Accounting Learners' Readiness for Virtual Classroom Learning In the Eastern Cape, South Africa: Lessons Learnt From the Literature

Melikhaya Skhephe[1], Christabel Dudu Mantlana[2*] and Berington Zanoxolo Gobingca[3]

[1]University of Fort Hare (South Africa)
[2]Walter Sisulu University (South Africa)
[3]Walter Sisulu University (South Africa)

*Corresponding author:
Dr M Skhephe, University of Fort Hare, South Africa

Abstract

The point of departure of this article was to investigate Accounting learners' readiness for virtual classroom instruction. To this end, the authors employed a desktop review method aimed at orientating themselves in respect of the topic under investigation. For the purposes of this investigation, the articles which the authors selected for their literature review were delimited in that they had to cover the period 2006–2020. The review primarily focused on learners' e-readiness in terms of virtual classroom instruction. Google Scholar was the only database used to search for articles related to e-readiness, it is possible that other sources may expand on the data reflected here. The authors' aims were twofold: to establish the readiness of Accounting learners for virtual classroom instruction, and to determine which strategies can be used to improve the readiness of those learners for virtual classroom instruction. The findings revealed that Accounting learners in the Eastern Cape province of South Africa are not yet ready for virtual classrooms. Another finding was that, prior to the implementation of virtual classrooms, little proper consultation is being undertaken. The recommendations made here, are that network providers and other stakeholders need to ensure that connectivity is prioritised, in order to bring about and promote virtual classrooms, and that learners be adequately prepared for this novel approach to learning.

Keywords: learner readiness, network, teacher readiness, virtual classroom

Introduction and background

World-wide, the rapid pace of both technological and economic development has placed greater demands on education systems (Khitam & Zuheir, 2019). There is a crucial need for learners to focus on, and realise, the importance of lifelong learning, which involves them continuously upgrading their knowledge and skills, learning to think critically, and being inspired to become more creative and innovative, so that they can adapt more easily to global change (United Nations Economic, Cultural and Scientific Organisation [Unesco], 2013). Recently, a new paradigm of teaching and learning has made stronger inroads into pedagogical

practice, and that is the virtual classroom, which has emerged as a result of the rapid diffusion of technology (Khitam & Zuheir, 2019) across all sectors of life. A virtual classroom is a learning environment which is created (and subsequently sustained) within a computer-generated space. In this context, computer-mediated communication systems, which have been especially designed to host and deliver e-education, allow teachers and learners to interact online, often at a distance, via the internet (Kaware, 2015). This mode of educational delivery thus allows online, interactive collaboration between students/learners and educators/teachers (Kaware, 2015). As Khitam and Zuheir (2019) observe, it is widely believed that virtual classrooms, if implemented properly, will empower all learners to become fully engaged in the demands of not only the 21st-century workplace, but also life in general. Van Raaij and Schepers (2006) warn, however, that the success of a virtual classroom depends to a considerable extent on learner acceptance of, and readiness to use, such an e-learning system. Subramaniam and Maheswari (2011) confirm that virtual classrooms imply a reduced dependence on rote learning, on repetitive tests and a 'one-size-fits-all' type of instruction, with a more marked emphasis being placed on the use of experiential discovery, engaged learning, differentiated teaching and the building of character, through innovative and effective teaching approaches and strategies. For Cruthers (2008), a virtual classroom holds great advantages, amongst which are improving access to advanced educational experiences, by allowing learners and teachers to participate in remote learning communities; and bettering the quality and effectiveness of education by supporting collaborative learning processes. To benefit from these advantages, however, both learners and teachers will need to be properly prepared prior to this approach being implemented, so that both groups can be ready for learning in this way. Once teachers and learners are fully ready, realise the manifold benefits involved and discover how exciting this approach can be, they will be more likely to adopt a more positive attitude towards e-learning models (Rozgiene, Medvedeva & Straková, 2008).

Statement of problem

Against the backdrop of the Covid-19 pandemic, one of the fundamental questions currently facing 21-century educators around the world (and Accounting teachers in particular), is what might prompt them to embrace the sustained use of e-learning in the time of the Corona virus and thereafter. After all, different e-learning platforms have been developed, including virtual classrooms which accommodate podcasts, Zoom chats and Blackboard, all of which can be integrated into lesson plans so that learning is not completely disturbed by the pandemic. But are teachers and learners ready to adopt these new technologies, as Van Raaij and Schepers (2006) debate? Given this conundrum, it seems imperative to find answers to the following questions that arise: What will cause learners to be ready for virtual classrooms? Is it the availability of technological devices and/or of e-learning platforms? Or is it teachers' and learners' understanding of both the technologies ***and*** how they can be used for educational purposes? It is against this backdrop that the authors sought to explore Accounting learners' readiness for virtual classroom instruction in the Eastern Cape.

Research objectives

Based on the problem statement outlined above, the stated researchers' aims were twofold: to establish the readiness of Accounting learners for virtual classroom instruction, and to determine which strategies can be used to improve the readiness of those learners for virtual classroom instruction.

Theoretical framework

This study is underpinned by Khan's (2003) Octagonal e-Learning Readiness Theory, which is represented in Figure 1.

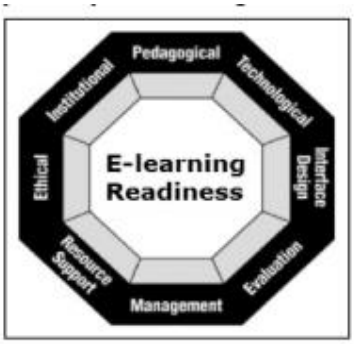

Figure 1: e-Learning readiness framework
Adapted from Khan (2003)

Badrul Khan's (2003) e-learning framework is also referred to as Khan's octagonal framework, because of its eight-sided shape. Each side represents one of the eight dimensions of the e-learning environment, thus providing a framework that enables teachers to select the most appropriate components for effecting a flexible learning environment in their classrooms. With the focus on e-learning readiness, the eight dimensions of Khan's (2003) framework include institutional, pedagogical, technological, interface design, evaluation, management, resource support and ethical components. Each of these dimensions in the framework represents a category of issues that need to be addressed, in order to create a meaningful e-learning experience (Singh, 2003). As Khan (2012) explains, this comprehensive framework for e-learning clusters together various related issues and factors, but as Morrison (2003) points out, each dimension consists of several sub-dimensions, all of which must be considered when assessing an entity's e-learning readiness. A comprehensive assessment of e-learning's organisational and individual readiness factors would of necessity include the critical perspectives of major stakeholder groups, including learners and teachers (Mncube, Olewale & Hendricks, 2019). Hence, following an e-learning readiness assessment, the user(s) will be able to design comprehensive e-learning strategies and effectively implement specific, targeted information and communication technology (ICT) goals (Aldhafeeri & Khan, 2016).

Literature review

A number of themes arose from the general, orientating literature review which the researchers conducted, and these are addressed below.

Lack of virtual e-learning platforms in South African schools

The great majority of schools in the United Kingdom are virtual learning environments (VLEs), thanks to the use of Web 2.0 or 'soft software', Sakai and DrupalEd, Moodle, Blackboard, TurnItIn and many more (Beetham & Sharpe, 2007). VLEs are a component of web-based software, which grants teachers an opportunity to search topics on the internet within a very short period of time. Typically, such learning environments include a chatroom, an online discussion forum, daily reminders, and online assessments with clear instructions which outline what learners need to do when completing (and subsequently submitting) such assessments (Beetham & Sharpe, 2007). Through various platforms, teachers (not only those who teach Accounting as a subject) are able to track their learners' activities in the VLE, in addition to being in a position to access and display syllabus-related information (Beetham & Sharpe, 2007). These platforms grant both teachers and learners access to a series of integrated tools, which allow the former to guide the learning while the latter are studying, and to decide on the best ways of teaching and learning a particular topic even before either party has entered the classroom (Beetham & Sharpe, 2007). As Pituch and Lee (2006) observe, e-learning systems are rapidly becoming an integral part of teaching and learning processes in the 21st century.

Technology readiness index (TRI)

Parasuraman and Colby (2015) argue that the success of technology-based learning can be measured by means of a technology readiness index (TRI). Such an index determines the extent to which individuals adopt and use technology, primarily based on their state-of-mind readiness, rather than whether they have the requisite skills (keeping in mind, however, that an individual's digital skills may influence his/her state of mind) (Parasuraman & Colby, 2015). To this end, Parasuraman and Colby (2015) identify four issues which any institution/individual needs to consider prior to implementing e-learning of any kind, namely optimism, innovativeness, discomfort and insecurity, and these are discussed below.

In the TRI, *optimism* is characterised by the presence of a positive mindset, notably the belief that one can attain intended goals by using technology (Hennessy, Harrison, & Wamakote, 2010). Optimism increases the levels of learner engagement and can improve learners' results as well as their digital skills (Partin & Lauderdale, 2013).

Innovativeness, in the context of the TRI, refers to actions such as being the first in a cohort to acquire technology, displaying a willingness to implement and use technology, and being a constant information-seeker in respect of new technologies (Falloon, 2013). An innovative individual is thus someone who actively engages with sources of information in order to acquire knowledge regarding upcoming technologies and the impact they are likely to have on society and on learning, in particular.

Discomfort, in the context of the TRI, is in evidence when people struggle, for example, to comprehend how technology is used (Ifenthaler & Schweinbenz, 2013) and they battle to adopt

such novelties. In this article, the authors sought to establish whether learners experience discomfort on the basis of being unable to use technology for its educational benefits.

Insecurity is seen as resulting from distrust based on, for instance, concerns about security and privacy (Ampofo et al., 2014). Discomfort and insecurity can affect both learners and teachers' perceptions of technology and limit the potential value of technology diffusion.

Accounting teachers' readiness for e-learning

A study conducted by Skhephe, Caga and Boadzo (2020) revealed that Accounting teachers in the Eastern Cape are not yet ready to implement e-learning, despite having been allocated laptops for use in the classroom. The established reason is that these teachers were not workshopped prior to being handed the devices, and were thus unsure about how to use them for teaching and learning purposes. As Skhephe et al. (2020) observe, most Accounting teachers leave their devices at home, or are unable to implement the use of such technologies in class due to a lack of appropriate knowledge, skills and expertise. Halibi, Touvein and Maxfield (2014) found that Accounting teachers in Egypt predominantly still adhere to the 'old-fashioned' (chalk-and-talk) method of delivering Accounting lessons to their learners. By contrast, Peterson and Reider (2009) report that in Algeria and other parts of Africa, Accounting teachers prefer to teach financial management by relying on various technologies. Loch, Straub and Sevick (2014) believe there are two main reasons why e-learning is difficult to achieve in the Accounting classrooms of developing nations: one reason relates to ritual and cultural differences which are in evidence amongst diverse population groups, and the funds required to adopt electronic platforms; the second pertains to prevailing state policies and regulations, which either facilitate or impede technology transfer in schools.

Internet connectivity

Lack of access to the internet is a notable obstacle in many schools in developing nations. Access to the internet, along with sufficient bandwidth, is essential for the development of an information society (Clement, 2020). As Clement (2020) further observes, the lack of broadband connectivity is preventing the widespread use of the internet in education and in other areas of life. For access to be meaningful, however, it must also be affordable for schools and individuals, while teachers and learners must acquire digital literacy and other skills in order to make the best possible use of an array of platforms. In addition, not all internet content is necessarily suitable: teachers and learners need to find and use locally relevant materials and content. Admittedly, the internet is not the answer to every challenge encountered within the domain of education. Santos (2016) concedes that the internet provides quality education in many respects, opening doors to a wealth of information, knowledge and educational resources, and expanding users' opportunities to learn both in and beyond the classroom. Santos (2016) further observes that teachers use online materials to prepare lessons, while learner use them to extend their range of learning. Interactive teaching methods, supported by the internet, enable teachers to pay more attention to individual students' needs, while supporting shared learning (Santos, 2016).

Methodology

For the purposes of this investigation, the articles which the authors selected for their literature

review were delimited in that they had to cover the period 2006–2020. The review primarily focused on learners' e-readiness in terms of virtual classroom instruction. In line with the research objectives, themes were selected with the purpose of conveying how Accounting learners should be prepared for virtual classroom instruction, as part of the new approaches which teachers were expected to adopt during the time of Covid-19. Since Google Scholar was the only database used to search for articles related to e-readiness, it is possible that other sources may expand on the data reflected here. For the purposes of this article, only texts pertinent to the topic were selected, following a Google search using the keywords "Accounting classroom", "virtual classroom", "learner readiness", "teacher readiness", "connectivity" and "Eastern Cape". Any of the articles which did not specifically deal with these issues, were discarded: of the initial 25 articles identified, that left a total of 14 articles.

Discussion of findings

Readiness of Accounting teachers and learners for virtual classroom instruction

The literature review revealed that, before any learner can be deemed ready for virtual classroom instruction, s/he needs to be physically and psychologically prepared for such a teaching approach. As Hennessy et al. (2010) state, a positive mind-set is crucial, as would be reflected in the belief that one can attain the intended educational goals, by using technology. This recommendation was not reflected in evidence regarding the situation which currently obtains in the Eastern Cape province. The *Daily Dispatch* (2020) reveals that a contract worth hundreds of millions of rand, to lease 55 000 tablet devices, was signed to provide a virtual classroom solution for Grade 12 learners over the next three years. Thus far, 44 000 tablets have been delivered to learners, in an attempt to promote online, distance learning. Despite these impressive statistics, there is no evidence that the recipients were prepared, in any way, before being allocated these devices. It is therefore impossible to determine whether the learners are psychologically and physically ready and able to use these devices for virtual learning. Do they know how to navigate their way through various sites? Are they prepared for contexts where they become stuck, start to panic – Khan's (2003) requirement for resource support – and have no one to help them? Is it ethical (Khan, 2003) to present a learner with technology s/he might not know how to use, or might even abuse for purposes other than the educational? Another important question that needs to be answered, is: Why is it only the Eastern Cape, which has electricity backlogs in some areas and poor connectivity in other areas, to which tablets were distributed? Surely it would be more important to establish the necessary infrastructure before actually distributing tablets to learners – Khan's (2003) requirement for technological infrastructure – prior to allocating devices which are completely reliant on a steady power supply and uninterrupted connectivity? As the article by Skhephe et al. (2020) revealed, Accounting teachers are not ready to implement e-learning classrooms – Khan's (2003) requirements for institutional and pedagogical preparedness – which begs the question: if teachers are not ready for the demands of electronic learning, how can the learners be? While there is thus optimism (Hennessy et al., 2010) on the part of departmental officials, that technology will benefit Eastern Cape learners and teachers alike, the latter might in fact be experiencing discomfort (Ifenthaler & Schweinbenz, 2013). Khan (2003) included the requirement for interface design, as one of the dimensions – if teachers have no say in what their learners learn, or how they navigate through the subject content, how suitable is the online material for the local context? And if teachers are not granted an opportunity to generate tailor-

made materials which showcase their innovativeness or challenge their learners to be innovative in engaging with the materials, then this recommendation of Falloon (2013) may fall by the wayside.

Strategies to improve the readiness of Accounting learners for virtual classroom instruction

The findings from the literature review revealed that, before the actual implementation of online and distance learning, certain considerations need to be attended to first, as these may negatively affect the smooth running of virtual classrooms. Khan (2003) confirmed this by stating that for e-learning to be successful, it needs to be managed, at an institutional level, so that all areas are optimally primed to support the implementation of e-learning. As Rozgiene et al. (2008) point out, in order to benefit from virtual classrooms, both learners and teachers need to be properly prepared beforehand. Another finding was that virtual classrooms are entirely dependent on access to the internet and connectivity (Parasuraman & Colby 2015): clearly, where there are network problems, this type of learning cannot be delivered. As Clement (2020) found, lack of access to the internet and insufficient broadband connectivity frequently bedevil many schools in developing regions. In a province beset by network connectivity problems, learners are unlikely to be able to make use of virtual learning, be it in the classroom or from the comfort of their own homes. This means that the majority of Khan's (2003) eight dimensions for e-learning readiness were overlooked.

Conclusion

The reported findings serve to confirm the concerns which the authors had as regards the initiatives of the Eastern Cape Department of Education to start the implementation of virtual classroom instruction. The concerns of education officials were evident in the hashtag #SaveTheAcademicYear (DBE, 2020) which seeks to allow South African learners to complete the current year of schooling despite the lockdown and other restrictions imposed in an effort to mitigate the effects of Covid-19. This important paradigm shift in teaching is happening at a time when there is no time to explore all the avenues available to educators and departmental officials, to ensure that any rollout of technology is successful, despite this being the first of its kind in the province, and some learners being completely new to such technologies.

Recommendations

Based on above findings, the authors make the following recommendations: before education officials can start the process of rolling out virtual instruction, there should be thorough consultation with teachers, learners, network providers and parents, in order to lay a solid foundation for the implementation of online and distance learning. That is one way of bringing all stakeholders on board. Such steps will not only be collaborative, but also democratic, and will represent an assertive way of igniting enthusiasm for virtual classroom instruction, and the accompanying processes, for the benefit of learners in particular. Closer collaboration between network providers, departmental officials and schools will serve to identify which areas lack internet access, so that the logistics can be put in place as a matter of urgency.

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