

**MEETING THE INFORMATION NEEDS OF SCHOLARS AND STUDENTS IN THE
DIGITAL ENVIRONMENT: CASE STUDY OF ZAMBIAN PRIVATE
UNIVERSITIES**

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ABSTRACT

The future of Africa and indeed Zambia depends on the development of its human capacity - the ability for citizens to develop and apply new ideas. Through education, individuals acquire the skills they need to provide for themselves, contribute to the health and welfare of their families and communities, solve local problems, and grow the local and national economy. The role of universities in national development is the subject of interest. Universities have a major role to play in equipping students with knowledge and skills that would position them to be productive in society. With a growing demand in higher education in Zambia, public universities find it difficult to admit a large number of prospective students due to limited resources and spaces. In this regard, private participation in the provision of tertiary education has become paramount. A large number of private universities have been opened in the country. These universities are helping to meet the unfulfilled demand for higher education in the country. However, there are serious doubts about the quality of education and research provided in private universities in Zambia. One of the reasons for this is limited access to information. The role and importance of information in education cannot be over-emphasised. The service of information provision in the era of a digital environment has been changing with focus being tilted towards the use of Information and Communication Technologies (ICTs) as an enabler for accessing information in the information society. Today, information providers are required to provide information for scholars and students as well as enable access to information and knowledge recourses without boundaries. Few studies if any have investigated how Zambian private universities are meeting the information

needs of scholars and students in the digital environment. Thus, the aim of this study was to ascertain how Zambian private universities meet the information needs of scholars and students in the digital environment. The study was largely quantitative in nature. A self-administered questionnaire was used to gather primary data. Twelve (12) out of sixteen (16) Private Universities in Zambia were purposively selected to participate in the study. The findings are presented and include enrolment levels; availability of library facilities; sources of funding for libraries and services offered; roles of librarians; availability of ICTs, use of ICT facilities and challenges private universities face to provide ICTs. The paper concludes by recommending that private universities in Zambia must fully embrace ICTs so as to wholly exploit the potential they have in meeting the information needs of scholars and students.

Keywords: Higher education, digital environment, University education, Information access, Zambia, Private universities, Research, Libraries, Information and Communication Technologies.

1. INTRODUCTION

Information plays a very critical role in the development process of any given society. Thus, it is crucial in all sectors of the economy. One major component of the economy that takes pleasure in the value of information is the education sector. Education is a major instrument for economic development and poverty reduction. One of the fundamental requirements of ensuring quality education is to prepare learners to participate in an information society in which information and knowledge are the most critical resource for social and economic development (Obanya, 2005). Scholars too require information to develop a desired human capital. Today, the potential of the digital environment to meet the information needs of scholars and students cannot be overemphasised. In the digital environment, information can be made available using Information and Communication Technologies (ICTs). ICT refers to technologies that provide access to information through telecommunications. This includes televisions, radios, satellite, the Internet, wireless networks, cell phones, and other communication mediums. These ICTs have a significant impact in all areas of human activity and the education sector is no exception.

ICTs have the potential to empower students and scholars with unique as well as direct access to information. The instantaneous access of information through the Internet has made vast amounts of information and data available to anyone with a computer, a modem and a provider. ICTs have the potential to increase learner independence and ensure students' active participation. This is possible where students can have access to learning material independent of lecturers and can have self-paced lessons not restricted by space or time. In addition, a student can have access to electronic learning resources like Encarta encyclopaedia, and other scholarly articles available electronically that have the potential to increase knowledge and add value to the student learning process. Scholars can also benefit from the use of ICTs in education through not only integrating different ICTs into the various teaching activities but also accessing a variety of information for teaching and research purposes.

However, the capability of ICTs to provide and disseminate scholarly information remains a struggle for most universities. Higher education institutions in Zambia are at a stage where they are striving to improve the ICT infrastructure, content and skills and making resources to meet the growing needs of students and faculty as well as responding to the pressure for effectiveness (Sharp, 1994). They are also faced with the dilemma of turning ongoing ICTs initiatives into opportunities and understanding what ICTs mean to the transformation of higher education in general and to learning, teaching and research in particular. It was therefore, imperative to investigate how Zambian Private Universities meet the information needs of scholars and students in the digital environment.

2. RESEARCH OBJECTIVES

There were several objectives of this study which were investigated. These included enrolment levels; availability of library facilities; sources of funding for libraries and services offered; roles of librarians; availability of ICTs, activities for which students and scholars use ICT facilities for and challenges private universities face to provide ICTs. In order to achieve the afore-stated objectives, endeavours were made to find answers to the following questions:

1. *What are the total enrolment levels in Zambian private universities?*
2. *Do Zambian private universities have library facilities?*
3. *What are the sources of funding for private university libraries in Zambia?*
4. *What are the roles of librarians in Zambian Private Universities in the digital environment?*
5. *Do private Universities in Zambia have ICT facilities?*
6. *What do Zambian Private Universities students and scholars use ICTs for?*
7. *What challenges do Private Universities in Zambia face to provide ICT facilities?*

3. METHODOLOGY

The research design was centred on a quantitative methodology. The main data collection instrument employed for primary data was a self-administered questionnaire. Observations to some of the private universities were also undertaken. Twelve (12) private universities purposively selected participated in the study. These private universities included: Cavendish University, University of Lusaka, Zambian Open University, University of Africa, Lusaka Appex Medical University, Liutebm University, DMI St. Eugene University, Chreso University, Copperstone University, Northrise University, Zambia Catholic University, and Rusangu University.

4. FINDINGS AND DISCUSSION

The findings of this study are reported in the following main themes: total enrolment levels; availability of library facilities; sources of funding for libraries and services offered; roles of librarians; availability of ICTs, use of ICT facilities and challenges private universities face to provide ICTs.

4.1 Total enrolment levels in Zambian Private Universities

Findings from the field revealed that 8.3% of the participating Zambian Private Universities have a total enrolment of below 500 students, 25% have a total of between 500 and 1000 students, 33.3% have a total enrolment of between 1500 and 2000 students and 16.6% have a total enrolment of above 2000 students. Table one below shows the results on total enrolment levels in Zambian Private Universities.

Table 1: Total enrolment levels in Zambian Private Universities

Total enrolment levels	Frequency	Percentage (%)
Below 500 students	1	8.3
Between 500 and 1000 students	3	25
Between 1000 and 1500 students	4	33.3
Between 1500 and 2000 students	2	16.7
Above 2000	2	16.6
Total	12	100

It is clear from the findings that most private universities in Zambian have a total enrolment level of between 1000 and 1500 students. Most of these Zambian Private universities are quite new and therefore, have not yet attracted a large number of students.

4.2 Availability of library facilities in Zambian Private Universities

From the findings depicted in table 2 below, all the participating private universities (100%) indicated that they have a physical purpose built library. The establishment of libraries clearly shows that these institutions of higher recognize the integral role a library plays in any institution of higher learning and as such it is imperative that each and every private university in Zambia establishes one. Libraries that are attached to academic institutions like private universities are significant for two main purposes; they support the institution's curriculum and also promote the research needs of students and staff (Okuy, 2005). It is for this reason that all participating private universities have established academic libraries to enhance their service delivery. University education is universal education and thus to be able to provide the kind of education that is universally recognized, private universities need to have infrastructure that supports learning as well as research and a library is a key factor in that sense.

Table 2: Availability of library facilities in Zambian Private Universities

Response	Frequency	Percentage (%)
Yes	12	100
No	0	0
Missing	0	0
Total	12	100

However, further findings on the size of library collection in Zambian private universities revealed that 25% have a collection of less than 2,000 materials in their libraries while another 25% indicated that their collection is between 2,000 and 5,000 materials. On the other hand, 8.3% of the participating institutions highlighted that they have a collection that is between 5,000 and 10,000 materials and the remaining 41.7% revealed that their collection is more than 10,000 library materials. This is summarised in table 3 below.

Table 3: Size of library collection in *Zambian Private Universities*

Size of library collection	Frequency	Percentage (%)
Less than 2,000 materials	3	25
More than 2,000 but less than 5,000 materials	3	25
More than 5,000 but less than 10,000 materials	1	8.3
More than 10,000 materials	5	41.7
Total	12	100

Academic libraries must provide access to a large amount of resources in their libraries to serve users and increase the visibility of their institutions and as a means of prestige (Campbell, 2006 and Lombardi, 2000). Notably, libraries have always served as access points for information and as focal points for teaching, learning and research; they are expected to provide standard information resources to the students and scholars of their mother institutions. Thus a well-established library is essential for any academic institution.

4.3 Sources of funding for libraries and services offered in *Zambian Private Universities*

The research findings from the field divulge that, the majority (50%) of the libraries of private universities in Zambia are funded by their mother institutions (the private universities to which they belong). On the other hand, 16.7% disclosed that they are self-funded while 33.3% revealed that they are funded by well-wishers and none of the libraries is financially supported by the *Zambian* government, members of staff or their students. The findings are portrayed in table 4 below.

Table 4: Sources of funding for libraries and services in *Zambian Private Universities*

Source of funding	Frequency	Percentage (%)
Self-funded	2	16.7
Members of staff	0	0
Government	0	0
Well-wishers	4	33.3
Mother institution	6	50
Total	12	100

From the findings in the field, it is clear that the main source of funding for academic libraries attached to private universities in Zambia are the mother institutions of those libraries (universities where the libraries belong). Thus, funding of private university academic libraries is entirely depended on the budgetary allocation by the mother institution. These libraries tend to be given a chunk of the revenue amassed by the private university through the payment of user fees as well as from other sources. To support the libraries, many private universities also seek aid from well-wishers for donations as it is evident that most private universities in Zambia are religious affiliated which may not have a profit making motives.

It is however, disappointing to note that the majority of libraries in private universities in Zambia are solely dependent on the funds that come from their mother institution. This is one of the key reasons why funding in these libraries tends to be inadequate and inconsistent hence affecting the delivery of information through the use of ICTs. Depending on the mother institution as well as well-wishers to fund library activities inhibit libraries from being innovative and coming up with ventures that would enhance their levels of finances to acquire and maintain ICT facilities that can further enhance the provision of academic information to students and scholars.

To sum up, it is highly indisputable that funds are an essential resource in the utilization of ICTs in the provision of academic information. However, in order for any library to its services effectively, it needs adequate funds.

4.4 Roles of Librarians

Findings from the field reveal a change in the roles librarians play in the digital environment. Table 5 below shows the new roles librarians are playing in Zambian private universities. 91.7% indicated that they work as e-information resources specialists, 100% librarians, another 100% information managers, hundred percent information advisers or instructors, 91.7% system and networking, hundred percent educators and 83.3% knowledge navigators.

Table 5: Roles of librarians in Zambian Private Universities

Role	Frequency	Percentage (%)
E-information resources specialist	11	91.7
Librarians	12	100
Information managers	12	100
Information advisers/instructors	12	100
System and networking	11	91.7
Educators	12	100
Knowledge navigators	10	83.3
Other (s)	9	75

The above findings concur with those of Sharma (2005) that currently, information professionals have to work as e-information resources specialists providing electronic resources; librarians acting as collection developers, technical processors taking care of information quality; information managers managing and delivering appropriate information services; information adviser or instructor to ensure that students and scholars access relevant sources of information; and system and networking delivering information in an appropriate manner, develop and design appropriate systems. Anderson and Gesin (1997) also observed that librarians in the digital environment are playing a critical role in the education process as knowledge navigators providing information literacy skills.

4.5 Availability of ICT facilities in Zambian Private Universities

The study results revealed that all participating Private Universities (100%) have computers with various application software ranging from word processing, database, spreadsheet and presentation software. In addition, all Private Universities (100%) indicated that they have

Internet access. A total of 75% of the Private Universities have projectors while 33.3% indicated that they have digital cameras. Other ICTs (83.3%) that are available in the Zambian Private Universities include projectors, televisions, telephones, radios and faxes. The findings are depicted in table six below.

Table 6: Availability of ICT Facilities in Zambian Private Universities

Response	Computers	Internet	Projectors	Digital Cameras	Other (s)
Yes	12	12	9	4	10
	100%	100%	75%	33.3%	83.3%
No	0	0	3	8	2
	0%	0%	25%	66.7%	16.7%
Total	12	12	12	12	12
	100%	100%	100%	100%	100%

4.6 Use of ICT facilities in Zambian Private Universities

The findings as indicated in table 7 below show that Zambian Private Universities use ICT facilities for different purposes. It is encouraging that all participating private universities (100%) use ICT facilities for accessing online resources for learning and teaching. Another 100% of the private universities use ICT facilities for storing information. Meanwhile, 75% of the private universities use ICT facilities for processing information and 50% utilise them for entertainment. 50% indicated that they used the facilities mainly for communication (e.g. email, face book, chat, discussion forums) and application of ICTs for lesson presentation was indicated by 33.3% which indeed is very low and this could be due to inadequate ICT skills on the part of the lecturers.

Table 7: Use of ICT facilities in Zambian Private Universities

Use	Frequency	Percentage (%)
Access online resources for learning/teaching	12	100
Information storage	12	100
Processing information	9	75
Entertainment	6	50
Communication	10	83.3
Presentation of lessons	5	33.3

The findings clearly demonstrate that ICT facilities in Zambian Private Universities are heavily used for accessing online resources for learning and teaching. This could be attributed to the fact that most of the libraries attached to private universities in Zambia are still in the infancy stages as observed from the size of the library buildings, the size and diversity of their collections. Therefore, much of the information for students and scholars is provided in electronic form. Gone are the days when academic libraries were the sole custodians of information which were predominantly in print. The advent of ICTs has revolutionized the way information is packaged, processed, stored, disseminated, and the way users seek and access information (Aguolu and Aguolu, 2008).

4.7 Challenges Private Universities face to provide ICTs

According to the findings, private universities in Zambia face many challenges to provide ICT facilities. Nevertheless, it is clear from the findings that the major challenge to provide ICT facilities as indicated by 100% of the participating private universities is the inadequate and unreliable funding. This is followed by high costs of equipment, maintenance and connectivity as revealed by 91.7% of the respondents. The findings further disclose that 66.7% of the participating private universities in Zambia face a challenge inadequate infrastructure to house ICT facilities. On the other hand, 75% of the participating private universities are confronted with the problem of limited knowledge and skills to use ICTs among students and staff. However, 83.3% of the participating respondents face the problems of limited connectivity and 33.3% face other challenges such as limited time on the part of lecturers and staff to use ICT facilities. Findings from the field regarding the challenges faced by private universities to provide ICT facilities are summarised in table 8 below.

Table 8: Challenges faced by Zambian Private Universities to provide ICTs

Challenge	Frequency	Percentage (%)
High costs of equipment, maintenance and connectivity	11	91.7
Inadequate and unreliable funding	12	100
Inadequate infrastructure to house ICT facilities	8	66.7
Limited knowledge and skills to use ICTs among students and staff	9	75
Limited connectivity	10	83.3
Other (s)	4	33.3

There is an irresistible understanding that there are enormous potentials in the availability and use of Information and Communication Technologies (ICTs). The use of ICTs in the academic setting speeds up information delivery facilitates teaching, learning and research. However, it should be noted that all those ICT facilities (such as computers and the internet) that enhance the afore-mentioned cost money. Private universities in Zambia are mostly funded by religious organizations which are charitable organizations hence face major difficulties in the provision of information using ICTs. Even the private universities that are not affiliated to religious organizations share the same story.

Gardner (1994); Haliso (2007); Okiy (2005) reveal that inadequate funding is a major hindrance to the use of ICTs in academic institutions in developing nations. The private universities in Zambia are not an exception to this and hence the major challenge of high costs. Chisenga (2004) further highlights that, a lack of adequate or reliable funding is a major challenge faced regarding the use of ICTs in the provision of information by most institutions of higher learning in Africa. Most of the funds acquired by private universities in Zambia are used for administrative purposes such as settling salaries for the members of staff as well as sustaining their well-being. This hence leaves the acquisition and maintenance of ICT facilities to be used for providing information highly neglected. They prioritise the other things like building infrastructure to house lecture theatres, offices and others neglecting the aspect of ICTs for information provision.

In connection to the costs attached to the use of ICTs in information provision, the challenge of having inadequate infrastructure to house ICT facilities also arises. Notably, most of the private universities in Zambia are still in their infancy stages of development hence lack adequate infrastructure that is going to support the proper housing of ICT facilities which are to be used in the process of academic information exchange in the private universities in Zambia. Inadequate investments in the procurement and development of ICT infrastructure significantly affect the institutions of higher learning such as universities both of public and private origin. According to Okiy (2005) and Omolayole (2002), poor and inadequate telecommunications infrastructure is a common barrier undermining the use of ICTs in African institutions of higher learning. On the other hand, limited funding also tends to bring forth the hurdle of limited ICT connectivity. As noted by Omolayole (2002), Okiy (2005) and Haliso (2007), low levels of ICT literacy in Africa is among the challenges mitigating against the use of ICTs. Lack of ICT skills among students as well as scholars still remains a challenge private universities in Zambia face when it comes to provision of ICTs facilities. Most students and scholars are conservative and hence find it hard to adapt to the new ICT dominated world.

5. OBSERVATIONS

- (i) The study has revealed that most private universities in Zambia have a total enrolment of between 1000 and 1500 students
- (ii) Zambian private universities have library facilities. However, the size of library buildings and collections is small
- (iii) The main source of funding for academic libraries attached to private universities in Zambia are the mother institutions of those libraries (universities where the libraries belong).
- (iv) Findings from the field reveal a change in the roles librarians play in the digital environment in Zambia private universities. They work as e-information resources specialists, librarians, information managers, information adviser or instructor, system and networking, educators and knowledge navigators.
- (v) Zambian private universities have ICTs which include computers, Internet, projectors, digital cameras, televisions, telephones, radios and faxes
- (vi) ICT facilities are mainly used for accessing online resources for learning and teaching, storing information, processing information, entertainment, communication, and application of ICTs for lesson presentation
- (vii) Private universities in Zambia face many challenges to provide ICT facilities including inadequate and unreliable funding; high costs of equipment, maintenance and connectivity, inadequate infrastructure to house ICT facilities, limited knowledge and skills to use ICTs among students and staff, limited connectivity and limited time on the part of lecturers and staff to use ICT facilities.

6. RECOMMENDATIONS

1. Private universities in Zambia must increase their allocation of funds to the acquisition and maintenance of appropriate ICTs
2. Private universities in Zambia must improve their infrastructure to house ICT facilities.
3. There is need for private universities in Zambia to provide the necessary skills, low cost and/or costless training and knowledge to enable their students and lecturers to effectively and innovatively utilise ICT facilities to meet their information needs.

4. Zambian private universities should also adequately fund library facilities and services.

7. CONCLUSION

The paper has shown that Zambian private universities are meeting the information needs of students and scholars using both print materials and electronic resources. Private universities are increasingly employing ICT facilities like the Internet because they have realised that it is a reasonably inexpensive, fast, two-way medium and an effective tool for storage, retrieval, dissemination and publishing information. It is undoubtedly a fact that the advent of ICTs has enabled students and scholars to access vast amounts of information regardless of time and distance. The recommendations that have been offered, if carried out will result in students and scholars deriving maximum benefit from ICTs in meeting their information needs.

REFERENCES

- Aguolu, C.C. and Aguolu, I. E. (2008). Libraries and Information Management in Nigeria. Maiduguri, ED-Information Service. pp. 261-272.
- Anderson, D and Gesin, J. (1997). The evolving roles of information professionals in the digital age. Available at: <http://net.educause.edu/ir/library/html/cnc9754/cnc9754.html>. Accessed 30/07/2012
- Campbell, J.D (2006). Changing a cultural icon: the academic library as a virtual destination. *Educause Review* 41(1), 16-31
- Chisenga, J. (2004). The Use of ICTs in African Public Libraries: A Survey of Ten Countries in Anglophone Africa. Oxford: International network for the Availability of Scientific Publications (INASP).
- Gardner, B. (1994). Ensuring Successful Information Technology Utilisation in Developing Countries. Gaborone: Botswana (Pty) Limited, Botswana, 12-20
- Haliso, Y. (2007). Internet availability and use in academic libraries in south west Nigeria. *Babcock Journal of Management and Social Science*, Vol.5 No. 2, January 2007 Special Edition. pp:246-261.
- Lombardi, J.V. (2000). Academic libraries in a digital age. *D-lib Magazine* 6(10)
- Mulauzi, F. (2007). The role of Information and Communication Technology (ICTs) in Professional women's access to development information in Zambia. Dissertation. The University of Sheffield.
- Obadare, S.O. (?). The changing role of librarians in the digital age. Available at: http://www.codesria.org/IMG/pdf/Obadare_S_O.pdf. Accessed 30/07/2012
- Obanya, P. (2004). Educating for the Knowledge Economy. Ibadan: Mosuro Publishers.
- Okiy, R.B. (2005). Strengthening Information Provision in Nigerian university Libraries through Information communication technologies. *The Electronic Library* 23.3: pp. 311-318.
- Omelayole, O. O. (2002). Electronic Services in Nigerian Libraries. *A Key Note Address presented at the Ogun State Chapter of the Nigerian Library Association*.
- Sharma, P.L. (2005). Changing role of librarians in the digital library era and need of professional skills, efficiency and competency. Available at: <http://drtc.isibang.ac.in/xmlui/bitstream/handle/1849/407/Changing%20Role%20of%20Librarians%20in%20Digital%20Library%20Era.doc?sequence=1> Accessed 30/07/2012
- Sharp, A. (1994). Information and Knowledge. Oxford: Oxford University Press

