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An Empirical Evaluation of the Role of Information and Communication Technology in Advancement of Teaching and Learning

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Abstract

This work reports an investigation into the role of Information and Communication Technology in promoting efficiency in teaching, using Federal University Lafia as a case study. The University is amongst the 9 newly created federal universities in Nigeria. Research questions and hypothesis were developed and used as a guide in the study. Data was collected via a questionnaire. The collated data were analysed using mean and standard deviation, while T-test was used in testing the hypothesis proposed for the study. The results from the sample survey of fifty (50) lecturers show that Information and Communication Technology plays a vital role in promoting efficiency in the teaching process. The T-test analysis show no

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significant difference between the opinions of Male and Female lecturers for most items that were considered in the course of the study

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Keywords: Information technology; teaching; learning; efficiency; Likert scale; T-test; ICT.

1. Introduction

There is no doubt that Information and Communication Technology (ICT) has a profound effect on the way people live. Contemporary methods of e-commerce, provision of services including learning and teaching, banking, entertainment and many others are becoming progressively dependent on ICT. In the work of Tony¹, efficiency was defined as the state or quality of being efficient. Furthermore, efficiency can also be an adjective that means working productively with minimum wasted effort or expense. Therefore, it could be gathered that ‘efficiency’ is the state or quality of working productively with minimum wasted effort or expense. Expounding the words ‘expense’ and ‘effort’ in relation to ICT, ‘expense’ can be viewed in terms of cost, productivity and time whereas ‘effort’ could be viewed in terms of providing seminars or workshops, training and technical support.

This paper seeks to examine how ICT has enhanced productivity in teaching with minimal wastage of effort (technical support, training, workshops/ seminars) or expense (time, cost and productivity) in Federal University Lafia (FULAFIA), Nasarawa State, Nigeria.

The notion as perceived by most people that ICT is only about computers is not entirely true, but it involves computer accessories like speakers, projectors, printers, modems, networks, electronics, routers, just to mention a few. Nweze² is of the opinion that “Information and Communication Technologies have introduced new method of teaching and conducting research and have brought into education, facilities for online learning, teaching and research collaboration”. This can be seen in the newly established Federal Universities in Nigeria, of which Federal University Lafia is one of them. These universities have embraced the use of ICT in order to improve teaching and learning.”

A recent study by Yusufet *al.*,³ stated that the presence of “ICT in education is evident, but the impact has not been as extensive as in other fields of endeavor. The moving of the world to digital media and information has made the role of ICT in education to become more important, and this importance will continue to grow and develop in the 21st century.”

Two vital components required especially in education for the advancement of teaching and learning are Information and Communication. Timely and accurate information is essential in teaching because, latest developments in various fields of study could be the key between being progressive or regressive. As an illustration, a lecturer that is up-to-date with the current trends in his field of specialization could be a vital link in passing to his student timely and current information, thereby making them as current as their colleagues in the developed countries of the world. Communication on the other hand if not effective could be a stumbling block for current information to be passed on or even understood between the lecturer and his students, hence the need for an efficient and effective medium of communication if at all teaching itself must be effective and efficient.

However, though both government and the university management are doing a lot to enhance highly rated standards in teaching by creating commensurate educational policies, there are a lot of difficulties still facing Nigerian universities. To overcome some of these challenges, ICT facilities were put in place in these institutions. Regardless of this, there are misgivings as to whether these universities have appreciated the role of ICT in promoting efficiency in teaching or whether the lecturers particularly recognize the role of ICT and its facilities in enhancing efficiency in teaching. This premise forms the basis of this study.

Research Questions: The general aim of the study is to determine the role of ICT in promoting effectiveness in teaching in the University system. The intent of the research is to investigate how ICT in teaching is perceived, how ICT in teaching has been hampered and ascertain if the availability of ICT tools has enhanced teaching and

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