, necessitated by the emergency circumstances created by the COVID-19 pandemic globally. The primary objective of emergency remote learning, therefore, is to establish a platform for educators and students to sustain teaching and learning processes without interruption (Rahiem, 2020). The transition to emergency remote learning was relatively seamless for countries having sophisticated online learning infrastructures. However, for developing nations like Nigeria, the experience was fraught with challenges due to the exigency of the emergency. The sudden closure of schools presented difficulties for students, teachers, school administrations, parents, and society, with variations observed across countries, systems, institutions, and student cohorts. Some of these challenges (Heng & Sol, 2021) encompassed limited human and technological resources, stress and disorientation among students and educators (Martin & Bolliger, 2018).

Student engagement in learning is a multifaceted phenomenon influenced by diverse factors at macro, exo, meso, and micro levels, with these factors interacting reciprocally (Bond, 2020), a viewpoint corroborated by Martin and Bolliger (2018), underscoring the pivotal role of student engagement in learning and satisfaction in online education. Although online learning was not the predominant mode of instruction pre-pandemic, it compelled educators and students to utilize various emerging technologies for continued learning activities during the Covid-19 crisis (Khlaif et al., 2021; Khlaif & Salha, 2020; Czerniewicz et al., 2019), often without prior preparation. Some of these technologies were novel to users, exacerbating stress and other hindrances, in addition to the inherent challenges posed by the sudden transition to emergency remote learning.

Online education demands greater self-discipline from students compared with traditional classroom education to maintain learning engagement, deemed essential for favourable learning outcomes (Qayyum, 2016; Panigrahi et al., 2018). As reported by Owusu-Fordjour et al. (2020), the abrupt shift to emergency remote learning engendered dissatisfaction and resistance among students, who cited negative experiences, including a lack of motivation and ineffective interaction with peers and educators. Recent empirical reports investigating students' perceptions and expectations of online learning have proliferated (Biswas, Roy, & Roy, 2020; Armstrong, 2011), revealing a spectrum of experiences ranging from satisfaction with the instructional method to challenges influenced by factors such as age, gender, computer literacy, and individual learning styles (Shrestha et al., 2020; Pérez-Pérez et al., 2020; Salloum et al., 2019). Numerous studies, including those by Hussein et al. (2020), Mollenkopf et al. (2020), and Turner et al. (2020), have documented the hurdles students face in online learning. Students not only grapple with academic focus but also contend with domestic responsibilities, lack of dedicated study spaces on campus, and distractions from household members and pets.

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Maintaining attention during online learning presents challenges for many students, with the virtual classroom environment proving susceptible to distractions. Turner et al. (2020) further noted that the intersection of the classroom with individuals' homes blurred boundaries, exposing students and faculty to aspects of each other's lives previously unseen. This virtual insight into personal environments compounded the challenge of maintaining focus amidst distractions (Hussein et al., 2020).

This study is grounded in Lewin's (1947) Change Management Model, which delineates the Unfreeze – Change – Refreeze three-step change process. The initial phase, unfreezing, entails preparing institutions to embrace proposed changes by acknowledging the necessity for departing from existing processes in favour of new ones. Subsequently, the second phase involves stakeholders within institutions identifying and implementing novel approaches. During this stage, individuals progressively accept and adopt the change while adjusting their behaviour to align with the new processes. Crucially, for successful change, individuals within the organization must perceive personal benefits from the change (Mind Tools Content Team, 2020). The third stage, refreezing, signifies the consolidation of transitions necessary to fully integrate the enduring effects of the new circumstances, such as those presented by the COVID-19 era. The initiation of the first stage (unfreezing) coincided with the global mandate to suspend educational activities due to the COVID-19 emergency, while the subsequent stage (change) transpired even more abruptly as educational processes were swiftly transitioned to online learning (Burnes, 2020). The final stage, refreezing, encapsulates the adjustments essential for fully embracing the enduring implications of the new paradigm (i.e., the COVID-19 era). As noted by Sande et al. (2021), the global shutdown of educational activities precipitated by the COVID-19 pandemic, unprecedented in its scale, abruptly replaced physical classes with emergency remote learning on a global scale. The Federal Ministry of Education in Nigeria decided on March 19, 2020, to close all schools in the country (Nlebem, 2020). This sudden closure severely disrupted educational activities, including physical teaching and learning processes, as well as parental routines. Consequently, students were compelled to remain at home for extended periods and engage in remote learning (The Education Partnership Centre (TEP Centre, Nigeria), 2018).

This study was motivated by the need to investigate the experiences of university students amidst the emergency remote learning prompted by the COVID-19 pandemic. Following the declaration of COVID-19 as a global public health emergency, all universities in Nigeria were mandated to cease physical operations to mitigate the spread of the disease. Subsequently, after a semester comprising twelve weeks of exclusive online learning, devoid of any in-person instruction, the study was undertaken to ascertain the perceptions and challenges encountered by undergraduates during the use of emergency remote learning.

While numerous studies have investigated students' perceptions of online learning before the COVID-19 crisis, scant attention has been given to examining undergraduate students' perceptions and challenges encountered during emergency remote learning prompted by the COVID-19 pandemic in Nigeria. The examination of undergraduate students' perceptions and challenges is paramount as the pandemic continues to evolve through various stages, showing no signs of abating in the foreseeable future. Therefore, conducting this research is imperative

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to comprehend undergraduate students' perceptions of emergency remote learning and the challenges confronted while utilizing this approach. The findings are expected to inform decision-making and policy formulation aimed at enhancing the delivery of online/virtual learning modalities to higher education students, particularly considering the ongoing threat posed by the COVID-19 virus to educational continuity.

Considering this, this study addresses the following research questions: (i) What are the perceptions of undergraduates on ERL during the COVID-19 pandemic lockdown? (ii) What are the challenges encountered by undergraduates during the COVID-19 ERL? (iii) Is there any significant difference in the perceptions of male and female undergraduates on ERL? (iv) Is there any significant difference in undergraduates' perceptions of ERL based on the course of study?

## METHODS

This study employs a descriptive (survey) research design within a non-experimental framework to examine the perceptions and challenges faced by undergraduates in Nigeria during the COVID-19 pandemic lockdown. The sample comprised 262 second-year students from the Department of Science and Technology Education at a university in Southwestern Nigeria. These participants were selected through purposive sampling, as all had engaged in a 12-week period of Emergency Remote Learning (ERL). The cohort included 96 male and 166 female students, all of whom consented voluntarily to participate. Participants' demographic information is provided in Table 1.

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**Table 1**
*Respondents' Demographic Information*

| Category | Frequency | |
|---|---|---|
| | ***n*** | ***%*** |
| Gender | | |
| Female | 96 | 36.64 |
| Male | 166 | 63.36 |
| Course of study | | |
| Social science-based | 92 | 35.11 |
| Arts-based | 110 | 41.98 |
| Science-based | 60 | 22.90 |
| Age | | |
| <20 years | 93 | 35.50 |
| 21-25 years | 167 | 63.74 |
| 31 years | 2 | 0.76 |

According to Table 1, a higher number of female participants are found compared to male participants. The result shows 166 males (63.36%) and 96 females (36.64%) making a total of 262 participants. This difference highlights a predominance of male individuals in the sample. Based on courses of study, the result shows the largest group of participants are those enrolled in arts-based courses, with 110 individuals representing 41.98% of the total. Following closely is those in social science-based courses, with 92 participants accounting for 35.11%. The smallest group comprises those in science-based courses, with 60 individuals making up 22.90% of the sample. Finally, based on age distribution of the participants, the result shows that majority of participants fall within the 21-25 years age range, with 167 individuals representing 63.74% of the total. This is followed by those aged less than 20 years, comprising 93 individuals and accounting for 35.50% of the group. A very small portion of the group, only 2 individuals, are aged 31 years, constituting 0.76% of the total. This age distribution indicates that the sample is predominantly young, with a significant concentration of participants in their early twenties.

Data collection utilized two self-developed instruments: the "Perception of Emergency Remote Learning Questionnaire (PERLQ)" and the "Challenges of Emergency Remote

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Learning Questionnaire (CERLQ)". PERLQ contains 16 items assessing undergraduates' perceptions of ERL during the COVID-19 pandemic, with a reliability coefficient of 0.90. CERLQ comprises 10 items aimed at identifying challenges encountered by students during the same period, and has a reliability coefficient of 0.82. Reliability coefficients for both instruments were calculated using the Cronbach Alpha method. To facilitate efficient data collection during the lockdown, the surveys were designed on Google Forms. Due to the restrictions on physical access to students, these surveys were distributed and administered via the students' online learning platforms. This platform, along with the University's online Learning Management System (LMS), served as the main channels of interaction with students during the lockdown. The surveys remained accessible to students for over three weeks, providing ample time for participation. Prior to participation, students were briefed on the study's objectives and assured of their freedom to participate without any consequences for non-participation.

The collected data were analysed using SPSS version 26, employing Mean, Standard Deviation, t-test, and One-Way ANOVA. Descriptive statistics (Mean and Standard Deviation) were used to answer research questions 1 and 2, while inferential statistics (t-test and One-Way ANOVA) were used to answer research questions 3 and 4. To determine the extent of perception (positive or negative), an average mean benchmark of 2.5 was utilized. Specifically, an average mean score of 2.5 or above indicates a positive perception, whereas a score below 2.5 indicates a negative perception.

## RESULTS

### *Students' Perceptions on ERL during the COVID-19 Pandemic Lockdown*

The answer to this research question is provided in Table 2. During the COVID-19 pandemic lockdown, undergraduates had varied perceptions of emergency remote learning (ERL). The results in Table 2 reveal that undergraduates perceived ERL positively in several areas, such as collaboration and interactivity (Mean = 2.60, Std = 0.810), user-friendliness of the platform (Mean = 2.68, Std = 0.757), flexibility of time and space (Mean = 2.84, Std = 0.768), and the ability to study irrespective of location (Mean = 2.89, Std = 0.802). Confidence during ERL was also noted (Mean = 2.66, Std = 0.795), as was the ability to get learning content faster and better (Mean = 2.78, Std = 0.770), and improved interactions with facilitators (Mean = 2.55, Std = 0.790). However, several aspects were viewed negatively, including the contents meeting expectations (Mean = 2.39, Std = 0.768), preference for ERL over face-to-face classes (Mean = 2.09, Std = 0.937), quick feedbacks (Mean = 2.38, Std = 0.773), compatibility with preferred learning methods (Mean = 2.26, Std = 0.760), comfort of the learning environment (Mean = 2.44, Std = 0.779), quality of learning materials (Mean = 2.27, Std = 0.912), confidence and informativeness of contents (Mean = 2.48, Std = 0.815), ease of working with modules (Mean = 2.42, Std = 0.835), and ease of collaboration with other students (Mean = 2.44, Std = 0.837). The overall average mean of 2.51 suggests a positive perception of this mode of learning.

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**Table 2**
*Results on Students' Perceptions on ERL During the COVID-19 Pandemic Lockdown*

| Items | Mean | Std. | Remark |
|---|---|---|---|
| Emergency remote learning allows for efficient collaboration and interactivity among students and facilitators. | 2.60 | .81 | Positive |
| Emergency remote learning platform is user friendly. | 2.68 | .76 | Positive |
| The contents provided during emergency remote learning always met my expectations. | 2.39 | .77 | Negative |
| There is flexibility of time and space during the emergency remote learning. | 2.84 | .77 | Positive |
| Emergency remote learning is better since it allows students to study irrespective of where they are in the world. | 2.89 | .80 | Positive |
| I prefer the emergency remote learning to the face-to-face classes. | 2.09 | .94 | Negative |
| The quick feedbacks provided by facilitators during the emergency remote learning makes it better than the conventional classroom learning. | 2.38 | .77 | Negative |
| I always feel confident during the emergency remote learning. | 2.66 | .80 | Positive |
| The approach and set-up of emergency remote learning is compatible with the way I prefer to learn. | 2.26 | .76 | Negative |
| Emergency remote learning environment is always comfortable for me. | 2.44 | .78 | Negative |
| The learning materials provided during the emergency remote learning are always better than the ones provided during face-to-face learning in the classrooms. | 2.27 | .91 | Negative |
| I feel more confident and informed while using emergency remote learning contents. | 2.48 | .82 | Negative |
| I find it easier to work with modules during the emergency remote learning. | 2.42 | .84 | Negative |
| Getting learning contents is faster and better with emergency remote learning. | 2.78 | .77 | Positive |
| It is easier and faster to collaborate with other students during emergency remote learning | 2.44 | .84 | Negative |
| It is far better to interact with facilitators during the emergency remote learning | 2.55 | .79 | Positive |

Average Mean = 2.51

### *Challenges Encountered by Undergraduates during the Use of ERL*

As illustrated in Table 3, undergraduates faced several challenges during ERL. Key challenges included technical problems (Mean = 3.11, Std = 0.779), distractions from others at home (Mean = 3.13, Std = 0.792), and poor internet connectivity (Mean = 3.29, Std = 0.764). They also found online practical difficult and less effective (Mean = 3.18, Std = 0.791), and experienced a reduction in communication typical of face-to-face interactions (Mean = 3.06,

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Std = 0.800). Additionally, the workload was perceived as excessive (Mean = 3.20, Std = 0.777), and students struggled with the self-discipline required for online learning (Mean = 3.21, Std = 0.762). Despite these challenges, issues like lack of access to necessary hardware (Mean = 3.00, Std = 0.756) and insufficient ICT skills (Mean = 2.74, Std = 0.836) were somewhat less significant. The average mean of 3.09 indicates that challenges were prominently present and negatively impacted the ERL experience.

**Table 3**
*Results on the Challenges Experienced by Undergraduates' During the Use of ERL*

| Items | Mean | Std. | Remark |
|---|---|---|---|
| I always experience technical problems during online learning. | 3.11 | .779 | Positive |
| Distractions from other people at home during online learning is a challenge to my studies. | 3.13 | .792 | Positive |
| Lack of access to computer hardware which demand intensive software for online learning. | 3.00 | .756 | Negative |
| Lack of the level of ICT skills needed for online learning. | 2.74 | .836 | Positive |
| Poor Internet connectivity. | 3.29 | .764 | Positive |
| Online practical is always difficult and less effective. | 3.18 | .791 | Negative |
| Reduction of communication as seen in face-to-face classroom like sharing experiences, joking, non-verbal contacts, and on during online teaching and learning. | 3.06 | .800 | Negative |
| Excessive workload for students of online learning. | 3.20 | .777 | Positive |
| Inability to effectively use some of the software demands of online learning efficiently. | 2.98 | .770 | Negative |
| Online learning does not guarantee self-discipline. | 3.21 | .762 | Negative |

Average Mean = 3.09

### *Students' Perceptions of ERL based on Gender*

According to Table 4, gender-based differences in perceptions of ERL were significant. According to the result, male undergraduates had a higher mean perception score (Mean = 41.89) compared to female undergraduates (Mean = 39.14), with a t-calculated value of 2.641 and a p-value of .009, which is significant at $p<0.05$. This indicates that male students generally had a more favourable perception of ERL compared to their female counterparts.

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**Table 4**
*T-Test Result on Students' Perceptions of ERL Based on Gender*

| Variable | Gender | N | Mean | Std | t-stat | p-value | Remark |
|---|---|---|---|---|---|---|---|
| Perceptions of emergency remote learning | Male | 96 | 96 | 41.89 | 2.64 | .009 | Sig. |
| | Female | 166 | 166 | 39.14 | | | |

Significant at p<0.05

***Students' Perceptions of ERL based on Course of Study***

As shown in Table 5, no significant difference was found in the perceptions of ERL based on the course of study. Accordingly, the ANOVA results reveal that the mean squares between groups (Mean Square = 8.256) and within groups (Mean Square = 67.776) resulted in an F value of 0.122 with a significance level of 0.885. Since the p-value is greater than 0.05, it indicates that undergraduates' perceptions of ERL were not significantly different based on their course of study. This suggests that the perceptions of ERL were consistent across different academic disciplines.

**Table 5**
*ANOVA result on students' perceptions of ERL based on course of study*

| Emergency remote learning | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 16.51 | 2 | 8.23 | .12 | .885 |
| Within Groups | 17553.98 | 259 | 67.78 | | |
| Total | 17570.49 | 261 | | | |

Significant at p<0.05

## DISCUSSION

The outcomes of this study indicate that undergraduate students generally maintain positive attitudes towards emergency remote learning, which was necessitated by the COVID-19 pandemic. This observation aligns with the assertions of Bower (2019) and Qayyum (2016), who highlighted that online learning offers engaging materials that cultivate a unique online learning culture, thereby enhancing academic success. Conversely, it contrasts with the findings of Owusu-Fordjour et al. (2020) and Duong et al. (2020), who reported significant student resistance and dissatisfaction due to the sudden shift to emergency remote learning and the disruption of traditional in-person classes caused by COVID-19 social distancing measures. Also, empirical evidence showcases a spectrum of student perspectives on emergency remote learning. For instance, Biswas et al. (2020) reported high levels of student satisfaction with

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online learning, while Shrestha et al. (2020) and Pérez-Pérez et al. (2020) noted negative perceptions among students.

Additionally, despite the generally positive perceptions identified in the study, the undergraduates encountered several challenges during the abrupt transition to online instruction. These included technical difficulties, distractions from household members, inadequate ICT skills for online learning, poor internet connectivity, and an overwhelming workload. These findings are consistent with previous research by Hussein et al. (2020), Mollenkopf et al. (2020), and Turner et al. (2020), which documented students' struggles to balance academic responsibilities with household chores, lack of conducive study environments, disruptions, and difficulties in maintaining focus during online learning sessions. The study also identifies a significant gender disparity in perceptions of emergency remote learning, corroborating the findings of Toti and Alipour (2021), Gelles (2020), and Hung et al. (2020). However, no significant differences were observed in undergraduates' perceptions of emergency remote learning based on their fields of study.

The findings of this study highlight the complex and varied ways students feel about emergency remote learning, showing both positive attitudes and various challenges. The findings contribute to a broader understanding of the impact of COVID-19 on higher education and emphasize the need for targeted support measures to address the diverse needs of students navigating emergency remote learning contexts, especially as there be could another pandemic in the nearest future.

## CONCLUSION AND RECOMMENDATIONS

The study's findings indicate that undergraduate students faced a range of challenges while engaging in emergency remote learning, which was necessitated by the COVID-19 pandemic and the subsequent lockdown of tertiary institutions in Nigeria in 2020. Despite these difficulties, students generally held favourable perceptions of remote learning. In light of these insights, several recommendations are proposed.

Firstly, it is recommended that universities refine and enhance their existing learning management systems to improve their functionality and user-friendliness, thereby facilitating more seamless access for students. This enhancement could help address some of the challenges experienced during the transition to remote learning. Secondly, while universities may not be able to provide Internet access for students outside campus, it is suggested that institutions offer readily accessible, functional and free Wi-Fi and Internet connections on campus for all students. This provision is intended to mitigate the financial burden on students who might otherwise face difficulties in affording personal Internet subscriptions. Furthermore, parents are encouraged to create supportive and effective learning environments at home for their children, especially in instances where prolonged home-based study becomes necessary, whether due to lockdown measures or other circumstances.

Lastly, it is crucial for educational stakeholders, including university administrators and parents, to collaborate proactively to prevent adverse impacts on higher education and to

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address any future disruptions that may require extended periods of remote learning. This collaborative effort is essential in ensuring the resilience and continuity of educational activities during emergencies.

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