

INNOVATIVE MANAGEMENT STRATEGIES AND ONLINE SECONDARY EDUCATION IN THE POST COVID-19 ERA OF KADUNA STATE, NIGERIA

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Abstract

Globalization trends demand an innovative process of transforming and redefining education in order to unlock effective management approaches to strengthen online education. The study aimed at determining the management strategies and online secondary education in the post COVID-19 era in Kaduna State, Nigeria. An overview of the background and statement of the problem were undertaken. Two research questions and two hypotheses guided the study. A researchers-constructed questionnaire titled, "Management Strategies and Online Education in post COVID-19 era Questionnaire (MSOEQ)" on a Likert scale was used for data collection. A survey research design, specifically cross-sectional design, was adopted for the study. 163 principals from public and private secondary schools were selected randomly from nine Local Government Areas of Kaduna State, using multi-stage sampling. The instrument was validated by three experts: two from Educational management, and one from Measurement and Evaluation units of University of Jos, Plateau State. Construct validity, using factor analysis was established with a sample adequacy of 0.76, while internal consistency reliability estimated at 0.803 was obtained. The data collected was analyzed using frequency count, mean and standard deviation to answer the research questions; whereas the hypotheses were tested using t-test at 0.05 level of significance. The findings revealed that there was no significant difference between the way technical difficulties, and digital distractions impacted the adoption of online education in public and private senior secondary schools in post COVID-19 era of Kaduna State. It was concluded that internet connectivity, level of computer proficiency, inadequate infrastructure, and influence of social media influenced teaching and learning significantly in public and private secondary schools. It was recommended that there should be increased and prompt release of fund by the government, with established transparency in disbursement and accountability system. Also, collaboration between Ministry of Education and National Information Technology Development Agency (NITDA) in developing infrastructure in schools, capacity building of teachers and students. Building resilience with Public-private-partnership should be encourage for improved access to internet connectivity. These suggestions would go a long way in creating a home grown solution that incorporates local content in shaping and continuous improvement towards blended learning and effective strategies in the management of senior secondary schools in Kaduna State.

Key Words: Management strategies, Online secondary education, Post COVID-19 era

INTRODUCTION

The onset of COVID-19 was a compelling period that necessitated the sudden shift to online education to ensure continued learning. This uncovered the policy-making challenges faced by government, due to lack of crisis-response policy making framework (Stoney, Asquith, Kipper, McNeil, Martin, Spano, & Akudo, 2023), leading to frequent changes in policy decisions. This unabatedly resulted in gaps between policy making and implementation of educational policies, whereas this could impact on the acceptability of online education by stakeholders.

Online education in both public and private schools in Nigeria took the nation unexpectedly as a contingency plan. Although the use of internet-based learning had always been assessed for possible adoption to replace the traditional classrooms, the realities encountered during the

pandemic were mostly beyond expectations. The constraints in the adoption of online education was directly based on information and technology infrastructure, which appeared inadequate.

The rapid transition to this method of teaching created problems and breaches in teacher training and support, students' engagement and well-being, access and equity, assessment and accountability. Other issues include: flexibility and adaptability, health and safety protocols, data, devices, communication and stakeholders' involvement. These have major implication for decision making and planning as it concerns management strategies and online education.

Effective management strategies, as planned actions, became crucial to mitigate these challenges during the pandemic and beyond. This became essential in planning and monitoring of online curriculum, organization and arrangement of the environment in response to potential problems envisaged. The strategies were tailored to the needs and context of online education, requiring regular adjustments in response to the changing circumstances, even in post pandemic.

Challenges faced online adoption in the post pandemic era showed a connection between technical issues, lack of interaction, digital distractions, and poor digital literacy. Also, poor internet connectivity, dearth of online equipment; even where such exist, may appear poorly maintained. Strategies on online education during the COVID-19 pandemic laid bare the state of secondary education as there was no unified data. Schools were not linked to central information system or portal. Invariably, all these may add to the apparent lack of interest in digital education in post pandemic period.

There was the issue of online distractions due to social media, games, and videos influence. This negatively impacted online education due to multi-tasking and mind wandering, which may impair focused attention. Online education witnessed increased addiction of youths to their mobile devices, leading to a gradual drift of focus from education to extra-curricular interests. Improper and excessive use of digital education may lead to academic exhaustion. All these issues appeared to show relative lack of popularity of online secondary education in post COVID-19 dispensation. Thus, these became constraints that may affect the hallmark of achievement of set goals in senior secondary education.

Despite growing evidence claiming the effectiveness of online education, there existed inadequate institutional readiness, in terms of students' computer proficiency, and insufficient digitally trained teachers in e-content of online education. This led to disparity in accessing digital resources, and poor digital literacy of students. To this end, the National Bureau of Statistics 2022 Learning Assessment revealed that only 28.7% of senior secondary students demonstrated basic computer proficiency. The challenges of technical difficulties, infrastructure deficit, and digital distractions were the downside dimensions that may have adverse imports on education. Thus, for educational recovery to be equitable, post pandemic would be an effective way of bridging the apparent gap in online secondary education.

Aim and Objectives of the study

The study aimed at determining the impact of management strategies and online secondary education in post COVID-19 era of Kaduna State, Nigeria. Specifically, the objectives of the study are to:

1. examine the technical difficulties that impact the adoption of online education in post COVID-19 era in private and public senior secondary schools of Kaduna State, Nigeria.
2. examine the impact of digital distractions on online education in post COVID-19 era in private and public senior secondary schools of Kaduna State, Nigeria.

Research Questions

The following research questions guided the study:

1. To what extent do technical difficulties impact the adoption of online education in post COVID-19 era in senior secondary schools of Kaduna State, Nigeria?

2. To what extent do digital distractions impact online education in post COVID-19 era in senior secondary schools of Kaduna State, Nigeria?

Hypotheses

To facilitate the study, the following hypotheses were generated and tested at 0.05 level of significance:

1. There is no significant difference in the ways technical difficulties impact the adoption of online education between private and public senior secondary schools in post COVID-19 era of Kaduna State, Nigeria.
2. There is no significant difference in the ways digital distractions impact online education between private and public senior secondary schools in post COVID-19 era of Kaduna State, Nigeria.

METHODOLOGY

The survey research design, specifically cross-sectional survey design, was adopted for the study. The population of the study comprised all principals of secondary schools in Kaduna State. The sample size for the study was drawn from the three senatorial zones of Kaduna State that make up the 23 Local Government Areas (LGA) in Kaduna State; nine local governments were randomly selected. The sample size comprised 163 school principals as participants. Data was collected using a researcher-constructed questionnaire titled: Management Strategies and Online Education in post COVID-19 era Questionnaire (MSOEQ). The use of this instrument was due to the large number respondents. The instrument was divided into two sections. Section A was used to elicit information about the characteristics of the respondents, while Section B contained two sub-sections made up of 10 items on a Likert scale coded as follows: Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), Strongly Disagree (SD). The decision rule was set at mean score below or less than 3.0 = rejected or disagreed on, and interpreted as having low influence; while the mean score greater than or equal to 3.0 = accepted or agreed on, and construed as being of high influence. The key for decision were: 1– 2.5 Low Extent, 2.6 – 3.5 Moderate Extent, 3.6 – 5.00 High Extent. The instrument was validated by three experts: two from Educational management, and one from Measurement and Evaluation units. Construct validity, using factor analysis was established with a sample adequacy of 0.76, while internal consistency reliability estimated at 0.803 was obtained. The data collected was analyzed using frequency count, mean and standard deviation to answer the research questions; whereas the hypotheses were tested using t-test at 0.05 level of significance.

RESULTS

Research Question One: To what extent do technical difficulties impact the adoption of online education in post COVID-19 era in senior secondary schools of Kaduna State, Nigeria?

Table 1

Results of the Analysis on Extent to which Technical Difficulties Impact the Adoption of Online Education in post COVID-19 era

| S/No | Statement | N | \bar{X} | SD | Decision |
|------|--|-----|-----------|------|----------|
| 1 | Internet connectivity affected teaching and learning in post COVID-19 era. | 163 | 4.34 | 0.81 | Agreed |
| 2 | Inadequate training on the use of e-learning affected teaching and learning. | 163 | 4.14 | 1.04 | Agreed |
| 3 | Level of computer knowledge of students affected teaching and learning. | 163 | 4.62 | 1.11 | Agreed |

| | | | | | |
|-------|--|-----|------|------|--------|
| 4 | Inadequate training on internet connection affected teaching and learning. | 163 | 4.72 | 0.94 | Agreed |
| 5 | Inadequate online equipment affected teaching and learning in post COVID-19 era. | 163 | 4.94 | 0.89 | Agreed |
| Total | | 163 | 4.55 | 0.96 | Agreed |

Key: 1– 2.5 Low Extent, 2.6 – 3.5 Moderate Extent, 3.6 – 5.00 High Extent.

The results of the analysis from the Table 1 revealed that all the items were agreed upon because the items have mean above 3.00. This implied that internet connectivity; inadequate training; level of computer literacy; inadequate online equipment was some of the technical issues that affected teaching and learning in post COVID-19. The result further indicated an overall mean of 4.55, standard deviation of 0.96. On the whole, this implied that technical issues affected teaching and learning with high level of extent.

Research Question 2: To what extent do digital distractions influence online education in post COVID-19 era in senior secondary schools of Kaduna State, Nigeria?

The results of the analysis from Table 2 revealed that items 1, 3, 4 and 5 were accepted, because the items have mean above the mean of 3.00. This implied that students were distracted with online materials; home distraction affected students' level of participation during online learning; social media influence students' usage of online materials; and background noise during lesson delivery affected online education.

Table 2
Results of the Analysis on Extent to which Digital Distractions Impact Online Education in post COVID-19 era

| S/No | Statement | N | \bar{X} | SD | Decision |
|-------|--|-----|-----------|------|-----------|
| 1 | Students were distracted with online materials when using smart phones to learn. | 163 | 4.47 | 0.84 | Agreed |
| 2 | Exposure of students to online materials using parents' phones distracted the students during interaction. | 163 | 2.74 | 0.66 | Disagreed |
| 3 | Home distractions affected students level of participation during online learning. | 163 | 4.55 | 0.79 | Agreed |
| 4 | Social media influenced students' usage of online materials. | 163 | 4.74 | 0.97 | Agreed |
| 5 | Distraction from the home front affected online learning. | 163 | 4.83 | 0.44 | Agreed |
| Total | | 163 | 4.27 | 0.74 | Agreed |

Key: 1– 2.5 Low Extent, 2.6 – 3.5 Moderate Extent, 3.6 – 5.00 High Extent.

Item 2 above, on exposure of students to online materials using parents' phone was rejected, because the item has mean below the mean. This implied that exposure of students to online materials using parents' phones do not distract the students during interaction. The result indicated that most of the respondents agreed that digital distraction affected teaching and learning in post COVID-19 with a high level of extent. Hence, it could be said that digital distractions affected teaching and learning in post COVID-19.

Hypothesis One: There is no significant difference on the ways technical difficulties impact the adoption of online education between private and public senior secondary schools in post COVID-19 era in Kaduna State, Nigeria.

Table 3
Results of T-test Analysis on the Ways Technical Difficulties Impact Online Education in post COVID-19 era Between Private and Public Schools

| Group | N | \bar{X} | SD | Df | t | p-value | Sig. | Decision |
|----------------|----|-----------|------|----|------|---------|------|-----------|
| Private school | 72 | 19.80 | 3.12 | | | | | |
| | | | | 23 | 1.15 | 0.258 | 0.05 | Accept HO |
| Public schools | 91 | 21.00 | 2.05 | | | | | |

The results of the t-test analysis from Table 3 revealed that private schools have a mean score of 19.80, standard deviation of 3.12; while public schools have a mean score of 21.00, standard deviation of 2.05. The result indicated $t(23) = 1.15$, $p > 0.05$. Since the p-value of 0.258 is higher than the significant level of 0.05, we accept the null hypothesis; and conclude that there is no significant difference between the ways technical difficulties affected online education in post COVID-19 era between private and public schools. Hence, school type does not significantly differ in the way technical issues affected online education in post COVID-19.

Hypothesis Two: There is no significant difference in the ways digital distractions impact online education in post COVID-19 era between private and public senior secondary schools in Kaduna State, Nigeria.

Table 4
Results of T-test Analysis on Ways Digital Distractions Impact Online Education in post COVID-19 era Between Private and Public Schools

| Group | N | \bar{X} | SD | Df | t | p-value | Sig. | Decision |
|----------------|----|-----------|------|----|------|---------|------|-----------|
| Private school | 72 | 20.46 | 3.87 | | | | | |
| | | | | 23 | 4.54 | 0.64 | 0.05 | Accept HO |
| Public schools | 91 | 19.80 | 3.11 | | | | | |

The results of the t-test analysis from Table 4 revealed that private schools have a mean of 20.46, standard deviation of 3.87; while public schools have 19.80, standard deviation of 3.11. The result indicated $t(23) = 4.54$, $p > 0.05$. Since the p-value of 0.64 is greater than 0.05, we accept the null hypothesis; and conclude that there is no significant difference in the way online distractions affected teaching and learning between private and public schools. Hence, online distractions did not have significant effect on school type of public and private.

Discussion of Findings

The aim of this study was to determine the impact of innovative management strategies and online secondary education in post COVID-19 era in Kaduna State. The results of the analysis from Table 1 revealed that technical difficulties influenced the adoption of online education in post COVID-19 to a very high level. This implied that internet connectivity; inadequate training, and lack of online equipment, were some of the technical issues that affected teaching and learning in senior secondary schools. This was in accordance with the findings by Asio and Bayucca (2020) who found that inadequate training, and lack of internet equipment have affected negatively the ability of teachers to teach in post COVID-19 period. The implication was that lack of internet connectivity is a factor when it comes to online education in senior secondary schools in Kaduna state.

The results of the analysis from Table 2 showed that digital distractions affected online teaching in post COVID-19 to a high extent. This was because of students and teachers' exposure to irrelevant online materials, home distraction, and social media, which have influence on students during online lessons. This finding was in consonant with the study by Azzi-Huck and Shmis (2020) who established that the outbreak of COVID-19 caught schools unaware, such that teachers and schools introduced different methods of learning, which at the end exposed students to different social media platforms. These were harmful to students because the students were distracted from their academic studies.

Findings from Table 3 revealed that there is no significant difference between the way technical difficulties influenced the adoption of online education in post COVID-19 between private and public Senior Secondary Schools in Kaduna State, Nigeria. This was in agreement with the findings by Reimers and Schleicher (2020) who found that both public and private schools were affected by the outbreak of COVID-19. The implication of this finding was that technical challenge affected both public and private schools.

Findings from Table 4 indicated that there is no significant difference in the way digital distractions affected online education in post COVID-19 era between public and private senior secondary schools, in Kaduna State, Nigeria. This finding indicated that students from both public and private schools faced distractions, as some students engaged in social media chatting rather than using the digital space to learn. This finding was in agreement with the studies by Schrenk, Alves, Van-Dam and Schrenk (2021) who reported that young children would engage in social media activities more than academic activities, when they are given the opportunity to have phones or other platforms that allowed them to engage in social activities. The implication of this finding was that digital space distracted both students from public and private senior secondary schools in post COVID-19 era in the Kaduna State.

CONCLUSION

The study examined innovative management strategies and online secondary education in post COVID-19 era in Kaduna State, Nigeria. The findings indicated that the challenges of technical difficulties, and digital distractions to irrelevant online materials were pronounced in both public and private secondary schools. In the light of the foregoing, the study has reached the conclusion that Kaduna State's secondary sector lacked preparedness for the sudden shift to online education. The study further underscores the need for targeted interventions to facilitate effective management strategies, and innovate the future of secondary schools, as building blocks to education. Hence, investment in digital infrastructure and training would help to bridge the gaps in teachers and students' computer proficiency. On the whole, just as technology has led to revolution in education, online education has led to innovation in the digital space.

RECOMMENDATIONS

In line with the findings of this study, the authors made the following recommendations:

1. Access to technology is becoming far reaching; thus making the cost of transition to online education a burden to schools. This calls for the need for increased budgetary allocation to education sector, and prompt release of fund by the government, with established transparency in disbursement, and accountability system.
2. There is need for collaboration between Ministry of Education and National Information Development Agency (NITDA) in developing online infrastructure in secondary schools, and capacity building of teachers and students in computer proficiency.
3. Public-private-partnerships (PPPs) with internet service providers would create pathways to affordable broadband services, zero-rated airtime, and subsidized internet packages. This would aid in teachers and students' access to improved online education.

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