

Exploring ideological-ware as a resource in the use of Moodle in higher education – analysing Covid-19 publications

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ABSTRACT

Across the globe, the advent of the coronavirus disease (Covid-19) has propelled most sectors to do their business online. Higher education institutions (HEIs) in particular have had to move their teaching and learning online, with Moodle (modular object-oriented dynamic learning environment) reported to be one of the most used platforms internationally. In the context of Covid-19, educational researchers and publications have discussed various ways in which this platform has influenced the three types of curricula, namely: competence curriculum; pragmatic curriculum and performance curriculum. However, there is less emphasis on ideological-ware in the use of Moodle as a teaching and learning resource, which presents a serious challenge and requires systemic debate and reflection. This study uses critical discourse analysis and community of inquiry through purposive and convenience sampling to identify the published documents on the use of Moodle as a teaching and learning resource in the context of Covid-19. Findings indicate that most scholars are advocating that the successful use of Moodle in higher education institutions relies on ensuring that hardware and software resources are available for both lecturers and students. This suggests that HEIs are focusing on the performance and competence-based curriculum, yet limited mention is given to ideological-ware as an important aspect when using Moodle.

Keywords: Higher education; Moodle; ideological-ware; Covid-19; competence curriculum; pragmatic curriculum; performance curriculum

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1 INTRODUCTION

The advent of Covid-19 forced changes in the curriculum systems of higher education institutions across the globe, including developing countries such as South Africa. The changes brought about migration from traditional methods of teaching and learning to online learning. Although many HEIs were accustomed to online learning, Covid-19 drastically enforced

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changes that needed immediate implementation as there were few other alternatives to continue with effective teaching and learning. Online learning refers to the use of information and communication technology to deliver lectures and share instructional materials (Hassan et al., 2021). As the transformation to online learning took place, a number of articles were published on this required migration instigated by Covid-19. The publications focused on the impact of Covid-19; migration to remote learning; learning opportunities presented by Covid-19; digitalised curriculum; virtual classes, among others.

However, no reviews were found on ideological-ware resource in the use of Moodle in higher education in the context of Covid-19. According to Khoza (2018) ideological-ware resources are ideas, theories and thoughts involved in the use of technological resources when teaching. Ideological-ware resource remains significant in the process of teaching in the sense that these are teaching and learning strategies whereby the facilitator imparts ideas and pedagogical knowledge on the subject matter.

Consequently, without ideological-ware, the teaching and learning process cannot take place. Even though hard-ware resources such as computers; laptops; tablets; overhead projectors; cellphones, etc. may be available, they still require software resources to operate. These soft-ware resources include the internet, videos, and different apps that are used for teaching and learning. However, it is necessary for the teacher to have ideological-ware resources which are ideas and methods on how both these resources can be successfully used to fulfil the role of teaching and learning (Budden, 2016). Amory (2010) correctly argued that teaching is not only about hard-ware or soft-ware resources but is about ideology. Correspondingly, Shulman (1987) shared a similar understanding using a concept of pedagogical comprehension and reasoning, stating that it is essential for successful teaching. In a similar manner, Khoza (2015) disclosed that a curriculum that is driven by hard-ware resources to achieve its aims addresses the needs of the subject content and those of the community as well, whereas a curriculum that is driven by ideological-ware resources addresses the needs of the teacher and student.

Notwithstanding the successes of Moodle in ensuring continued learning despite difficult times, there are yet challenges that need attention. The central challenge faced by lecturers (especially those without previous experience of e-learning) is adapting to new teaching approaches involving the use of technology in their practice. Correspondingly, Mpungose (2017) identified that another challenge could be students not welcoming these new changes which could cause a barrier for students. Furthermore, there could be other obstructions with the infrastructure such as lack of hard-ware and soft-ware resources. Finally, there could also be barriers on the institutional leadership which could engender lack of support.

2 MATERIALS AND METHODS

Reviews specifically about exploring ideological-ware as a resource in the use of Moodle in higher education - analysing Covid-19 publications, were not found on Google Scholar and JStor. Nonetheless, there was one identified review by Khoza et al. (2021) *‘Exploring the mi-*

gration to a digitalised curriculum at UKZN'. Even though this review highlighted the essence of ideological-ware, its main focus was on migration to a digitalised curriculum specifically at UKZN. This indicates that there is still a greater need for a study that examines, on a broader scale, digitalised curriculum ideological-ware resources used by HEI academics in teaching during the COVID-19 pandemic. Moreover, when keywords such as 'ideological-ware and Covid-19' were used in the search, several articles by Khoza, Mpungose, Makumane and Nhlongo were listed. These articles commonly advocate for the awareness and importance of performance, competence and pragmatic curriculum, and aligning the curriculum with resources (hard-ware, soft-ware and ideological-ware). It is important to note that even though they are relevant and can be used to generate data to advance this study, they cannot be classified as reviews since they are empirical studies. Thus, this scarcity of reviews on ideological-ware as a resource in the use of Moodle in higher education during Covid-19 presents an opportunity for this study to prevail.

3 CONCEPTS AND DEFINITIONS

In the context of this study, higher education institutions (HEIs) refer to organisations such as universities, colleges, and other professional schools that provide post-secondary education or training with a reward of a degree, diploma, or certificate at the end of the course. These institutions enforced digital transformation to complete the curriculum, since global closure of schools was part of measures to maintain social distancing to curb rapid transmission of Covid-19 (Khoza et al., 2021). The pandemic led to the migration from face-to-face methods to online methods of teaching and learning. The Moodle platform was one amongst many learning management systems (LMSs) used by HEIs to create lessons, manage courses, and facilitate lecturer-student interaction (Tang et al., 2021). Moodle is an open-source software online educational platform that provides custom learning environments for lecturers and students. However, to successfully utilise Moodle, the user needs to have hard-ware (physical gadgets), soft-ware (internet, programs, systems to control the hardware) and ideological-ware resources. According to Khoza (2016) ideological-ware refers to any component of one's teaching/learning that cannot be seen or touched such as thoughts, ideas, and experiences that facilitate teaching and learning.

4 DATA COLLECTION

4.1 Collection and analysis of selected papers

The authors of the study were responsible for the selection, collection and analysis of articles and other publications. All the articles and publications found on the search engines such as Google Scholar, ERIC (Education Resources Information Center), iSEEK Education and Science.gov, were verified for authenticity. The identified publications were documented and saved to be further analysed. The utilised publications were cited and referenced accordingly.

4.2 Selection criteria for publications

Both qualitative and quantitative publications and studies that were made and conducted during the Covid-19 pandemic which are aligned with exploring ideological-ware as a resource in the use of Moodle in higher education were included. The rationale behind this was to generate insight into the existing literature as well as to collect data. Studies, reviews and publications that were about e-learning but conducted prior to Covid-19, were excluded. Furthermore, studies that were published in languages other than English were also excluded.

5 FRAMEWORK FOR THIS STUDY

Figure 1 illustrates the framework of this study, identifying three categories of curriculum, namely competence, pragmatic and performance curriculum, that are aligned to three categories of experiences, namely shared-experience, self-experience and specialised-experience. The concepts of shared-, self- and specialised-experiences are the curriculum concepts pro-

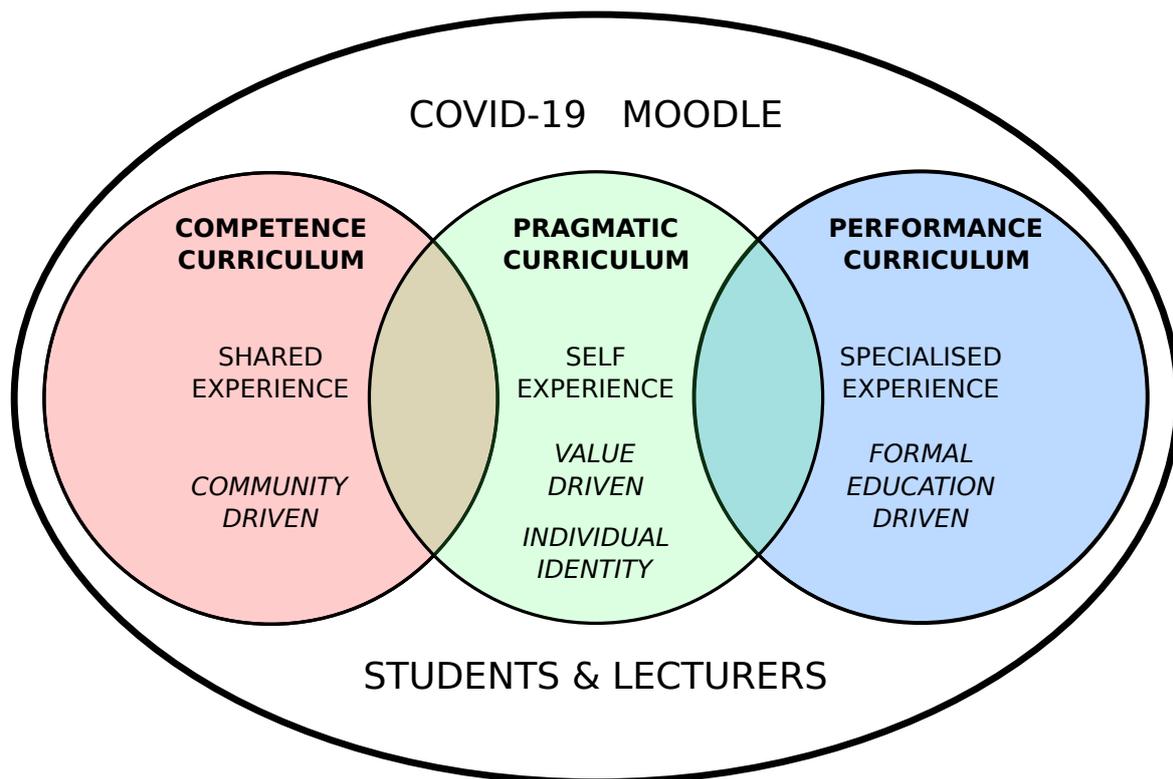


Figure 1: Three categories of experience aligned to curriculum.

posed by Zuma (2019). The meaning of shared-experience is derived from the word sharing which can be practised by the community. Self-experience is derived from individual identity,

in a sense that even if human beings can live in a community, each human has a different character, therefore the curriculum must accommodate and acknowledge the uniqueness of the student. Lastly, specialised-experience is derived from the word specialisation, in a sense that the needs of the curriculum are independent, whereby content shapes the individual identity of a student in order for the student to achieve global standards of a particular subject or module.

The discussion in the following sections will demonstrate how shared-, self- and specialised-experiences are aligned with competence, pragmatic and performance curriculum.

5.1 Shared-experience aligned to competence curriculum

Shared-experience means placing the needs of the community at the centre of teaching and learning (Khoza, 2015; Khoza et al., 2021; Mpungose, 2017). This suggests that teaching and learning addresses the community's needs, which is why the community is more concerned about the outcomes of the curriculum over aims and objectives. Similarly, competence curriculum prioritises learning outcomes for the students, whereby the students are active in their own learning and lecturers are facilitators (Khoza, 2015). To achieve these learning outcomes the lecturer guides and facilitates, and students may be given several opportunities to complete or resubmit their assessment tasks until the desired outcomes are achieved. In addition, students are encouraged to participate in peer-assessments where they offer constructive criticism to each other's tasks to an extent that they get marks for critiquing (Zuma, 2019). This illustrates that competence curriculum is based on sharing experiences, through which the knowledge, skills, ideas and opinions of others are valued and used to drive the lesson.

5.2 Self-experience and the pragmatic curriculum (blended learning)

Self-experience, is a recognition of the student's or lecturer's individual identity within the curriculum (Zuma, 2019). At this level, lecturers are using the correct ideologies to support students. Self-experience recognises that the teaching and learning process is about individual identity, capabilities, strengths and talents (Leroux & Levitt-Perlman, 2010). Therefore, individual uniqueness and identity are central in any activity of teaching and learning taking place inside and outside the classroom. Thus, Zuma (2019) agreeably notes that self-experience is aligned to pragmatic curriculum, which is about integration and consideration of students and content needs in a learning space. Accordingly, it can be concluded that self-experience is about combining shared-experience (community needs) with specialised-experience (content needs). This suggests that the aims and objectives of the curriculum being taught are given equal consideration with the outcomes.

5.3 Specialised-Experience and performance curriculum

Specialised-experience is about centralising the needs of the specialisation, whereby teaching and learning is about achieving the needs of the module or content (Khoza, 2015; Khoza et

al., 2021; Mpungose, 2017; Zuma, 2019). Performance curriculum is composed of objectives, whereby the lecturer is an instructor, and formal assessment is prioritised. The objective of an instructional lecturer is teaching by the rules, where students are guided and expected to follow step-by-step prescripts, to attain the curriculum. Hence, it can be said that performance curriculum focuses on the goals of the curriculum rather than the needs of the student, and the main goal is completing the content (Adams et al., 2022). Assessment is summative, which is used to grade students to establish whether they have understood the content learnt or not. Specialised-experience is guided mostly by time (Octaberlina & Muslimin, 2020), therefore when a particular topic is taught, the module concepts, language and context must be comprehended by students speedily so that they produce specific answers expected by the assessor. Furthermore, the summative assessments have a fixed duration (Makumane, 2021); the implication for this is that students are expected to recall, analyse, synthesise and evaluate knowledge in a limited period. As a result, most students fail when performance curriculum is used.

5.4 Aligning framework with this study

Studies involving shared-experience in relation to the use of Moodle in higher education

These studies are more concerned about addressing the needs of the community. The purpose and rationale for conducting research are closely related to community needs. The observable patterns such as issues of culture, gender and race are used to classify the publication under the shared-experience subheading. Furthermore, studies in this category are reflecting on the use of social media platforms to influence teaching and learning in situations where the user might be the lecturer or the student.

Studies involving self-experience in relation to the use of Moodle in higher education

These studies are more concerned about students' or the lecturers' needs. The observable patterns are about ideology/teaching methods/strategies that are utilised by lecturers to accommodate their needs as well the needs of students. Awareness about proper teaching methods assists students find their identity within the curriculum (Acar & Kayaoglu, 2020). Lecturers also understand their own talents, abilities and limitations and devise strategies on how to deliver the curriculum successfully. Subsequently, ideological-ware is discussed by certain scholars in this category as a requirement for blended learning and an essential resource for successful teaching and learning through online-learning platforms during Covid-19. In essence these studies encourage a balanced curriculum that embraces competence, pragmatic and performance. However, challenges such as poor connectivity, lack of data, and geographical location of students are noted as causes for concern for both students and lecturers as they have potential to restrict blended learning.

Studies involving specialised-experience in relation to the use of Moodle in higher education

These studies are more concerned about addressing the needs of the module/content.

The purpose and rationale for conducting research are about the needs of the module. Universities are concerned about content and assessment coverage regardless of Covid-19 challenges in higher education. Specialised-experience is guided by time, therefore time lost for teaching and learning during lockdowns is prominent in these studies. Moreover, since specialised-experience is less concerned about the needs of the students, these studies focus more on module content coverage and they only accommodate one aspect of the curriculum. It can be concluded that these publications only address or emphasise the challenges faced by higher education institutions during Covid-19 with regards to curriculum coverage.

6 FINDINGS

Tables 1, 2 and 3 display findings of various global studies exploring the use of digital technology such as Moodle in HEIs that demonstrate shared- (Table 1), self- (Table 2) and specialised-experiences (Table 3).

Table 1: Publications that generated the findings - studies involving shared-experience in relation to the use of Moodle in higher education.

	Sample size Data collection method	Findings	Discussion and Conclusion
Tang et al. (2021)	913 participants Survey using a questionnaire	This study explored several key factors in the research framework related to learning motivation, learning readiness and student's self-efficacy in participating in live online learning during the coronavirus outbreak, considering gender differences. The results revealed that female students have higher motivation and better communication in online learning than males.	The motivation of female students was higher because they are more enthusiastic about using communication and technological resources for learning. Moreover, females prefer to use written communication over male students, or females preferred to use written communication over spoken communication. Despite that, the pandemic may be the reason to push male students to participate more actively in live online learning, thus narrowing the gender differences towards student readiness in motivation and communication.

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Table 1 – *continued from previous page*

	Sample size Data collection method	Findings	Discussion and Conclusion
Sakkir and Dollah (2020)	20 undergraduate students from English Education Department of the 2019/2020 academic year Questionnaire and Interviews	The results show that students still prefer to study on campus directly compared to learning from home with various e-learning media. The results also show that the lecturers are not too familiar with other, more varied learning media. The choice of media used is limited. However, students have a positive perception of learning English based on e-learning media during the Covid-19 pandemic.	The study concludes that there are many types of e-learning media used by lecturers in delivering the materials. Students are less interested in the use of media in the learning process. However, the use of e-learning media in the current learning process is an absolute necessity. Favourite learning media frequently used by lecturers in teaching includes Zoom, WhatsApp and LMS, whereas students prefer to be taught with WhatsApp, Zoom, Google Classroom, LMS, and Quizizz.
Maulana et al. (2021)	4 students from 2 groups of teaching staff Data generated using practicality tests, validity tests, effectiveness tests as well as a questionnaire	The findings demonstrate that the learning media developed for online learning during the Covid-19 pandemic based on student learning outcomes is very effective. E-learning learning media developed was proven to improve student learning outcomes.	The findings show that the teaching staff can use this learning media so that its use is not only limited to computer network management design materials but can also be used for learning. The more people use the learning media, the better the transition to digital technology will be.
Mishra et al. (2020)	78 faculty members and 260 students for survey; 20 students and 20 teachers for interviews Survey and semi-structured interviews	Despite having a variety of digital modes of teaching/learning, almost all the teachers and students were using both WhatsApp/ Telegram and email for educational interactions, submission of assignments, clarification of doubts and conducting class tests. Only 32% of teachers were using Google Classroom and 45% were using Zoom/Cisco WebEx/Google Meet/Skype platforms for taking on-line classes (20% and 15% for students, respectively). 25% of teachers conducted webinars as on-line teaching while 35% of students attended university webinars.	At the very onset of the lockdown, teachers intended to use WhatsApp, email and telephonic conversation for imparting teaching. However, gradually as the lockdown period was extended from time to time, they were found to be inadequate. Teachers were given training to explore other online platforms such as Zoom, Google Meet, Telegram, LinkedIn Learning, Sololearn, Udemy, and many more. Three relevant stakeholders, namely academics, technicians and students, started working in tandem to experience and utilise the transition. Students faced specific problems like connectivity and video issues due to the remoteness of their location.

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	Sample size Data collection method	Findings	Discussion and Conclusion
Pustika (2020)	60 English education study program students. Open-ended and closed-ended questionnaire	The finding of this study is that teachers were aware that defining the objective first is important to make the teaching and learning process meaningful. They believed that the learning process needs to be useful as well as meaningful to their students even though the learning process is held virtually.	The future English teachers should be aware of what they will face by following the rapid development of technology. Both advantages and disadvantages of e-learning that they have experienced might be reflection for them to improve and support their e-learning process later.
Mahalakshmi et al. (2020)	175 students across the world Stratified sampling method, data collected with Google Forms	The findings revealed the contribution of e-learning resources or facilities on the students' performance. The study found that there is a generally positive thought among students about e-learning, there is also a great interest in and increasing use of these e-learning programmes for academic use. However, many of them do not wish for e-learning. They only like virtual learning like face-to-face learning or traditional learning.	The online method of learning is best suited for everyone. Depending on their availability and comfort, many people choose to learn at a convenient time. This enables the learner to access updated content whenever they want it. This study showed that e-learning has become quite popular among the students across the world particularly, the lockdown period due to the Covid-19 pandemic.

Table 2: Publications that generated the findings - studies involving self-experience in relation to the use of Moodle in higher education.

	Sample size Data collection method	Findings	Discussion and Conclusion
Khoza et al. (2021)	Purposefully selected publications Pragmatism, critical discourse analysis, and community of inquiry with natural identity	Findings suggested that, while the UKZN had the professional identity of migration through engaging Moodle, it began the migration using WhatsApp, Facebook, Skype, and Zoom video conferencing technology, promoting societal identity. However, the migration seemed to miss the personal or pragmatic identity as an important ingredient of a digitalised curriculum, which addresses individual personal needs.	While staff and students at UKZN managed to complete the 2020 academic year despite the circumstances of Covid-19, a cause for concern still existed regarding the missing awareness of pragmatic and natural identities, the most important ingredients of an effective digitalised curriculum. The situation conditioned the academics to believe that students learned and achieved high marks when they were drilled to master their module content (professional identity of performance digitalised curriculum). However, academics missed the notion that students learn when they are internally ready to learn (mindset), based on their individual needs and situations, irrespective of being with groups/friends or drilled with their course content. Students learn through connecting relevant personal information that addresses their needs.
Simbolon and Tampubolon (2021)	22 students Questionnaires	Based on the analysis and interpretation of research data, it was found that 40.9% of students were enthusiastic about participating in the learning process using Moodle during the Covid-19 pandemic, while 45.45% felt neutral. Students who feel dissatisfied were 9.09% and 4.54% chose to feel very dissatisfied.	Moodle is part of the LMS and as a result, it assists lecturers and students to continue with teaching and learning beyond the classroom walls through delivery of activities, assignments, electronic journal submissions, and other learning resources. From the findings it is clear that although Moodle is a good resource for teaching and learning, face-to-face teaching and learning is also significant to accommodate all students.

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Table 2 – *continued from previous page*

	Sample size Data collection method	Findings	Discussion and Conclusion
Acar and Kayaoglu (2020)	44 students Questionnaire and semi-structured interviews	Quantitative data revealed that there was statistically significant difference between the experimental group and control group, suggesting that the potential contribution of Moodle to learners' language achievement in blended EFL (English as a foreign language) lessons was positive. In the same vein, the qualitative data affirmed that most of the students were satisfied with using Moodle to support English lessons.	The aim of study was to identify whether using Moodle in English lessons as a blended-learning method makes a significant difference in the success of the students in foreign language education. Moodle proves to be an effective online learning tool supporting blending learning. The findings of this study also provide empirical evidence for integrating blended instruction with Moodle in EFL lessons. This is valuable information to the Ministry of National Education.
Lin and Nguyen (2021)	The participant of this study was the researcher (author 1), an international learner in an Australian university. The analytic and evocative autoethnography methodology was employed	The findings show that while the participant could engage with the curriculum to some extent, there are signs of disconnection, isolation and emotional instability associated with the establishment and development of the e-learning environment.	The study concludes that international students' education outcomes could be compromised, and expectations could be unfulfilled via e-learning. Thus, there is a further need to prepare learners for e-learning environments. Illustrations of these emerging issues could help educators better understand the downside of e-learning and e-practice by identifying various influential elements, including individuals' socioeconomic status, cultural heritage and environmental learning settings.
Turnbull et al. (2021)	The databases used in this review were sourced from different search engines. Narrative review: meaning capturing a wide range of articles and views on a research topic.	Moodle was the main platform for conducting asynchronous learning activities in studies that examined the use of online tools in specific courses and programs. However, Moodle was never used by itself as the only weapon in the teacher's online arsenal and was often supplemented by video conferencing tools such as Zoom.	In an online environment, it would be ideal to take advantage of both forms of communication in course delivery; students appreciated the flexibility and trust that asynchronous course delivery gave them to manage their studies. Blended learning can be viewed as a hybrid environment that combines the benefits of traditional learning spaces while exploiting online technologies that enrich learning content and delivery options.

Table 3: Publications that generated the findings - studies involving specialised-experience in relation to the use of Moodle in higher education.

	Sample size Data collection method	Findings	Discussion and Conclusion
Makumane (2021)	10 participants Reflective activities and LMS focus group discussions	Participants supported the use of Thuto LMS as they claimed that it influenced their content knowledge because it was viewed as promoting 'professionalism and easy access to content posted by lecturers'. Participants advocated for the inclusion of more flexible features on the platform, and to a larger extent, an adaptation of LMSs in order to support technological knowledge for socialisation. Perceptions and social perceptions seem to be influenced by habitual perceptions. That is, individual preferences as impacted by their unique interaction with digital technologies promote pedagogical knowledge, which stems from personalisation experience.	The use of LMS is also expected to promote socialisation, where students would interact with theories and content presented. However, in this article, findings demonstrate that Thuto LMS did not allow participants to socialise with the content as it did not permit flexible communication between students and lecturers and among students themselves. The findings further suggest that participants' habitual perceptions were somewhat neglected as Thuto LMS was not aligned to their personal identities in order for them to manage their learning.
Akcil and Bastas (2020)	The sample consisted of 105 people who volunteered to participate in the university. This study was conducted using the correlational survey method which is a qualitative research method.	The findings reveal that the e-learning attitude of students is positive at medium level. Among the reasons may be the unpreparedness for the pandemic. Findings obtained from this study have displayed that students were not prepared for an online learning experience in this pandemic process. Students either fear that they will face many difficulties while working online, or they think that academics will not be able to help enough in the process during the pandemic period.	E-learning attitudes of students are thought to affect their desire for continuing education. High-quality learning experience of students do not only result from the efforts of teachers in e-learning. For faculty students and lecturers, online learning is believed to be more sustainable while instructional activities will become more hybrid provided the challenges experienced during this pandemic are well explored and transformed into opportunities. Lecturers and university managers must raise the technology usage capabilities as regards e-learning to the maximum level in the distance education venture of students.

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Table 3 – *continued from previous page*

	Sample size Data collection method	Findings	Discussion and Conclusion
Adams et al. (2022)	<p>298 undergraduate and 101 postgraduate students.</p> <p>A cross-sectional quantitative survey method was employed in this study. A questionnaire was developed to gauge students' readiness for e-learning.</p>	<p>The findings showed that undergraduate students were mostly ready (65%) compared to postgraduate students (23%) for e-learning. The findings also showed male students were more engaged in blended learning activities than female students. As for students' ethnicity, Indian students were the most interested in online learning compared to other ethnic students.</p>	<p>The findings revealed that students who had the necessary technology skills and knowledge about technology usage were equipped with necessary technology devices and possessed computer and Internet efficacy for an e-learning mode of instruction. This indicates that those students understood the functions and peripherals of computers and laptops and used office software more often. This explains why the male gender and Indian ethnic group are more ready for e-learning because they are exposed to technological usage on a regular basis.</p>
Egielewa et al. (2022)	<p>1134 Nigerian students of the three types of higher institutions in Nigeria.</p> <p>The study used a quantitative survey method whereby the respondents completed a questionnaire via Google Forms.</p>	<p>The study found that students are not satisfied with virtual learning embarked upon by many higher institutions throughout the country during the Covid-19 lockdown and would not want the online learning to continue after the pandemic due to poor internet infrastructure and lack of electricity.</p>	<p>The study concluded that students of higher education in Nigeria have a low acceptance of online learning technology, preferring instead the traditional classroom setting. The study recommends that universities should engage students more interactively not only through texts but also video (e.g. camera demonstrations), increase their online learning during the pandemic and arrange proper internet connection so as not to lag academically, and spend more time on online learning to get the best possible level of instruction until traditional learning resumes.</p>
Mwale and Chita (2020)	<p>Selected students from two universities as end users of e-learning.</p> <p>Thematic analysis of documents and interviews.</p>	<p>Students' responses were characterised by both reluctance and acceptance of e-learning. The students did not express misgivings about e-learning, except for barriers to accessing it.</p>	<p>The students' responses were driven by the perceived ease on the use of e-learning platforms on the one hand, and the perceived benefits of e-learning on the other. Hence, it is recommended that specific contextual realities of students as end users for the effective implementation of e-learning should be taken into account.</p>

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Table 3 – *continued from previous page*

	Sample size Data collection method	Findings	Discussion and Conclusion
Ajani (2021)	Purposefully selected publications.	The author explores and discusses various studies to establish what is known and unknown. The challenges of using Moodle by lecturers differ from developed to developing countries. It is mandatory to use Moodle for curriculum delivery in the era of the Covid-19 pandemic, where physical contacts have been limited for social distancing. This study reaffirms the significance of academics' use of different Moodle platforms to deliver the curriculum in South African universities. Academic activities must continue despite the pandemic, to salvage the academic calendar. Hence, Moodle is an effective approach to deliver the curriculum to students in their different locations.	The study concludes that Moodle as a LMS platform has various challenges that should be addressed by the universities for academics to effectively use the platforms for teaching and learning. This includes, planning, self-development of academics and technological infrastructure development.
Terenko and Ogienko (2020)	78 students (Faculty of Philosophy and Natural Sciences), 12 university staff, and 35 lecturers	Research design which involves quantitative and qualitative methods based on online questionnaires results showed that almost all respondents expressed their concern and uncertainty about the challenge of the Covid-19 pandemic. The teaching staff were concerned about the lack of well-designed web-based curriculum resources. Students noted the difficulties related to visual impairments, unstable internet access and inadequate knowledge on the use of technology.	The transition of teacher training to online mode requires consideration of the fact that the essential feature of the students' future pedagogical activity is constant verbal communication with the participants of the pedagogical process. Teacher training in the Covid-19 pandemic is an international problem. The solution requires the unification of the education community. Transition to online teacher training requires empathy, understanding, and active communication between all participants of the learning process.

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	Sample size Data collection method	Findings	Discussion and Conclusion
Ho et al. (2020)	856 undergraduate students across four campuses located in Hanoi, Can Tho, Ho Chi Minh and Danang A case study of a HEI in Vietnam that used technology in teaching and learning, using a quantitative approach which involved controlled online questionnaires	Findings demonstrate that the interaction between lecturers and students, and among students themselves are important during the period of e-learning since students can seek help from their lecturers and/or classmates whenever they have difficulties in e-learning. The study further highlighted that difficulty with ICT equipment might be a factor that has an impact on attitudes of students towards using technologies in learning.	It is necessary that more emphasis be placed on communicating the benefits of e-learning via a wide variety of channels as well as enhancing the interactivity of e-learning systems. To promote the use of online platforms, the university management should have virtual meetings to connect with students, as well as have specific actions to support students to deal with the academic and psychological issues that could result from learning online.

7 DISCUSSION ON FINDINGS

Studies involving shared-experience in relation to the use of Moodle in higher education

The overall analysis is that despite the many publications around higher education and Covid-19, these studies are limited. One of many possible reasons is the fact that university curriculum is performance based, thus the focus diverged from the community aspect. For example, a study conducted by Tang et al. (2021) revealed that female students were more motivated to communicate and learn online than their male counterparts. However, the wide spread of COVID-19 forced male students to also participate and be accustomed to online-learning because no other means of learning were available to them due to global lockdowns. This demonstrates that issues of gender, culture and race are part of our community and as such they must be given equal consideration in the curriculum.

Correspondingly, another study by Sakkir and Dollah (2020) revealed that teachers and students were using social media platforms such as WhatsApp, Telegram and emails for learning. WhatsApp and Telegram are platforms for socialisation. WhatsApp was designed and introduced as a social platform for smartphones and other users (Prat et al., 2020). It was not designed for education but is used by some universities to communicate formal education (Zuma, 2019). In a similar manner, Telegram has been one of the largest social media platforms in Russia (Adedoyin & Soykan, 2020) but has also been used by students and lecturers for academic communication. This validates that any platform can be integrated to communicate learning. Therefore, it is of essence to embrace those students who learn easier through social platforms, since they learn from each other and by the opinion of others.

Studies involving self-experience in relation to the use of Moodle in higher education Studies of this nature have been published more in comparison to those of shared-experience however, the majority of them are about blended learning. Blended learning is the inclusion of technology into the lesson to continue with learning beyond challenges of no face-to-face contact with students as a result of Covid-19. The selected studies have discussed and embraced all three categories of experiences identified with deeper understanding of ideological-ware resources. For example, Khoza et al. (2021) reveals that UKZN had specialised experience which means that the university is grounded on performance curriculum. However, migration was through social media platforms such as WhatsApp, Skype, Facebook and Zoom video conferencing technology, which are promoting shared-experience (competence curriculum). It can be said that this university used the pragmatic curriculum in its migration because the identity of students and lecturers was at the centre of teaching and learning (Khoza, 2018). Most students and lecturers use social media on a daily basis, hence the university identified this and filled the curriculum in that space.

Studies involving specialised-experience in relation to the use of Moodle in higher education Specialised-experience is dominating on the publications around higher education and Covid-19. Some of the possible reasons for this is the fact that most universities across the globe are grounded on performance curriculum, whereby specialisation is given more priority than shared and self-experiences (competence and pragmatic curriculum). The majority of universities have gone to the extent of supporting students with laptops and data in order to continue with teaching and learning and finish the academic calendar in spite of the countless lockdowns. The support by universities to students is meant to push the content.

In addition, a study conducted by Makumane (2021) revealed that students viewed LMSs as promoting professional identity (performance curriculum) as they get easy access to content uploaded by lecturers. However, students wanted inclusion of more flexible features on the platform for socialisation purpose as the platform did not allow them to socialise (exclusion of competence curriculum). Hence, in that way, the curriculum was not accommodating to their self-experience/ identities to be part of the curriculum (Khoza, 2018). This suggests that lecturers should understand the platform that is used for teaching, and also understand the needs of the students. They should also utilise the appropriate ideology, teaching methods and theories to teaching students, so that the needs of the content, students and lecturer are combined to produce a balanced curriculum.

8 CONCLUSION

This study revealed that there were many publications in the period of Covid-19 that were concerned about performance curriculum/ specialised-experience. There are numerous reasons for this. One of them was the crisis of global lockdowns that forced higher education institutions to cease face-to-face teaching and learning and resort to online learning. Hence,

the focus was on how higher education institutions were going to finish the academic calendar and achieve full content coverage. Moreover, the nature of higher education institutions is competitive (Nicol & MacFarlane-Dick, 2007), which results in the emphasis being put on content coverage to be able to compete with global standards. Consequently, LMSs such as Moodle are used to implement the content-driven curriculum. Therefore, since scholars are a product of such institutions, most of their focus is inevitably on specialised curriculum.

On the other hand, there are limited studies on competence curriculum/ shared-experience in the context of Moodle during Covid-19. However, these studies illustrated that since higher education institutions are part of the community, issues of gender, culture and race and socialisation, must be given equal consideration in the curriculum. Therefore, these studies even recommend that Moodle needs to infuse an aspect of socialisation to be user-friendly to students. Furthermore, there are some studies that embraced the pragmatic curriculum/ self-experience as an effective perspective for effective teaching and learning. These studies demonstrated that when students' and lecturers' needs, ideas, opinions, talents and unique identities are acknowledged and infused in designing the curriculum, the process of teaching and learning becomes successful.

Even though there were limited studies about ideological-ware during the period of Covid-19, they emphasised the essence of ideological-ware in blended learning. For Moodle to be successfully utilised, lecturers need to have teaching strategies and creative ways when using hard-ware and soft-ware for teaching. This involves consideration of the students when thinking about ideas and teaching theories that will be fit for each topic and the resources available. Unfortunately, studies that emphasise the essence of ideological-ware appear to be lacking, yet it is one of the most essential resources for teaching and learning even in critical times and conditions such as during pandemics. Since the future is inevitable, it would seem both prudent and judicious to consider further exploring the different ideological-ware resources that higher education institutions have found to be successful. The sharing of such knowledge will not only assist lecturers and students in facilitating teaching and learning, but it will also guide higher education institutions on the type of training they ought to give both students and lecturers on utilising Moodle.

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