The Access and use of Information and Communication Technology (ICT) for Distance Education by Zimbabwe Open University's Virtual Region Graduates.

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Abstract: This study investigated 'The Access and Use of Information and Communication Technology for Distance Education by Zimbabwe Open University's Virtual Region graduates.' This study was informed by the pragmatist philosophy and used the sequential exploratory approach. From a population of 50 virtual region graduates in 2022, 16 were sampled for this study. Findings were that using ICT for ZOU's online-communication was uncomplicated. Half the graduates used their laptops for e-learning while the other half used other means. Most students indicated that lack of robust ICT-infrastructure led to students' inability to access learning materials. 50% of the students indicated that ZOU's responses online was slow. All graduates indicated that ZOU online tutorials were unavailable. Most graduates' lives/careers/businesses improved after the attainment of ZOU's virtual-qualification. All graduates were willing to recommend studies with ZOU's Virtual region. They rated ZOU as most-convenient. Challenges graduates faced included unavailable online-tutorials, computer-illiteracy, inadequate tools, unwillingness to change, lack of expertise, software problems, internet-connectivity, lack of robust ICT-infrastructure and administration challenges. Recommendations were that Government should supply free e-learning resources and training, time-management and attitude-change training programmes to enable prospects to use and access ICT easier. Band with had to be increased, e-tutorials to be functional and communication improved by ZOU's administration to allow full utilisation of ICT for learning purposes by students. Graduates needed hands-on skills to overcome e-learning challenges.

Keywords: Information and Communication Technology (ICT),Virtual Student, ZOU.

I. Introduction

The Zimbabwe Open University (ZOU) is an interdisciplinary, multi-faculty public university established on 1 March 1999 by the Act of Parliament (Chapter 25, Section 20) as an Open and Distance Learning (ODL) which has been developed to Open and Distance electronic Learning (ODeL) University. ZOU operates through a national center and 10 regional centers in all 10 provinces of the country (Tarusikirwa, 2022).The Virtual Region is the institution's 11th regional center, serving online students across different regions inAfrica, Europe and Asia. The Virtual Region Department was established in January 2010 and the first graduation was in 2015. There were 102 initial enrollees and a maximum of 45 first graduates in the ZOU Virtual Region Department. Currently 250 students are enrolled and the dropout rate has decreased from 29% to just below 15%. Future research can establish whether or not the dropout rate is decreasing further.Many Zimbabwean students left the country during the 2007–2008 economic crisis in search of employment overseas, which led to the demand for a virtual region. Most Zimbabweans, however, wanted to continue their studies even if they were now living in other nations so they could finish their degrees in Zimbabwe while they were there.They encouraged other prospective students to pursue a degree from Zimbabwe Open University in the countries where they were now currently based. As a component of Zimbabwe's educational system, the university enjoys a reputation across the globe. The worldwide norm is now to support Zimbabwe's educational system.Due to the dynamics of the market for remote education, enrollment and eLearning have enormous room to develop. The need for a quality Zimbabwean education and a larger interest for higher education in general led to the creation of the ZOU Virtual Region. The goal of the current study was to ascertain how graduates who attended university in the virtual world and used e-learning platforms for their education accessed and used ICT. Graduate-specific problems were also noted.

According to Kumar and Sharma (2021), using network technology to develop, foster, deliver, and facilitate learning continuously is known as e-learning. Abuhassna, Busalim, Mamman, Yahaya, Zakaria, Al-Maatouk and Awae (2022)point out that because students are considerably more independent in e-learning than in a traditional setting, it creates a completely new learning environment for them that requires distinct skill sets to be successful.This requires that they be highly motivated and committed to learning with less social interaction with peers or an instructor. However, there is a higher incidence of withdrawals or incomplete grades in online courses than in traditional classroom settings. This is likely due to students' lack of ICT skills,

resources, or interest in participating in a setting where there is no face-to-face interaction with the facilitator. E-learning **is** the channel that was used by ZOU's Virtual Region graduates for their studies.

Enwelu, Enwereuzor, Asadu, Nwalieji, and Ugwuoke (2017) state that inadequate organisational and governmental support, a lack of ICT skills, and the high cost of maintaining ICT equipment all work against extension workers' access to and use of ICTs. On the degree of ICT usage among extension workers, the number of ICTs owned had a substantial impact. ICT access and usage in Anambra State ADP were relatively low. According toAdarkwah (2021), it is important to consider a range of stakeholders and institutions to assess how efficiently the few e-learning resources, poor facilities, and slow internet connections that are available in most of the country are used.   The present study also aimed to establish if Zimbabwe Open University Virtual Region students had similar challenges as those highlighted by Enwelu, et al. (2017)

Rambe and Moeti (2017) indicate that high-speed broadband connectivity, which is necessary for modern business, is now available in many capitals and significant towns in Africa, but it is expensive and only a small number of students opt to use it. In the developing world, access to information technology facilities is still terribly inequitably spread, with metropolitan inequities while rural areas fall behind.The ability of teachers and educators to manage e-learning programs also remains weak. Some students do not have adequate computer skills.(Patterson,2017). According to Kumar (2015), these include reduced technical capacity and bandwidth to decipher course material, switching from face-to-face classes to computer-based training in virtual classrooms, computer skills, time management, self-sufficiency and motivation.

II. Research Methodology

This study was informed by the pragmatist philosophy to research. The essential ideal of pragmatism, as indicated by Osman and Saputra (2019), is to focus on 'what works' in getting research questions answered. According to Asenahabi (2019), in the exploratory sequential technique, the researcher starts by conducting qualitative research, to better understand participants' perspectives. Following data analysis, the information is used to create a second, quantitative phase. The qualitative phase may be used to develop an instrument that is most appropriate for the study's sample, identify suitable instruments to utilise in the subsequent quantitative phase, or specify the variables that must be included in the latter. The focus on selecting the best qualitative findings to use and the sample selection for both research stages present particular challenges to this strategy. This is a mixed methods strategy, that entails a two-phase project in which the researcher first gathers qualitative data and then follows up on or builds on this database with a second quantitative data collection and analysis, according to Asenahabi (2019).Shiyanbola, Rao, Bolt, Brown, Zhang, and Ward (2021) state that there will be a final phase of data integration or joining from the two distinct data strands.The exploratory sequential design was used in this study where qualitative data was collected first, from all the 15 participants,sampled for this study, followedby the quantitative data collection and analysis phase. The intent was to explore the topic with participants, using interview forms. Then the researchers expanded the understanding through a second phase of which data were collected quantitatively by checking how many participants agreed on a particular view.The 15 participants for this study were conveniently sampled for this study because according toDawadi, Shrestha and Giri (2021), mixed methods present a flexible and adaptable conceptual framework for planning and carrying out mixed methods research in an efficient manner. According to Dawadu, et al. (2021), mixing of the two types of data may happen throughout many stages, including data collection, processing, and interpretation. It may also happen during all three stages. In this investigation, mixing took place during each of the three phases. Dawadu, et al. (2021) asserts that utilising various approaches increases the reliability of the results and assures that the inherent bias of one measure is balanced by the advantages of the other.The researchers chose convenient sampling as they for those students who graduated in the Virtual Region Department of Zimbabwe Open University. This sampling method was selected, because, according to Dawadi, et al. (2021), in a mixed research approach, one uses, what works, whether it is from qualitative or quantitative approach. The main goal of convenient sampling was to focus on particular characteristics of a population that were of interest, that is, ZOU virtual region graduates, which best enabled the researchers to answer research questions. According toPörhölä, Cvancara, Kaal, Kunttu, Tampere and Torres (2020), in a homogenous sampling, participants would be comparable in terms of their ages, cultures, occupations, or life experiences. The virtual region graduates' life experiences wascommon in learning at ZOU online. This strategy was used as it seemed the most appropriate for virtual region graduates through distance education.

Out of a population of 50 graduates in the virtual region department, a sample of 15 graduates was used for this study. These are the people who responded to questionaires and had functional email addresses. The rest did not respond most probably due to network problems or lack of airtime. In-depth analysis of smaller samples, according to Dawadi et al. (2021), aids in the detailed analysis of the sample. Therefore, these were representative enough, according to this assertion by Dawadi et al. (2021).

Translation, coding, and interpretation were done. A research approach that was appropriate for one question was not appropriate for another, so that is why multiple methods were used. Triangulation was made possible by using several procedures, which was the second justification. Triangulation aided in balancing out any potential flaws in the various data collection techniques.

III. Results and Discussion

The selected sample had six male and nine female graduates, who studied via Virtual Regional Department of Zimbabwe Open University. The questionnaire and the interview guide were used as research instruments for this study. Most of the graduates were middle-aged, between 41 and 60 years. From January 2010 to date, 95 students had graduated from the Virtual Region Department of the Zimbabwe Open University. The first group of graduates completed their studies in 2015, but the sample for this study completed their studies in 2022, since the minimum duration of the course was four years.

Most students (90%), rated online communication with ZOU as easy, while the remaining 10% found it difficult. Ten of the graduates used laptops for online distance learning while five used internet cafes to access ZOU materials. This showed that ICT was accessed and used by the Virtual region graduates.   The majority of students complained that there was a weak ICT infrastructure, which prevented them from having accessibility to instructional resources, sometimes. Sixstudents said that ZOU online responses to students was slow, while nine said that it was fast. All graduates indicated that ZOU's online tutorials were not available.

90% of graduates improved their lives/careers after obtaining qualifications through distance learning at Zimbabwe Open University's Virtual Region. The remaining 10% were business owners, who said that they were still implementing what they had learnt through ZOU's virtual regional division, but hoped to be successful after the implementation.

All graduates said that they would want to do another qualification and would recommend studies with Zimbabwe Open University's Virtual region department to anyone who wanted to study through online distance education in Zimbabwe. All students rated ZOU as most convenient for online distance education, since it was the most accessible open learning institution. The challenges graduates faced included, not getting online tutorials frequently, inability to do practical studies online due to computer illiteracy on their part and unavailability of resources to facilitate online learning.   Sometimes, students were unable to access instructional materials on time due to a weak ICT infrastructure. Internet connectivity associated with small bandwidth led to inefficiency of accessing the learning platform. Some students did not get their learning materials in time because of the exchange control regulation across the world; it took time for the transferred fees to reflect into the university account, resulting in students not being able to access the e-learning materials on time.

Most students reported that there was a lack of adequate tools to orient students online as there was just a provision of hand books, there was no video or tele conferencing. ZOU's Virtual region graduates faced challenges of power cuts, especially those who resided in Zimbabwe, because the virtual region department included also students within the same country in remote areas. When there was no power student were not learning and that gave them pressure to then rush through assignments and study when power was back. The graduates also indicated that practical tutorials were not conducted and they suspected that it was possibly because some of the tutors had no expertise in conducting online practical lessons, or did not have the resources.

Virtual region students' registration was sometimes problematic in the sense that bank charges and transfer fees were too much on the part of the graduates. Banks' software was incompatible with ZOU's pastel accounting package, which forced the administration staff to make a hassle-free human intervention that delayed the students' access to course materials. Additionally, there was no virtual campus separate banking account to serve overseas students, which presented a challenge to students because it was frequently unavailable.Switching from traditional classroom and face-to-face instruction training to computer-based online training in a virtual classroom made the learning experience entirely different for students and it was challenging to the graduates to adjust. Their resistance to change did not allow them to adapt to the online learning environment easily, whereas it took time for them to get accustomed to Course Management Systems (CMS) and the methods of computer-based education. While passive listening and note-taking were expected in a traditional classroom, online discussions or creating a web page demanded springing into action. Graduates with a "traditional" mindset found it difficult to adapt; however, they needed to accept the new learning circumstances with an open mind and heart.

Some of the graduates did not even own computers and sought help in Learning Resource Centers for technical assistance. The only solution to this problem was knowing exactly what kind of technological support they needed for certain courses before enrolling in them, as well as properly equipping themselves for the course's successful completion. Many of the graduates could not operate basic programs such as Microsoft Word and PowerPoint and therefore were not able to handle their files. Furthermore, many students found fixing basic computer problems troublesome, as they had no knowledge in that area. However, technological proficiency was a must for following online courses, as it enabled students to manage their assignments and

courseware in an organised manner without struggling. Basic courses in computer literacy enhanced students' knowledge in the field thus helping them to complete their studies with ZOU and to graduate. This helped the graduates to participate in online classes without interruptions and hindrances.

Some of the graduates indicated that time management was a difficult task for e-learners, as online courses required a lot of time and intensive work. They overcame this challenge through working in chatrooms and whatsup lessons.

References

1. Abuhassna, H., Busalim, A. H., Mamman, B., Yahaya, N., Zakaria, M. A. Z. M., Al-Maatouk, Q., & Awae, F. (2022). From Student's Experience: Does E-Learning Course Structure Influenced by Learner's Prior Experience, Background Knowledge, Autonomy, and Dialogue. Contemporary Educational Technology, 14(1).

2. Adarkwah, M. A. (2021). "I'm not against online teaching, but what about us?": ICT in Ghana post Covid-19. Education and information technologies, 26(2), 1665-1685.

3. Asenahabi, B. M. (2019). Basics of research design: A guide to selecting appropriate research design. International Journal of Contemporary Applied Researches, 6(5), 76-89.

4. Lorenzetti, J.P. (2017).Distance Education Administrators face unique Challenges. Maryland:Magna Publications.

5. Dawadi, S., Shrestha, S., & Giri, R. A. (2021). Mixed-methods research: A discussion on its types, challenges, and criticisms. Journal of Practical Studies in Education, 2(2), 25-36..

6. Dillon, A., & Morris, M. G. (1996). User acceptance of information technology: Theories andmodels. Annual Review of Information Science and Technology, 31, 3-32.

7. Enwelu, I. A., Enwereuzor, S. O., Asadu, A. N., Nwalieji, H. U., & Ugwuoke, B. C. (2017). Access and use of information and communication technologies by extension workers in Anambra State Agricultural Development Programme, Nigeria. Journal of Agricultural Extension, 21(2), 152-162.

8. Kumar, V., & Sharma, D. (2021). E-learning theories, components, and cloud computing-based learning platforms. International Journal of Web-Based Learning and Teaching Technologies (IJWLTT), 16(3), 1-16.

9. Pallavi, D. R., Ramachandran, M., & Chinnasamy, S. (2022). An empirical study on effectiveness of e-learningover conventional class room learning–a case study with respect to online degree programmes in higher education. Recent trends in Management and Commerce, 3(1), 25-33.

10. Osman, A. R., & Saputra, R. S. (2019). A pragmatic model of student satisfaction: A viewpoint of privatehighereducation. Quality Assurance in Education, 27(2), 142-165.

11. Pörhölä, M., Cvancara, K., Kaal, E., Kunttu, K., Tampere, K., & Torres, M. B. (2020). Bullying in university between peers and by personnel: Cultural variation in prevalence, forms, and gender differences in four countries. Social Psychology of Education, 23(1), 143-169.

12. Shiyanbola, O. O., Rao, D., Bolt, D., Brown, C., Zhang, M., & Ward, E. (2021). Using anexploratory sequential mixed methods design to adapt an Illness Perception Questionnaire for African Americans with diabetes: the mixed data integration process. Health psychology and behavioral medicine, 9(1), 796-817.

13. Stratton, S. J. (2021). Population research: convenience sampling strategies. Prehospital and disaster Medicine, 36(4), 373-374.

14. Tarusikirwa, M. C. (2022). Teacher Development in the Digital Era: Experiences from a Zimbabwean Odel Institution. In Perspectives on Teacher Education in the Digital Age (pp. 81-98). Singapore:Springer Nature Singapore.