# Relationship between access to ICT and the use of electronic library resources by scholars and postgraduate students in a rural-based South African university

*by* Alugumi Ndou

**Submission date:** 02-Feb-2021 12:05PM (UTC+0200)
**Submission ID:** 1499815420
**File name:** resources_by_scholars_and_postgraduate_students_in_a_rural.docx (125.09K)
**Word count:** 5509
**Character count:** 32725

# Relationship between access to ICT and the use of electronic library resources by scholars and postgraduate students in a rural-based South African university


## ABSTRACT

This study examined access to information and communication technologies (ICTs) and use of electronic library resources (ELRs) in a rural-based university, against the backdrop of ongoing changes in the way people access information. It aimed to investigate access to ICTs and use of ELRs at the University of Venda in South Africa (SA). A quantitative research approach with an embedded survey research design was adapted to collect data from the respondents. Stratified sampling techniques were employed to select the sample size consisting of 45 scholars and 150 postgraduate students. This study used structured questionnaires as data collection instruments. The Statistical Package for Social Sciences (SPSS) was used to analyse the collected data. The findings revealed that UNIVEN scholars and postgraduate students have access to the prerequisite infrastructure and technology for accessing ELRs. Likewise, this study shows that scholars and postgraduate students at UNIVEN have regular access to the internet. However, there is no significant difference in the preferences of electronic databases (e-databases) accessed and used by scholars and postgraduate students. The study recommends that UNIVEN library should provide research commons for scholars and postgraduate students within the library building.



**Keywords**: Electronic library resources, Information and communication technologies, Postgraduate students, Scholars, South Africa, University of Venda.

## 1. INTRODUCTION AND BACKGROUND

The use of ICTs for academic purposes in institutions of higher learning requires serious consideration (Ostrowick, [n.d]). ICT refers to any device or system that allows for the electronic storage, retrieval, manipulation, or transmission of information (Bwalya & Mkulama, 2017; Zuppo, 2012). Personal computers, the internet, and email are some examples of ICTs. This shows the importance of ICTs in the provision of efficient and up to date information services. The rapidly increasing use of ICTs elicits different feelings among information users. This study assumed that some users are overwhelmed by the changes that ICTs have introduced to the accessing of information. With the introduction of ICTs, libraries now offer various types of technology such as computers and internet services to their users (Agyekum, Arthur & Trivedi, 2016).

Investigating internet accessibility and availability within the University of Venda (UNIVEN) campus was important to this study because of the location of the university. Although South Africa's ICT infrastructure is at an advanced level, UNIVEN is located in one of the rural areas of South Africa mainly characterised by low penetration of internet and other ICT services (Dalvit, Kromberg & Miya, 2014). It has been reported that South African rural areas are experiencing lack of computers with internet access and high cost of internet access (Ramavhona & Mokwena, 2016). In addition, with UNIVEN being a historically black disadvantaged university, it was necessary to understand how the institution is currently faring in terms of internet accessibility and other ICTs which are necessary for both scholars and students to make full use of the available ELRs. Wangenge-Ouma (2010) argue that the democratic South African government has provided the previously disadvantaged universities with more funds to improve their infrastructure.

For those who really need information, ELRs have addressed challenges because the available ELRs in libraries provide access to information for everyone in modern society (Shahapurmath, Medar & Kenchakkanavar, 2015). Moreover, ELRs have the "efficiency and capability of providing right information to the right user at the right time" (Bhat & Mudhol, 2014). ELRs are important to university community because they provide "high quality information service to a full range of learning and teaching

resources in various formats" (Mcharazo, 2016 as cited in Bhat and Mudhol, 2014). Furthermore, Ani, Ngulube and Onyancha (2015) pointed out that ELRs "provide new platforms for information to support in research conducted" by scholars.

UNIVEN is situated in Vhembe, one of the rural districts in the Limpopo province of SA. It was established as a campus of the University of Limpopo, formerly known as the University of the North on 18 February 1981 (UNIVEN, 2012). Like other historically black universities in SA, it was established to serve black people, particularly Venda speaking people (Edwards, 2015). However, under the new political dispensation in 1997, it was mandated to be a comprehensive university that offers career, academic and vocationally focused programmes that address rural development and poverty alleviation (Nkomo & Sehoole, 2007). Due to its location and historical background, UNIVEN is categorised as a rural-based university that offers both theory- and practice-oriented courses (Nkomo & Sehoole, 2007; Higher Education South Africa, 2011). Edwards (2015) defined rural-based universities in the South African context as universities established by the apartheid government to serve ethnic groups such as Sotho, Tswana, Venda, Xhosa, and Zulu speaking people.

Williams, Pitchforth and O'Callaghan, 2010) stated that students in African countries were discouraged from using ELRs due to poor download speeds. Furthermore, Statistics South Africa (2018) revealed that internet access in South African rural areas was 45% compared to 63.7% in urban areas. Madzhie (2010) highlighted that staff and students at UNIVEN obtain information from the internet as they are computer literate and that most students found the internet as a reliable source of information. Maiwashe (2009), Madzhie (2010) and Nemalili (2014) concur that the UNIVEN community has access to internet. However, Pearce (1996) and Maiwashe (2009) indicate a lack of adequate ICT infrastructure at UNIVEN. Therefore, it is necessary to find out if all UNIVEN scholars and postgraduate students have access to the internet.

## 2. PROBLEM STATEMENT, AIM AND OBJECTIVES OF THE STUDY

Worth noting is that Aparicio (n.d) points out that access to the internet in African rural areas is worse than in African urban areas. However, Kebede (2014) articulates significant growth in access to the internet in top African universities.

There are rural and urban based universities in South Africa. Most of South African rural-based universities are historically black universities. The South African government provides the previously disadvantaged universities with more funds to improve their infrastructures, including funds for purchasing and subscription of ELRs. Institutions formally categorised as historically disadvantaged universities in SA were generally under-resourced in various respects, including ICT infrastructure. In addition, it is often assumed that there is lack of ELRs in rural-based universities. The UNIVEN is one of the previously disadvantaged rural-based institutions. Therefore, the central research question is the following: is there a positive relationship between access to ICT and the use of ELRs by scholars and postgraduate students in a rural-based South African university? This central research question is subdivided in the following specific research questions:

- Are scholars and postgraduate students in a rural-based South African university have access to the prerequisite infrastructure and the technology used to access the internet and ELRs?
- Which preferred location of accessing the internet and ELRs by scholars and postgraduate students in a rural-based South African university?
- Are scholars and postgraduate students in a rural-based South African university accessed ELRs provided by the library?

## 3. LITERATURE REVIEW

ICT usage in academic libraries is often under investigation. It is of interest to find that universities do not provide enough ICT in their libraries, as Manda cited in Rosenberg (2008) suggested that “academic libraries had inadequate computers available for scholars and students compared to computers available at other locations within the institutions”. This could mean that the situation in rural-based academic libraries is

worse than in urban universities. Computers and the internet are some of the prerequisites for accessing ELRs. This also implies that libraries use the internet as a gateway for accessing ELRs. Furthermore, in disadvantaged rural settings, unavailability of computers and internet connectivity could lead to low usage of ELRs (Dulle, 2015). The internet allows users to access ELRs without being restricted to geographical area and time. To access and use ELRs effectively and efficiently, users need to have access to the internet (Shija, 2009). Therefore, to provide access to ELRs an academic institution needs to have a well-structured digital infrastructure for its community.

As depicted in Globalization 101 (n.d), an overall advancement in information technology and reduced cost of internet access improve internet accessibility. Furthermore, Bhukuvhani, Chiparausha and Zuvalinyenga (2012) state that more than 80% of scholars rely on the internet for their research papers. An academic library is responsible for providing academic information to the university community. Therefore, it is of importance for the university to ensure that its library is fully equipped with ICTs and ELRs.

Worldwide, there is a growing interest in the use of ELRs among scholars and students (Sohail & Ahmad, 2017). Academic libraries are subscribing to ELRs such as electronic books (e-books), electronic journals (e-journals), electronic theses and online databases to enable scholars, researchers, and students to have access to information required for academic purposes. Likewise, Wema and Manda (2011) show that the use of ELRs varies greatly between institutions and individuals. Nkosi, Leach and Hoskins (2012) find that supervisors expect students to know how to access and use ELRs. In addition, Falc (2013) notes that students prefer ELRs because they are affordable compared to print format, however, those who do not prefer ELRs indicate that it is harder to read on the screen. Furthermore, Treptow and James (2011) surveyed the use of ELRs by prominent South African scholars, and the study reveals that scholars access ELRs such as e-journals and e-books. Malapela and De Jager (2015) indicate that scholars in the Faculty of Agriculture at the University of Zimbabwe access and use ELRs. The reviewed literature shows that nowadays, information users are more reliant on ICTs for accessing information. There is a need for an academic library to be well equipped with ICT- infrastructure, and for it to have relevant ELRs available for the community it serves.

## 4. METHODOLOGY

The study adopted a quantitative research approach and case study with an embedded survey research design. Self-administered questionnaires were used to collect data from both scholars and postgraduate students. The questionnaire comprised three sections. Section A dealt with demographic variables such as gender, age, academic positions and study levels; Section B investigated respondents' access to the internet and other ELRs with questions on preferred location of accessing ELRs and internet connectivity; Section C contained questions on respondents' access to ELRs provided by the library.

The target population of this study was 375 academics and 1 262 postgraduate students at UNIVEN. A total of 195 questionnaires were personally distributed using a stratified random sampling technique. The questionnaires were conveniently distributed to four strata of scholars composed of 10 professors, 12 senior lecturers, 19 lecturers and four junior lecturers. Postgraduate students' four strata consisted of 22 doctoral, 54 masters, 57 honours, and 17 postgraduate diploma students. All 195 questionnaires were completed and collected for data analysis.

## 5. FINDINGS AND DISCUSSION OF THE STUDY

### 5.1 Background information of the respondents

As indicated in Table 1, a total of 195 completed questionnaires were received from scholars and postgraduate students. The data in Table 1 show that the majority 106 (72%) of the postgraduate students were aged between 21 and 30 years whereas most (12 , or 27%) scholars were aged between 31 and 40 years. The table further shows that more than half (83, 55%) of the postgraduate students were female against 67 (45%) male respondents and 15 (33%) females against 30 (67%) males in scholars. It is noted that less than half 19 (42%) of scholars are in lectureship positions and 4 (9%) in junior lectureship positions.

**Table 1: Demographic information**

| | Variable | Respondents | Frequency | Percentage |
|---|---|---|---|---|
| Scholars - N=45 | Gender | Female | 15 | 33% |
| | | Male | 30 | 67% |
| | Age | 21 – 30 years | 8 | 18% |
| | | 31 – 40 years | 12 | 27% |
| | | 41 – 50 years | 11 | 24% |
| | | 51 – 60 years | 10 | 22% |
| | | 61 and above | 4 | 9% |
| | Academic position | Junior lecturers | 4 | 9% |
| | | Lecturers | 19 | 42% |
| | | Senior lecturers | 12 | 27% |
| | | Professors | 10 | 22% |
| Postgraduate students – N=150 | Gender | Female | 83 | 55% |
| | | Male | 67 | 45% |
| | Age | 21 – 30 years | 106 | 72% |
| | | 31 – 40 years | 30 | 20% |
| | | 41 – 50 years | 10 | 7% |
| | | 51 – 60 years | 1 | 1% |
| | | 61 and above | 1 | 1% |
| | Level of study | Honours | 57 | 38% |
| | | Masters | 54 | 36% |
| | | Doctoral | 22 | 15% |
| | | Postgraduate Diploma in Education | 8 | 5% |
| | | Postgraduate Diploma not specified | 7 | 5% |
| | | | 4 | 3% |

### 5.2 Access to the internet and other ICTs

Figure 1 below represents regular access to the internet by both scholars and postgraduate students and shows that the majority of scholars (43, or 96%) and postgraduate students (122, or 82%) indicated that they had regular access to the internet. This concurred with findings by Emeka and Nyeche (2016) which articulate that the rate of access to the internet by African students is progressing. Only 2 (4%) scholars and 28 (18%) postgraduate students responded that they had no regular access to the internet.

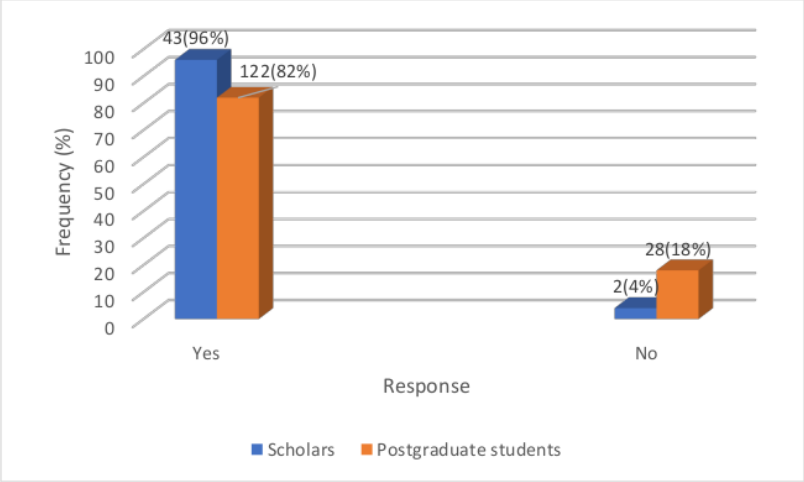


**Figure 1: Regular access to the internet: scholars (N=45) and Postgraduate students (N=150)**

This study noted improved access to the internet at the university. Pearce (1996) indicates poor internet accessibility at UNIVEN. In addition, Maiwashe (2009) reports that more than sixty percent of students at UNIVEN do not have regular access to the internet. Having regular access to the internet, scholars and students at UNIVEN will be able to complete academic tasks on time. Moate, Chukwuere and Mavhungu (2017) argue that the internet enables students to submit their academic tasks on time. Remarkably, the findings of this study show a significant increase in internet accessibility at UNIVEN within the eight-year span. Possible reasons for this increase are an increase in the number of computers purchased by the university, the introduction of hot-spot internet connectivity (WI-FI), and an increased bandwidth. These improvements show that previously disadvantaged and rural-based universities

in SA are catching up with urban universities in terms of internet accessibility. Likewise, Mgobozi and Ocholla (2002) articulate that there is not much difference between internet access of students in a rural-based university and urban university. Furthermore, the findings of this study confirm the research of Kebede (2014) which indicates that internet usage in Africa shows significant growth. With this significant growth in access to the internet as noted in this study, it is possible for a rural-based university to provide 100% regular internet connection to its community soon. With improved internet access in Africa, scholars and students will be able to access ELRs both on and off-campus, anywhere and at any time. The improvement in internet access could lead to increased research output from African scholars and researchers.

In addition, chi-square test was conducted using SPSS (as mentioned earlier) to test the relationship between regular access to the internet as experienced by scholars and postgraduate students. Chi-square test resulted in a p-value of 0.024 which is less than 0.05, which shows a significant association of being a scholar or a postgraduate student with having regular access to the internet. Scholars have more regular access to the internet than postgraduate students. This might be caused by economic factors such as ability to purchase or subscribe to data bundles to access the internet; and scholars having more time to access the internet while in their offices. Other studies noted that economic factors had an influence on access to and use of the internet. Naude, Rensleigh and du Toit (2005) note that demographic characteristics influence internet usage among scholars at the University of South Africa (UNISA). Sarasvady and Khatri ([n.d]) also argue that variables such as demographic characteristics have an influence on internet access. In addition, Dukic and Striskovic (2015) note level and field of study as some of the variables affecting access to and use of ELRs.

### 5.3 Preferred location of access to the internet and ELRs

Table 2 shows that the majority (43, or 65%) of the scholars access the internet from their offices, 20 (30%) from home and 3 (5%) at the library. The preferred location for accessing the internet reported by scholars in this study is the same as what has been reported in other studies (Korobili, Tilikidou & Delistavrou, 2006; Hadagali & Kumbar, 2011; Jayaprakash, 2017). More scholars access ELRs from their offices than in

libraries (Korobili *et al*., 2006; Hadagali & Kumbar, 2011; Jayaprakash, 2017). Not having a special computer area for scholars in the library, or better facilities and greater comfort in scholars' offices might be the cause of scholars not using library computers. UNIVEN library had 237 personal computers to provide access to the internet and ELRs for the university community (Vele, 2011). This might mean that scholars and postgraduate students share the very same personal computers to access internet and ELRs while in the library.

**Table 2: Location of accessing the internet by scholars (N=45) and postgraduate students (N=150)**

| | **Responses** | **Frequency** | **Percent %** |
|---|---|---|---|
| Scholars (N=66) | Home | 20 | 30% |
| | Library | 3 | 5% |
| | Office | 43 | 65% |
| | Total | 66 | 100% |
| Postgraduate students (N=233) | Library computers | 99 | 42% |
| | Departmental computer laboratory | 41 | 18% |
| | General computer laboratory | 37 | 16% |
| | Home | 33 | 14% |
| | Others | 23 | 10% |
| | Total | 233 | 100% |

However, 99 (42%) of postgraduate students access the internet from library computers, 41 (18%) from the departmental computer laboratory, 37 (16%) from a general computer laboratory, 33 (14%) from home and 23 (10%) from other locations. This study noted that more postgraduate students prefer to access the internet from the library, than at other locations of internet access. Other studies revealed that the library is the main place of internet access for students. Chandran (2013); Mitta and Bala (2013); Kumar (2016); Priyanka, Padmama and Walmiki (2017) also revealed that most of the students access the internet from the library. This study concurs with findings by Polanka (2014) that people from disadvantaged rural communities rely on libraries for internet access. Remarkably, the Melinda Gates Foundation in Polanka

(2014) reports that most people from low-income and disadvantaged households use libraries to access the internet and other ELRs. UNIVEN is a rural-based university, consequently some of its students may come from low-income and disadvantaged households and may not be able to afford their own computers and data bundles to access the internet.

### 5.4 Internet connectivity

In Table 3, the data show that the majority 40 (60%) of scholars use cabled internet, 15 (22%) university Wi-Fi, 11 (16%) cellular and 1 (1%) a modem connection. With regard to internet connectivity, this study notes that not all scholars have network cables in their offices. Some scholars use other types of internet connectivity such as Wi-Fi and mobile phones in their offices. Furthermore, this study reveals that the recommendation by Madzhie (2010) was implemented: that UNIVEN should allocate wire-less hot spot areas for the university community as there was at the time no Wi-Fi connectivity.

**Table 3: Internet connectivity of scholars**

| Variables | Responses | Frequency | Percent (%) |
|---|---|---|---|
| Scholars' internet connectivity: on campus. | Cable | 40 | 60% |
| | UNIVEN Wi-Fi | 15 | 22% |
| | Cellular | 11 | 16% |
| | Other (modem) | 1 | 1% |
| | **Total** | **67** | **100%** |
| Postgraduate students' internet connectivity: on campus. | Cable | 78 | 38% |
| | UNIVEN Wi-Fi | 102 | 49% |
| | Cellular | 27 | 13% |
| | Other (modem) | 1 | 0% |
| | **Total** | **208** | **100%** |

Data from Table 3 also show that 102 (49%) of the postgraduate students use Wi-Fi connectivity while on campus, 78 (38%) cabled internet and 27 (13%) cellular. Moate *et al.*, (2017)indicate that students welcome the introduction of Wi-Fi and view it as a life saver for their academic tasks. This study concurs that the available Wi-Fi connection is useful to both academic and postgraduate students. Noticeably, only one academic and one postgraduate student indicate use of other connectivity such as a modem for internet connection. This study shows that most of UNIVEN's scholars and postgraduate students rely on the university for an internet connection while on campus.

### 5.6 Access to the library website

The findings of this study note that the library website was fully utilised by both scholars and postgraduate students. Data in Table 5 shows that 41 (92%) of scholars accessed the library website, 2 (4%) did not access the library website and 2 (4%) are not sure if they have accessed library website. In addition, Table 5 shows that 132 (89%) of postgraduate students accessed the library website, 13 (9%) did not and 4 (2%) were not sure if they have accessed it. Kumar and Bansal (2014) articulate that a library website helps in building a long relationship with patrons. Perceived ease of use, or usefulness of the website might be the cause for full utilisation of the university library website. However, this study did not investigate the factors that influence scholars and postgraduate students to access the library website.

**Table 5: Scholars and postgraduate students who access the library website**

| Variables | Responses | Frequency | Percent % |
|---|---|---|---|
| Scholars (N=45) | Yes | 41 | 92% |
| | No | 2 | 4% |
| | Not sure | 2 | 4% |
| | Total | 45 | 100% |
| Postgraduate students (N=149) | Yes | 132 | 89% |
| | No | 13 | 9% |
| | Not sure | 4 | 2% |
| | Total | 149 | 100% |

### 5.7 Access to ELRs provided by the library

Figure 2 shows that 29 (64%) access the ELRs provided by the library "sometimes", 32% "often" and 4% "not sure". Among postgraduate students, 67 (45%) accessed the ELRs provided by the library "sometimes", followed by 38% "often", 13% "never" and 4% "not sure". This shows that scholars at UNIVEN are fully aware of the available ELRs. However, 13% of the postgraduate students indicate that they have never accessed ELRs provided by the university. Hadagali and Kumbar (2011), and Sonkar, Singh and Kumar (2014) note that scholars and students access ELRs provided by their university libraries. Hadagali and Kumbar (2011) note that scholars and research scholars at Karnataka State access ELRs provided by the university library. Likewise, Sonkar, Singh and Kumar (2014) note access and use of ELRs by scholars and postgraduate students at Banaras Hindu University.

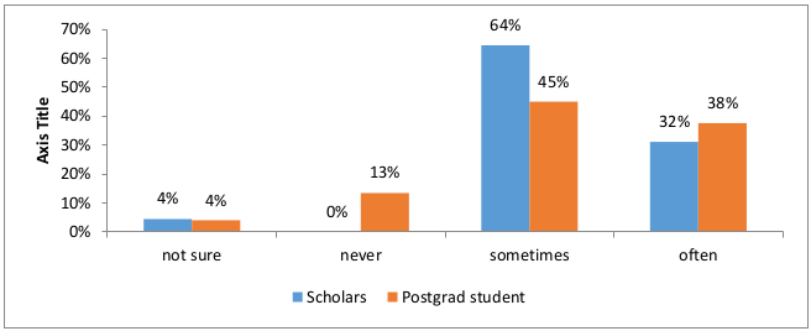


**Figure 2: Access to ELRs provided by the library: scholars (N=45) and postgraduate students (N=150)**

This study revealed a significant association in frequency of access to ELRs with being scholar or a postgraduate student. Conducted chi-square test revealed less than 0.05 p-value in frequency of access to ELRs by scholars and postgraduate students, meaning that scholars accessed ELRs more frequently than postgraduate students. This might be caused by more opportunities to access the internet by scholars. Scholars might have used their own financial resources to access the internet while off-campus.

## 6. CONCLUSION AND RECOMMENDATIONS

This study used a quantitative research approach and case study with an embedded survey research design to investigate access to ICTs and the use of ELRs in one of the rural-based universities in SA, UNIVEN. Suggestions for the improvement of access to and the use of internet and other ELRs by scholars and postgraduate students at a rural-based university are provided in this study.

This study concludes that UNIVEN has pre-requisite technologies and facilities necessary for adequate utilisation of ELRs. This study also concludes that access to ICTs and use of ELRs at a rural-based university is the same as in other universities. From the Chi-squares test results, this study concluded that scholars have more regular access to the internet than postgraduate students. This might be caused by economic factors such as ability to purchase or subscribe to data bundles to access the internet; and scholars having more time to access the internet while in their offices. Furthermore, this study concludes that the library website was fully utilised by both scholars and postgraduate students. This suggests that the library website could be a useful tool used to inform the scholars and students of the available ELRs and library services.

This study recommends that the library provide a research commons area equipped with ICT facilities for the exclusive use of scholars, master's and doctoral students. Further investigation on undergraduate students' access to and use of ELRs at a rural-based university is required. This study also recommends investigation to establish whether there is a significant relationship between regular internet access of scholars and students in rural-based and urban universities. It is understandable that there is a need for equal opportunities to access information, among scholars and students both in rural and urban areas.

**REFERENCES**


Agyekum, BO, Arthur, B &Trivedi, M. 2016. Adoption of social networking tools in public university libraries in Ghana. *International Journal of Innovative Research and Development*. http://www.ijird.com/index.php/ijird/article/view/92261 (Accessed: 26 April 2018).

Ani, OE, Ngulube, P & Onyancha, B. 2015. Perceived effect of accessibility and utilization of electronic information resources on productivity of academic staff in selected Nigerian universities. *SAGE Open*: 1–7. https://us.sagepub.com/en-us/nam/open-access-at-sage. (Accessed: 18 February 2016).

Aparicio, MAM. ([n.d]). Access to the Electronic publishing in African Countries: some reflections. http://elpub.scix.net/data/works/att/0312.content.pdf (Accessed: 20 July 2016).

Bhat, I & Mudhol, MV. 2014. Use of ELRs by faculty members and students of Sher-E-Kashmir Institute of Medical Science (SKIMS). *DESIDOC journal of library & information technology* 34(1): 28–34. http://publications.drdo.gov.in/ojs/index.php/dj/it/article/view/5943/3080. (Accessed: 17 February 2016).

Bhukuvhani, C, Chiparausha, B & Zuvalinyenga, D. 2012. Effects of electronic information resources skills training for lecturers on pedagogical practices and research productivity. *International journal of education and development using information and communication technology* 8(1): 16–28. http://researchdatabase.ac.zw/188/1/EDICT-2011-1383.pdf (Accessed: 15 March 2016).

Bwalya, T & Mkulama, A. 2017. The use of free and open source software (foss) in Zambia: a case study of government departments. *The International Journal of Multi-Disciplinary Research.* www.ijmdr.net (Accessed: 26 April 2017).

Chandran, V. 2013. Use and user perception of electronic information resources: a case study of Siva Institute of Frontier Technology, India. *Chinese librarianship: an international electronic journal* 36. www.iclc.us/cliej/c136chandran.pdf (Accessed: 01 March 2016).

Czerniewicz, L & Brown, C. 2014. The habitus and technological practices of rural students: a case study. *South African journal of education* 34(1): 1–14. http://www.sajournalofeducation.co.za (Accessed: 26 March 2016).

Dalvit, L., Kromberg, S & Miya, M. 2014. The data divide in a South African rural community: A survey of mobile phone use in Keiskammahoek. *Proceedings of the e-Skills for Knowledge Production and Innovation Conference 2014, Cape Town, South Africa,* 87-100. http://proceedings.e-skillsconference.org/2014/eskills087-100Dalvit842.pdf (Accessed: 27 September 2017).

Dukić, D & Strišković, J. 2015. Croatian university students' use and perception of electronic resources. *Library and Information Science Research* 37 (3): 244-253. http://dx.doi.org/10.1016/j.lisr.2015.04.004 (Accessed: 06 May 2018).

Dulle, FW. 2015. Online information resources availability and accessibility: a developing countries' scenario. *African Journal of Library, Archive and Information Science* 25(1): 45–57. http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=1&sid=6a196b0e-4501-473f-b3ca-1930733c3c04%40sessionmgr103 (Accessed: 11 March 2016).

Edwards, SD. 2015. The role of rural universities in developing psychology in South Africa. *South African Journal of Psychology* 45 (1): 50–59. http://journals.sagepub.com/doi/abs/10.1177/0081246314555305 (Accessed: 07 May 2018).

Emeka, UJ & Nyeche, OS. 2016. Impact of internet usage on the academic performance of undergraduate students: a case study of the University of Abuja, Nigeria. *International Journal of Scientific & Engineering Research* 7 (10): 1018–1028. http://www.ijser.org (Accessed: 05 May 2018).

Falc, EO. 2013. An assessment of college students' attitudes towards using an online e-textbook. *Interdisciplinary journal of e-learning and learning objects* 9: 1–12. http://www.ijello.org/volume9/IJELLOv9p001-012Falc831.pdf (Accessed: 15 March 2016).

Globalization 101. [n.d]. Technology and Globalization. http://www.globalization101.org (Accessed: 27 September 2017).

Hadagali, GS & Kumbar, BD. 2011. Use of internet by faculty members and research scholars in the 21st century: a study of university libraries of Karnataka State, India. *Sri Lankan Journal of Librarianship and Information Management* 4 (1): 1–17.

Kahn, M & Underwood, PG. 2013. Issues related to the adoption of e-books in academic libraries: a literature review. *South African Journal of Library and Information Science* 79(2): 10–17. http://sajlis.journals.ac.za (Accessed: 27 September 2017).

Kebede, HW. 2014. Adoption of web 2.0 in academic libraries of top African universities. *The Electronic Library* 32(2): 262–277. www.emeraldinsight.com/0264-0473.htm. (Accessed: 30 April 2015).

Korobili, S, Tilikidou, I & Delistavrou, A. 2006. Factors that influence the use of library resources by faculty members. *Library review* 55(2): 91–105. http://dx.doi.org/10.1108/00242530610649594 (Accessed: 21 March 2016).

Kumar, R. 2016. Use of ELRs by the medical students of M.M. University, Ambala: a case study. *DESIDOC journal of library & information technology* 36(1): 10-16. www.journaltoc.ac.uk/index.php (Accessed: 10 March 2016).

Kumar, V & Bansal, J. 2014. Qualities of a library website: evaluating library website of new IITs. *International Journal of Information Dissemination and Technology* 4 (4): 283–288. https://www.researchgate.net/publication/281578900 (Accessed: 05 May 2018).

Madzhie, CN. 2010. Challenges facing academic libraries in the management of library user education and information literacy: a case study of University of Venda. Thesis, University of Venda, Thohoyandou.

Maiwashe, R. 2009. Perception of university students on communication channels and access to available sources of information for effective learning. Dissertation, University of Venda, Thohoyandou.

Malapela, T & De Jager, K. 2015. Using an electronic journal availability study to measure access to electronic journals by scholars and researchers in the faculty of agriculture at the University of Zimbabwe. *Library and information research* 39(120): 29–39. http://www.academia.edu/22124956/Using_an_electronic_journal_availability_study_to_measure_access_to_electronic_journals_by_scholars_and_researchers_in_the_Faculty_of_Agriculture_at_the_University_of_Zimbabwe (Accessed: 24 March 2016).

Mgobozi, M.N & Ocholla, D.N. 2002. The use of electronic journals for the dissemination of scholarly information by the University of Natal and the University of Zululand. *South African journal of library and information science* 68(2): 81–93. http://sajlis.journals.ac.za. (Accessed 28 May 2015).

Mittal, P & Bala M. 2013. Use of ELRs in universities. *International journal of innovative research in computer and communication engineering* 1(6) www.ijircce.com (Accessed 08 March 2016).

Moate, KM, Chukwuere, JE & Mavhungu, MB. 2017. The impact of wireless fidelity on students? Academic performance in a developing economy. *Proceedings of International Academic Conferences*. https://iises.net/proceedings/31st-international-academic-conference-london/table-of-content/detail?cid&iid=032&rid=7490 (Accessed 17 June 2019).

Naude, F, Rensleigh, C & du Toit, ASA. 2005. Analysis of the citation of web-based information resources by UNISA academic researchers. *South African journal of information management* 7(3). http://).reference.sabinet.co.za.oasis.unisa.ac.za/ (Accessed 25 March 2016).

Nemalili, TV. 2014. An assessment of the effectiveness of the academic library online public access catalogue (OPAC) by students: a case study of University of Venda. Thesis, University of Venda, Thohoyandou.

Njeze, ME. 2013. Use of newspapers and magazines in the academic pursuits of university students: case study of Covenant University. *Library Philosophy and Practice (e-journal)*. 845. http://digitalcommons.unl.edu/libphilprac/845 (Accessed 18 August 2017).

Nkomo, M & Sehoole, C. 2007. Rural-based universities in South Africa: Albatrosses or potential nodes for sustainable development? *International Journal of Sustainability in Higher Education* 8(2): 234–246. http://www.emeraldinsight.com/doi/pdfplus/10.1108/14676370710726689 (Accessed 24 March 2016).

Nkosi, D, Leach, A & Hoskins R. 2012. Academic staff expectations of undergraduate students with respect to their use of the library at the University of KwaZulu-Natal, Pietermaritzburg campus. *South African journal of library and information science* 78(2): 79–87. http://sajlis.journal.ac.za (Accessed 07 March 2016).

Ostrowick, J. 2018. Challenges in introducing ICTs in teaching and learning in South Africa. https://www.researchgate.net/publication/324080145 (Accessed 05 May 2018).

Polanka, S. 2012. *No shelf required 2: use and management of electronic books*. London: Facet Publishing.

Priyanka, [n], Padmamma, S & Walmiki, RH. 2017. Use of ELRs by students of MBA and MCon departments in Kuvempu University: a study. *International Journal of Innovations & Advancement in Computer Science* 6 (11): 588–599.

Ramavhona, TC & Mokwena, S. 2016. Factors influencing Internet banking adoption in South African rural areas. *South African Journal of Information Management* 18(2): 1–8. http://doi.org/10.4102.sajim.v18i2.642 (Accessed 27 September 2017).

Rosenberg, D. 2008. Evaluating electronic resources programmes and provision: case studies from Africa and Asia. *INASP*. http://www.inasp.info (Accessed 27 February 2016).

Sarasvady, S & Khatri, NK. [n.d]. Study of the use of electronic resources for implementing library consortium. http://www.isica/.ac.in/~serial/consortia/CBSOR-07.pdf (Accessed 01 March 2016).

Shahapurmath, SD, Medar, AS & Kenchakkanavar, AY. 2015. Use of electronic resources by the PG students of Karnatak College, Dharwad: a study.

*International journal of advanced research in education & technology (IJARET)* 2(3): 210–212. www.ijaret.com. (Accessed 17 February 2015).

Shija, H. 2009. ELRs use via the internet improvement is a must: a case of special libraries in Tanzania. *Research on poverty alleviation (REPOA)*. www.library.up.ac.za/digi/doc/shija_paper.pdf (Accessed 16 March 2016).

Sohail, MD & Ahmad, S. 2017. Use of Electronic Resources and Services by Faculty Members and Students of Fiji National University. *Journal of Library and Information Technology* 37 (3): 165-171. https://www.researchgate.net/publication/317240395 (Accessed: 26 April 2018).

Sonkar, SK, Singh, MP & Kumar, J. 2014. Use of electronic resources by post graduate students and research scholars of the Banaras Hindu University: a study. *Journal of Information Management* 1 (2): 87–97. www.pacificresearchpublication.com (Accessed: 05 May 2018).

Statistics South Africa. 2018. General household survey. http://www.statssa.gov.za/publications/P0318/P03182018.pdf (Accessed: 16 June 2019).

Treptow, R & James, M. 2011. Use of online knowledge resources by prominent South African researchers. *South African journal of library and information science* 77(1): 64–74. http://sajlis.journal.ac.za (Accessed 15 June 2015).

University of Venda (UNIVEN). 2012. *From inkpot to iPad: towards an educational centre of excellence*. Janxion Communications.

Vele, J. 2011. UNIVEN is on the priority list for the installation of SANReN. *University of Venda annual report.* http://www.univen.ac.za/docs/UnivenAnnualReport2012_Low.pdf (Accessed 11 July 2017).

Wang, S & Bai, X. University students' awareness, usage and attitude towards e-books: experience from China. *The Journal of Academic Librarianship* 42: 247–258. http://dx.doi.org/10.1016/j.acalib.2016.01.001 (Accessed 16 August 2017).

Wangenge-Ouma, G. 2010. Funding and the attainment of transformation goals in South Africa's higher education. *Oxford Review of Education* 36 (4): 481–497. http://www.tandfonline.com/loi/core20 (Accessed: 26 April 2017).

Wema, E & Manda, P. 2011. The impact of ELRs usage in academic and research institutions in Tanzania. *INASP*. www.inasp.info/uploads/filer (Accessed: 16 March 2016).

Williams, CD, Pitchforth, EL & O'Callaghan, C. 2010. Computers, the Internet and medical education in Africa. *Medical Education* 44: 485–488. http://content.ebscohost.com/ContentServer.asp?T=P&P=AN&K=49072475&S=R&D=a9h&EbscoContent=dGJyMNXb4kSeqK44yOvqOLCmr06eprNSsqi4SLGWxWXS&ContentCustomer=dGJyMPGtsk%2Bzr7BKuePfgeyx44Dt6fIA (Accessed: 20 July 2016).

Zuppo, CM. 2012. Defining ICT in a boundaryless world: The development of a working hierarchy. *International journal of managing information technology* 4 (3): 13–22. http://www.airccse.org/journal/ijmit/ijmit.html

# Relationship between access to ICT and the use of electronic library resources by scholars and postgraduate students in a rural-based South African university

ORIGINALITY REPORT

| 11% | 7% | 6% | 4% |
|---|---|---|---|
| SIMILARITY INDEX | INTERNET SOURCES | PUBLICATIONS | STUDENT PAPERS |

PRIMARY SOURCES

| | | |
|---|---|---|
| 1 | Submitted to University of Venda<br>Student Paper | 1% |
| 2 | uir.unisa.ac.za<br>Internet Source | 1% |
| 3 | open.library.ubc.ca<br>Internet Source | 1% |
| 4 | Submitted to Rhodes University<br>Student Paper | 1% |
| 5 | "Mapping the Digital Divide in Africa", Walter de Gruyter GmbH, 2019<br>Publication | 1% |
| 6 | digitalcommons.unl.edu<br>Internet Source | <1% |
| 7 | www.tandfonline.com<br>Internet Source | <1% |
| 8 | Joseph Francis, Beata Kilonzo, Pertina Nyamukondiwa. "Student-perceived criteria for | <1% |

assessing university relevance in community development", South African Journal of Science, 2016
Publication

| | | |
|---|---|---|
| 9 | www.emeraldinsight.com<br>Internet Source | <1% |
| 10 | Cosmas, Maphosa, Mudzielwana Ndileleni Paulinah, and Netshifhefhe Lufuno. "Examining the Significance of Service Learning in Driving the Purpose of a Rural-Based University in South Africa", Mediterranean Journal of Social Sciences, 2014.<br>Publication | <1% |
| 11 | Submitted to St. Patrick's College<br>Student Paper | <1% |
| 12 | www.gapsc.com<br>Internet Source | <1% |
| 13 | Anna Leonard, Nampa Meameno Hamutumwa, Chiku Mnubi-Mchombu. "Use of electronic resources by law academics: a case study from the University of Namibia", Collection and Curation, 2020<br>Publication | <1% |
| 14 | hrmars.com<br>Internet Source | <1% |
| 15 | hdl.handle.net | |

| | | |
|---|---|---|
| | Internet Source | <1% |
| 16 | Submitted to Walter Sisulu University<br>Student Paper | <1% |
| 17 | journals.sagepub.com<br>Internet Source | <1% |
| 18 | paperity.org<br>Internet Source | <1% |
| 19 | J. Lavanya, S. Santharooban. "Usage of Online Resources by the Undergraduates Attached to the Faculty of Agriculture, Eastern University, Sri Lanka", Journal of the University Librarians Association of Sri Lanka, 2018<br>Publication | <1% |
| 20 | wwwisis.unam.na<br>Internet Source | <1% |
| 21 | Submitted to CVC Nigeria Consortium<br>Student Paper | <1% |
| 22 | Dorcas Bana, Monica Eberechukwu Eze, Lovet Ovigue Esievo. "A comparative study of the use of electronic resources by LIS and computer science students in two Nigerian universities", Library Hi Tech News, 2019<br>Publication | <1% |
| 23 | www.koreascience.or.kr | |

| | | |
|---|---|---|
| | Internet Source | <1% |
| 24 | repository.up.ac.za<br>Internet Source | <1% |
| 25 | www.rfppl.co.in<br>Internet Source | <1% |
| 26 | informationr.net<br>Internet Source | <1% |
| 27 | dc.etsu.edu<br>Internet Source | <1% |
| 28 | ijlis.org<br>Internet Source | <1% |
| 29 | ciclrm2017.files.wordpress.com<br>Internet Source | <1% |
| 30 | aa-rf.org<br>Internet Source | <1% |
| 31 | The Electronic Library, Volume 28, Issue 4 (2010-08-28)<br>Publication | <1% |
| 32 | researchspace.ukzn.ac.za<br>Internet Source | <1% |

| | | | |
|---|---|---|---|
| Exclude quotes | On | Exclude matches | < 3 words |
| Exclude bibliography | On | | |

# Relationship between access to ICT and the use of electronic library resources by scholars and postgraduate students in a rural-based South African university

GRADEMARK REPORT

FINAL GRADE

/0

GENERAL COMMENTS

**Instructor**

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15

PAGE 16

PAGE 17

PAGE 18

PAGE 19

PAGE 20

PAGE 21