

**ASSESSMENT OF THE UTILIZATION OF MODERN TECHNOLOGY IN THE
MANAGEMENT OF TERTIARY INSTITUTIONS IN BAYELSA STATE
(EDUCATION LECTURERS PERSPECTIVE)**

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ABSTRACT: *The study examined the extent to which modern technology is utilized in managing tertiary institutions in Bayelsa State. The study adopted a descriptive survey design. Three research questions were raised to guide the study. The population of the study was all lecturers of the Faculty of Education in tertiary institutions in Bayelsa State. A sample of 30 lecturers drawn from the 6 departments in the faculty was used for the study. The instrument for data collection was a structured questionnaire styled as utilization of Modern Technologies Questionnaire developed by the researcher and validated by experts. The reliability analysis was done using Pearson Product Moment Correlation, which yielded a value of 0.72. The research questions were answered using mean and standard deviation. The findings revealed that the extent of utilization of modern technologies in the management of tertiary institutions was low. It was recommended that adequate and regular funding should be provided for tertiary institutions to utilize modern technologies for effective service delivery.*

KEYWORDS: utilization, modern technology, tertiary institution.

INTRODUCTION

Education in the broad sense is the entire process of socialization by which man and woman learn to adapt, and, where necessary, conquer their environment. It is the process of developing the cognitive, affective and psychomotor faculties of the individuals and groups in order to equip them with knowledge and skills necessary to survive and make progress in the human society.

The National Policy on Education (2014) states “Education in Nigeria is an instrument “par excellence” for affective national development...” It is therefore, desirable for the nation to spell out in clear and unequivocal terms the philosophy and objectives that underlie its investment in education. Ojoawo (2015) posited that education is recognized both as an end in itself and as a mean to achieve many other ends. It is the only sector in the economy that has the primary responsibilities of human resources development from cradle to adulthood for the purpose of national development. Akangbou (2011) wrote that “Education is a service provided in all countries of the world with many objectives in mind. These objectives include the development of the skills required for a more rapid growth of the economy and provision

of basic knowledge to the citizens of the country concerned". The importance of education in the social and economic development of a country, the success, survival and continuity of any organization in a competitive world is ultimately determined by the productivity of its employees (workers) as well as the satisfaction which these workers derive from performing their jobs (Olanyan 2019).

Tertiary Education is an indispensable tool for Nigeria's sustainable socio-economic development. It is a powerful means for manpower training and development. An individual receives tertiary education immediately after senior secondary schooling in order to acquire specific skills and competencies in specialized areas that will enable such individual participate actively in socio-economic activities of the society. According to the Federal Republic of Nigeria (FRN, 2014), tertiary education is given after post basic education in institutions such as the universities, polytechnics, colleges of education, monotechnics, and other specialized institutions. The goals and objectives of tertiary education include contributing to national development through high level manpower training, providing accessible and affordable quality lifelong learning opportunities and career counselling in formal and informal education programmes, which inculcates into students the requisite skills for self-reliance in the world of work. Tertiary education therefore, produces skilled manpower relevant to the needs of the labour market (FRN, 2014). Oshia (2018) submitted that the achievement of this goal can only be realized if the stakeholders charged with the responsibility of managing the entire process are up-to-date with the best practices.

Management is the control of both human and materials resources in order to achieve desired goals. Management of tertiary institutions is the individual or group of people saddled with the responsibility to control, to manage, and to organize both human and material resources in tertiary institutions. Aina (2011) posited that Education management is the identification, organization and coordination of human, material, physical and fiscal resources as well as other available educational programmes, using them judiciously towards the attainment of objectives of education.

Technology has affected the life of mankind in all ages. When the changes and transformations in the history of mankind have been analyzed, the traces of technology can be observed. This situation continues today by increasing its intensity. Today, technology is much more involved in everyday than at any other period in history. Technology and in particular information technology is involved in every step of the phase of human life and education system has also been affected by this change (Demir 2016). Technology has become an indicator of quality in educational practices generally and at such, it does not affect only the teaching and learning processes again, but has begun to transform management processes radically (Cetin, 2016). Changing the nature of teaching and learning naturally requires new management policies and practices. The use of technology in school management process refers to the application of electronic devices during managerial processes. It involves using technological devices such as the computer to discharge managerial functions.

Modern technologies have existed for a long time, so with the development of computers. They began to appear in different variations: “Modern and Communication Technologies” “Computer Modern Technologies” etc. Modern technology is the integration of computers, electronics and communications. Managers sometimes make decisions under conditions of great uncertainty. Modern technologies act as consultants. The corresponding modern technologies are a system of decision support and decision-making rests with the manager. They have properties that are useful for the school manager; they help to overcome the gap in bad informed decisions. Gurina (2014) submitted that modern technologies act as a technical aid in the elaboration of new models and instruments of learning and teaching in educational establishment.

Appraising the relevance of the use of technology in managing tertiary institutions, Cetin (2016) submitted that, effective use of technological devices in school management guarantees improved fee collection, quick responses to emergency, better security and control, comprehensive reporting, enhanced student learning, managing attendance and discipline, effective resource allocation and improved communication and interactions. Despite this widespread acknowledgement of the relevance of the utilization of technology, many institutions of higher learning are found wanting in either utilization or competency.

Zandvliet and Straker (2014) emphasized that the application of modern technologies is increasing in almost all fields, but many schools have been slow in adopting these technological changes. Also, Brummelhuis described the integration of computer technologies in the educational process as a complex and multifaceted innovation having a lot of issues which need to be addressed successfully before it is possible to talk about effective innovation. He further noted that the slow adaptation of modern technologies can be credited to cost, and users knowledge.

This research is rooted in the theoretical framework of Technology Acceptance Model (TAM) propounded by Davis Fred in 1989. The theory states that the perceived usefulness and ease of use determine an individual’s intention to use a system, with the intention to use serving as a mediator of actual system use. The main aim of the theory is to describe factors that determine technology acceptance, information technology usage, behavior and how users come to accept and use technology. The theoretical basis of technology acceptance model is based on the assumption that when users are presented with new technology, three major factors influence their decision on how and when they will use it (Kingdom-Aaron, 2019). The first determinant is its perceived usefulness (pu), the second is the perceived ease of use (PEOU) and the third determinant is user’s attitude towards usage (ATU). Consequently, perceived usefulness is the degree to which a user believes that using a particular system would enhance its performance. On the other hand, perceived ease of use (PEOUS is the degree to which a user believes that using the particular technology would be free from effort.

Statement of Problem

Observations and research report have shown that despite the level of usage of modern technologies in school management in developed countries and their consequent achievement, developing nations are still not using these modern technologies. This research therefore is aimed at assessing the level of utilization, the challenges associated and the possible support strategies needed to improve the use of modern technologies in the management of tertiary institutions in Bayelsa State, Nigeria.

Purpose of the Study

The main purpose of the study was to assess the utilization of technologies in the management of tertiary institutions in Bayelsa State. Specifically, the study was designed to determine the following:

1. The extent to which technologies were utilized in the management of tertiary institutions.
2. The challenges associated with the use of technologies in managing tertiary institutions in Bayelsa State.
3. The possible support strategies needed to improve the utilization of technologies in the management of tertiary institutions in Bayelsa State.

Research Questions

The following research questions were raised to guide the study.

1. To what extent are modern technologies utilized in the management tertiary institutions in Bayelsa State?
2. To what are the challenges associated with the use of modern technologies in managing tertiary institutions in Bayelsa State?
3. What are the possible support strategies needed to improve the utilization of technologies in the management of tertiary institutions in Bayelsa State?

METHODOLOGY

Descriptive survey design was adopted in this study. The population comprised all education lecturers in the three higher institutions which offer education courses.

A purposive sampling technique was used to select Niger Delta University out of the other two higher institutions, because it is the only institution that has graduated students in education. A stratified random sampling was used to select five (5) lecturers each from the 6 departments in the faculty of education.

All the 30 lecturers from the 6 departments formed the sample. Instrument for data collection was a structured questionnaire tagged as "Utilization of Modern technologies questionnaire" developed by the researchers. It was based on a 4 point scale of strongly agree (SA), Agree

(A), Disagree (D) and Strongly Disagree (SD) with corresponding values of 4, 3, 2, and 1 respectively.

The instrument was validated by experts in measurement and evaluation. It was subjected to pilot testing and the outcome was analyzed using Pearson Product Moment Correlation formula Cronbach Alpha (PPMC), which yielded a coefficient value of 0.72. One-on-one mode of questionnaire administration was adopted and 100% return rate was achieved.

Mean and standard deviation were used to answer the research questions. Mean values of 2.50 and above were considered accepted, while the values below 2.50 were considered rejected.

Research Question 1

To what extent is modern technology utilized in the management of tertiary institutions in Bayelsa State?

Table 1: Mean and standard deviation of responses on the extent of utilization of modern technologies.

S/N	Statement	\bar{X}	St.D	Decision
1	The management of the school used modern technology effectively.	2.40	0.63	Low
2	The administrators are aware of the importance of technology in school management.	2.59	0.65	Moderate
3	The administrators use technology during decision making process.	2.13	0.54	Low
4	The e-learning facilities are effective in the school I work.	2.98	0.83	Moderate
5	The administrators use technology during communication and interaction within the school community.	2.40	0.63	Low
6	They use modern technological gadgets that aid quick response to emergencies.	2.40	0.63	Low
7	Technological gadgets are used in providing security and control of the campus.	2.31	0.60	Low
8	The management of the school I work uses technological gadgets for data management.	2.43	0.62	Low
9	The management of the school I work uses technological gadgets for comprehensive reporting.	2.51	0.63	Moderate
10	The management uses computerized system to collect fees.	3.98	1.07	High
	Grand/Mean	2.49	0.63	Low

Source: Field work (2019)

The results in the table above revealed that the extent of utilization of modern technologies in the managing of tertiary institutions is low. This is based on the criterion mean of 2.50. The

only area where school management highly utilizes modern technologies is in the collection of fees from students.

Research Question II

What are the challenges associated with the use of modern technologies in managing tertiary institutions in Bayelsa State?

Table 2: Mean and standard deviation of respondents on the challenges associated with the use of modern technologies.

S/N	Statement	\bar{X}	St.D	Decision
1	Lack of knowledge of using modern technologies.	1.98	0.33	Major
2	Cost of the facilities	1.80	0.33	Major
3	Ignorance of the existence of the facilities.	1.13	0.43	Minor
4	Attitude towards the use of the facilities.	2.00	0.65	Major
5	Lack of time to use the facilities.	1.34	0.31	Minor
	Grand/Mean	1.51	0.45	

The result shown in the table above revealed that lack of knowledge, cost of the facilities, and attitude of the users of the facilities are major challenges associated with the use of modern technologies in managing tertiary institutions in Bayelsa State.

Research Question III

What are the possible support strategies needed to improve the use of modern technologies in the managing of tertiary institutions in Bayelsa State?

Table 3: Mean and standard deviation of responses on possible support strategies needed to improve the use of modern technologies.

S/N	Statement	\bar{X}	St.D	Decision
1	Constant training of management staff.	1.89	1.03	Major
2	Provision of funds by Government and other agencies.	2.10	1.11	Major
3	Developing the right attitude towards the use of modern technologies.	1.17	0.90	Minor
4	Enacting laws and policies that will create a platform for compulsory usage of modern technologies.	1.90	1.03	Major
	Grand/Mean	1.84	1.02	

The result in the table shown above revealed that constant training of staff, provision of funds by Government and other agencies, and enacting laws and policies are major support strategies needed to improve the use of modern technologies to manage tertiary institutions in Bayelsa State.

DISCUSSION OF FINDINGS

The results from the study revealed that the extent of usage of modern technologies in managing tertiary institutions was low. This finding is in line with the finding of Gurina (2014), and Brummelhuis who reported that there is a slow adaption of modern technologies in schools in developing and underdeveloped nations.

The study established that lack of knowledge, cost of modern facilities, ignorance of the existence of the facilities, poor attitude towards the use of facilities are major challenges associated with the use of modern technologies in managing tertiary institutions in Bayelsa State. This finding collaborates the findings of Aina (2011) and Kingdom Aaron (2019) who independently reported that finance and ignorance are major challenges affecting the use of modern technologies in the management of tertiary institutions.

Finally, the study established that constant training, regular and adequate funding, developing the right attitude towards the use of modern technologies and enacting laws are policies that will create enabling platform for usage of modern technologies in the management of tertiary institutions Bayelsa State.

CONCLUSION

Evidence from the results of the study revealed that the extent of utilization of modern technologies in tertiary institutions was low. Lack of knowledge, cost of facilities, poor motivation are some of the challenges associated with the use of modern technologies in tertiary institutions in Bayelsa State.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Information and communications technologies facilities should be made available to both lecturers and non-academic staff with ease and unrestricted access.
2. Adequate training of staff of tertiary institutions on ICT should be given on regular basis.
3. The Government should as a matter of urgency ensure that these modern facilities are utilized in tertiary institutions in the state.

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