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Engaging Students Online: Readiness of Lecturers to Use Learning Management System (LMS) at a Technical Vocational Education and Training College

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ABSTRACT

Higher education institutions worldwide have embraced remote as a response to restrictions caused by the COVID-19 pandemic, which resulted in the imposition of stay-at-home protocols. While this shift from the conventional face-to-face mode to remote learning platforms represents a notable innovation in the education circles, we contend that implementing online learning in these times requires faculty to be adequately prepared to use online tools to facilitate learning among students effectively. In this case, a study conducted at a vocational – a rural community college in South Africa – we explore the readiness of lecturers ($N = 15$) to use an institutionally-designed Learning Management System (henceforth referred to as MLMS) to engage their students in learning. The study revealed that the participants were largely unprepared to use the MLMS for teaching. This lack of readiness was influenced by the (poor) MLMS design, lack of user expertise, and inadequate technological resources for lecturers and learners. It emerged from the findings of this paper that the MLMS needs upgrading to improve its effectiveness for online and teaching purposes. The findings suggest that the college should seek the buy-in of lecturers by providing them with further training on the use of the MLMS.

Introduction

The following quotation from Cutri and Mena (2020, p. 362) captures the main preoccupation of this paper, namely; the faculty's readiness for online teaching in a TVET college in South Africa, particularly during these times of emergency where digital transformation in universities and colleges across the country appears to be on the ascendency:

Faculty members' willingness to teach online profits institutions of higher education. Certainly, this does not discount that such efforts also benefit students, but faculty experiences in this exchange must be critically examined. Without such a critical orientation, the power and equity issues involved in the symbolic economy inherent in higher education online teaching cannot be adequately examined. Stewards of online teaching need a nuanced conceptualization of faculty readiness that critically considers the forces that produce and constrain faculty's experiences teaching online. Such a critical construct of readiness could serve as the foundation upon which a theory about faculty readiness and equitable experiences with online teaching could be built.

The advancements and innovations of cutting-edge parallel and alternative technologies (Salam, Zeng, Pathan, Latif & Shaheem, 2020) within higher education have ushered in concurrent shifts in teaching and learning in colleges worldwide.) The traditional chalk and talk that had

characterized much of teaching and learning in those institutions appear to be giving way to digital channels for interacting with students. Lu (2021) and Paulsen and McCormick (2020) admit that technological improvements have resulted in exponential growth in online learning and teaching in many colleges. Furthermore, the recent COVID-19 pandemic has accelerated digital transformation in many community colleges worldwide. While there is no question that online learning tools open up new possibilities for student engagement by providing new levels of flexibility in teaching and learning. It has been argued that the actual implementation and adoption of online learning have been persistently inconsistent, with far-reaching implications for student learning experiences and engagement (Bernard et al., 2014). Notably, in response to the COVID-19-inspired social distancing protocols, many TVET colleges in South Africa have instituted institutional structures to enable their faculty to transition from their comfort zone (traditional face-to-face teaching) and to establish platforms for remote learning (Cutri & Mena, 2020; Cutri & Mena, 2020). Gülbahar and Adnan (2020) and Mohr and Shelton (2017) have all argued that many instructors are not well-acquainted with remote learning and lack formal training in online learning systems, which could affect their readiness to teach online.

Thus, this paper sought to explore the nuanced experiences of the faculty concerning their readiness to create, implement and manage online teaching. The topicality of faculty's readiness for online teaching lies in events of the recent past, where schools, colleges and universities were shut to avert the devastating effects of this pandemic in South Africa. South Africa is one of the countries hardest hit by the pandemic on the continent, with 3.7 million cases and over 100 000 deaths. From 2020 to date, several stages of nationwide lockdowns and restrictions have been implemented nationwide, and therefore to sustain the academic project, many higher education institutions have instituted fully online teaching and learning or the blended type to support students' learning. The current massive scale shift to online learning is, however, not an isolated incident in the country's higher education landscape. The operational result of the infamous #feesmustfall movement, which created a platform for discussions on student funding, resulted in the adoption of offsite learning by most higher education institutions

The tentative argument of this paper is that while these protests may have prepared universities in the country for the exigencies of these times, TVET colleges, on the other hand, have not been that lucky. Therefore many TVET colleges were left utterly unprepared for the sudden and perhaps chaotic adoption and implementation of remote learning due to the lockdown restrictions. In such a context, improvisation became the norm, impelling many TVET colleges to roll out remote learning initiatives that were largely unplanned and poorly coordinated. Aside from the lack of adequate preparation for the exigencies of the COVID-19 pandemic, TVET Colleges in the country have had to contend with the poor performance of students, which has the potential to affect effective student engagement during this peculiar era. Papier, cited in Badenhorst and Radile (2018), has observed that in 2007, for instance, the certification rate was very poor. The students' performance continued to dive, illustrated by the 4% pass rate in 2009 (Badenhorst & Radile, 2018). Although pass rates have increased gradually in recent years (2012–2016), the trend of poor performance persists, with certification rates hovering between 29% and 41% (Badenhorst & Radile, 2018, p. 93). That raises several questions; paramount among them is; how the sudden transition to online learning in South African TVET Colleges will affect students' learning engagement and overall performance.

Despite the availability of powerful affordances relative to digital technologies in higher education, there appears to be a lacuna with regard to literature on the readiness of faculty to adopt such technologies in their practice. Therefore, this study sought to contribute to the literature by exploring the unique experiences and perspectives of faculty in a TVET college in South Africa regarding their readiness to employ an institutionally designed LMS for teaching and learning. In order to achieve this, the study pursued the following threefold research question:

RQ1. How ready are lecturers to use the MLMS to enhance teaching and learning during COVID-19?

RQ2. What are lecturers' experiences using MLMS in teaching and learning during students' stay at home?

RQ3. What are the lecturers' suggested strategies for the MLMS for enhanced teaching and learning?

Going forward, the remainder of this paper proceeds in 5 sections. In the next section, we discuss a unified theoretical model (which incorporates the Theory of Reasoned Action and Technology Acceptance Model) underpinning this paper which is followed by a review of related literature on faculty readiness for remote teaching. In the third and fourth sections respectively, we discuss the various methodological decisions that were undertaken in the conduct of this study and present and discuss the findings of the study. The fifth, sixth and seventh sections provide the conclusion to the paper, implications for practice, and some limitations and recommendations for future research, accordingly.

Theoretical framework

We now focus on the theoretical lens through which we anticipate a vivid understanding of the problem of faculty's readiness for online teaching that could accurately be espoused. Teo (2010) argues that comprehending the individual's behavior toward adopting technology remains a huge concern among scholars and stakeholders in higher education. Thus research into staff attitudes, aptitude to use the technology and their general perception of technology serve as a lens to the users' adoption and use of technology for teaching purposes (Salleh & Laxman, 2015). This study integrates the Theory of Reasoned Action and Technology Acceptance Model into a useful framework for predicting and explaining the phenomenon of interest.

Theory of reasoned action

The Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), which has its roots in psychology, is widely used to ascertain user readiness for and adopt new technology. The efficacious acceptance and execution of new inventions hinge on the individual's readiness to use the proposed technology. Alwahaishi and Snáel (2013) postulate that understanding and adopting new technology by the individual user is the hub for introducing new technology in any organization. TRA suggests that an individual's behavior is factored by the individual user's intention, which revolves around the user's motivation to use that particular technology (Bernova et al., 2020, p. 572). The TRA is characterized by the difference between the individual's beliefs, attitudes, intentions and behaviors (Alwahaishi & Snáel, 2013, p. 4). As Morris et al. (2012, 5) noted, the intention is the negative or positive evaluation of the behavior, its expected outcomes, and subjective norms. The Theory of Reasoned Action model is normally used to predict the user's behavior (Binyamin & Zafar, 2021). Reasoned action is a logical thinking process (Vega, 2019). In the context of this study, this model is used to comprehend lecturers' readiness to utilize the MLMS for offsite learning. The TRA has been developed to predict the efforts of intention, attitude, and social norms toward information technology usage (Özer & Yilmaz, 2021b). Technology adoption and use are also factored in by the user's attitude toward the system. In this study, lecturers' readiness to use the MLMS is determined by their positivity toward the system.

The adoption and use of new technology are the individual's perceived outcomes of using the technology. Social norms are equally important for lecturers' readiness and adoption of the online teaching and learning platform. For instance, if the individual believes that other related individuals perceive the system positively, the individual's readiness level to adopt it is improved (Özer & Yilmaz, 2021b). Another important variable in the TRA is the subjective norm which focuses on users' perceptions of the attitude of their immediate community toward the adoption and use of the new technology (Lai, 2017). The views of other lecturers and staff can greatly influence the user's intention to embrace the technology. In terms of the complexities of the system and its user-friendliness, the

design element is one of the determinants that can also influence one to use the new technology. That can affect the individual's perceived efficacy regarding the ability to use the technology for its intended purpose optimally. It is significant to note that in this study, the user's level of computer efficacy and the aptitude to use the platform influences the individual's readiness to operate the MLMS.

The TRA is relevant to this study as it determines the lecturers' readiness to adopt the MLMS. Rahmayanti et al. (Özer & Yilmaz, 2011, p. 650) assert that the TRA explicitly states that an individual's motivation to use technology is determined by the individual's intentions and is shaped by his/her attitude toward the behavior. Therefore, lecturers' intention and adoption of the new system depend on their perceptions of the benefits to be derived and the system's user interface. The user's perceptions about the relevance of the system and the user interface are crucial elements in the individual's decision to accept the new system. The TRA also clarifies the role of the immediate community in influencing the individual's readiness. The MLMS is a new platform, and other lecturers' views on its usefulness will also influence the individual lecturer to embrace the platform. If most lecturers have a positive attitude toward adopting the system, the individual lecturer will also be motivated to adopt it.

Technology acceptance model

This paper is also underpinned by Davis' Technology Acceptance Model (TAM), which he introduced in 1985. The TAM has been widely used when new technology is being incepted. The Technology Acceptance Model has its roots in psychological theories and incorporates Fishbein's Theory of Reasoned Action and Ajzen's Theory of Planned Behavior (Sagnier et al., 2020). The model focuses on perceived use, system usefulness, and the individual's motivation toward using new technology. The TAM presents the individual's perceived effectiveness and the user's interface with the system as the variables impelling behavioral intentions to use new technology (Musyaffi et al., 2021). Legris et al. (2003, p. 192) explain that the TAM examines the mediating role of perceived ease of use and perceived usefulness in the relationship between system characteristics and the probability of the system use. The user's attitude toward the introduced technological system is a major determinant in the individual user's resolution to accept or reject the new technology (Marangunić & Granić, 2015). Commenting on Davis' TAM, Marangunić and Granić (2015) further suggest that the individual's decision to utilize new systems is influenced by the individual's motivation, system features and purpose. The individual's perceived usefulness influences the user's attitude to adopt the new system and perceived utilization of the new technology and the effective (Chuttur, 2009). According to Davis (1989, p. 320) perceived use is defined as the degree to which a person believes that using a particular system would enhance his job performance. Davis (1989, p. 320) further defines perceived ease of use as the degree to which a person believes that a using system would be free of effort.

The TAM is a useful model for technology adoption and utilization, but it should incorporate factors inclined to human behavior and human factors that affect change (Legris et al., 2003). Despite its shortfalls, it is imperative to admit that the Technology Acceptance Model is useful for user technology acceptance and adoption. Studies focusing on mobile learning adoption by students at Konkuck University in North Korea, Park et al. (2012, p. 592) suggest that institutions are required to implement technological systems appropriate to the user's perceptions. Sagnier et al. (2020) and Marangunić and Granić (2015) acknowledge that the TAM has been mostly used with technology acceptance or rejection, and it is a parsimonious and accepted model. The same can be said about the lecturer's perceptions regarding the use of technology for online student engagement. It is vital to consider the elements that influence the lecturers' implementation of the new technology when designing the system. If the user perceives the system as useful, the individual's behavioral intention to use the system will be strengthened. Critically important for the user's adaption of rejection of the system include system design, user computer efficacy, user consultation, and the implementation procedures followed by the institution (Marangunić & Granić, 2015). The literature suggests that behavioral intention and attitude influence users' motivation to accept or reject new technology.

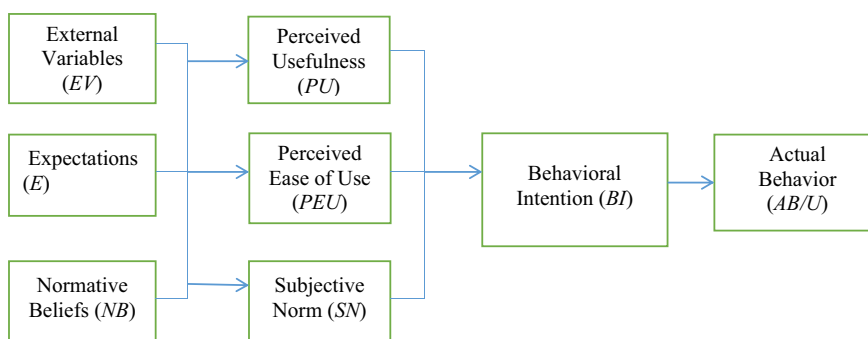


Figure 1. An integrated framework of TRA and TAM. **Source:** Adapted from Davis (1989)

Integrating TRA and TAM

TRA and TAM have been employed in this study to provide useful insights into the determinants of the lecturers' consciously intentioned actions in respect of their acceptance of technology for teaching online. While we acknowledge that the two theories are independently sufficient in explaining human behavior, we contend that incorporating them into a unified model would offer a more comprehensive explanation for lecturers' readiness for technology use in their pedagogical practices. From the unified model, 3 constructs, namely; *External Variables* – factors within the individual's environment which tend to affect an individual's perceptions, e.g., institutional factors, *Expectations* – an internalized social norm for individuals and institutions about what people should do (Hasegawa, Shinohara & Broadbent, 2007), and *Normative Beliefs* – the individual's subjective probability that performing the target behavior will result in consequence. (Davis, 1989, p. 984) combine to influence 3 latent variables, namely *Perceived Usefulness* – the extent to which a person believes that using a particular system would enhance his or her job performance. (Davis, 1989, p. 320) explain *perceived Ease of Use* as the extent to which a person believes using a particular system would be free of effort. (Davis, 1989, p. 320) defines *Subjective Norm* as the person's perception that most people who are important to him think he should or should not perform the behavior in question. Fishbein and Ajzen (1975, p. 302) opine that latent variables influence the individual's behavioral intention to execute a particular behavior (Fishbein & Ajzen, 1975) which in turn influences the individual's *Actual Behavior* - the actual performance of the behavior. Figure 1 illustrates an integrated framework of TRA and TAM.

Literature review

The pandemic has affected normal academic operations in colleges all over the world. In response, many colleges introduced remote learning to continue academic activities without disruptions (Floyd, 2020). While these initiatives were desirable, given the prevailing conditions, the unexpected change from face-to-face instruction and learning to the online mode presented uncharted challenges for students, faculty and staff (Thanawala et al., 2022). Allen et al. argue that this abrupt transition has led to significantly intensified workloads for staff as they work to not only move teaching content and materials into the online space but also become sufficiently adept in navigating the requisite software. Equally, Martin et al. (2022) report that students during the transition phase of teaching and learning:

did not have the needed technologies and resources and might have been unfamiliar with strategies they needed to engage and succeed in emergency online courses. Also, the added stress of the pandemic caused some students to disengage from overall academic activities. (s1).

The role of faculty members is crucial to enhancing students' online learning experiences, and therefore the willingness of faculty members to adopt and implement this new teaching and learning

system is very crucial (Mills et al., 2009). However, higher education institutions are susceptible to resistance from individuals affected by transformation when instituting large-scale reforms (Mokher et al., 2020). Technology readiness has been conceptualized as the tendency of an individual to accept and use new technologies at home or work to achieve his/her goals (Parasuraman, 2000). Tsai et al. (2020, p. 3) maintain that technology readiness is an individual personality trait, and this concept can be seen as an overall psychological state of an individual's tendency to use new technologies, as determined by the psychological aspects of positive drivers (positive readiness) and inhibitors (negative readiness).

Reluctance to adopt new technology could be attributed to staff members' lack of preparedness and negative attitude toward the system (Mills et al., 2009), which may inform their decision to stick with the current situation. Friel et al. (2009) suggest that the reluctance to adopt new technology could be attributed to resistance to change by some institutional stakeholders. For instance, findings from a study conducted at a vocational college in Northern New Jersey, United States, indicate that faculty were not technologically ready to embrace online learning platforms (Thanawala et al., 2022). The lack of technological resources impedes technological acceptance among users. Staff are likely to resist and be indifferent to online learning systems if they lack the technological resources and technical expertise. It is important to consider the level of users' experience and their knowledge of new technology (Culp-Roche et al., 2020), which may inform their readiness to use.

Institutions can use various means to improve lecturer readiness and adopt the new system. Mokher et al. (2020) suggest that institutions should involve the users in approving and implementing new technology. The noninvolvement of users could result in users resisting and non-complying. Thanawala et al. (2022) argue that user readiness should transcend beyond technological expertise but also demands a positive attitude and dedication from the user. Technical support from the institution is an important factor in introducing and adopting any new technology. Goomas and Czupryn (2019) assert that the technical team can design and use standard templates to improve lecturer readiness to adopt and use new learning systems. Goomas and Goomas and Czupryn (2019) further suggest the lecturers' training on navigating and using the designed template. The adoption and readiness to use new technologies for teaching and learning start with the institution sharing its vision with the users (Friel et al., 2009, p. 300). Continued technical support is critical to the implementation and sustainable use of the system. Findings from a study on staff perceptions of online learning at a state college in the Philippines suggest that continued technical support improves lecturers' readiness to use the system (Moralista & Oducado, 2020). The institutions are bequeathed the responsibility of providing adequate training to improve computer efficacy among users. Professional development improves the user's readiness and effective use of online learning management systems. Faculty training is necessary to develop digital skills, knowledge, strategies and attitudes that should be activated (Liesa-Orús et al., 2020).

Methodology

Research approach

This paper used the qualitative approach to explore lecturers' readiness to use the MLMS for remote learning. This qualitative research allowed the researchers to understand the context, the consequences, and the importance of what is being studied (Wertz, Charmaz, McMullen, Josselson & Rosemarie, 2011). By design, the study employed case study research which allowed the researchers to instantaneously investigate a specific unit and comprehend the unit's behavior pattern under study (Kothari, 2004). The Majuba TVET College was selected as a case study as it was one of the pioneers to implement online teaching using an institutionally designed MLMS to continue with the academic calendar during the pandemic in South Africa.

Study site and participants

The study was conducted at the Majuba TVET College, situated in the Kwazulu Natal province of South Africa. The college has 9 campuses that offer engineering, business and farming programmes. The college offers Diplomas, National certificates and Nated programmes in engineering, business, information and technology. The college also has several vocational, artisan, and short learning programmes. There are over 11,900 students spread across the various campuses. Due to the huge number of students, the college has engaged over 680 lecturers for the various programmes. In order to select information-rich participants for the study, we employed the convenience sampling technique, which entailed identifying available and willing individuals until the required number of participants was achieved). Al in all, 15 lecturers were selected from all 4 programmes. The process of conveniently selecting the participants comprised 2 phases:

- Messages were sent through E-mails to all faculty in the college, informing them about the study and also seeking their participation. The e-mail indicated the study's scope, purpose and the participant's role in the process.
- Researchers then contacted the lecturers who responded timeously to our invitation, and the date and time for the meeting were mutually agreed upon.

Data collection

This paper used individual semi-structured interviews as data collection techniques. The study's trifocal research questions informed the interview guide used to collect the data. The researchers conducted the interviews via Zoom to adhere to impositions attributed to the lockdown restrictions. Before the interviews, we found it necessary to contact the participants to address issues related to the research, data collection procedures, and the various gatekeeping issues. The dates and times for the Zoom meetings were agreed upon with the participants before the interview. Each interview session lasted 40 minutes, and after consent from the participants, the interview sessions were video-recorded.

Data analysis

This paper utilized the thematic data analysis method to analyze the data. Braun and Clarke 2006/2012 explain that thematic data analysis is a flexible means to identify, analyze and interpret consistent patterns of meaning within data collected using qualitative techniques. In this paper, themes used for data analysis were derived from the participants' narratives, relevant literature and research questions. Braun and Clarke encapsulate six major steps in data analysis: data familiarization, code generation, the building of themes, theme review and naming and writing of the report (Terry et al., 2017). The researchers followed the thematic data analysis phases outlined above to code the data, cluster themes into categories and identify themes and subthemes for implementing the MLMS. The audio-recorded interviews were transcribed verbatim. Miles, Huberman and Saldana (2014) suggest that researchers must re-read the excerpts to identify patterns and categories and their interconnectedness. The corpus was read several times to identify the codes combined to form and the categories later clustered to form themes and aligned with themes generated from the research questions and relevant literature. Table 1 summarizes the themes that emerged during the thematic data analysis process.

Table 1. Themes and sub-themes from the analysed data.

Themes	Sub-themes
Readiness	Significance Work-in-progress Lecturer readiness Institutional readiness System effectiveness
Experiences	System design Difficult to use Standardization Lack of resources Institutional support Lack of training
Ways of Improving LMS	Upgrade LMS system: standardization, interaction/feedback, online submissions Training Technical support unit Equipment and internet connectivity Standardization

Findings

The study's findings are presented under this section's various themes and sub-themes

Lecturers' readiness to use the MLMS

The pandemic resulted in disruptions to onsite academic activities at the Majuba TVET College, and the MLMS emerged as an important platform to continually support teaching and learning activities. However, the success of the MLMS hinges on the readiness of lecturers to use the system to facilitate learning among students aptly. Some of the responses collated from the participants suggest that they were not fully prepared to adopt the MLMS in their online teaching and learning. TRA and TAM have noted that a user's readiness to adopt and utilize specific technology depends on the user's attitude and perception of the new technology. In this study, these two variables featured prominently among the issues the participants raised regarding their readiness to use the MLMS. First, while the lecturers perceived the MLMS as useful in their online pedagogies, their attitude toward the system was influenced by their perception of whether the system is easy to use, which affected their readiness to use it. Particularly, the participants perceived the MLMS is user-unfriendly. The comments below highlight the participants' frustrations with the MLMS:

The MLMS platform is not easy to navigate. The tools are not user-friendly, and the system is difficult for me.

Sometimes it is difficult to locate documents I have uploaded to the system. Tools that could enhance our user experience are hidden within other tools, which makes it very difficult to use the system.

I do not think the design of the MLMS took into account the integration of the system with other online tools the students are already using. For instance, the MLMS has no link with students' institutional e-mails, which makes it difficult for us (lecturers) to inform the students through the system about some uploaded materials or revisions to the course site. The lack of a notification tool and link to students' e-mails makes it very difficult to use the system.

The lecturers' reluctance to adopt the digital system was hinted at when some participants hinted that consultations on implementing the MLMS system are crucial. Most of the lecturers interviewed believed that the college needs to consult them as the principal users of the platform. The quote below suggests that consultations with lecturers would play a crucial role in users' willingness to use the MLMS system:

MLMS is a good initiative; however, consultation with the system's users (lecturers) is vital to save time and money for the system development and ensure the system's acceptance.

The responses from the participants questioned the institution's preparedness to implement the MLMS system for remote academic activities. The following response indicates the instructors'

views that the college lacked commitment to implementing the MLMS. The quote below from one of the participants also suggests a lack of commitment from the college management to using the MLMS system.

The initiative is good but lacks proper support from the administration and management. From my short experience, the ambitious program is super, but the application is not exciting. Students have no hardware and data to access it. Lecturers have no data to access it. Last time the login in process was a nightmare.

There was consensus among lecturers regarding the significance of the MLMS system for online teaching and learning. However, the participants' responses further revealed a need to improve how the MLMS platform works. The lecturers perceived their lack of readiness was also attributed to the system design. When asked about their readiness for adoption, one of the participants (lecturer) believed that their reluctance to embrace the system was aligned to the system, which was still a work in progress.

It is a great start in a long process to integrate the TVET sector into online platforms to reach a wider market. It does not adequately serve its purpose. A huge amount of work still needs to be done before getting positive results.

Most participants also felt that the system lacked features that allow interaction with students. The response below also reflects the lecturers' perceptions of the MLMS system design:

I think it is not effective. We need more or less like an e-learning platform for lecturers to interact with students and give clear feedback based on performance on how much the learners are accessing the learning materials.

Lecturers' experiences on the use of the MLMS

The findings from the study suggest that lecturers encounter numerous challenges in their use of the MLMS. These challenges included the MLMS design, the lack of technological resources, and the lack of computer efficacy among users. The majority of the participants indicated that the MLMS was difficult to use. From the viewpoint of the lecturers, the MLMS was not simplified enough to improve their user experience; hence they opined that the system was not user-friendly. They also reported that co-taught courses were characterized by uncoordinated upload of course materials and learning activities, adversely affecting students' learning experiences. The participants intimated that they do not control who accesses their uploaded material. They further indicated that the system does not indicate the number of students interacting or accessing the learning material, which affected their monitoring of students participating in the online teaching and learning encounter.

The participants were also concerned about the students' lack of technological resources. The finding revealed that students did not have the necessary technological devices to engage in online learning. This observation is summed up by the quote that follows:

When you post notes on the MLMS, the number one challenge is teaching your students and teaching students from other campuses. Some students do not have smartphones, data, or laptops; therefore, they have difficulty accessing MLMS. Students were not trained on how to use it.

The study found that interactions between the lecturers and the students on the MLMS are a unidirectional process that involves the lecturer uploading instructions, learning materials and learning activities unto the MLMS for students to review and complete. As noted by the lecturers, the system does not allow lecturers to provide feedback on students' completed tasks, and there was an opportunity for students to relay their queries or feedback to the lecturers. The excerpt below provides some evidence of the non-interactive nature of the MLMS for students and lecturers:

The system does not have interactive tools to enable us (lecturers) meaningfully engage with our students. When students submit their assignments, for instance, the system does not allow lecturers to provide students with comments for improvement. My students also do not have the means to interact with me on the system.

Some participants further perceived the platform as ineffective, effectively undermining the purpose of online student engagement. The ineffectiveness was attributed to the system's design prohibiting lecturers from establishing and monitoring their classes. The following quote supports this:

It does not provide a complete connection to my students because I cannot interact with my allocated class group; instead, every college student can access my class content, which is irrelevant. It does not allow lecturers to deal with their specific groups of students, which leads to duplication of information as different people have to load the same subjects from different campuses.

There was consensus among the participants that the lecturers were not adequately resourced for effective use of the MLMS system. The responses also suggest that the learners lacked the relevant technological equipment and internet connectivity. The response from one of the lecturers bemoaned the lack of technological resources for users to exploit the MLMS system effectively:

I feel it is a good idea for the benefit of the learners. However, the infrastructure offered by the college makes it impossible for learners to participate. Limited data, lack of Gadgets, and service providers fail to develop a system that allows learners to access information without using data.

Institutional support is imperative if the MLMS is to achieve effective outcomes. The participants acknowledged that the institution was providing limited support. The lecturers revealed that the college does provide limited training on the use of the system. The following response indicates the lack of training on the use of the system:

Within my campus, I feel the training was so minimal. There was no qualified facilitator to carry out the training. One of our colleagues (computer lecturer) was tasked to train the lecturers, and this individual is not a specialist in the MLMS. The curriculum department is not providing routine training or improvement on the MLMS platform.

Some participants believed that the institution should also support the students through technological equipment, internet connectivity, and training. They advocated for student training on navigating and accessing material on the MLMS platform.

Inadequate training was provided to students, making it difficult to use the system. Some challenges are not addressed to ensure students have access. The college must provide gadgets for students to access LMS at home.

The participants' responses suggest that students the lecturers find it difficult to use the system. The participants showed concern about the lack of resources for students and lecturers to use the MLMS system for online instruction effectively. The findings postulate that the lecturers' lack of training on the LMS system and the lack of technical support were some of the challenges experienced by the lecturers.

Ways of improving the MLMS

The participants suggested improving the MLMS to enhance their readiness to use it to promote effective remote academic activities. Several strategies recommended by the lecturers include upgrading the MLMS system, training primary users of the MLMS system, provision of technical support, and adopting established online learning system providers. The study showed that the MLMS platform needs improvement, particularly by refining the system to add features and tools that promote active student involvement in the online teaching and learning encounter. In line with this suggestion, some participants suggested that these improvements should enhance the "interactiveness" of the system and allow feedback between the lecturers and the students. The interactions should be synchronous, as suggested by some of the participants. The excerpt that follows from one of the participants emphasizes the need for an interactive online platform:

The platform should allow direct connections between subject lecturers and their respective students. Students must be properly trained. Students need appropriate devices to access the MLMS platform. The platform must allow for live communication with students, not just posting content to students, yet you have no idea if they will

be able to access it and when they are accessing it. It must provide feedback solutions to facilitate complete communication.

Some participants believed that the platform should also facilitate interactions among students. This view is supported by the quote that follows from of the lecturers:

Improve to more or less e-learning platforms where lecturers have classes and can view learners' progress in accessing materials. Learners can post work and interact with the lecturer and other learners as well

The participants further suggested the inclusion of additional features on the MLMS system. In addition to upgrading the system to be interactive, one of the participants recommended that the system allow students to access and submit assignments online. The response that follows supports the above view:

It can be improved by allowing students to raise questions with their lecturer/tutor and get responses (vice versa), allowing the teaching and learning process to be interactive. Assessments should also be made available and allow assignment uploading (submission). The system should also include the announcements section to keep students updated.

The participants recommended training for lecturers and students on navigating the MLMS system. The participant stated as follows:

Since this is a new e-learning platform for the lecturers and students, it would be helpful to organize training workshops for them in order to enhance their user experiences on the system

It emerged from the findings that there is a need to standardize learning material uploaded on the MLMS platform. The participants suggested collaboration between campuses offering the same programs. They also suggested the appointment of lecturers who would be responsible for developing and uploading material for the entire college. They further suggest that the appointed lecturers be compensated for the extra work. The following response outlines some of the suggestions:

In my view, this MLMS project needs to be standardized across all campuses. I suggested to the Head of Department to ask Central Office to advertise posts for lecturers interested in uploading an entire syllabus for each subject, with remuneration. Otherwise, I do not see MLMS taking off without glitches. Another suggestion was exchanging and sharing work by pairing with a sister campus.

The quote below also supports including specific subjects to make the administration easier.

The platform should be module/subject-driven to avoid duplication. Currently, the platform is program/course driven, meaning modules/subjects are duplicated if they exist in more than one course, making it difficult to locate the updated module/subject.

The participants' responses suggest that the institution should provide the necessary equipment and internet connectivity to the primary users. Some participants believed that lecturers and the students should have the relevant resources. The verbatim quotation that follows from one of the lecturers supports this view.

The college has to consider the students too when allocating computers and data. Most of the students do not have laptops to access the content. The college must do something about this, or this project is a total waste of time.

The responses from the participants highlight the need for standardization of subject content uploaded on the system. Some participants opined that subject committees be established to ensure uniformity when uploading information on the same subjects. The following excerpt from one of the lecturers also supports collaboration among lecturers from different campuses teaching the same subject:

It must be streamlined to suit the college's needs. It must also be more accessible to learners. MLMS should facilitate online learning and collaboration for challenges and share best practices.

The study's findings called for collaboration and consultations between the main stakeholders. The participants reported involving all stakeholders before the system could be adopted. The following quote backs this proposal:

In the initial phase, all stakeholders (internet service providers, Lecturers, students' representatives, gadgets manufacturers, and Blog engineers) must be involved and play their part in making online teaching successful.

There were suggestions from some of the participants that the college should adopt and implement systems that are reputable and that have proved to be reliable. The following quote indicates this sentiment from one of the participants:

College must engage well-established providers like SAKAI, STUDENT HUB, and Moodle rather than get providers who are learning to develop a new system for the college as if there are no existing and running learning platforms.

The participants suggested several strategies that can be considered to improve the MLMS system. The participants' responses recommended upgrading the MLMS system to be interactive and incorporating additional features that allow uploading assignments. It also emerged from the participants' responses that lecturers and students should be trained on exploiting the MLMS system. The participants suggested technical support to lecturers and students and the standardization of content uploaded. The provision of technological resources was also presented as improving the MLMS system.

Discussion

Lecturers' readiness to use the MLMS system

It is important to acknowledge that the exigencies of recent times have impelled educational institutions to embrace remote learning systems in academic activities. While this gravitation toward e-learning is becoming widespread in these institutions, it is important to note that the establishment and adoption of online remote learning should integrate the role of key stakeholders, including perhaps, more importantly, lecturers who directly implement this mode of teaching and learning. That aligns with Budur et al. (2021), who suggest that implementing online systems requires institutional commitment to incorporate input from various stakeholders. The findings postulate that the lecturers were inadequately prepared to leverage the MLMS to engage the students in online learning – a mode which had become necessary as a result of the pandemic-led closure of the institution. This finding is supported by both TRA and TAM in that they demonstrate that a mix informs the actual intention to use the MLMS of variables. The salient among these variables are a) lecturers' perception of the MLMS and b) lecturers' negative attitude toward the "new" technology, which affected their intention to use the system. Marangunić and Granić (2015) argue that attitude is a major determinant of the user accepting or rejecting the new technology, and b) lecturers' perceptions about the commitment of the institution's leadership to warrant that the MLMS is successfully implemented. Concerning the former, the study identified two factors: attitude suggest that institutions must conduct wide consultations and consider the user's needs if the technology is accepted. The study's findings suggest that issues need addressing before implementing the MLMS system. This aligns with Davis' Technology Acceptance Model (TAM), which focuses on user readiness and technology readiness. It is important to acknowledge that the individual's attitude is crucial to individual embracing of the new system. Therefore, it is critical for the college to include input from the lecturers if the platform is effectively utilized. It emerged from the study that the MLMS platform's design deterred the lecturers from embracing the platform. Therefore, it is imperative for the institution through the system designers to include features that facilitate interaction between lecturers and students. Sagnier et al. (2020) suggest that the individual's adoption of new technology revolves around its perceived usefulness and ease to use. To improve lecturer readiness and acceptance, relevant training and providing relevant technological resources are also crucial. Douglas et al.

(2020) accept that relevant training allows the instructors to improve student engagement. The lecturers' cognitive ability to use the different applications of the system influences their readiness to adopt and use the MLMS system. Insorio (2021) consent that if the lecturers are ready, the system can be implemented with minimum obstacles. It can be derived from the study that the users' perceptions and readiness can be enhanced if the users' needs are adequately catered for.

Lecturers' experiences on the use of the MLMS

Institutions encounter several challenges while adopting and implementing the online learning system. Changing from face-to-face to remote teaching and learning is met with challenges (Cibaroğlu et al., 2021). The study's findings revealed that lecturers experience several challenges when using the MLMS for online teaching and learning. The difficulties lecturers encounter when using the online platform deter them from embracing and effectively using the system. That is consistent with Bedenlier et al. (2020), who concede that users need to comprehend and appreciate technology before accepting and using it. The lack of technological resources and computer efficacy among students and lecturers emerged as the main obstacles to using the MLMS platform for lecturers. Musyaffi et al. (2021) argue that users' computer efficacy is vital to utilize remote learning systems effectively. It is also important to acknowledge that providing technological resources is critical for users to accept and embrace the online learning system. The availability of technological devices, internet connection, and proficiency in using the technology are important indicators of an individual's inclination to embrace new technological systems (Andarwulan et al., 2021). The lack of standardization on similar subjects offered on different campuses also deterred the lecturers from effectively using the online learning platform. The findings further revealed that the platform lacked an interface, making it difficult for the lecturers to monitor student participation and performance. The TAM advocates that perceived effectiveness and simplicity of use are the key determinants of the individual users' readiness and approval of the new system. The user's negative perception of the system's usefulness would change the user's behavioral intention to adopt the system. It is imperative to admit that online platforms should not deter students from participating (Prince et al., 2020). Therefore, there is a need for the institution to select platforms that include tools that facilitate suit the needs of the users. However, it emerged from the study that the MLMS was bereft of interactive features that facilitate student participation.

The acceptance and effectiveness of technology for online learning depend on adequate support from the institution. Commenting on institutional support, Budur et al. (2021) explain that faculty readiness through adequate support positively influences the adoption and use of online learning systems. In recognition of online learning systems, Douglas et al. (2020) postulate that online student engagement allows students to access rich and flexible pedagogical methods and promotes autonomous learning. The findings revealed that the lecturers received minimum support in using the MLMS system. There were concerns from the users about the lack of adequate training on using the online platform. Musyaffi et al. (2021) suggest that institutions provide adequate training to improve the users' computer efficacy. The findings further suggested that the students should also be provided adequate training on the system to navigate and effectively use the online learning platform. (Farrell & Brunton, 2020) advocate for adequate access to technology and internet connection for disadvantaged students who support technology use. The provision of technological resources for teaching and learning should also include students. The study revealed that the institutions should support the users with sufficient technological resources and internet connectivity.

Ways to improve the MLMS

The MLMS can be an essential tool for remote academic activities if it is properly implemented and supports systems. The institution's capability to provide the required technology improves the system's acceptance and effective use by the academic staff members. In supporting the use of remote

for teaching and learning, Douglas et al. (2020) attest that student engagement improves if adequately trained on technology use and supported. The above view is consistent with Davis's Technology acceptance model, which advocated for adequate resources and user training. The findings revealed that training lecturers and students using the MLMS would yield positive results. The above view aligns with Lu (2021), who asserts that computer self-efficacy improves student engagement and user satisfaction. It is also noteworthy that the user's computer self-efficacy contributes significantly to user acceptance, consistent with the TAC model.

The MLMS platform requires improvement, and the platform should include features that allow lecturers to register for their classes and post their expectations and announcements. Prince et al. (2020) believe that instructors are responsible for building student engagement through clear instructions and outlining their expectations. Such an improved platform would assist lecturers in monitoring student participation. The platform should also be interactive, allowing the students to interact with the lecturer. Pedler et al. (2020) suggest that students actively engage in a platform that encourages interaction. The interaction should not be confined between students and lecturers but between students. There is also a need to add tools on the MLMS that allow lecturers to give feedback to the students timeously. On the importance of feedback, Prince et al. (2020) agree that continuous feedback motivates students to participate in academic activities. Based on the findings, it is imperative to acknowledge that institutional support is critical to ensure the available technology is effectively used. Paulsen and McCormick (2020) acknowledge the crucial role of the institution in implementing the system and continued support. The findings further suggest the need for the institution to standardize the learning material uploaded on the system. There is a need for the institution to appoint individuals responsible for uploading learning material to the system. Therefore, there is a need for collaboration between the curriculum unit, system designers, and lecturers. To improve acceptance and use of the system, the institutions should initiate wide consultations among key stakeholders on implementing the MLMS platform.

Conclusion

This paper has discussed the findings of a study conducted at a South African TVET College focusing on the lecturers' readiness to aptly use an institutional designed Learning Management System to facilitate online teaching and learning in these prevailing times. It has been noted that the successful implementation of the MLMS revolves around the lecturers' ability to embrace and effective use of the online system. Our analysis has revealed that the lecturers were not fully prepared to use the MLMS and that a combination of internal and external factors influenced lecturers' readiness to use the MLMS in their online pedagogy. Among these factors are lecturers' attitudes about the MLMS and perceptions about the institution's management's commitment to ensuring the system's successful implementation. The study has also revealed that insufficient technological equipment and network connectivity and the users' lack of computer literacy – which the lecturers reported as some of the challenges they encountered – hindered the effective use of the MLMS system for online student engagement. Despite the challenges adumbrated above, the lecturers made some suggestions to improve the MLMS, such as institutional support by providing training to lecturers and students, upgrading of the MLMS platform and consultations between designers, curriculum unit, and faculty staff.

Implications of the study for practice

This study has wider implications on how online platforms are administered and implemented in TVET institutions. The study has important implications for various stakeholders such as students, lecturers, designers, curriculum units and management of institutions implementing LMS as a learning platform to counter challenges enforced by the current COVID-19 pandemic. The study could impact how the institutions to design, adopt and implement the system, considering the resources required and the lecturers' and students' different levels of aptitudes. The context differences

and challenges that affect the users should be factored in before the system is implemented. It also has implications for the teaching and learning methodology currently used by TVET institutions. The institutions could be impelled to blend their learning or adopt a complete shift from traditional to remote academic activities. The study's findings could impel TVET colleges to invest more in remote learning and prioritize the training of lecturers in online learning and teaching. Despite some challenges to lecturers, the suggested strategies could enhance the adaptation and implementation of the LMS within the TVET sector.

Limitations and future research

There are a few limitations to this study. The first limitation pertains to the sample size selected for the study. The sample size was small and hence fails to justify the diverse, multifaceted nature of faculty readiness for online pedagogy. Linked to the first, the study's second limitation concerns our inclusion criteria which were restrictive and failed to offer other information-rich lecturers the opportunity to participate in this study. We entreat future research to expand the sample to include a sizable number of lecturers whose experiences could offer a more detailed and complete comprehension of lecturer readiness for online teaching and learning. The study's third limitation concerns the one-sided nature of the data collected for analysis. The data used for this study was acquired from the lecturers' narratives. However, since online teaching and learning represent a twofold relationship between lecturers on the one side and students on the other, the students' accounts and those of the lecturers would have enriched the study's findings. Future research could incorporate both students and lecturers in the sample to enhance the richness of the data generated. Fourth and more importantly, our findings must be read with some caution; specifically, they must be seen as related to a particular group of lecturers who participated in this study. The narratives presented in this article are part of the participants' unique experiences and hence cannot be extrapolated to other lecturers within the college or other colleges in South Africa or elsewhere.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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