

Stakeholders Perceptions on Promoting Effective Management of Public University Education through Technology in North West Nigeria

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ABSTRACT

This study was carried out to investigate the perceptions of stakeholders on effective management of university education in North West Nigeria. The study has three objectives, among which is to find out the perceptions of stakeholders on the impact of technology on students' academic achievement and effective management of universities. Descriptive survey design was used for the study. The population comprises of all the public universities in North Central States, Nigeria. Stratified random sampling was used to select four universities. Random sampling was used to select 100 respondents from each of the four universities. The total number sampled was 400. A researcher-structured questionnaire was used to obtain data from the respondents. Correlation coefficient of 0.72 was obtained through the use of Cronbach Alpha. The statistical methods employed in analyzing the research questions were mean and standard deviation while t-test was used to test the hypotheses at 0.05 level of significance. The findings showed that stakeholders were of the opinion that improved students' academic achievement, effective management practices, and reduction in cost of university education can be achieved through the use of technology. It was concluded that the use of technology is essential because the 21st century is technology driven. The study recommends amongst others that every stakeholder in the management of university education should key into the use of technology. As a matter of urgency, the use of technology should be emphasized and implemented in teaching and learning, and management of public universities in North West Nigeria.

Keywords: Stakeholders, Perception, Technology, Effective, University, Education, North West, Management.

INTRODUCTION

Stakeholders in Education maintain that education is an important investment that need to grow and develop in order to meet up with the challenges of the 21st century. The expectation expectations and challenges of the 21st modern students have called for significant changes in the management of public universities in North West State. Usman in Haruna (2024) observed that the success of any university education especially in the 21st century would not only be determined by the provision of adequate educational resources but the nature of management. The author stressed further that expansion of the universities due to the introduction of new academic's programmed require effective management. Series of activities takes place in the University and these requires complex management function ranging from staff personnel services to student services.

Management is derived from the Latin word 'maneggiare' which means to handle, especially tools. In human organization, management can be seen as the task of accomplishing desired goals and objectives through other people's effort. Just as the heart coordinates and regulates the human activities, management coordinates and regulates the activities of various members of the organization. Maicibi (2024) opine that management is the processed practice through which the objectives of an organization are executed towards their achievement by optimizing the use of both human and material resources in the organization.

In order to achieve the goals of university education as stated in the National policy on Education, there is need to improve on student academic achievement, maintain effective management and reduce the cost of university education.

Universities do not exist in isolation; many people are connected to make the system work. These people who are concerned with the working of the universities are referred to as the stakeholders. Mathew (2022) opines that stakeholder's perception is the opinions, attitudes and beliefs of individual or groups that have interest or influence on the organization or institution. In the course of this study the stakeholders are the members of university community.

Technology here refers to the integration of technological pedagogies in teaching and learning and in every aspect of management in the University. Transforming university education with high technology enables automation tools to support the academic and management processes make it easy to achieve goals.

Presently the traditional methods employed in teaching in the universities in North West alone are out of place and ineffective to bring about appropriate and desired learning outcome in the 21st century digital natives. Stakeholders are of the opinion that technology can bring about transformation, flexibility, effective management and reduction in the cost. But, despite the realization of the need for technology in promoting effective university education, many universities are still struggling to keep pace with the integration of technology.

This can lead to ineffective management and limited student learning outcome. Therefore, there is need to undertake an empirical study to investigate how technology can be integrated into public universities to enhance effective student outcome, improve management and reduce the cost of universities in North West Nigeria.

North West States comprise of Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto and Zamfara State. Universities in this area have experienced one form of technological advancement or the other. But the extent to which this has impacted on the student academic achievement, management and cost of university education is not certain.

Hence the study investigates the perceptions of stakeholders on promoting effective public university education management through technology. Other researchers had carried out studies on the adoption of technology in university in Nigeria and other aspects of technology. But they seem to be paucity of research specifically focusing on North Central. This Study was carried out to fill that gap.

Objectives of the study

The study was undertaking to investigate Perceptions of stakeholders on promoting effective Public University Education Management through technology in North West States, Nigeria. Specifically, the study seeks to find;

1. Perception of stakeholders on the impacts of technology on students' Academic achievement
2. Investigate perception of stakeholders on the role of technology on effective Management of the University in North West, Nigeria.
3. Examine perceptions of stakeholders on how technology can reduce cost of management of education.

Research Questions

1. What are the perceptions of stakeholders on the impacts of technology on students' academic achievement?
2. What are the perceptions of stakeholders on the role of technology on effective management of Universities in North West States in Nigeria?
3. What are the perceptions of stakeholders on how technology can reduce the cost of university education?

Hypothesis

HO₁: There is no significant difference in the mean ratings of management and academic staff on the impacts of technology on effective management of university.

METHODOLOGY

Descriptive survey design was used for this study. The population comprises of the all the public universities in North West States Nigeria. Stratified sampling was used to select four universities. Random sampling was used to sample 100 respondents from each of the four universities. The total number sampled was 400. A researcher structured questionnaire was used to obtain data from the respondents. The questionnaire has three clusters based on 4 point modified Likert rating scale. The questionnaire was administered through the use of 4 research assistants who are familiar with the environment. The respondents were required to tick their preferred options. Correlation coefficient of 0.72 was obtained through the use of Cronbach Alpha. The data obtained from the field was subjected to inferential and descriptive statistics in analyzing the research questions with mean and standard deviations. While analysis of variance (ANOVA) was used to test the hypothesis at 0.05 level of significance. ANOVA was used because there are 3 sets of respondents. Mean scores of 2.5 and above was accepted while mean scores below 2.5 will not be accepted.

RESULTS/FINDINGS

Research Question 1: What is the perception of stakeholders on the impacts of technology on students' academic achievement?

Table 1: opinions of respondents on the perception of stakeholders on the impacts of technology on students' Academic achievement

S/N	ITEMS	X	SD	DECISION
1	Technology has improved my academic performance.	3.24	1.1	Accept
2	Technology makes learning impactful to me.	3.84	1.3	Accept
3	Through technology, I am able to use online tools to enhance my academic performance.	3.87	1.4	Accept
4	Technology has increased my knowledge in my discipline.	3.8	1.21	Accept
5	Technology has helped me develop collaboration skills that improve academic performance.	3.9	1.6	Accept
6	Technology enables me to have critical thinking skills.	3.95	1.5	Accept
7	Blended learning motivates me to have a better understanding of concepts.	3.92	1.4	Accept
8	Technology boosts my reading habits, aiding my academic performance.	3.99	1.7	Accept
Cluster Mean		3.84		

Source: Field work 2024

Response to items 1 to 8 in table 1 which sought the opinion of respondent's perceptions of stakeholders on the impacts of technology on students' academic achievement, response from the respondents were collected, analyzed and discussed. Responses on items 1 to 8 as shown in table 1, in response to item 1, on Technology improved academic performance the result shows a mean score of 3.24. Response to item 2 which states that technology makes learning impactful has a mean score of 3.84. Responses to items 3 to 8 have the following mean scores: 3.87, 3.89, 3.96, 3.95, 3.92, and 3.99. and a cluster mean of 3.84. The cluster mean and all the mean scores of items 1 to 8 are above the cutoff point of 2.5. This means that all the respondents agreed that items 1-8 are the impacts of technology on students' academic achievement.

Research Question 2. What are the perceptions of stakeholders on the management practices of universities through technology for effectiveness?

Table 2: Mean (X) and Standard deviations (SD) of respondents on Perceptions of stakeholders on how Technology can bring about effective management in universities.

S/N	ITEMS	X	SD	DECISION
9	Through technology we are able to adopt paperless minutes	2.64	1.04	Accept
10	Technology makes work distribution easy	2.76	1.11	Accept
11	It saves time	2.76	1.11	Accept
12	By reducing the workload	2.83	1.5	Accept
13	It promotes virtual meetings	3.16	1.21	Accept
14	By increasing productivity	2.98	1.05	Accept
15	Technology helps to reduce conflicts of interest among staff and students	2.6	1.02	Accept
Cluster Mean		3.74		

Response to items 9 to 15 in Table 2 which sought the opinion of respondents on perceptions of stakeholders on the management practices for effectiveness through technology in universities. The response from the respondents were collected, analyzed and discussed. Responses on items 9 to 15 as shown in table 2 are as follows: in response to item 9, on through technology paperless minutes adopted help to reduce cost of buying papers. the following item statements were made and responded to; enhances easy distribution of work, it saves time, it promotes virtual meetings for effective management it increases productivity, reduction of work load, and reduces conflict of interest among staff and students. The result for items 9 to 15 shows a minimum mean score of 2.60 and a maximum 3.16 with a cluster mean of 3.74. The cluster mean and all the mean scores of items 9 to 15 are above the cutoff point of 2.5. This indicates that all the respondents agreed that items 9-15 are ways stakeholders' perception on how management practices through technology can bring about effective management in universities in North central, Nigeria.

Research Question 3. How can technology reduce the cost of university education?

Table 3: Mean (X) and Standard Deviation (SD) of respondents of perceptions of stakeholders on how technology can reduce the cost of university education

S/N	ITEMS	X	SD	DECISION
16	Digital textbooks reduce the expenses on physical textbooks	3.98	1.2	Accept
17	Online library reduces the need for physical textbooks	2.7	0.9	Accept
18	Online courses reduce the cost of instruction	3.6	1.1	Accept
19	Online registration reduces administrative cost	3.45	1	Accept
20	Online students' services reduce cost	3.64	1.2	Accept
21	Remote work for staff reduces facility cost	3.72	1.3	Accept
22	Online training reduces the cost of staff	3.71	1.4	Accept
Development Cluster Mean		3.54		

Response to items 16 to 22 in Table 3 which sought the opinion of respondent's perceptions of stakeholders on how technology can reduce the cost of university education item 16 which states that digital textbooks reduce the expenses on physical textbooks has a mean score of 3.98, item 17 which sought responses on online library reduce the need for physical textbooks has mean score of 2.7. Item 18 sought responses to online courses reduce the cost of instruction has a mean score 3.6. Items 19 to 22 have the means scores of: 3.45, 3.64., 3.72 and 3.71. The cluster means score is 3.54. Table 3 show that all the items (16-22) were accepted as how technology can reduce the cost of university education. This is visible in the mean scores which are above 2.5.

The responses from the respondents interviewed in respect to research question 3 are also in line with the above analysis. The interviewees maintain that technology can reduce cost of university education. In addition

to items 16-20, they also added that technology can reduce personal cost, reduces work load, decreases travels and accommodation allowances among others.

Hypothesis: There is no significant difference in the mean ratings of respondents on the impacts of technology on effective management.

Table 4: ANOVA analysis of the Hypothesis

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-calculated	Significance (Sig.)
Between Groups	4.15	2	1.383	1.129	0.327
Within Groups	400.039	386	1.225	-	-
Total	404.189	388	-	-	-

From table 4, the F-value is 1.129 and the P-value is 0.327 at 0.05 level of significance. Since the P-value is more than the level of significance, the hypothesis is therefore accepted as stated.

DISCUSSION OF FINDINGS

The main purpose of the study was to investigate perceptions of stakeholders on promoting effective public university education management through technology. The following are the findings from the various research questions. The analysis of data in respect of the first research question indicates that all the items in the table were accepted as the impact of technology on students' academic achievement. This is in line with the findings of Bhattar. A (2023). The author observes that integrating technology promotes lifelong learning. With the introduction of technology learning, students use it to seek and acquire knowledge throughout their life. C.D Aryelo (2018) agreed that technology can improve more flexible and democratic styles of teaching and learning. The author maintains that implementing technology shift the learning environment to be more learned centered.

The findings from the analysis of the research question 2 shows the perception of stakeholders on management practices through technology for effective management of public universities in North West States. The responses reveal that technology can lead to improvement in paperless minutes, easy distribution of work, saves time, promotes virtual meetings to enhance effectiveness, reduces work load, increase productivity and reduces conflict of interest among staff and students. This is in line with the submission of Ranjit, K.E et al (2023) that Management information system can develop educational administration for secretarial practices, admission, personnel management among others. Farmansyah (2020) found that ICT plays a crucial role in enhancing the efficiency, effectiveness and overall performance of local government organizations. The study emphasizes the need to train personnel on the usage of technology and adopting innovative ICT solutions to enhance organizational performance.

Garcia, Anjali Malik (2021) found that organizations with higher levels of technology absorptive capacity and technological engage in effective organizational learning processes. This leads to improved innovations and improved performance outcomes. The author emphasizes the need to build and enhance technological capabilities within organizations in order to foster continuous learning and adaptability.

Imarticus (2023) corroborate with the earlier findings that for any institution to flourish, they must be collaboration, efficiency in operational tasks and digital transformation. In addition, Haruna (2024) opine that 21st century has been the age of technological advancement and the impact of technology on management has been profound resulting in faster more efficient and cost-effective process.

In respect of research question 3, the findings show that stakeholders agreed that technology can reduce cost of maintaining universities. This is corroborated by Munoz (2017) where the author noted that with the use of technology in carrying out task's organizations can eliminate manual errors, reduce operational costs and also improve overall efficiency. It was also noted that technology can reduce the need for physical infrastructure and resources, leading to further cost savings. The use of e-books and online books will reduce cost of printing,

online libraries and articles database will reduce subscription and storage costs. While online students' services like enrollment, registration reduces administrative cost. Through this, the universities can attract a larger number of students irrespective of their location. By doing this, the cost per student will reduce. The use of technology can also reduce the need for physical infrastructure and resource which will also save cost. If students are taught online, there will be no need to spend money on physical structures for such student. In addition, technology in the classroom does not only help students develop necessary skills for a digital world, but it also opens up opportunities for a more learning experience. Educational institutions all over the world seek ways to reduce cost and still achieve learning outcomes through technology in university education.

The analysis of the hypothesis indicates that the null hypothesis is accepted. This is because the F-cal is less than the F-tab. therefore, the null hypothesis of no significant differences in the mean ratings of the respondents on the impact of technology on effective management stand accepted.

CONCLUSION

Stakeholder's perception on promoting effective public university education management through technology shows that technology has brought about revolution in the way institutions operate, allowing them to achieve organizational goals easily, enhancing students learning outcomes, enhancing effective management and reducing overhead cost. Therefore, organizations that integrate technology stand to gain a lot more and flow freely with the 21st century. It should be noted that the essence of technology is not to replace humans but to strike a balance between technology and human beings. When universities embrace technology, she can drive innovation, improve student learning outcomes, enhance effective management and reduce operational cost. In short, technology has become an indispensable component of modern organizations significantly influencing overall effectiveness, and universities cannot be left out.

RECOMMENDATIONS

Based on the findings, the following recommendations were made:

1. There is need to modernize university education with digital technologies in order to improve students' academic achievement.
2. While technology is very crucial for effective management, teachers training and provision of infrastructural facilities must be giving top priority. If not, the aim of leveraging technology will be defeated.
3. Effective planning on the use of technology for cost reduction the university education should be incorporated into the university portal for effectiveness and efficiency.

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