Postgraduate Students' Perception of the Use of e-Portfolios as a Teaching Tool to Support Learning in an Open and Distance Education Institution

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Abstract: E-portfolios have been used for decades in education, however, it is still a new trend in some developing countries as they continue to adopt e-learning practices. The study investigated postgraduate students' experiences and perceptions of using an e-portfolio as a teaching tool to support their learning in an open and distance e-learning (ODeL) university in South Africa. A sample of 74 students registered for online modules were selected and an online questionnaire was administered via Lime Survey. The results show that more than half of the respondents (71%) used the e-portfolio for the first time. The study also revealed the contrasting views of the support received from the lecturer and institution for the e-portfolio platform, especially with technical issues. This study suggests that distance education institutions that use e-portfolios need to strategically choose user-friendly technology tools and design appropriate student support strategies for delivering online modules. Higher education institutions that are planning to implement e-portfolios may find the results of this paper useful, however, further investigation of the learners' needs, and the available tools may assist with creative and appropriate designs of support strategies for their contexts.

Keywords*:* student support, e-portfolio, Mahara, e-learning, Open Distance Learning (ODL), Community of Inquiry (CoI), COVID-19.

Introduction

Technological educational tools, such as e-portfolios, increasingly affect how educators teach and support students in online environments. The growing interest in more flexible and adaptive learning and teaching modes due to the technological advances and higher education policy regulations in South Africa (Department of Higher Education and Training, 2014) have seen higher education institutions (HEIs) adopting e-learning and/or blended learning modes of education delivery (DHET, 2013; Van Wyk, 2018) in Africa (Makhana & Ogange, 2019). Pedagogical and technological innovations are constantly changing and continuously redefining higher education (Garrison, 2011). However, other factors such as the emergence of the COVID-19 pandemic, which broke out late in 2019 (Chan et al, 2020) also affect the way HEIs operate. For example, the COVID-19 pandemic accelerated off-campus teaching and learning with much dependence on technology. Therefore, HE and DE institutions need to continuously take cognisance of the current and future trends and appropriately prepare themselves for any disruption, especially HEIs in developing countries.

Lecturers play an important role by facilitating learning through online teaching and learning environments. Anderson, Rourke, Garrison and Archer (2001, p. 5) explain that, "personally meaningful and educationally worthwhile learning outcomes" are a result of intentional and creative

"design, facilitation, and direction of cognitive and social processes" in online teaching and learning environments. They call this the teaching presence in their community of inquiry (CoI) framework. To achieve this, lecturers must learn new ways of using technology pedagogically to deliver education effectively and successfully. However, students are equally expected to successfully use the learning tools and platforms that the educational institutions put in place. For example, the introduction of e-learning tools and platforms, such as e-portfolios, increasingly requires a creative approach to deliver teaching and support to students online.

Whether education is offered face-to-face or online, the meaningful learning and educational experience is still important, thus, technology must be effectively used to achieve the learning goals. It is, therefore, important that institutions continuously find ways to improve the teaching profession. It is equally important that the tools chosen by institutions for teaching and learning are fit for purpose to achieve the set goals. Van Wyk (2018, p. 35) explains that an e-portfolio can be an important tool to empower student teachers to become self-directed learners. He also argues that e-portfolios can also be used to support student teachers to effectively document their development at personal, professional and intellectual levels. The notion that e-portfolios can be creatively integrated in a blended learning design or e-learning to build and assess relevant competencies, and authentic learning is strongly supported in the literature (Zawacki-Richter, Baecker & Hanft, 2011; Abd-Wahab, Che-Ani, Johar, Ismail & Abd-Razak, 2016; Mapundu & Musara, 2019). The objective of this research study was to report on how postgraduate students, who registered for the module offered fully online, perceive the use of the e-portfolio as a teaching tool to support their learning.

Context of the Study

The University of South Africa (Unisa) officially adopted the e-learning mode of delivery in 2013 (Letseka, Letseka & Pitsoe, 2018; Mbatha, 2013); and has, therefore, introduced e-portfolios in some modules since. The introduction of e-learning and Unisa's transition from ODL to ODeL (Ngubane-Mokiwa & Letseka, 2015; Ngubane-Mokiwa, 2017) brought new teaching approaches such as e-portfolios. Teaching with e-portfolios can present many benefits to higher education institutions (HEIs) in developing countries to continue delivering education effectively, even in conditions where learners are not able to visit campuses, such as during the COVID-19 pandemic and the subsequent lockdown.

The Instructional Techniques and Multimedia in Adult Education (INTMAEU) module is part of the postgraduate Diploma in Tertiary Education in the College of Education (CEDU) at Unisa and is delivered completely online through an e-portfolio. One of the purposes of the Diploma in Tertiary Education (DTE) is to prepare education and training practitioners to teach effectively in an adult education situation with a focus on teaching methods and media. The INTMAEU e-portfolio is treated as a process (formative) and a product of learning (Ghany & Alzouebi, 2019) and is submitted for summative examination at the end of the academic year.

INTMAEU is a year-long module which is offered fully online on the Mahara e-portfolio platform through the university's learning management system (LMS). Students are required to integrate multimedia, such as text, audio, images, animations, videos and interactive content, to build an e-portfolio on Mahara from which they can interact with the instructor and other learners. The module has eight activities, mostly graded, which include online discussions, written assignments, a podcast,

a reflective journal and other artefacts. The module has one recommended textbook but also uses Open Educational Resources (OERs) as supplementary learning materials. Learners are cautioned not to include personal information in their e-portfolios (Barrot, 2021).

Among the challenges faced by students and lecturers with this module is difficulty in accessing and working on the university's LMS, specifically on the Mahara e-portfolio platform. Out of the 130 students who registered for the INTMAEU module for the 2018 academic year, 56 students (43%) cancelled their registration for this module and a few students were repeating the module. The research was undertaken to understand the different perceptions and various needs of students learning through e-portfolios so that lecturers can design creative and appropriate teaching and support strategies for students so as to reduce the number of students dropping out of similar modules. These teaching and support strategies should also be designed to enhance the online learning experiences of students in developing countries. The main question that drove this study was: "How do postgraduate students in open and distance education institutions perceive the use of e-portfolios as a teaching tool to support their learning?"

Literature Review

The educational benefits of e-portfolios have been well-documented in research (Van Wyk, 2018; Arnold-Garza, 2014). However, Zawacki-Richter (2004) warns that online learning requires more competencies, for example, media literacy, and skills for learners. It also demands even more from those who facilitate the learning experiences online. This can create a mutually rewarding teaching and learning journey for the learner, lecturer and the institution. It is, therefore, imperative that institutions vigorously embed strategic support services in designing online modules or courses. This includes the appropriate choice of technological tools used to deliver the education online to ensure that teaching and learning is effective and achieves the module and programme objectives.

There are many definitions of e-portfolios in the literature, however, this study adopted Yang, Tai and Lim's (2016) definition. Yang, Tai and Lim (2016, p. 1276) define an e-portfolio as a "form of authentic assessment with formative functions that include showcasing and sharing learning artifacts, documenting reflective learning processes, connecting learning across various stages, and enabling frequent feedback for improvements." This definition includes important aspects of an e-portfolio, such as assessment, feedback, interaction, reflection, learning process, and the showcasing or sharing of students' artefacts. Students must be provided with appropriate support during each stage and for each element of the e-portfolio with relevant and timely constructive feedback, allowing learners to reflect on it and make the necessary improvements. Reflective writing is not an easy task. Shum, Sándor, Goldsmith, Wang, Bass and McWilliams (2016) argue that it is a novel genre for many students, however, it requires practice and an honest approach to one's learning progress. Reflection is a key component of e-portfolios (Smith & Jack, 2005) since it allows students to think deeply about their learning. Koh, Wong, and Lee (2014) argue that reflection should be task-oriented, which will allow students to gain a deep sense of self-awareness. According to Medina, Castleberry and Persky (2017), reflection helps to build students' metacognitive skills, which they believe are "essential in critical thinking, self-regulated, and lifelong learning" (p. 1). Medina et al (2017) also argue that metacognitive skills are developed through intentional questioning and reflection, which is characteristic of e-portfolios.

Brandes and Boskic (2008) argue that the knowledge to use technological tools helps students to build richer e-portfolios and present complex illustrations of learning. Teaching is a complicated job with technology constantly changing the way in which we do things; and time is a resource that lecturers and students do not have much of. Time should be spent on engaging and interacting with other elements, such as content, teachers and other learners (Moore, 1993), and not on figuring out how the technology works. The user-friendliness and accessibility of the chosen tools do not have to force lecturers and students to spend time on figuring out the tools instead of interacting with them and with the content for a more meaningful learning experience. Interaction has long been identified as a key to distance education (Moore, 1989; Mayanja, Tibaingana & Birevu, 2019; Makoe & Shandu, 2019); and it is a key determinant for student learning and success (Baloyi 2012). According to Nsamba and Makoe (2017), difficulties in interactions may cause some students to feel threatened and isolated; reduce their motivation levels and lead to students dropping out of the education system. It has also widely been accepted that learning is a social activity (Garrison, 2011; Johnson & Cooke, 2016; Chugh & Ruhi, 2018; Joksimović, Gašević, Kovanović, Riecke, & Hatala, 2015; Lim & Richardson, 2016), therefore, technology should be a vehicle used to enhance social interactions among students and other elements found in online educational spaces. Certain digital skills and competencies are required when using e-portfolios to teach and learn, which will give instructors and learners confidence to use the chosen digital tools and/or platforms. However, when intimidated or frustrated by user-unfriendly tools, the learning activity may be adversely affected. An online educational activity, such as e-portfolio platforms, requires that all participating role-players are equally present for teaching and learning.

Makhaya and Ogange (2019) found that institutional support improves lecturer proficiency in e-learning technology and pedagogy. It is important that lecturers in higher education have all the necessary sets of knowledge and skills to adequately train student teachers in using the relevant educational technology tools. Modise (2016) argues that lecturers cannot transfer skills they themselves do not possess to their students. However, when lecturers are not adequately supported by their institutions, they are not able to fully support their learners, and this will negatively affect students' learning experiences.

Theoretical Framework

Shea and Bidjerano (2010) proposed the 'revised' Community of Inquiry (CoI), originally designed by Garrison, Anderson, and Archer (2000) to guide teaching and learning in the digital age. The original CoI framework was based on three interdependent elements — teaching presence, cognitive presence and social presence. Teaching presence is described as "the design, facilitation, and direction of cognitive and social processes to support learning" (Garrison et al, 2000). The ability of a facilitator to be purposefully present in an online education transaction. Social presence is "the ability of participants to identify with the community, and develop inter-personal relationship" (Garrison, 2009). Lowenthal and Lowenthal (2010) explain social presence theory as "the ability of people to present themselves as 'real people' through a communication medium." Cognitive presence is the ability of learners to construct and confirm meaning through sustained reflection and discourse (Garrison, Anderson, & Archer, 2001).

Shea and Bidjerano (2010, p. 1721) added a new presence framework, the learner presence, which represents elements, such as "self-efficacy as well as other cognitive, behavioural, and motivational constructs supportive of online learner self-regulation". Learner presence has different elements that are contextually dependent, such as forethought and planning, monitoring and strategy (Shea, Hayes, Smith, Vickers, Bidjerano, Pickett, et al, 2012; Pool, Reitsma, & van den Berg, 2017). After exploring the evolution of the CoI model, Anderson (2017, p. 5) agreed with Shea and Bidjerano's (2010) addition of learner presence to the model, arguing that "effectiveness of teaching is equally dependent on the learners".

Using an e-portfolio to learn implies that some level of digital skills is required and necessary to help a learner to meaningfully interact with the content, instructors and other learners and with the technology to achieve the set learning objectives. Garrison (2011, p. 15) explains that an educational community of inquiry involves, "a group of individuals who collaboratively and purposefully engage in critical discourse and reflection to construct personal meaning and confirm mutual understanding". While it is important for the lecturer's presence to be visible in an online learning environment, such as an e-portfolio platform, it is also imperative that learners are also present. The learners' presence is marked by active participation, planning, strategically choosing and using digital tools to construct meaning and learning; collaborating with others and monitoring their own progress through reflective practice. It is for this reason that the tools chosen for delivering online education or any other education scenario, should enhance the opportunity for students to effectively interact with the content and the lecturer and, most importantly, with one another (Moore, 1989, p. 2); and that learning takes place. The next section explains the methods and procedures employed for the empirical research.

Methods

The case study research design was chosen for this study. Data was collected through an online questionnaire with closed and open-ended questions. Thus, a mixed-method approach was employed.

Sample

The study involved all the students, specifically those registered for the online postgraduate module, INTMAEU at Unisa's College of Education. Only students that were enrolled for the year 2018 constituted the population for the study. There were 74 active students to whom the research instrument was administered, and 51 of them responded.

Research Instruments

An online survey questionnaire was used to understand how the postgraduate students experienced and perceived the support received while using e-portfolios in an open and distance e-learning environment. The questionnaire was administered on Lime Survey with a mix of Likert-scale and open-ended questions to collect data. Van Wyk (2018) used a similar questionnaire design to study the use of an e-portfolio in teaching the Teaching Methodology of Economics module in the same context. Some questionnaire items were adapted from the E-portfolio Hub's (2016) survey tool for a study by the Dublin Institute of Technology to study the use of e-portfolios in teaching and learning.

Procedures

Ethical clearance was granted by the university's Ethics Committee to conduct the research study. The participants were informed about the facts of this study and about the handling of their privacy, confidentiality and anonymity. Data was downloaded from the Lime Survey website. The quantitative data was analysed, using descriptive statistics through the Statistical Package for the Social Sciences (SPSS). Frequency tables, used to present data and themes arising from the open-ended questions, are discussed. Thematic analysis was used for an in-depth analysis of data from the open-ended items in the survey. Vaismoradi, Turunen and Bondas (2013) describe thematic analysis as an independent qualitative descriptive approach, and it is defined by Braun and Clarke (2006, p. 79) as "a method for identifying, analysing and reporting patterns (themes) within data". Vaismoradi, et al (2013) argue that qualitative approaches seek to understand a specific phenomenon from the perspective of those experiencing it.

Findings

Seventy-four active students were invited and 51 students (69%) completed the online survey. There was a 50% split of gender (females and males) and 26% of the students who participated in the study were repeating the module. Fifty-five of the 130 students registered for the module in 2018 dropped out for various reasons unknown to the researcher and 13 out of 51 students who responded to the online questionnaire were repeating the module. According to the data collected, the average age of student teachers was between 25 and 45 years (78%) (Table 1).

Table 1: Age of respondents

Age Group	Frequency (n = 51)	Percent (%)
18 – 24	1	2.0%
25 – 35	19	37.3%
36 – 45	19	37.3%
46 – 55	6	11.8%
56+	1	2.0%
Missing	5	9.8%

The data showed that most students were not first-time tertiary learners, although 78% indicated they were using e-portfolios for learning for the first time. There is a fast-growing interest in e-learning and blended education in South Africa and an urgent need for teachers to acquire relevant e-learning skills. The results, illustrated in Table 2, indicated that more than half of the participants (75%) reported to have gained more confidence in using technology (online tools and platforms) to develop their e-portfolios.

Table 2: Participants' responses on how they gained confidence in using technology through developing their e-portfolios

Responses	Frequency (n = 51)	Percent (%)
Strongly Agree	27	52.9%
Agree	11	21.6%
Neither agree nor Disagree	3	5.9%
Disagree	1	2.0%
Strongly Disagree	1	2.0%
Missing	8	15.7%

Another 75% of the participants indicated that building an e-portfolio helped them to take full ownership of their learning. Collaborative work and creativity in using e-portfolios for teaching and learning were rated as valuable education benefits by most respondents (91%).

The results also revealed that Internet-based tutorials (e.g., YouTube, OER), guides and handouts from the lecturer on the university's LMS were perceived to be helpful in supporting learning in the module (Table 3). It is however a cause for concern that 49% of the students indicated that they received no support from the university's Information and Communication Technology (ICT) department or from those designated to help with technical-related issues and/or with working on Mahara.

Table 3: Students' perceptions of support received from an e-portfolio

# item	Which guidance or support resources were useful when creating your e-Portfolio?	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1.	Help from classmates on myUnisa discussion forums.	41.9	27.9	23.3	4.7	2.3
2.	Internet-based tutorials (e.g., YouTube, OER).	34.9	41.9	16.3	7.0	0.0
3.	Guides and hand-outs from the lecturer on myUnisa.	39.5	34.9	16.3	2.3	7.0
4.	I received support with my e-Portfolio when I experienced challenges.	37.2	34.9	16.3	7.0	4.7
5.	Help from family and friends.	20.9	34.9	14.0	18.6	11.6
6.	Help from my lecturer/e-tutor/teaching assistant.	46.5	32.6	7.0	9.3	4.7
7.	I received clear guidance on what to include in my e-Portfolio.	44.2	34.9	9.3	7.0	4.7
8.	I was provided with guidance on how to use the Mahara e-Portfolio.	48.8	27.9	14.0	7.0	2.3
9.	IT Support from the university.	11.6	14.0	25.6	23.3	25.6

The students' responses to the open-ended questions were categorised into three themes of support: support from the lecturer, support from the institution and support from other students. These are discussed below.

Theme 1: Support from the Lecturer

The results showed an overall positive experience and perception towards using e-portfolios as teaching and learning tools among the postgraduate students in this module at Unisa:

> I really enjoyed this module and want to thank the lecturer for the support and her dedication. Unfortunately, there is not many of her calibre.

> It [e-portfolio] is convenient mode of learning. It is really a great tool for e-learning.

When teaching with e-portfolios, learners do not only have to learn the content, but also learn how to use the chosen technology tools and platforms. Therefore, the learners must receive appropriate support and help when needed, as it can be very confusing. As one student put it:

> e-portfolio is something that you need to look at every day in order to have a good understanding, and you need have someone to lead all the way till the end, because sometimes it's very confusing.

Reflection seemed to be one of the major challenges for students. Most students treated their reflection exercise as a separate activity, and only attended to it at the end of the module. One student pointed out that she/he learnt later that a reflective journal is something to be done throughout the learning process, not only at the end of the year or semester:

> Reflective journal was supposed to be done as I progressed. Doing it at the last moments was challenging. Students should do self-reflection upon receiving feedback on each assignment.

Some students raised concerns about the amount of work expected of them and felt that they were spending more time on the e-portfolio module than on the other modules they were enrolled for. As indicated, more than half of the respondents (71%) were using the e-portfolio for the first time. However, some students indicated that they enjoyed building understanding and critical reflection and learning through the e-portfolio and that the support from lecturers was instrumental in their positive learning experience:

> I really enjoyed using ePortfolio for this module and helped me to grow in technology learning and collaboration with others. Support from the lecturer was amazing and helped students to take collaboration more seriously. I enjoyed playing with the ePortfolio to make it more live and colourful.

> The module was challenging at first. It became softer as we progressed. The lecturer provided invaluable assistance. In order for the e-portfolio to be easy - students should built it from the onset.

Theme 2: Support from the Institution

Almost half of the students (49%) indicated that they did not receive support from the university's ICT team with their e-portfolios according to the data presented in Table 3 above. A student indicated that the design and chosen platform of the e-portfolio was a disadvantage to those who were not familiar with computers or e-portfolios, specifically concerned about the submission of assignments and/or artefacts on Mahara.

The developer of this e-Portfolio must also think about those students who are not familiar with computer/e-portfolio and I feel that we are disadvantaged. Alternatively, there should be an alternative way of submitting e-Portfolio should a student fail to submit using Mahara e-Portfolio platform.

It became evident that the design and presentation of an e-portfolio was an important factor in facilitating learning. The study also found that once the students at Unisa submitted their e-portfolios on the Mahara platform, they no longer have access to it. This was not well-received by some students:

> The application of my e-portfolio beyond the course is not clear. That is because once one is done with the module, it disappears from the portal. That also defeats the purpose of showing my e-portfolio to prospective employers.

Another student reported challenges in submitting her e-portfolio and both the lecturer and the institution failed to assist her. This made the student feel limited in her ability to use the technology, which affected his/her grades:

> Towards the end of this module, I ran into a problem where I was unable to login to my ePortfolio, I made my lecturer aware and she tried to assist but also failed. I also contacted the universities ICT however never received any feedback nor found any help from them, the lecturer had to mark an incomplete portfolio and she had to make alternative ways to mark my work where I had to write the remainder on my portfolio using a word document however I felt it limited my abilities and I could have received and done better. Till today I try and login to my ePortfolio and still unable to access it.

This study found that much of the students' time was spent on trying to figure out the Mahara e-portfolio platform and the university's LMS instead of interacting with the content or with one another and/or the lecturer. Some students suggested that the university should organise an orientation of the e-portfolio module at the beginning of the year or semester:

> I think that it would be easy for students if the University can conduct the orientation classes before the first assignment due date to show the students what is expected of them and how to use the e-Portfolio.

This orientation can be used to gather information about the students' needs, their level of computer and/or digital literacy and other relevant information that can be used to design the support strategies that will enforce a smooth transition into the e-portfolio teaching and learning approach.

Theme 3: Support from Other Students

About 70% of the students indicated that some of the useful guidance and support resources they received were from their classmates, either from the university's LMS discussion forums or social networks such as WhatsApp, as indicated in Table 3. When faced with many tasks, especially group-based tasks and projects, most students indicated that they formed WhatsApp groups, interacted on this platform and only logged onto the LMS and Mahara to submit their work or participate in graded discussions:

> it was so difficult to work on Mahara, and myUnisa is down when you need it most, so me and a few students decided to create a WhatsApp group to help each other

> whenever I encountered problems uploading my assignments on Mahara e-portfolio, I just
> WhatsApp a fellow student to help me how to do it, sometimes the lecturer takes long to respond
> to our emails and we have to submit an assignment on the due date

The difficulty in accessing the university LMS and Mahara forced some students to conduct their interaction outside the university's LMS and Mahara e-portfolio platform by setting up discussions on other social media platforms that are easier to access and work with any time of the day.

Discussion

Effective teaching and learning through e-portfolios is founded on effective sound student support practices. Appropriate support can mitigate some of the challenges faced by students learning with e-portfolios in higher education. For example, e-portfolios were found to have the potential to foster self-directed learning (SDL) (Lukitasari, Hasan & Sukri, 2020, Van Wyk, 2018), however, SDL may be inhibited by lack of relevant digital skills for learning through e-portfolios but designing or choosing user-friendly e-portfolios that are embedded in constant feedback can help students to build SDL. It is, however, a concern that almost half of the students in this study indicated that they received no support from the university's ICT department or those tasked to help students. Institutions need to understand their students' needs to fully support them. Some students feel comfortable and confident working and learning with other students, and therefore the design of e-portfolios needs to cater to student-to-student interaction and peer support that enhances students' learning experiences.

E-portfolios also depend on the notion of learning by doing which, according to Moye, Dugger Jr. and Starkweather (2014), also support problem-solving principles and collaborative activities. Workload, task design and assignments should be aligned with the type of delivery mode without undermining the quality of education. Most distance education learners are already inundated with other responsibilities (Lucena, Díaz, Reche & Rodríguez, 2019). Studies show that students in higher education use mobile phones and social media for collaborative learning (Makhaya & Ogange, 2019); therefore, e-portfolio platforms and tools chosen and implemented by institutions should be compatible with the digital gadgets available to students. Macy, Macy and Shaw (2018) argue that lecturers are able to use various tools to create content but, unfortunately, some of these emerging tools can make the content inaccessible. An e-portfolio needs to be simple and accessible (De Swardt, Jenkins, Von Pressentin & Mash, 2019).

The goal of technology use in distance education is to facilitate meaningful learning and interactions among all relevant role-players and components of education — learners, contents and instructors. Mediated technology should close the gap in distance education (Oliver, 2012; Andrade & Bunker, 2011); however, when technology is the problem, the gap becomes wider and many students feel more alienated. This can adversely affect the learning achievement of students. This study found that much of the students' time was spent on trying to figure out the Mahara e-portfolio platform and the university's LMS, instead of interacting with the content or with one another and/or the lecturer. Technology should make teaching and learning more manageable without creating unnecessary hassles for learners and educators. Although there are challenges, e-portfolios have many benefits that the learners, lecturers and institutions can leverage, especially now in the digital era, and especially now during the COVID-19 pandemic, which forced many institutions to continue offering education

in online spaces (Deslandes & Coutinho, 2020). Abd-Wahab et al (2016) believes that the e-portfolio is the latest technology that can be used to enhance the students' technology skills.

The study also found that most students often spend less time and make little effort in writing their reflective journals. When done properly, with the appropriate support from the instructor, reflective writing has proven to improve students' learning (Chau & Cheng, 2010) to identify their strengths and weaknesses and critical-thinking skills (de Jager, 2019). Chau and Cheng (2010) suggest that templates with guidelines and rubrics can be designed to help students select evidence and reflect on how evidence is connected to the identified goals and objectives (Shum et al, 2016). Appropriate support is of utmost importance to encourage students to reflect on their learning.

One of the best things about web-based e-portfolios is their flexibility and infinitely revisable factor, qualifying them as a lifelong learning tool. However, if a university denies access to the e-portfolio after examination, this does not foster lifelong learning, as the student can no longer update and learn from this e-portfolio. Anderson (2017) explains that the CoI model, as a learning model, recognises the importance of motivation and self-efficacy and further asserts that teaching and learning are equally dependent on each other. Shea and Bidjerano (2010) argue that higher-order learning is best supported in a community of learners who engage in building understanding and critical reflection. E-portfolios can be designed around collaborative principles that allow for social learning and reflective interaction with content and other students. Through various design and support strategies, e-portfolios can pull together all the three presences, affording students enriching learning experiences. Although the study also revealed that students were mostly satisfied with the support from the lecturer, however, without the relevant training and development in the use of online teaching tools and proper support from the institution, the lecturers' support might not be sufficient for all registered students.

Conclusion and Recommendations

Portfolios are not new in the world of education, however, they have become a new phenomenon as educational institutions adopt new technology innovations, such as e-learning approaches. Higher education institutions in developing countries can clearly benefit from employing e-portfolios in teaching and learning where they are faced with many challenges that directly affect education. However, irrespective of the technology chosen by an institution to deliver education, it is important to design accompanying support strategies that will ensure that the students successfully achieve the intended academic standards. In order to achieve this, lecturers also need the relevant support and training from their institutions (Modise, 2020). It is also important to note that incorporating OER into e-portfolios in HE and DE in developing countries can benefit learners where financial resources are lacking.

When universities embark on e-learning innovation and offer modules online, it is advisable to revise all relevant policies that guide the practice as soon as possible. A one-off orientation event that explains to students what the module is about and what is expected of them can reduce confusion at the earliest stage of the learners' learning journey. This is important, especially in distance education where the students interact with the content and must make sense of it by themselves, away from the instructors.

The goal of this study was to investigate how students perceive the support they received in a postgraduate online module that used e-portfolios for teaching and learning. The study revealed that the choice of technology tools and platforms interfered with the learning experiences of students. The study also revealed that the lecturers and students spent more time figuring out the platforms and tools instead of interacting with the content, with lecturers and with one another, which, according to Van den Berg (2020), provides a pedagogical foundation for effective teaching and learning in an ODL environment. With the variety of free e-portfolios available online, universities should be able to encourage learners to take ownership of their digital literacy by allowing them to choose from a variety of e-portfolio platforms and not restricting them to use specific platforms, such as the Mahara e-portfolio platform. The lecturers must also be involved in the choice and evaluation of e-portfolio platforms and tools that are implemented by universities and receive relevant training to use those platforms to teach and support students. A dedicated support centre for lecturers and students may prove beneficial in spaces where e-portfolio platforms and tools are used for teaching and learning, especially in modules with a large number of students.

The participants in this study confirmed a preference for and enjoyment in using the e-portfolio for learning; however, there is great concern about student support services and strategies and the design and choice of e-portfolio platforms. The revised CoI framework was used in this paper to explain how student support and technology choice can affect various presences required in online learning environments. Each presence requires some digital skills and support from the institution to be successful. The theory highlighted the dynamics involved in student learning with new technologies in ODL and how learners and lecturers need specific skills and support to manage educational activities at the end of the interface. Although, limited to the study of one module in an ODL context, the study brings good lessons that can be of great value to higher education institutions in developing countries embarking on e-learning technologies and adopting e-portfolios.

References

Abd-Wahab, S. R. H., Che-Ani, A. I., Johar, S., Ismail, K., & Abd-Razak, M. Z. (2016). ePortfolio: A descriptive survey for contents and challenges. *International Journal of Emerging Technologies in Learning*, *11*(1).

Anderson, T. (2017). How communities of inquiry drive teaching and learning in the digital age. *North Contact*: 1-16.

Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conference context. *Journal of Asynchronous Learning Networks*, *5*(2).

Andrade, M. S., & Bunker, E. L. (2011). The role of SRL and TELEs in distance education: Narrowing the gap. In *Fostering self-regulated learning through ICT* (pp. 105-121). IGI Global.

Baloyi, G. P. (2012). *Learner support in open and distance learning context: A case study of ABET programmes at the University of South Africa* (Unpublished octoral dissertation.) University of South Africa.

Barrot, J. S. (2021). Effects of Facebook-based e-portfolio on ESL learners' writing performance. *Language, Culture and Curriculum*, *34*(1), 95-111.

Brandes, G. M., & Boskic, N. (2008). Eportfolios: From description to analysis. *The International Review of Research in Open and Distributed Learning*, *9*(2).

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Chau, J., & Cheng, G. (2010). Towards understanding the potential of e-portfolios for independent learning: A qualitative study. *Australasian Journal of Educational Technology*, *26*(7).

Chugh, R., & Ruhi, U. (2018). Social media in higher education: A literature review of Facebook. *Education and Information Technologies*, *23*(2), 605-616.

Deslandes, S., & Coutinho, T. (2020). Social research in digital environments in COVID-19 times: Theoretical and methodological notes. *Cadernos de Saúde Pública*, *36*, e00223120.

Department of Higher Education and Training. (2014). *White paper for post-school education and training: Building an expanded, effective and integrated post-school system.* Government of South Africa.

De Swardt, M., Jenkins, L. S., Von Pressentin, K. B., & Mash, R. (2019). Implementing and evaluating an e-portfolio for postgraduate family medicine training in the Western Cape, South Africa. *BMC medical education*, *19*(1), 1-13.

Garrison, D. R. (2011). *E-learning in the 21st century: A framework for research and practice*. Taylor & Francis.

Garrison, D. R., Anderson, T., & Archer, W. (2003). A theory of critical inquiry in online distance education. *Handbook of distance education*, *1*, 113-127.

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The internet and higher education*, *2*(2-3), 87-105.

Ghany, S. A., & Alzouebi, K. (2019). Exploring teacher perceptions of using e-portfolios in public schools in the United Arab Emirates. *International Journal of Education and Literacy Studies*, *7*(4), 180-191.

Lowenthal, D. A., & Lowenthal, P. R. (2010, April). A mixed methods examination of instructor social presence in accelerated online courses. Paper presented at the *Annual Meeting of the American Educational Research Association*, Denver, CO.

Lucena, F. J. H., Díaz, I. A., Reche, M. P. C., & Rodríguez, J. M. R. (2019). A tour of open universities through literature. *The International Review of Research in Open and Distributed Learning*, *20*(4), 116-131.

Joksimović, S., Gašević, D., Kovanović, V., Riecke, B. E., & Hatala, M. (2015). Social presence in online discussions as a process predictor of academic performance. *Journal of Computer Assisted Learning*, *31*(6), 638-654.

Koh, Y. H., Wong, M. L., & Lee, J. J. M. (2014). Medical students' reflective writing about a task-based learning experience on public health communication. *Medical Teacher*, *36*(2), 121-129.

Letseka, M., Letseka, M. M., & Pitsoe, V. (2018). The challenges of e-Learning in South Africa. *Trends in e-learning*, 121-138.

Lim, J., & Richardson, J. C. (2016). Exploring the effects of students' social networking experience on social presence and perceptions of using SNSs for educational purposes. *The Internet and Higher Education*, *29*, 31-39.

Lukitasari, M., Hasan, R., & Sukri, A. (2020). The effect of e-portfolio on biological concepts understanding and responses of students with different academic achievement levels. *International Journal of Instruction*, *13*(1), 685-694.

Macy, M., Macy, R., & Shaw, M. E. (2018). Bringing the ivory tower into students' homes: Promoting accessibility in online courses. *Ubiquitous Learning: An International Journal*, *11*(1).

Makhaya, B. K., & Ogange, B. O. (2019). The effects of institutional support factors on lecturer adoption of elearning at a conventional university. *Journal of Learning for Development*, *6*(1), 64-75.

Makoe, M., & Shandu, T. P. (2019). Using mobile-based social media to facilitate interaction and build communities through the lens of Ubuntu in distance education. *Journal of Learning for Development*, *6*(2), 130-142.

Mapundu, M., & Musara, M. (2019). e-Portfolios as a tool to enhance student learning experience and entrepreneurial skills. *South African Journal of Higher Education*, *33*(6), 191-214.

Mayanja, J., Tibaingana, A., & Birevu, P. M. (2019). Promoting student support in open and distance learning using information and communication technologies. *Age*, *139*, 43.

Mbatha, B. (2013). Beyond distance and time constrictions: Web 2.0 approaches in open distance learning, the case of the University of South Africa (UNISA). *Mediterranean Journal of Social Sciences*, *4*(14), 543-543.

Medina, M. S., Castleberry, A. N., & Persky, A. M. (2017). Strategies for improving learner metacognition in health professional education. *American Journal of Pharmaceutical Education*, *81*(4).

Modise, M. P. (2020). Continuous professional development and student support in an open and distance e-learning institution: A case study. *International Journal of African Higher Education*, *7*(1).

Modise, M. P. (2016). *Towards an effective and empathetic student support system in an open and distance education and e-learning environment: a case study from a developing country context.* (Unpublished doctoral dissertation). University of South Africa.

Moore, M.G. (1993). Theory of transactional distance. *Theoretical principles of distance education* 1: 22-38.

Moore, M.G. (1989). Three types of interaction. *The American Journal of Distance Education*, *3*(2), 1-6.

Ngubane-Mokiwa, S. A. (2017). Implications of the University of South Africa's (UNISA) shift to open distance e-learning on teacher education. *Australian Journal of Teacher Education*, *42*(9), 7.

Ngubane-Mokiwa, S. A., & Letseka, M. (2015). Shift from open distance learning to open distance e-learning. *Open distance learning (ODL) in South Africa*, *129*.

Nsamba, A., & Makoe, M. (2017). Evaluating quality of students' support services in open distance learning. *Turkish Online Journal of Distance Education*, *18*(4), 91-103.

Oliver, E. (2012). Closing gaps in open distance learning for theology students. *Acta Theologica*, *32*(2).

Pool, J., Reitsma, G., & Van den Berg, D. (2017). Revised Community of Inquiry: Examining learning presence in a blended mode of delivery. *Online Learning, 21*(3).

Shea, P., & Bidjerano, T. (2010). Learning presence: Towards a theory of self-efficacy, self-regulation, and the development of a communities of inquiry in online and blended learning environments. *Computers & Education*, *55*(4), 1721-1731.

Shum, S. B., Sándor, Á., Goldsmith, R., Wang, X., Bass, R., & McWilliams, M. (2016, April). Reflecting on reflective writing analytics: Assessment challenges and iterative evaluation of a prototype tool. In *Proceedings of the sixth international conference on learning analytics & knowledge* (pp. 213-222). Association for Computing Machinery.

Smith, A., & Jack, K. (2005). Reflective practice: A meaningful task for students. *Nursing Standard (through 2013)*, *19*(26), 33.

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & health sciences*, *15*(3), 398-405.

Van Wyk, M. M. (2018). e-Portfolio as an empowering tool in the teaching methodology of economics at an open distance e-learning university. *Ubiquitous Learning: An International Journal, 11*(3), 35-50.

Yang, M., Tai, M., & Lim, C. P. (2016). The role of e-portfolios in supporting productive learning. *British Journal of Educational Technology, 47*(6), 1276-1286.

Zawacki-Richter, O. (2004). The growing importance of support for learners and faculty in online distance education. *Learner support in open, distance and online learning environments*, 205-217.

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