Int. j. adv. multidisc. res. stud. 2023; 3(2):398-400

Received: 02-02-2023
Accepted: 11-03-2023

International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

Information and Communication Technologies (ICTs) as a Source of Education in Selected Higher Institutions of Education in Zambia

Dr. Sidney Kawimbe
ZCAS University, Lusaka, Zambia

Corresponding Author: **Dr. Sidney Kawimbe**

Abstract
Application of ICTs in every sphere of life has taken a new high following the reduction in the cost of connectivity and access to ICTs in many parts of the global, Zambia inclusive. This paper aims to examine the stances of students towards the use of ICTs as a source of education. The methodology adopted was that of original research, with a qualitative approach. This study included 80 students from 8 Higher Education Institutions (HEIs), both private and public. The independent variables of this study were gender, year of study and nature of program of study and preferred ICT gadget for use in acquiring education. In order to assess the attitudes of students towards the use of ICT in education, a five-point Likert scale was used across twelve statements. The results of the research show that students are very interested in using ICT as a source of education as opposed to other sources such as books from the library. The prevalent gadget used is the smart phone due to its portability and multirole usage. Thus, it is evident that ICTs have become very important pedagogical resources in approaching the teaching and learning processes in an innovative way.

Keywords: Attitudes of Students, ICT in Education, ICT, Education Technology, Education

1. Introduction
In Zambia, ICTs in Higher Education Institutions (HEI) like elsewhere in Southern Africa, has been affected by lack of adequate international communications infrastructure. The problem is particularly acute for Zambia because it is a landlocked country, which has had to rely on satellite links or interconnection agreements with neighbouring countries to gain access to international telecommunications networks, (Panos 2014) [2]. This means that internet use in particular has been expensive in comparison with other parts of the world. However, this means that the Zambian government as well as other countries in sub-Saharan Africa need to rise up to the challenge as ICTs is invaluably the drivers for effective leaning in HEI. Mndzebele, (2013) [3] also submitted that, lack of infrastructure, time, qualified lecturers and financial resources are among the challenges faced by HEIs when introducing ICT in developing countries. Apart from ICT infrastructure challenge, some issues that the government has been responding to revolve around ensuring equity and equality of education provision of relevant education via curriculum change to incorporate the contemporary issues such as entrepreneurship and gender.
However, much attention is being accorded to the promotion of ICTs in HEIs. The Zambia National ICT Policy has seen the embracing of ICTs in education as a strategic issue for national development and this has been reflected in the goal of the education sector during the 2012-2015 National Implementation Framework III in support of Strategic National Development Plan (SNDP), as both have sought to increase equitable access to quality education and skills training to enhance human capacity for sustainable national development. In the context of this goal, the strategic focus of the education and skills sector, as specified in the SNDP. Indeed, one cannot refute the fact that ICT can play an important role in the higher educational sector by improving the access to information (one of the major problems in the Zambian higher education). Therefore, adopting and integrating ICTs into HEIs curriculum, has potential to offer high quality education that will enable Zambia as a country to realize the objectives in the vision 2030. ICT can help in fostering the goals of the Ministry of Education that are encouraging learner cantered methods of teaching. Acquah (2012) observed that a subject like ICT requires facilities such as computers, internet connectivity, projectors, relevant textbooks and other peripheral devices to be in place to enhance implementation.

2. Methodology
Various scholars have commented on research design. In the views of Bryman (2008) [1], research design is a framework for

collection and analysis of data which one employs in a study. This is usually designed according to epistemological and ontological assumptions a researcher might have adopted. Qualitative and quantitative are the two main research paradigms used in social research which Bryman (2008) [1] refers to as positivism and interpretativism respectively. Bryman observes that positivism has been an epistemological position that supports the utilization of natural sciences to the study of social reality and beyond whereas interpretativism is an epistemological position that requires the social scientists to understand the subject meaning of social act. In this case, qualitative approach was adopted.

The main aim of the study was to collect opinions from the respondents to examine the state of the role of ICTs in delivering the higher education in the context of Zambia. Collected data were duly tabulated and analyzed using tabular analysis. Secondary information was collected from various documents such as books, newsletters, reports, magazines, journals, daily newspaper, www, as well as from existing literature to understand the uses of ICTs for offering various levels of higher education in different jurisdictions which further simplified the meaning by arguing that research design could be seen as a plan on how a study will be carried out or a detailed outline of how research will take place.

Achola (1988) [4] also defines it as, "the planning of any scientific research from the first to the last step. It is a specification of the most adequate operations to be performed in order to test specific hypothesis under given conditions. The study is empirical and explorative in nature and therefore the information presented is based on selected both private and public HEIs. Primary data was collected using structured questionnaire. In this study stratified random sampling technique was used in terms of respondents.

3. Results and Discussions

A total of 80 respondents were identified using the saturation principle of sample size determination as shown in table I below, and altogether 80 questionnaires were distributed to students and all the 80 were returned as they were online questionnaires, representing a 100% response rate. The sampled institutions were carefully selected to represent a mix of public and private HEIs as shown below in Table 1:

Table 1: HEIs

S. No	Name of HEI	Number of Respondents
1	ZCAS University	10
2	NIPA	10
3	Evelyn Home	10
4	Kwame Nkhuruma University	10
5	Oak University	10
6	Copperbelt University	10
7	Rockview University	10
8	Northrise University	10
	Total	80

As regards the gender distribution, 40 females and 40 males were selected in order to ensure that the gender imbalance does not affect the results as can be seen from table 2 below:

Table 2: Gender Distribution

S. No	Gender	Number of Respondents
1	Females	40
2	Males	40
	Total	80

The nature of the programmes that the students were undertaking were also considered so that the researcher could have a diversified programme of study distribution. The distribution was further categorised as shown in Table 3. The four programmes of study were picked because they had more student's number across all HEIs than any other programme.

Table 3: Programme of study distribution

S. No	Programme of study	Number of Respondents
1	Accountancy	20
2	Business Administration	20
3	Marketing Management	20
4	Computer Studies	20
	Total	80

As regards the choice of gadgets used by the respondents, 61 students indicated that they mostly use smart phones as the prime gadget of use in getting education. They indicated that the smart phone was mostly appropriate as it can be portable and apart from using the gadget for accessing the academic material, they are also able to use the same gadget for social aspects such as socializing.

21 students reported that they preferred tablets, claiming that the gadget is fancy and more contemporary in the modern environment especially the Gen Z generation. 13 students preferred to use laptops to access the educational material. A paltry 3 indicated that they used the laptop. Lastly, 2 of the respondents indicated that they used other means to access the learning and educational materials as shown in Table 4 below:

Table 4: Gadgets preferences

Gadget in use	Preferred for accessing education material
Smart phone	(n=61/80)
Tablet	(n=21/80)
Laptop	(n=13/80)
Desktop	(n=3/80)
Others	(n=2/80)

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Table 5: Programme of study distribution

S. No	Programme of study	Number of Respondents
1	Accountancy	20
2	Business Administration	20
3	Marketing Management	20
4	Computer Studies	20
	Total	80

4. Conclusions

It is evident from the responses as shown in table 1 that students feel that ICTs can enhance their learning and that ICT gadgets are exceptionally good as compared to the brick-and-mortar way of learning where the lecturer would stand in front and giving lecturers. The modern trend now is learner centred and hence the ideal learning environment where the learner learns at their own time and in their convenience using different gadgets. The rigid use of textbook material and its high complexity and great diversity of content does not motivate students, as it imposes great difficulties on them in the understanding of concepts and how to relate the topics being studied with real applications. The findings also showed that students prefer the flexibility in the learning process through ICT-based education.

In areas with a continuous change of technological content, as with information and communication technologies, the problem is the difficulty in selecting and organizing the knowledge to be taught. In terms of technical support, experts, and course materials ICT-based education system is expected to enhance its capability to satisfy the user groups. On the one hand, new knowledge has to be added to the curriculum constantly, and at the same time any other knowledge becomes obsolete. On the other hand, content has to be organized and ordered, relating every concept to others, which is not a trivial task because of their number and how often they change. The ICT-based education system is a holistic approach where a very high level of integrity and moral standard is required by instructors, ICTs experts, students and other stakeholders. To be effective everyone concerned with the process has to upgrade themselves continuously to keep pace with the ever-changing environment. The use of ICTs which has revolutionized the higher education through virtual campus which has been more practical and well accepted by the all people around the globe. Activities of the virtual Campus are centred around www. User groups' understanding and attitude towards www are instrumental to the development and sustainability of the system.

5. Acknowledgement

I would like to thank our Vice Chancellor Professor Dauglas Kunda and Dr Kelvin Mukolo Kayombo for the encouragement and facilitation of my research by way of allowing me to spending time to collect data and financing my attendance to the National Research and Innovation Symposium (NRIS) organised by the Ministry of Education.

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