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Responding to the Covid-19 Crisis in Nigerian Higher Education: Lessons Learned and Future Directions

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Abstract:- The COVID-19 pandemic has caused significant disruptions to educational systems globally, with Nigerian tertiary institutions facing considerable challenges in adapting to online learning. This paper explores the impact of the pandemic on Nigeria's higher education system, focusing on the infrastructural, pedagogical, and policy-related challenges encountered during the shift to remote instruction. It highlights the unpreparedness of many Nigerian universities to implement online learning due to limited digital infrastructure, inadequate teacher training, and student access barriers. Drawing from the experiences of institutions globally, this paper also outlines recommendations for Nigerian tertiary education, including integrating environment and health courses into curricula, strengthening environmental policies, incorporating online mental health services, scaling up teacher training for digital instruction, and promoting evidence-based research. By addressing these key areas, Nigerian universities can enhance their resilience and capacity to deliver quality education during and after future public health emergencies. The paper concludes by emphasizing the need for ongoing research and policy reform to adapt the Nigerian higher education system to emerging technologies and future crises.

Keywords: COVID-19, tertiary education, online learning, Nigeria, teacher training, digital infrastructure, educational policy

1. Introduction

The COVID-19 pandemic, caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), has had a far-reaching impact on global health, economies, and education systems. The World Health Organization (WHO) defines COVID-19 as a highly infectious respiratory disease that can lead to severe illness, particularly among vulnerable populations such as the elderly and those with pre-existing medical conditions. Globally, the disease has infected millions, with the latest statistics indicating over 4,385,427 confirmed cases and 295,405 fatalities as of May 7, 2020 (Figure 1). In Africa, the situation was similarly critical, with over 112,385 confirmed cases of COVID-19 as of May 7, 2020 (Figure 2). While the overall case count may have been lower than in some regions, the impact of the pandemic on African countries was significant due to factors such as limited healthcare resources, infrastructure challenges, and socioeconomic disparities (Badu, 2020).

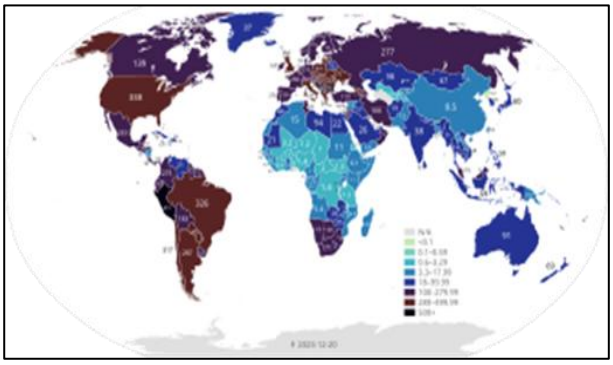

Figure 1: Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE) https://en.wikipedia.org/wiki/COVID-19_pandemic_by_country_and_territory

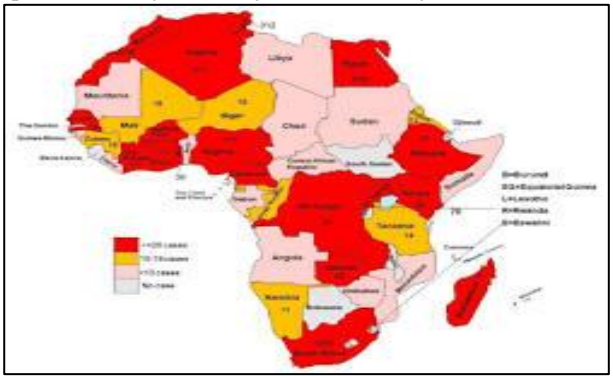

Figure 2: Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE)

COVID-19 shares similarities with the severe acute respiratory syndrome (SARS) outbreak of 2003, as both are caused by coronaviruses, and their modes of transmission are largely the same. The virus is primarily spread through respiratory droplets when an infected individual coughs, sneezes, or speaks, making close human contact a major risk factor (WHO, 2020). Vulnerable populations, including the elderly and those with compromised immune systems, face the highest risk of severe illness.

The pandemic has also profoundly disrupted the education sector, particularly in countries with limited infrastructure for online learning. UNESCO reports that over 1.6 billion students were affected by school closures worldwide, prompting governments and educational institutions to explore alternative learning modalities, such as digital platforms. In Nigeria, the pandemic forced many tertiary educational institutions to shift to online learning. However, as of May 7, 2020, with [insert NCDC statistic] reported COVID-19 cases, it became apparent that this transition was not without challenges. Many educators turned to platforms like Google Classroom and WebQuest to facilitate online instruction, but the majority were ill-prepared to navigate the complexities of digital education.

Shortly after the introduction of online learning, the National University Commission suspended this mode of instruction following widespread complaints from students and educators alike. Factors such as inadequate access to the internet, lack of digital literacy, and infrastructural shortcomings impeded the success of this transition. Despite the initiative to explore alternative learning methods, it is evident that Nigeria's tertiary education system was not fully prepared to implement and sustain online education on a large scale.

Many tertiary institutions, including both private and public universities in Nigeria, lack the necessary infrastructure and readiness to effectively implement online learning systems. While substantial research has been conducted on COVID-19 from a medical and public health perspective (cite sources), limited studies have focused on the impact of the pandemic on the educational sector. Even less attention has been given to how previous pandemics like SARS affected educational systems,

highlighting a significant gap in literature (cite relevant studies, including previously submitted work).

However, the shift to online education exposed critical gaps in infrastructure, digital literacy, and educator readiness. As Mulenga and Marbán (2020) suggest, the pandemic served as a gateway for digital learning in some disciplines, such as mathematics, but many teachers were unprepared for the rapid transition. Similarly, Toquero (2020) emphasizes that the COVID-19 pandemic has challenged higher education institutions globally, revealing both the limitations and opportunities for digital transformation. In line with these findings, Chukwuemeka et al. (2021) discuss the urgent need for redesigning educational delivery systems in Nigeria to ensure continuous learning amid the pandemic. Falode, Chukwuemeka, and Falode (2022) also highlight that the pandemic has acted as a catalyst for technology integration in teaching, particularly within the fields of science, technical, and vocational education in Nigeria. Thus, the need to consider new instructional models to integrate technology effectively into teacher education, as highlighted by Chukwuemeka et al. (2020), is paramount if the following challenges are overcome:

2. Challenges Facing Nigerian Tertiary Education During Covid-19

2.1 Limited Infrastructure for Online Learning

The transition to online education in Nigerian tertiary institutions has been hindered by inadequate technological infrastructure. Many students and educators lacked access to reliable internet connections and digital devices, limiting their ability to participate in remote learning (Sintema, 2020). This digital divide exacerbated educational inequality, as students in rural or underserved areas were disproportionately affected. As Chukwuemeka et al. (2021) point out, the lack of infrastructure not only impacts student participation but also inhibits the continuity of learning during crises like the COVID-19 pandemic.

2.2 Inadequate Teacher Preparedness

While some educators successfully adopted digital platforms, the majority lacked the necessary training for effective online instruction (Fauzi et al., 2020). The rapid transition to digital learning highlighted the need for professional development programs that equip teachers with the skills required for remote teaching. This is consistent with Chukwuemeka et al. (2020), who argue that effective teacher education models must integrate technology to prepare educators for online learning environments, a necessity emphasized by the pandemic.

2.3 Student Access and Engagement Issues

Many students faced challenges in accessing online learning materials due to limited internet access, a lack of digital literacy, and inadequate support from educational institutions (Akwa et al., 2020). These barriers led to decreased engagement and learning outcomes, particularly for students in disadvantaged regions. To address these gaps, Chukwuemeka et al. (2021) advocate for the redesign of educational delivery systems in Nigeria, emphasizing the need for innovative solutions that ensure student access and engagement in remote learning contexts.

3. Recommendations for Tertiary Education In Nigeria

Given the need for improved instructional delivery and institutional preparedness, the following recommendations are proposed:

3.1 Integrate Environment and Health Courses in the Curriculum

Nigerian universities should integrate environment and health-related courses into their curricula to raise awareness about hygiene practices, disease prevention, and public health management. This means not just adding isolated classes but infusing these vital concepts throughout the curriculum. This is in line with the assertions of Ohiare-Udebu et al. (2021) that the curriculum is designed to aid improvement, and by integrating these crucial subjects, we can empower students with the knowledge and skills necessary to become agents of positive change within their communities and the nation as a whole. Imagine a sociology course exploring the social determinants of health, an engineering program grappling with sustainable infrastructure, or an economics class analyzing the economic impact of environmental degradation.

Beyond theoretical knowledge, practical experience is crucial. Field trips to local communities, hands-on projects addressing real-world health challenges, and engaging with public health professionals will equip students with the skills and knowledge to navigate future health crises and contribute to a healthier society. This is in line with the assertions of Ohiare-Udebu et al. (2021) that is designed to add improvement.

This will ensure that students are better equipped to navigate future public health emergencies and contribute to building a more health-conscious society (Usak et al., 2020).

3.2 Strengthen Environmental Policies and Hygiene Practices

Universities must implement comprehensive environmental policies that promote cleanliness and hygiene across campuses. Imagine a campus where waste is meticulously managed, clean water flows freely, and green spaces abound, fostering a sense of tranquility and well-being. Regular cleaning protocols, readily available hand sanitizers, and ongoing hygiene education campaigns will minimize the spread of infectious diseases and create a safer learning environment for everyone.

These measures, such as frequent sanitation of classrooms and providing hygiene education, will create safer learning environments and reduce the spread of infectious diseases (Lee et al., 2003; Basilaia & Kvavadze, 2020).

3.3 Incorporate Online Mental Health and Medical Services

The mental health impact of COVID-19 has been significant, particularly among students (Papapicco, 2020). Nigerian tertiary institutions should provide online mental health and medical services to support students' well-being.

This could involve expanding telehealth services, offering online counseling sessions, and creating a wealth of online resources, such as self-help guides and relaxation techniques. Moreover, fostering a culture of open dialogue about mental health, training faculty to recognize signs of distress, and providing support groups can create a more compassionate and supportive learning environment for all students.

3.4 Migrate Courses, Align Curriculum Competencies, and Scale up Teachers' Training for Online Learning

Universities should migrate selected courses to online platforms and align curriculum competencies with digital instruction. As Mulenga and Marbán (2020) note, scaling up teacher training for online learning is crucial. Investment in digital literacy programs for educators will ensure that online learning can be delivered effectively.

Curriculum must evolve to align with the unique demands of digital learning, emphasizing skills like critical thinking, self-directed learning, and effective online communication. Investing in comprehensive teacher training programs, equipping faculty with the necessary tools and resources (Bello et al. 2024), and providing ongoing support will ensure the success of online learning initiatives. This recommendation is in line with Chukwuemeka et al. (2020), who emphasize the importance of integrating technology in teacher education for effective online instruction.

3.5 Strengthen Research Efforts, Data Monitoring, and Evidence-Based Practices

Enhancing research efforts related to the educational impacts of the pandemic is critical for informed decision-making. Universities should prioritize data monitoring and adopt evidence-based practices to better respond to future health crises. Encouraging interdisciplinary research on education, public health, and technology will strengthen institutional resilience (Sintema, 2020; Toquero, 2020). By collecting and analyzing data on student outcomes, identifying areas for improvement, and adopting evidence-based practices across all aspects of university operations, institutions can navigate future challenges with greater resilience and effectively serve the needs of their students.

4. Conclusion

The COVID-19 pandemic has profoundly impacted tertiary education systems globally, including in Nigeria. Educational institutions faced unprecedented challenges as they shifted to online learning. However, the pandemic also created opportunities for the Nigerian education system to embrace emerging technologies and digital learning platforms. Moving forward, Nigerian tertiary institutions must seize the opportunity to strengthen evidence-based practices, provide accessible mental health services, and make the curriculum more responsive to the changing needs of students. By doing so, universities can emerge from the pandemic more resilient and better equipped to face future crises.

5. Implications for Further Studies

This paper highlights significant pedagogical and policy implications for Nigerian tertiary institutions. Universities must reassess their curricular interventions to prepare for online learning, while also developing health management protocols to maintain environmental hygiene within and beyond academic settings. Future research should focus on evaluating the long-term impact of COVID-19 on Nigeria's tertiary education system. There remains a need for scientific evidence on how educational institutions can adapt effectively to remote learning and respond to future virus outbreaks (Naciri et al., 2020).

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