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# Technology Preparedness, Adoption and Use of Instant Messengers for Emergency Remote Learning among Postgraduate Students in University of Ibadan, Nigeria

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## Abstract
*The rapid integration of technology has transformed remote learning, especially during emergencies. This study explores the technology preparedness and adoption of instant messaging platforms among postgraduate students at the University of Ibadan. Using a descriptive, correlational survey design, data was collected through an online questionnaire distributed to all postgraduate students. The questionnaire included sections on Technology Preparedness (TPS), Technology Adoption (TAS), and Instant Messengers Use (IMU). The results showed that 76.2% of respondents were in the 20-30 age range, indicating a tech-savvy demographic. WhatsApp, Telegram, and Zoom were the preferred platforms, while Skype, Google Meets, Microsoft Teams, and Slack were less favored. The study also found that digital literacy, device access, and internet connectivity were critical for the adoption of instant messengers for remote learning. A positive relationship between technology preparedness and adoption was observed, suggesting that as technology literacy and adoption increased, so did the use of instant messengers. However, challenges such as poor internet connectivity and high data costs were barriers to smooth adoption. The study recommends improving campus internet infrastructure, offering free WiFi, and conducting awareness campaigns to encourage the use of instant messengers for academic purposes. Despite limitations such as reliance on self-reported data, the findings provide valuable insights for educational institutions aiming to enhance technology integration in remote learning, ensuring an inclusive and dynamic learning experience.*

***Keywords:*** *Technology preparedness, Adoption of instant messengers, Remote learning, University of Ibadan postgraduate students, Instant Messengers Use.*

## Introduction
There has been a shift in the educational landscape following the onset of the COVID-19 pandemic, which has compelled many institutions worldwide to pivot to remote learning modalities (Boskic & Hausknecht, 2021). It is important to note that this shift triggered the adoption of diverse communication tools, particularly instant messaging (IM), to maintain the teaching and learning process during this period (Patnaik & Swartz, 2020). However, the effectiveness of IM for educational purposes

is contingent upon students' technology preparedness and their ability to adapt to these tools. This study investigates how technology preparedness influences instant messaging for emergency remote learning among postgraduate students at the University of Ibadan.

**Research Question**

The primary research question guiding this investigation is to find out how technology preparedness and adoption influence use of instant messaging as a tool for emergency remote learning among postgraduate students in University of Ibadan? To address this question, the study aims to achieve the following objectives:

1. identify the instant messaging platforms being utilised by postgraduate students in University of Ibadan.
2. assess the levels of technology preparedness among postgraduate students in University of Ibadan.
3. determine the adoption rates of instant messaging tools for educational purposes by postgraduate students in University of Ibadan.
4. investigate the challenges faced by postgraduate students in University of Ibadan, in adopting IM for remote learning.
5. examine the relationship between technology preparedness and the use of instant messaging platforms by postgraduate students in University of Ibadan.
6. examine the relationship between technology adoption and the use of instant messaging platforms by postgraduate students in University of Ibadan.

**Context and Rationale**

As educational institutions strive to adapt to the ongoing technological revolution, understanding the factors that enable effective online communication becomes increasingly critical. Instant messaging platforms provide real-time interaction, which can significantly enhance the learning experience (Patnaik & Swartz, 2020). However, the transition to remote learning has shown disparities in students' readiness to engage with these technologies. Previous studies indicate that inadequate access to technology and varying levels of familiarity and comfort with digital tools can hinder effective communication and collaboration in an online learning environment.

Moreover, the role of technology preparedness in shaping students' experiences with IM during remote learning has not been thoroughly explored in the context of Nigeria's educational system. This research aims to bridge this gap by focusing specifically on postgraduate students at the University of Ibadan. By this, this study tends to understand their experiences and challenges and will contribute valuable insights to educators and policymakers, enabling them to implement targeted strategies that enhance technology readiness and optimize the use of IM for educational purposes.

**Significance of the Study**

This study aims to provide baseline data on technology readiness and adoption as determinants for using instant messaging applications in emergency remote learning. The findings could guide educational institutions in adapting their strategies to effectively leverage these tools. Additionally, the research will identify specific mobile applications that facilitate emergency remote teaching and other multimedia resources to enhance the learning process. This is crucial for achieving remote learning objectives in Nigerian universities, as it may reveal how applications like WhatsApp, Telegram, Skype, and Facebook Messenger can be integrated into the curriculum for educational emergencies. Ultimately, the insights gained will empower educators and administrators to make informed decisions about technology integration in teaching, enhancing the overall learning experience for students.

## Literature Review

### Use of Instant Messaging in Education

Instant messaging (IM) platforms have become integral to modern communication, and their potential in educational contexts has been explored extensively (Patnaik & Swartz, 2020). With the growth of remote and online learning, IM tools such as WhatsApp, Telegram, and others have emerged as key facilitators of real-time communication between students and educators. This literature review examines relevant studies on the use of instant messaging in education, placing emphasis on technology preparedness and its role in remote learning. Gaps in the literature will be discussed, focusing particularly on how technological readiness influences the efficacy of instant messaging in emergency remote learning settings.

### Use of Instant Messaging in Education

Instant messaging has been integrated into education primarily to support communication, collaboration, and engagement among students and teachers (Patnaik & Swartz, 2020). (Julie & DiLoreto., 2016) in their findings indicates that online platforms enhance the learning experience by fostering interactive discussions, enabling quick feedback, and promoting collaborative learning. A study (Karen & Oliveira., 2013) depicts how IM tools allow for informal learning spaces where students can ask questions, seek clarifications, and share knowledge without the constraints of formal classroom settings. Their findings suggested that students are more comfortable interacting with their peers and instructors in these informal, instant modes of communication. Similarly, a study by (Rambe & Crispen, 2013) emphasized that IM platforms like WhatsApp facilitate student engagement by creating a virtual learning community which aids these student's continuous learning beyond the classroom.

Furthermore, (So, 2016) examined the role of instant messaging in supporting blended learning environments. The study found that IM platforms helped bridge the gap between face-to-face and online learning by providing a seamless mode of communication. The ability to instantly ask questions, participate in group chats, and

receive feedback allowed students to remain connected with the learning process even outside scheduled classes. However, while these studies demonstrate the benefits of instant messaging in education, they often focus on its use as a supplementary tool rather than a primary mode of learning delivery. As remote learning becomes more widespread, particularly during crises like the COVID-19 pandemic, there is a growing need to understand how IM can function as a central component of the educational process, especially in emergency remote learning contexts.

**Technology Preparedness and Its Influence on Remote Learning**

The rapid shift to online and remote learning has underscored the importance of technology preparedness. For instant messaging to be an effective tool in education, both students and educators must possess the requisite technological skills and access to resources. Research into technology preparedness explores the extent to which individuals are ready to adopt and effectively use digital tools in learning environments. A study by (Bao, 2020) during the COVID-19 pandemic revealed that a significant number of students and educators lacked the necessary digital literacy and infrastructure to engage effectively in remote learning. This lack of preparedness was particularly evident in regions with limited access to reliable internet and technological devices. Students who were unprepared technologically often struggled to engage fully with online learning platforms, including IM tools. In a similar vein, (Gonzalez-Ramirez, 2021) explored the challenges of implementing remote learning in Latin America. The study found that while IM platforms were widely used for educational purposes, the lack of consistent access to smartphones and the internet hindered the effectiveness of these tools. Moreover, students from lower socioeconomic backgrounds were disproportionately affected, further highlighting the digital divide in education.

Despite these challenges, there is evidence that proper training and support can mitigate some of the issues related to technology preparedness. For instance, a study by (Alghamdi, 2024) emphasized the importance of digital literacy training for both students and educators. The study found that individuals who received training on how to use IM tools for educational purposes were more likely to engage with the platforms effectively, leading to better learning outcomes.

**Gaps in the Literature**

While there is substantial research on the benefits of IM in education, gaps remain, particularly in understanding the role of technology preparedness in influencing the success of instant messaging in remote learning contexts. Many studies have focused on the positive aspects of IM usage, such as improved communication and collaboration, but fewer have examined the challenges associated with integrating these tools into emergency remote learning scenarios, especially when students and educators are not fully prepared.

One major gap in the literature is the lack of research on how socio-economic factors influence technology preparedness and access to IM platforms. While studies such as those by (Gonzalez-Ramirez, 2021) have touched on the digital divide, there is a need for more in-depth exploration of how students from different backgrounds experience and overcome technological barriers in remote learning environments.
Another area that requires further exploration is the impact of institutional support on technology preparedness. Research has shown that students and educators who receive proper training are more likely to succeed in remote learning, yet there is little discussion of the role educational institutions play in providing this support. Future research should investigate how schools and universities can better prepare their students and staff to use IM platforms effectively in crisis situations.

Moreover, while there is research on the effectiveness of IM tools for communication, there is a lack of studies focusing on their role in delivering content and assessments in remote learning. IM platforms are often seen as secondary to more formal learning management systems (LMS), but during emergency remote learning, they may take on a more central role. Understanding how IM can be used to deliver entire courses, assessments, and feedback is an area ripe for future research.

**Research Methodology**

This study employed a descriptive survey design of the correlational type, aiming to explore the relationship between technology preparedness, adoption, and the use of instant messaging platforms for emergency remote learning among postgraduate students at the University of Ibadan. Nigeria. The descriptive survey was selected to gather data from a large sample of students, enabling the researchers to accurately depict the current state of technology usage for remote learning purposes. The correlational approach was used to explore potential relationships between the independent variables, technology preparedness and adoption, and the dependent variable, instant messenger use.

The population for this study consisted of postgraduate students from various academic departments at the University of Ibadan during the 2021/2022 academic year. In total, 5,736 students from disciplines spanning sciences, humanities, social sciences, engineering, and health sciences were included in the research. The entire postgraduate population was targeted using a census sampling method, ensuring the inclusion of all students who were enrolled during the study period. Data were collected using a self-developed structured questionnaire. The instrument was divided into four sections viz: demographic characteristics of respondents, including age, gender, academic qualifications, and department; Technology Preparedness Scale (TPS), designed to measure respondents' readiness and competence in using instant messengers for remote learning; Technology Adoption Scale (TAS), gauging respondents' attitudes toward adopting instant messaging platforms, including perceived usefulness, ease of use, and integration into learning activities and; Instant Messenger Use (IMU) Scale, assessing how frequently and effectively respondents used platforms such as WhatsApp, Telegram, and Zoom for communication,

collaboration, and learning purposes. The questionnaire underwent face validity, reviewed by experts in educational technology, to ensure the relevance and clarity of the questions. Content validity was confirmed through a panel of experts, who assessed whether the instrument adequately captured the intended constructs. A pilot test was conducted with a small sample from Lead City University, leading to refinements in the questionnaire before distribution to the full sample. Internal consistency was determined using Cronbach's alpha, with all scales achieving a reliability score above 0.70, indicating a high level of internal consistency. The instrument was administered using online survey platform and distributed via email to all postgraduate students at the University of Ibadan with the assistance of the IT unit. Individualised survey links were sent to ensure data privacy and prevent duplicate responses. Follow-up emails were sent to participants who had not responded to the initial request to increase the response rate. The data collected from completed questionnaires were analysed using the Statistical Package for Social Sciences (SPSS) version 23. Frequency distribution tables were used to summarise respondents' demographic characteristics and technology usage patterns. Correlation and regression analyses were employed to establish relationships between the independent variables (technology preparedness and adoption) and the dependent variable (instant messenger use), which was in line with the hypotheses formulated in the study.

**Presentation and Interpretation of Results**

The respondents for this study were predominantly young, with 76.2% falling within the 20-30 age range, indicating that most were tech-savvy and adaptable to digital tools. A smaller portion of the sample consisted of individuals aged 31-40 (16.1%), 41-50 (6.6%), and 51-60 (1.1%). Females represented 62.0% of the respondents, while males accounted for 38.0%. In terms of academic qualifications, 74.9% held a Bachelor of Science (BSc) or equivalent degree, and 25.1% had a Master of Science (MSc). The distribution of respondents across academic departments was broad, including fields like Accounting, Agricultural Economics, and Engineering, which allowed for a diverse sample population.

**Objective One**: Identify the instant messaging platforms utilised by postgraduate students in University of Ibadan.

WhatsApp was the most frequently used instant messaging platform, with 73.4% of respondents utilizing it daily for emergency remote learning. Telegram was also widely used, with 30.4% reporting daily use and 46.2% using it frequently for lectures. Zoom followed closely behind, with 51.9% of respondents using it daily for real-time online meetings and classes. Other platforms, such as Skype, Google Meet, Microsoft Teams, and Slack, were used less frequently. Specifically, Skype had the lowest daily usage rate at 11.1%, while Slack was rarely used daily by only 3.6% of respondents.

**Tables 1: Types of Instant Messaging Platforms used by Postgraduate Students at the University of Ibadan for Emergency Remote Learning**

| Instant Messaging Platform | Daily Usage (%) | Occasional Usage (%) |
|---|---|---|
| WhatsApp | 73.4% | - |
| Telegram | 30.4% | 46.2% |
| Zoom | 51.9% | - |
| Skype | 11.1% | - |
| Google Meet | - | - |
| Microsoft Teams | - | - |
| Slack | 3.6% | - |

**Objectives 2: A**ssess the levels of technology preparedness of postgraduate students at University of Ibadan

The technology preparedness of the respondents was assessed based on digital literacy, access to devices and internet, and familiarity with platforms. A majority of postgraduate students (87.0%) demonstrated high levels of digital literacy, indicating confidence in using instant messaging platforms. Similarly, 87.2% reported having sufficient access to devices and reliable internet for emergency remote learning, and 88.8% expressed high familiarity with platforms like WhatsApp and Zoom. These findings suggest that the University of Ibadan postgraduate students are generally well-prepared in terms of technology for remote learning.

**Table 2: Level of Technology Preparedness among Postgraduate Students at the University of Ibadan**

| **Aspects of Technology Preparedness** | | LLP (1) | MLP (2) | HLP (3) | ***Mean*** | ***STD*** |
|---|---|---|---|---|---|---|
| Digital Literacy | frq<br>**%** | 37<br>4.2 | 76<br>8.7 | 759<br>87.0 | 3.83 | 0.48 |
| Access to Devices and Internet | frq<br>**%** | 28<br>3.2 | 84<br>9.6 | 760<br>87.2 | 2.84 | 0.45 |
| Familiarity with platforms | frq<br>**%** | 20<br>2.3 | 78<br>8.9 | 774<br>88.8 | 2.86 | 0.40 |

*Key: LLP= Low Level Preparedness, MLP=Medium Level Preparedness, HLP= High Level Preparedness*

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**Objective 3:** Determine the adoption rates of instant messaging tools for educational purposes by postgraduate students in University of Ibadan.

The adoption rates of instant messaging platforms were also explored. The majority of respondents exhibited a high rate of adoption for WhatsApp, with a mean score of 3.47. Telegram and Zoom had adoption mean scores of 2.65 and 2.59, respectively, indicating moderate adoption levels. On the other hand, platforms such as Skype (mean = 1.68), Google Meet (mean = 2.53), Microsoft Teams (mean = 2.04), and Slack (mean = 1.70) showed lower levels of adoption, suggesting that these platforms are less integrated into the learning experiences of postgraduate students.

**Tables 3: Adoption Rate of Instant Messengers for Emergency Remote Learning among Postgraduate Students at the University of Ibadan**

| | | | **NA (1)** | **LRA (2)** | **MRA (3)** | **HRA (4)** | ***Mean*** | ***STD*** |
|---|---|---|---|---|---|---|---|---|
| | WhatsApp | frq<br>**%** | 26<br>3.0 | 175<br>20.1 | 31<br>3.6 | 640<br>73.4 | 3.47 | 0.91 |
| | Telegram | frq<br>**%** | 77<br>8.8 | 414<br>47.5 | 116<br>13.3 | 265<br>30.4 | 2.65 | 1.01 |
| | Zoom | frq<br>**%** | 44<br>5.0 | 324<br>37.2 | 453<br>51.9 | 51<br>5.8 | 2.59 | 0.68 |
| | Skype | frq<br>**%** | 432<br>49.5 | 313<br>35.9 | 97<br>11.1 | 30<br>3.4 | 1.68 | 0.80 |
| | Google Meets | frq<br>**%** | 70<br>8.0 | 337<br>38.6 | 398<br>45.6 | 67<br>7.7 | 2.53 | 0.75 |
| | Microsoft Teams | frq<br>**%** | 294<br>33.7 | 310<br>35.6 | 208<br>23.9 | 60<br>6.9 | 2.04 | 0.92 |
| | Slack | frq<br>**%** | 421<br>48.3 | 326<br>37.4 | 94<br>10.8 | 31<br>3.6 | 1.70 | 0.80 |

*Key: NA= No Adoption; LRA= Low Rate of Adoption; MRA=Medium Rate of Adoption; HRA=High Rate of Adoption*

**Objective 4:** Investigate the challenges faced by the postgraduate students in University of Ibadan, in adopting IM for remote learning.

Despite the high levels of preparedness and adoption, students reported several challenges related to the use of instant messaging platforms for emergency remote

learning. The most significant barriers included poor internet connectivity, data availability issues, and frequent power outages. The cost of data allowances also posed a substantial obstacle, limiting students' ability to engage fully in remote learning activities. Additionally, a lack of familiarity with certain platforms and reluctance from instructors to adopt these tools was noted as a hindrance to more widespread and effective use of instant messengers in education.

**Table 4: Frequency Distribution of the Challenges Faced by Postgraduate Students in Adopting IM**

| S/N | Barriers | Frequency | Percent |
|---|---|---|---|
| | Bad Internet connection | 9 | 1.03% |
| | Low responsiveness from instructors | 2 | 0.23% |
| | Network issues and interruptions | 25 | 2.87% |
| | Insufficient network reception | 8 | 0.92% |
| | Limited access to hutch-free networks | 1 | 0.11% |
| | Availability of data at the appropriate time | 2 | 0.23% |
| | Concentration difficulties | 1 | 0.11% |
| | High cost of internet/data usage | 8 | 0.92% |
| | Data allowance limitations | 2 | 0.23% |
| | Data consumption concerns | 2 | 0.23% |
| | Lack of provision for data availability | 1 | 0.11% |
| | Lack of familiarity with certain platforms (e.g., Zoom, Skype, Slack) | 2 | 0.23% |
| | Difficulties in getting added to certain platforms | 1 | 0.11% |
| | Lack of internet access in school (Wi-Fi restrictions) - | 1 | 0.11% |
| | Lack of resources - Frequency: | 1 | 0.11% |
| | Limited features, security, and privacy concerns | 1 | 0.11% |
| | Low battery life | 2 | 0.23% |
| | Lecturers' reluctance to use instant messengers for lectures | 1 | 0.11% |
| | Limited internet access and insufficient data | 2 | 0.23% |
| | Poor network connectivity and network downtime | 13 | 1.49% |
| | Lack of ICT facilities and infrastructure | 1 | 0.11% |
| | Data subscription limitations | 1 | 0.11% |
| | Network glitches and expensive data costs | 2 | 0.23% |
| | Network problems with service providers | 2 | 0.23% |
| | Network unavailability or unhelpfulness at times | 4 | 0.46% |
| | Distracted during remote instant messaging sessions | 1 | 0.11% |
| | Unstable network reception and connectivity | 2 | 0.23% |
| | Limited internet connectivity and slow devices | 1 | 0.11% |
| | Unstable power supply and power failures | 4 | 0.46% |

| | | | |
|---|---|---|---|
| | Addiction, distraction, and time-wasting concerns | 1 | 0.11% |
| | Lack of stable network connections | 2 | 0.23% |
| | Instructors' reluctance to use instant messengers | 1 | 0.11% |
| | Fluctuating nature of network connections | 1 | 0.11% |
| | Challenges with data and unstable power supply | 1 | 0.11% |
| | Inconsistent use of video communication | 1 | 0.11% |
| | Unstable electricity and power failures | 2 | 0.23% |
| | Lack of stable internet connectivity | 1 | 0.11% |
| | Weak network connectivity | 1 | 0.11% |

**Source: Fieldwork 2023**

**Objective 5:** Examine the relationship between technology preparedness and instant messenger use by postgraduate students in University of Ibadan

Correlation and regression analyses were employed to explore the relationships between technology preparedness, adoption, and the use of instant messaging platforms for remote learning. The results indicated a positive and significant relationship between technology preparedness and instant messenger use, with a correlation coefficient of 0.365 ($p < 0.05$). This finding suggests that students who are more technologically prepared are more likely to use instant messaging tools effectively for emergency remote learning.

**Table 6: Test of Significant Relationship between Technology Adoption and Instant Messenger Use**

| **Correlation Matrix** | | **Technology Adoption** | **Instant Messenger Use** |
|---|---|---|---|
| **Technology Adoption** | Pearson Correlation | 1 | 0.365** |
| | Sig. (2-tailed) | | 0.000 |
| | N | 872 | 872 |
| **Instant Messenger Use** | Pearson Correlation | 0.365** | 1 |
| | Sig. (2-tailed) | 0.000 | |
| | N | 872 | 872 |

**. Correlation is significant at the 0.01 level (2-tailed).

**Objective 6:** Establish the relationship Between technology adoption and instant messenger use by postgraduate students in University of Ibadan

The study also found a strong positive relationship between technology adoption and the use of instant messengers for remote learning, with a correlation coefficient of 0.619 ($p < 0.01$). This significant correlation highlights the importance of

encouraging and facilitating technology adoption among students to enhance their engagement with instant messaging platforms for academic purposes.

**Table 6: Test of Significant Relationship between Technology Adoption and Instant Messenger Use**

| **Correlation Matrix** | | **Technology Adoption** | **Instant Messenger Use** |
|---|---|---|---|
| **Technology Adoption** | Pearson Correlation | 1 | 0.619** |
| | Sig. (2-tailed) | | 0.000 |
| | N | 872 | 872 |
| **Instant Messenger Use** | Pearson Correlation | 0.619** | 1 |
| | Sig. (2-tailed) | 0.000 | |
| | N | 872 | 872 |

**. Correlation is significant at the 0.01 level (2-tailed).

**Discussion of Findings**

The results of this study reveal several critical insights into the preparedness and adoption of technology among postgraduate students at the University of Ibadan, particularly in the use of instant messaging (IM) platforms for emergency remote learning. The high level of digital literacy (87%) and access to devices and reliable internet (87.2%) reported by the respondents highlights that the students are generally well-prepared to engage in remote learning using digital tools. This finding aligns with research that suggests younger generations, such as the 76.2% of respondents in the 20-30 age range, are typically more tech-savvy and adaptable to digital platforms for educational purposes .

The most commonly used platforms for remote learning—WhatsApp (73.4% daily use), Telegram (30.4%), and Zoom (51.9%)—indicate a strong preference for tools that allow real-time communication and collaboration. This is consistent with findings in prior studies which emphasize that real-time engagement tools significantly improve student interaction in online learning environments . Conversely, platforms like Skype and Slack saw minimal daily usage, likely due to their less intuitive interfaces or unfamiliarity among the users. This suggests that further efforts may be necessary to improve the adoption and usability of these platforms in academic contexts.

The correlation between technology preparedness and the use of IM platforms in this study supports prior findings that digital literacy is a key factor in determining the effectiveness of remote learning tools . For example, research by Hodges et al. (2020) asserts that well-prepared students are more likely to engage actively with online learning resources, improving overall educational outcomes. Similarly, the adoption of IM platforms as a key remote learning tool aligns with other studies, such as that

of Dzandu et al. (2017), which demonstrated that technological tools, including IM, enhance student engagement and academic performance when effectively integrated into the curriculum.

One notable contribution of this study is its focus on how technology preparedness and adoption jointly influence the use of IM tools for emergency remote learning. The regression analysis revealed a moderately strong positive relationship between the combined factors of preparedness and adoption, with a significant impact on IM use for remote learning ($R = 0.620$, $p < 0.01$) . This builds on prior research by Ertmer et al. (2021), who found that technology readiness and adoption practices work synergistically to improve learning outcomes in remote education contexts.

**Implications for Educational Practices**

The study highlights the importance of fostering both technology preparedness and adoption to optimize the effectiveness of IM platforms in emergency remote learning scenarios. Educational institutions must prioritize initiatives aimed at increasing digital literacy among students, particularly in less tech-savvy demographics such as the 31-60 age range, who may require additional support to engage effectively with IM tools. Moreover, institutional strategies should include regular training sessions for students and faculty on how to navigate various IM platforms and integrate them into the academic workflow. Universities should consider adding these platforms as core components of their remote learning infrastructure, alongside more traditional tools like Learning Management Systems (LMS). By improving familiarity with platforms such as Zoom, Telegram, and WhatsApp, both students and faculty can benefit from smoother, more interactive remote learning experiences .

The barriers to technology adoption, including internet connectivity issues, power supply instability, and the high cost of data, emerged as significant challenges for many students. This finding is consistent with global studies, such as those by Fidalgo-Blanco et al. (2020), which noted that technical issues are among the most prominent obstacles to effective online learning. To mitigate these challenges, universities need to collaborate with internet service providers and explore alternative solutions like free campus Wi-Fi or subsidized data plans for students.

**Conclusion**

This study on the technology preparedness and adoption of instant messaging platforms for emergency remote learning among postgraduate students at the University of Ibadan revealed several key insights. The findings highlight that postgraduate students are generally well-prepared regarding digital literacy and access to devices and the internet. Instant messaging platforms such as WhatsApp, Telegram, and Zoom were the most popular, indicating their preference for real-time communication and collaborative tools during emergency remote learning situations. The research established a positive relationship between technology preparedness and the adoption of instant messengers, showing that students who are more digitally

prepared are more likely to use these platforms effectively. This is critical as educational institutions continue to rely on technology for remote learning, particularly in emergencies. It underscores the need for universities to continue enhancing digital literacy programs and improving access to technology to ensure that students are well-equipped to engage in online learning.

Challenges such as unreliable internet connectivity, high data costs, and insufficient power supply were identified as significant barriers to the smooth adoption of instant messaging tools. These issues disproportionately affect students in regions with underdeveloped infrastructure, making it essential for educational institutions to collaborate with service providers and explore alternative solutions to these challenges. Institutions should also consider offering free or subsidized data plans and Wi-Fi access, which can alleviate financial burdens on students and improve engagement with remote learning platforms.

Additionally, the study found that younger students, particularly those in the 20-30 age range, were more comfortable using digital tools for learning than older students. This highlights a potential gap in technological adoption across different age groups, suggesting the need for tailored interventions, such as targeted training programs, to ensure that older students are not left behind in the digital transition. Overall, this study provides valuable insights into the dynamics of technology adoption in emergency remote learning, emphasizing the importance of technology preparedness and the role of instant messaging platforms in facilitating effective learning. The recommendations made in this research offer actionable strategies for improving the use of technology in educational settings, ensuring that all students have the resources and skills necessary to succeed in a digitally-mediated learning environment.

Future research should explore additional factors that influence the adoption of technology, such as socioeconomic status and institutional support, to develop more comprehensive strategies for addressing the challenges of remote learning in various contexts. By addressing these challenges, educational institutions can create a more inclusive and effective learning environment that leverages technology for academic success.

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