

## **The perceptions of new lecturers towards adopting a learning management system for facilitating modules online in a South African ODeL institution**

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### **ABSTRACT**

Learning management systems (LMSs) are among the key digital tools that most institutions have developed for their lecturers and students to manage their online academic activities. The aim of this study was to explore new lecturers' perceptions of adopting and using an LMS for facilitating online modules in the College of Education (CEDU) of an open distance and e-learning (ODeL) institution in South Africa. ODeL institutions recruit new lecturers from other traditional universities and private organisations, with the result that these individuals often have no experience of the ODeL context and therefore encounter challenges using distance education technologies to teach and support students. A qualitative case study research design was employed in this study. Semi-structured interviews were used to collect data from 11 new lecturers who were purposely selected to participate in this study. The findings revealed that most lecturers were not using the university's LMS frequently. The non-use of the university's LMS was affected by various factors, including lack of proper skills, the design of some LMS functions and the lecturers' attitudes. The researchers recommend that relevant training be aligned with the specific digital literacy needs of lecturers. LMS platforms form a major part of the e-learning initiatives at universities and are often central to student support; consequently, they should be used effectively to teach and support students.

**Keywords:** *e-learning; learning management system (LMS); online learning; open and distance e-learning; technology adoption; TPACK*

### **INTRODUCTION AND BACKGROUND**

The adoption and use of digital technologies within higher education for distance and on-campus teaching and learning have increased since the 1990s (Price & Kirkwood 2014). The advancement of emerging technologies has led to new approaches towards open and distance learning (ODL) (Ahmed, Hussain & Farid 2018), including the design and development of universities' learning management systems (LMS) to facilitate teaching and learning activities for online learning. The different collaborative platforms that make teaching and learning interesting and meaningful have increasingly been adopted and modified in various teaching and learning spaces. While e-learning is not new in the world of education (Mohamad et al. 2014), the advancement of emerging technologies constantly influences the delivery of content in ODeL and higher education institutions (HEIs) in developed and developing countries.

Research supports the idea that e-learning can assist HEIs to advance their academic tuition goals effectively (Zaineb 2016). Many HEIs in Africa, including South Africa, have embarked on the e-learning innovation in response to the demands from government and other stakeholders to expand access to education to the masses of qualifying learners (Adiyarta et al. 2018; eLearning Africa 2008; Department of Higher Education and Training (DHET) 2013). Other goals for such innovation include remaining relevant and meeting the various needs of the diverse students registering at HEIs.

The University of South Africa (Unisa) officially implemented the e-learning mode of delivery (ODeL) in 2013 (Ngubane-Mokiwa & Letseka 2015; Baijnath 2014). Since then, Unisa has been offering modules in blended learning and fully online learning modes. Some modules were initially

delivered in a blended learning mode with the aim of eventually offering them fully online. However, the new ODeL strategy compelled lecturers to embrace and use the university's LMS and other online digital tools and technologies to teach, support and interact fully with the students (Swart 2015). This requires a new way of facilitating modules and supporting students from diverse backgrounds, employing various educational technologies. The university's LMS has thus been used for various purposes by lecturers, although Modise & Van den Berg (2021) reported that it was not compulsory to use the university's LMS prior to the COVID-19 pandemic (that is, before 2019); therefore, the LMS was not used regularly by many lecturers, especially new lecturers.

Although universities are making significant efforts to provide lecturers with various digital technologies for teaching and learning and supporting students online, Flavell et al. (2019) suggest that many academics tend to be slow to embrace these new technologies for various reasons. Lecturers need to be aware of the educational technology tools that can be used to enhance their teaching and delivery of online modules. Flavell et al. (2019) argue that academics are required to adapt positively to changes resulting from technology. The challenge is that e-learning is a relatively new priority for universities and most of the academics in developing countries (King & Boyatt 2015; Kisanjara et al. 2017; Phutela & Dwivedi 2020). Many African HEIs are adopting forms of blended and online learning, thus highlighting the growing need for continuous development of lecturers (Pallitt et al. 2018). This implies that lecturers need to be better prepared, competent, and sufficiently supported to effectively adopt online course delivery. It also means that ODeL universities need to be intentionally strategic and creative in their recruitment practices, making sure that they hire incumbents who are ready to confront the demands of ODeL environments. Earlier research shows that some academics at the University of South Africa (Unisa) still required additional training to deliver course modules using LMS and digital technologies provided by the university (Chetty 2012; Holomisa & Dube 2014; Oliver 2014; Van den Berg, Joffe & Porto 2016). Based on the e-learning developments at Unisa, this paper sought to explore the perceptions of new lecturers in the College of Education towards the use of the LMS to deliver course modules online. The main research question guiding the discussion in this study was "What are the perceptions of new lecturers in the College of Education towards using a learning management system for facilitating modules online?" The discussion that follows unpacks this study's literature and theoretical underpinnings.

## **LITERATURE REVIEW**

The impact of online learning is inevitable and its growth and spread in higher education can no longer be ignored (Simonson et al. 2019). With the constant emergence of new digital technologies for teaching and learning, new modes of delivery such as e-learning and blended learning are being introduced and adopted by HEIs in developing countries. At the heart of ODeL is the great desire to improve the quality of education (Rohayani, Kurniabudi & Sharipuddin 2015), and to do this, the delivery and support to students' learning must be improved. HEIs must provide appropriate and relevant support to their academic staff to deliver quality teaching online. Although e-learning continues to grow rapidly (Kisanjara et al. 2017), Mohamad et al. (2014) maintained that e-learning was still at an early stage of development, especially in developing countries. Mohamad et al. (2014) define "e-learning in education" as "a process of learning through formal and informal use of all electronic media such as internet, intranet, extranet, mobile phones or others" (p.169).

Morris et al. (2019) argue that digital technologies can be used not only to enhance the quality of teaching and learning in higher education, but they "also allow a more student-centric approach that can reach increasing numbers of students at a lower cost" (p.45). Thus, most higher education institutions develop an LMS for lecturers and students to manage their academic activities (Mohamad et al. 2014). Anderson (2017) argues that LMSs are designed to facilitate and enable discovery, knowledge, and skill development, through collaborative platforms and social-constructivist teaching activities. Some of the activities in an LMS include, but are not limited to,

creating and delivering content, monitoring student participation, assessing student performance and supporting students. The same LMS is also normally accessible to students, who are exposed to various digital tools for completing graded tasks, collaborating with other students, participating in discussions, compiling, and storing their learning artefacts (that is, through e-portfolios) and other learning activities. Therefore, the role and expertise of the lecturer in ensuring that the e-learning process is efficient is extremely important (Bouhnik & Marcus 2006).

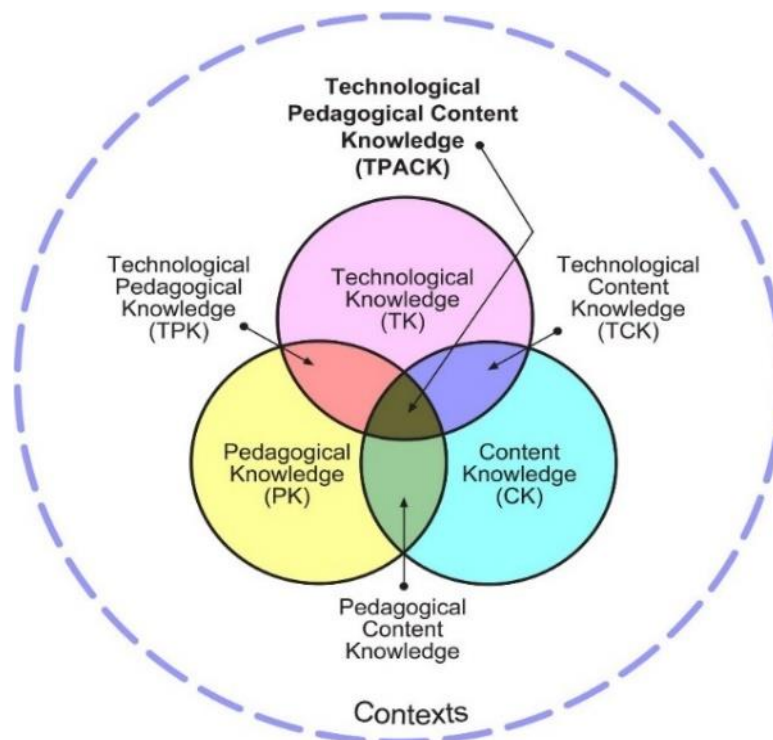
Lecturers and students alike are facing the challenging reality of acquiring the relevant digital skills and correct attitudes towards e-learning. For example, lecturers are expected to take the lead in mastering the use of e-learning skills and knowledge for delivering content and supporting students effectively in online spaces. However, Modise (2020) argues that lecturers will not be able to transfer the relevant key digital skills to students if they themselves do not possess them, neither will the lecturers be able to support the students effectively without those skills. The idea that a person ought to put on their own oxygen mask before helping others (Dhir 2018; Bart et al. 2020) is a practical reality that should drive digital skill development and adoption of new education technologies by lecturers. This will allow lecturers to transfer the skills confidently and support the students' transition to new learning approaches. It is therefore important that lecturers embrace the transition and ensure that students are properly supported through and beyond the evolutionary period.

Generally low and infrequent overall usage of digital resources for teaching and learning by academics, seems to be a worrying trend in various HEIs in the African context (Mwantimwa et al. 2021; Moakofhi et al. 2017). Using ICTs proficiently for teaching and learning has become one of the key ingredients for successful adoption of e-learning (Holomisa & Dube 2014). Research reveals that some e-learning initiatives fail because HEIs and their employees are not well prepared for the e-learning experience (Ncube et al. 2014). Oliver (2014) argued for continuous training of staff and students for the effective use of technology and to ensure viability. For example, the need for interaction in online learning spaces is reported by researchers (Woods & Baker 2004; Chongwony 2008; Mucundanyi 2021) as the key characteristic of an effective online learning environment. Anderson and Garrison (1998) identified three common types of interaction involving students in a distance education and learning context, namely, student–student, students–teacher and student–content. The course content and learning activities in an LMS should therefore be designed with the interaction as a prerequisite, because new technologies enable lecturers to interact with students far more easily and more creatively than in the past. However, if the lecturers are not sufficiently equipped to design and deliver highly interactive modules through the LMS, the students stand to suffer.

Adequate preparation for ODeL and relevant ICT skills may bring some form of comfort and confidence to students and lecturers. Merely uploading study materials and instructions on the university's LMS is not enough. Hojeij et al. (2021) argued that integrating technology is not enough and Freeman (2005) had earlier explained that well-designed learning material does not in itself constitute a 'learning experience', but rather a learning resource that should support students to complete their studies successfully. Therefore, it is important that lecturers receive the relevant training, support and resources necessary to design and facilitate a meaningful learning environment for the students. Having a rich technological environment is not enough; universities need to make sure that their lecturers are using these pedagogical tools appropriately to benefit the students. At the centre of e-learning initiatives is the concept of student support, which requires lecturers to have relevant and adequate digital skills to assist students to be successful in their quest to acquire educational qualifications. If using the university's LMS is one of the ways that students can be supported effectively in their learning, lecturers must actively use this tool for teaching and supporting students online.

## TPACK AND THE USE OF LEARNING MANAGEMENT SYSTEMS IN ODEL

The Technological, Pedagogical and Content Knowledge (TPACK) theory designed by Mishra & Koehler (2006) was purposefully chosen for its relevance to guide the study and the understanding of the adoption of an LMS by academics in the HE and ODL environment. Mishra & Koehler (2006) developed TPACK to help educators to use technology to teach effectively and successfully. This theory was also chosen as it has proven to be applicable across various educational contexts (Williams et al. 2015). TPACK lays out the knowledge and skills that lecturers need to successfully integrate technology into their teaching. According to Mishra and Koehler (2006), content, pedagogy and technology knowledge are at play in any teaching scenario, positioning TPACK at the centre of these tripartite relational sets of knowledge, as illustrated in Figure 1 below. This is what Koehler & Mishra (2009) refer to as meaningful and skilled teaching with technology.



**Figure 1:** TPACK framework (Koehler & Mishra 2009, p. 63)

We can consider TPACK as the desired achievement for any effective teaching practice. This means the teaching knowledge must be well complemented by the subject content knowledge and the creative integration of technology to effectively deliver quality education in ODeL environments. Kurt (2019) maintains that this theory was developed to explain the unique knowledge that teachers need to present subject content effectively using technology. Koehler & Mishra (2009) attest that TPACK involves using a variety of technologies in constructive ways to present content, using technology to redress some challenges faced by learners in the teaching and learning environment. The key elements of TPACK are discussed below.

**Technological Knowledge (TK)** is teachers' knowledge of various digital devices, which includes not only the ability to identify the relevant devices for delivery of content but also knowledge about how to teach using such devices (Koehler & Mishra 2009; Evens et al. 2015). TK is necessary for making learning meaningful in ODeL environments, where teaching and learning happen at

different times and in different spaces. In the current study, the participants were expected to showcase their technological knowledge by using a relevant device to deliver a module.

**Technological Pedagogical Knowledge (TPK)** is the understanding of how the use of technology can support the delivery of content (Koehler & Mishra 2009). Both technology and pedagogy practices influence each other (Kurt 2019) by the accustomed relationships and interactions made by a teacher. In this study, the participants were expected to have a comprehensive understanding of technological tools and how they can be integrated pedagogically within the LMS, to effectively teach and support students.

**Technological Content Knowledge (TCK)** refers to the skills that teachers acquire to help them to identify the best technologies to support their students as they interact with the content (Koehler & Mishra 2009). Kurt (2019) described TCK as the relationships and intersections between technologies and content. Ideally, a teacher needs to understand which specific technologies are best suited to addressing subject-matter learning outcomes. In the context of the current study, the participants were expected to choose from an array of tools available from the university's LMS that best suited the accomplishment of the learning outcomes of the different course modules. The university's LMS portfolio includes technological devices such as announcements, blogs, discussion forums, lesson folders, podcasts, and online meeting tools, which they had to employ to enhance the achievement of various tasks.

This study sought to explore new lecturers' experiences of adopting an LMS for facilitating online modules in the College of Education at the University of South Africa. The most important feature of the TPACK framework is that each set of knowledge (content, pedagogy and technology) is dependent on the others – as long as they all work together. Therefore, the lecturers need to develop fluency and cognitive flexibility not just in each of the core competencies, but also in understanding the interplay that exists between these competencies and construct effective solutions to challenges that may be experienced (Koehler & Mishra 2009).

## **METHOD**

### **Context**

This study was conducted at the University of South Africa (Unisa) in the College of Education in 2019, just before the start of the COVID-19 pandemic. As already mentioned, Unisa officially implemented the ODeL model in 2013, but at the time of this research in 2019, only a few modules had been delivered via the university's LMS; in other words, not all lecturers were teaching online. The university's LMS was developed and run on the Sakai platform. The study focused on undergraduate modules in various departments within the College of Education.

An interpretive epistemological paradigm was employed in this study to produce relevant understanding (Yin 2017) of lecturers' experiences of adopting a learning management system for facilitating online course modules. A qualitative case study research approach was also used to explore the nature of the phenomenon under study. Yin (2017) states that case studies examine complex phenomena in natural settings to increase the understanding of them, not necessarily to generalise the results to other situations. However, some lessons may prove to be valuable for HEIs in similar contexts. The research question pursued in this study was "What are the perceptions of new lecturers in the College of Education towards using a learning management system for facilitating modules online?"

### **Participants**

Eleven new lecturers (10 females and 1 male) between the ages of 30 and 55 were purposefully identified and invited to participate voluntarily in the study in the College of Education at Unisa.

These lecturers were selected because of their involvement in the online module delivery and their availability and willingness to participate in the study (Suen et al. 2014). All the participants in the study had been employed at Unisa for less than five years. Most of the new lecturers who participated in this study had previously been employed as teachers at various primary and secondary schools and had never worked in an ODL environment prior to working at Unisa. The other participants had previously worked in other traditional face-to-face HEIs before joining Unisa and thus had no ODL experience and/or experience in the use of an LMS for teaching. However, Unisa provides training workshops during their onboarding and orientation programme, and training sessions are also available throughout the year for lecturers to update their skills.

### **Data collection and analysis**

Semi-structured interviews with open-ended questions were used to collect data. Tracy (2019) supports face-to-face interviews for their clear advantage of providing rich data and allowing the researcher an opportunity to observe non-verbal communication, which presents its own set of cues to a researcher. However, owing to the participants' work schedules, seven of the participants could only be reached via e-mail. The researchers therefore opted to conduct electronic mail (e-mail) interviews – also known as virtual interviews (Robinson et al. 2021). E-mail interviews “are becoming an increasingly widespread method of data collection” (Martini & Buda 2019, p. 2353). One of the benefits of virtual interviews is that they can be conducted anytime, anywhere, especially where time commitments pose a problem. Baker & Edwards (2012) reported that e-mail responses are sufficient to elicit intellectual discourse (p.3). To ensure the flow of conversation, the researchers in this study requested the participants to respond to questions within three days. Face-to-face semi-structured interviews with four participants were conducted and transcribed by the researchers.

### **Data analysis**

“Data analysis methods and techniques seek to bring order, structure and meaning to the large amount of data that are collected in research” (De Vos 2011, p.397). In this study, thematic analysis was used to make sense of the data. Due to the size of the study, we opted to transcribe the four face-to-face interviews ourselves, and this ensured that we immersed ourselves in the data. To interact deeply with the data, we also opted for collaborative manual coding (Saldaña, 2021) using Microsoft Word. The email interview responses were incorporated with the face-to-face responses and analysed. Intercoder reliability was achieved through constant member checking (Hamilton 2020). The systematic process led to the emergence of two major themes.

### **Ethical considerations**

All ethical principles were maintained throughout the study, including voluntary participation, informed consent, confidentiality and anonymity. Permission to conduct the research was granted by the Unisa College of Education Ethics Committee. The participants were informed that their participation in the study was voluntary and that they are free to withdraw at any time without penalty. Upon agreement, the participants were requested to complete the informed consent form. Concerning anonymity, the researchers ensured that the participants' personal details were kept confidential in the password-protected computers of both researchers and that the participants could not be identified through their comments. The numbers 1 to 10 were used to identify the participants for purposes of data analysis and reporting, to protect their identities.

## FINDINGS

### THEME 1: USE OF THE UNIVERSITY'S LMS TO DELIVER MODULES ONLINE

When asked about their general view regarding the use of the university's LMS, most of the participants expressed frustration with the LMS platform. All the participants mentioned that the design of discussion forums on the university's LMS was problematic. They indicated that the design negatively affects their effective facilitation and management of the discussion and interaction with the students, as indicated by the following participant:

*"It is a powerful tool but can be frustrating when the network is down making it difficult even for some students to access it."* [Participant 9]

#### **Design of discussion forums**

Participant 6 indicated that the discussion forum is the most frequently used tool on the university's LMS:

*"This is the tool I used most often. I visit it frequently. And in the weeks running up to a due date, I visit it daily because that is when students start posting in the discussion forum."*

Although the discussion forum is one of the most frequently used tools on the LMS, Participant 4 went on to describe how the discussion forums design inhibits conversations with students.

*"[sigh] university's LMS as a teaching and support tools is still lacking...university's LMS discussion forums is designed in a linear way. Life is not linear, discussion forums are not conversational, they are also linear."*

#### **Non-use of the LMS by students**

The other challenge, as explained by the participants, is that most of the students do not use the discussion forums; the only time students visit the LMS platform is near the due date of an assignment or an examination, either to submit an assignment or to ask for more information about the scope of the work.

One participant indicated that the discussion forum was used to encourage participation in and contribution towards group tasks.

*"Students assist each other on the discussion forums, students post queries, comments and concerns. I visit these forums at least three times a week. I also create activities such as mind maps so that each student can participate."* [Participant 3]

In responding to the question about how often they visit the LMS, all the participants believed that the grouping of students on the LMS into smaller groups would facilitate management and the effective teaching and support of the students' learning. The process of grouping is not without its challenges, however, as one of the participants indicated:

*"Grouping of students is problematic...We are in the second term and there are many students who have not yet been grouped, and there are assignments that have already been submitted. This affects our assessment planning..."* [Participant 10]

#### **ICT, LMS and social media tools used for teaching**

When asked about what ICT tools the participants used to deliver module content online, the discussion forums, blogs, the announcement tool, and additional resources were identified by nine

out of eleven participants as the most frequently used tools on the LMS. Three of the participants did not use blogs as a technological tool to support their delivery of modules. The study also found that some lecturers at Unisa were not fully utilising the LMS to teach. Some of the participants did not even know that these tools existed on the university's LMS or how to use them. One participant explained that not being the primary lecturer, there is no need to use the LMS:

*"I am not hands-on with the tool, in the module where I am a secondary lecturer, we have allocated some colleagues this responsibility."* [Participant 4]

Only one of the participants had teaching assistants (TAs) in her module. The reason for the absence of TAs in the other modules was the lower numbers of students enrolled in those modules. The following comments highlight this point:

*"It's a daunting task, we check groups sites, see what TA's have posted, if they are responding to students, and that they are attending to students' complains. Playing the mediating role between TAs and students takes a lot of time."* [Participant 9]

*"We only operate on the site (LMS) to monitor TAs and not to directly communicate with the students."* [Participant 10]

These participants clearly do not use the LMS for teaching, instead, they use the LMS only for managerial purposes, which influences their attitudes towards the need to learn how to use the available technologies and the LMS for teaching and learning purposes.

When asked if the participants were using any collaboration tools or social media (such as, Facebook, WhatsApp, Google Docs, YouTube, Dropbox, or Wiki) to teach and support their students, most of the lecturers indicated that they do not use any collaboration tools or social media to augment their online module delivery. One participant indicated that they only use tools that the university provides as they are still new in the university:

*"I try to remain within the myUnisa space, primarily because I am fairly new at Unisa."* [Participant 1]

In contrast, Participant 3 mentioned that the workload is excessive, so they do not have time to incorporate collaboration or social media tools in the modules:

*"I do not have time to interact on wikis, blocks and other tools."*

Only a few participants indicated that they make use of WhatsApp groups to support their students beyond the confines of the university's LMS. Immediate feedback on assignments was one of the major reasons mentioned for using WhatsApp to support students.

## **THEME 2: COMMUNICATING AND SUPPORTING STUDENTS THROUGH THE UNIVERSITY'S LMS**

In response to the question about using e-mails and telephone calls to support students, all the participants mentioned e-mails and telephones as tools that they commonly used to supplement support given to students in online modules, as in the following comments:

*"I answer e-mails within 24 hours and students are grateful for the response. Even if I don't have an answer immediately, they are pleased to know that someone 'hears' them...Students are very pleased to have contact with someone when they experience challenges."* [Participant 8]



The study reveals that the students are also not using the LMS as much as the lecturers, as shown by the following comments:

*“I answer numerous telephones calls on the same topics. Students also tend to phone to ask for an extension.”* [Participant 5]

*“We use telephones, but I prefer emails, I get almost 30 telephones a day.”* [Participant 9]

The participants also expressed the belief that many students do not read their e-mail communications sent via the compulsory myLife e-mail account, which is provided by the university to students for official communication. One participant indicated that they also use SMS messages to ‘force’ students to read communication sent via their myLife e-mails and the university’s LMS announcements site.

*“Most students don’t read their emails regularly, and therefore miss out on important communication, so, I sometimes use the University’s SMS facility to force them to read their emails or direct them to the announcements made on the LMS”* [Participant 11]

The findings revealed that most of the participants did not see the university’s LMS as a viable tool to support and disseminate knowledge to students because of the challenges faced by students, such as access to the Internet, cost of mobile data, connectivity problems and lack of electricity in some rural areas. One participant noted:

*“Most of our students also don’t have relevant resources like stable access to the internet and data to participate in online learning, that is discouraging for them, and also for lecturers.”* [Participant 2]

## DISCUSSION

The design of an LMS is important in assisting the lecturers’ effective facilitation and management of student interaction online. However, in this study, the participants expressed their concerns about the design of the LMS, specifically the design of discussion forums and how negatively they impact on lecturer-student and students-students interactions. Consequently this resulted in students using the discussion forum only at particular times, as highlighted in the findings. This means that the discussion forum tool is not achieving what it was designed to do, namely, to facilitate teaching and learning through interaction. This was mentioned as a barrier to the participants in delivering their module content effectively via the LMS. Ideally, educational technology tools such a discussion forum should be designed to facilitate purposeful instructional solutions that promote meaningful learning experiences effectively.

Since Unisa deals with large numbers of student registrations in various modules, the students are divided into smaller, more manageable groups of a maximum of 200 students per group for online modules. This allows the lecturers (or etutors and teaching assistants) to interact effectively with students, as and when the need arises. The number of students in a group also influences the interaction between the pedagogical practices and the technology tools used (Kurt 2019).

The university’s LMS has an array of tools that can be used by lecturers for various activities, including teaching and supporting students. However, more than half of the participants mentioned that they never use some teaching tools on the LMS, such as learning units, e-portfolios, gradebooks and online meeting tools (e.g. BigBlueButton). The announcement tool was used mainly for communication purposes, to remind students of important due dates and to share important information and communication – not necessarily to teach. Swart (2015) states clearly that Unisa expects all its academic staff members to use tools within the LMS to support and deliver modules. However, it appears that there are no mechanisms to ensure that the LMS is fully

integrated in teaching and learning within the university. Modise & Van Den Berg (2021) alluded to the fact that before the COVID-19 pandemic, the university did not enforce the use of the LMS. This created a digital divide between some of the new lecturers, those who regularly used the LMS and those who chose not to use it for their teaching and learning activities. The digital divide and other trends reported in this study also adversely affected the new lecturers' attitude towards technological knowledge in the use of the LMS. It also impacted the speed at which e-learning is adopted as a means of delivering tuition and student support services to the masses of students that enrol at this distance education institution. Koehler & Mishra (2009) contend that understanding how the use of technological tools influences how content is facilitated is important. The participants in this study showed confidence in the knowledge of their module content, but not in how they could integrate and use LMS technology tools to teach and support students effectively.

Employing teaching assistants (TAs) in modules assists lecturers with high student enrolments to facilitate their modules effectively. One of the participants explained that they regularly check on the TAs' participation and how they respond to student queries. The students are also advised on content matters and are provided with extra resources and guidance on how to use the LMS. This participant demonstrated content expertise by assisting TAs and checking their interactions within the LMS but did not interact with students via the LMS. Kurt (2019) and Koehler & Mishra (2009) emphasise relationships and intersections between technologies and content. Bouhnik & Marcus (2006) emphasised the role and expertise of the lecturer in ensuring that the learning process is efficient. However, if lecturers do not frequently visit the university's LMS and engage with students on the platform, as revealed in this study, the effective implementation and success of e-learning will be delayed.

E-mails and telephone calls are communication tools that can be used to support students, although they are not fully integrated in the university's LMS and thus tend to divert the teaching and learning activities away from the LMS. This also fails to stimulate a desire among the new lecturers to interact with the LMS fully. For lecturers in distance education and e-learning, constructive and effective communication depends on the students reading the communication and the study materials provided to them – even if it sometimes takes a little 'push', such as using the SMS facility. Freeman (2005) emphasised communication and feedback as essential to motivate students to engage actively in online learning. The importance of communication tools in ODeL was emphasised by the participants, since in an ODeL context, students and lecturers are separated by geographical space and time. Thus the use of such communication tools facilitates synchronous communication and valuable, continuous feedback. However, e-mails and telephones seemed to be the preferred methods/tools of communication by these new lecturers because most of them were still approaching ODeL teaching and learning using face-to-face approaches.

Most of the lecturers interviewed were recruited from traditional face-to-face educational institutions, including those who had previously taught at schools. Consequently, most of them may not have been exposed to the regular use of technology relevant to distance and online education. This was clear in this study, as the lecturers seemed to prefer a more 'human-contact' type of teaching through telephone calls, e-mails, and SMS messages, rather than through the LMS. The fact that the university did not mandate the use of the LMS before the COVID-19 pandemic also promoted apathy and reluctance in using the LMS, with the result that most modules were still being designed for correspondence and not for online delivery.

## **RECOMMENDATIONS**

The university's LMS design and navigation functions for the available technology tools and sites should be user-friendly to facilitate the successful delivery of modules. There is a need for HEIs operating in the ODeL context to conduct regular audits of their lecturers' technological knowledge, technological pedagogical knowledge and technological content knowledge. The gaps should thus

be identified and addressed through various relevant and timely training interventions. Facilitating open discourse in the ODeL environment and sharing ideas and resources will benefit lecturers and students in any educational setting and should thus be encouraged. The researchers also recommend creation of active communities of practices and an environment that encourages sharing of ideas and lessons learned between new and other lecturers. It is also important to note the impact of the COVID-19 pandemic on education and all relevant stakeholders, and thus future studies should take into consideration how this affects delivery of education in online spaces.

## CONCLUSION

The aim of this study was to explore new lecturers' perceptions of the adoption of an LMS to deliver modules online in an ODeL university context in South Africa. TPACK theory was used to highlight the sets of knowledge and skills needed by lecturers to deliver modules online efficiently and effectively. The most important feature of the TPACK framework is that each set of knowledge (content, pedagogy and technology) is dependent on the others – they all work together. The lecturers need to develop fluency and cognitive flexibility, not just in each of the core competencies but also in understanding the interplay that exists between these competencies, to construct effective solutions to challenges that may be experienced (Koehler & Mishra 2009). The study provided insights into the factors affecting the adoption of the LMS by new lecturers in an ODeL HE context and how such factors affect their delivery of modules and support to students. Although this was a case study and, therefore, of limited application, the lessons highlighted from a globally recognised mega university such as Unisa may prove valuable to other similar institutions in other developing countries.

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