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## **Learning Management System (LMS) for Academic Inclusion and Learning Agency: An Interpretive Review of Techno-progressivism in ODL Instructional Technology Policy**

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### **Abstract**

Literature frequently describes how ineffective implementation of instructional policy frameworks can make distance learning a lonely and unrewarding academic pursuit, characterized by high student drop-out rates, high failure rates and academic exclusion. In trying to mitigate this catastrophe, academic departments in distance learning institutions utilize learning management systems (LMSs) to stimulate students' learning experiences. In keeping with techno-progressivism, the researchers (and authors of this paper) turned to extant documentary policy and literature to review – qualitatively – how the University of South Africa's (Unisa's) Open Distance Learning Policy (ODLP) promotes academic inclusion and learning agency as cornerstones of student success and social justice, especially in an unequal society like South Africa. The findings revealed the following: 1) Unisa's ODLP position has the impetus to influence the deployment of the LMS to promote academic inclusion; 2) Practical means of promoting inclusion were mirrored in the provision of manual or electronic learning material, computer laboratories and free internet connectivity in regional centres across all nine provinces of South Africa, as well as in the provision of laptops for National Student Financial Aid Scheme (NSFAS)-funded students, 30 gigabytes of free monthly mobile data to all students, and assistive technologies for students with disabilities; 3) Practical utilization of an LMS to foster self-regulated learning occurred through problem-based individual

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activities supplemented by asynchronous demonstrative learning material (e.g. audio, video), while collaborative learning agency was enabled through e-tutoring, which afforded students the opportunity to interact with e-tutors and their peers about the learning content; 4) Drawbacks in the use of the LMS stemmed from the insufficiency of assistive learning technologies that are required for students with disabilities to participate fully in online learning, and a corpus of students' irregular attendance at and participation in e-tutoring discussions and their projection of a negative attitude towards the e-tutors.

**Keywords:** *knowledge management; learning agency; knowledge systems; knowledge era; open distance e-learning; fourth industrial revolution; academic support*

## **1. Introduction**

The advantages of 21<sup>st</sup>-century education have made it mandatory for higher education institutions to adopt learning management systems (LMSs) as a tool to activate teaching and learning proceedings, particularly those that facilitate distance education (DE). Salmon (2019) notes that daily online transactions between students and higher education institutions (HEIs) have increased considerably over the last few years. In HE, “how LMSs are to be used and to what capacity” they should be positioned to facilitate academic transactions between the faculty and students (Van Wingerden, 2021, p. 684) depends on the primary mode of instruction of the individual institutions. Naturally, owing to the geographical distance between students and lecturers, DE institutions use LMSs more than do traditional HEIs. While it is evident that LMSs have the propensity to improve the administrative and pedagogical processes in DE (Walker, Lindner, Murphrey & Dooley, 2016), it should also be acknowledged that there are instances where they are beset with challenges (Peterson-Karlan, 2015) owing to their design (Van Wingerden, 2021) and deployment strategies (Sarker, Mahmud, Islam & Islam, 2019). This suggests that “as distance education becomes more ubiquitous,” greater emphasis needs to be put on the design and deployment of LMSs (Westera, 2015, p. 23), especially in DE contexts where they constitute the primary means of bridging the transactional distance between the institutions and students. In socio-economic contexts like

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South Africa, where the apartheid regime historically deprived many people's human rights, DE carries a social justice imperative (Van den Berg, 2021). This view is supported by Mtebe (2015), who posits that through purposeful deployment of technology, DE institutions can become a conducive space for inclusive education and social transformation. Owing to the belief that "distance-teaching universities are able to enroll large numbers of students at a lower cost" (Guri-Rosenblit, 2013, p. 1), the South African government mandated them to place their operations at the forefront of social transformation and provide access to students who otherwise would not have had the opportunity to acquire HE through other means (Van den Berg, 2021). The initiative of the government to declare distance learning an antecedent of inclusion and equitable participation in HE (Department of Higher Education and Training [DHET], 2017) is influenced by techno-progressivism. As a theory, techno-progressivism advocates for technologies to be adaptable to the level of all users so that the latter can all enjoy their benefits. It regards training and development as a viable solution to ensure that users who are unable to cope with the intricacies of such technologies are equipped with the necessary skills. It further raises a sentiment that LMSs should be designed to reflect diverse learning styles, cognitive abilities and physical attributes of students (Matarirano, Yeboah & Gqokonqana, 2021), while policies that inform their deployment must be a product of evidence-based decision-making and scientific inquiry (Combs, 2023). Given that South Africa is counted among the world's strongest distance education cultures (Qayyum & Zawacki-Richter, 2018), attention was drawn to the University of South Africa (Unisa), which is the country's only public open distance learning (ODL) institution. In this paper, the researchers analyzed the architecture and implementation of Unisa's Open Distance Learning Policy (ODLP) to ascertain whether it promotes techno-progressivism sufficiently to ensure that the deployment of the learning management system (LMS) promotes academic inclusion and learning agency, as guided by the following questions:

- a. How clear is the institution's policy position regarding the use of online learning technologies to foster academic inclusion?

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- b. How does the institution implement the ODLP to inform the deployment of the LMS to foster academic inclusion?
- c. How does the institution implement the prescripts of the ODLP to inform the deployment of the LMS to foster students' development of agency for self-directed and collaborative learning?
- d. What are some of the notable drawbacks associated with the deployment of the LMS for distance learning purposes in this institution?

In the following sections, the researchers discuss the phenomenon from the literature review, theoretical framework, and methodological points of view. Thereafter, they consider the thematically structured results and include a discussion thereof. Lastly, they provide a conclusion (including recommendations, limitations of the study and implications for future research).

## **2. The revision of the specialty literature**

### ***2.1 Leveraging learning management systems in higher education***

LMSs are the driving force behind the success of technology-mediated education (Walker et al., 2016). Chaubey and Bhattacharya (2015), alongside Bhattacharya and Chaubey (2019), define the “LMS” as a digital or cloud-based platform that is used by higher education institutions (HEIs) to schedule and engage in academic knowledge-sharing between students and the lecturers and to enhance students' access to learning support. More concisely, Ellis (2009, p. 2) defines it as a “software application for the administration, documentation, tracking, reporting and delivering by e-learning education courses or training programs”. LMSs are beneficial to both students and lecturers. Following their observation of the trends in the field of educational technology, researchers (c.f. McGrill & Klobas, 2009; Mtebe, 2015; Weaver, Spratt & Nair, 2008) noted that in the last decade, LMSs have become a standard tool for pioneering the delivery of teaching and learning in HEIs. Juhary (2014) notes that this incremental appreciation for LMSs is a far cry from the preceding years, where there was apprehension around the adoption of LMSs in some HEIs. In the context of South African HE, evidence suggests that apprehension towards the adoption of LMSs was more palpable

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among historically black universities (Steyn, Millard & Jordaan, 2017) and was partly exacerbated by ICT skills deficiencies among academic staff (Maphalala, 2017), concerns about the ease of use of learning technologies – or the lack thereof – among students (Wild, Cant & Nell, 2013) and academic staff (Moonsamy & Govender, 2018), and the absence of clear policy directives (Brown & Baume, 2023). However, there was a change in mindset after the unexpected outbreak of COVID-19. This awakened academics and students to the realization that online learning (Al-Hamad, 2022; Azionya & Nhedzi, 2021; Badaru & Adu, 2022; Gamede, Ajani & Afolabi, 2021; Matarirano et al., 2021; Mbhiza, 2021; Songca, Ndebele & Mbodila, 2021) is the only knowledge transmission method that is immune to catastrophic situations such as pandemics (Nkambule, 2023).

Essentially, LMSs are designed to host the management, scheduling and facilitation of synchronous and asynchronous learning. Synchronous learning refers to a digitally enabled learning endeavor in which students must commit to attending virtual classes at the times agreed upon between themselves and instructors. Badaru and Adu (2022, p. 73) mention “the Zoom meeting application, Microsoft team’s application, Skype, Google classroom, and virtual chat rooms” as examples of synchronous learning applications that are often used in academia to facilitate collaborative knowledge-sharing and co-creation transactions. Asynchronous learning pertains to the curricula delivery process in which students make time to tune into the LMS to access the learning content and immerse themselves in self-regulated learning to acquaint themselves with it. To clarify the nature of asynchronous learning, Coursera (2023) states that it often involves group discussions via email or a discussion board, with the instructor posting content such as documents, videos or journals on a course website that can be accessed by individual members of the group at their leisure. The benefits of asynchronous learning are such that students can personalize and optimize their learning experience, revisit lessons to improve comprehension and retention, take advantage of extra time to process, practice and respond, and adapt learning to self-accommodate for disability (Panopto, 2022). Asynchronous learning is premised on the principle of self-regulation, whereby the student moderates their intake and processing of the

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learning content based on their cognitive agility. Ordinarily, students who have mastered self-regulation are noticeable by their commitment to attending classes, adhering to stipulated deadlines, conducting themselves appropriately during class and participating in discursive engagements that take place in class (Kirwan, Lounsbury & Gibson, 2014; Leonte, 2023) or any other learning space or platform. The demanding nature of both synchronous and asynchronous learning feels more bearable to students when they have a positive perception of the ease of use of the LMS that is being used by their institutions to facilitate teaching and learning (Gamede et al., 2021). This emphasizes the need for LMSs to contain features that provide students of different technological orientations with easy access to the learning content.

Research indicates that from the almost 200 LMSs available (Al-Hadrami, 2012), Blackboard, Sakai, KEWL and Moodle are the favorites of HEIs (Unwin et al., 2010). However, if statistics are anything to go by, Moodle and Blackboard are by far the most used in the academic space (Juhary, 2014). By 2010 (11 years after it was invented), Moodle had already proven itself as the world's fastest-growing LMS, boasting about 38 million subscribers at the time (Open-Source Learning Management System: Moodle and Sakai, 2010), a figure that, as of 2020, had increased astronomically to 213 million spread across 239 countries (Moodle, 2020). Meanwhile, Blackboard has also cemented its position among the sought-after LMSs in the world. As of 2023, Blackboard hosts 100 million users across the globe (Blackboard, 2023). Their resounding popularity in the academic space (Chaubey & Bhattacharya, 2015) continues to generate contrasting views from circles of educational technology and distance education researchers. Some postulate that compared with Blackboard, Moodle is well suited to host academic collaborations (Beatty & Ulasewicz, 2007), while others believe that Blackboard contains student management tools and many other related features that Moodle currently does not have (Bouchrika, 2023). In their study, which explored the use of LMSs in 19 universities, Pishva, Nishantha and Dang (2010) concluded that, owing to its sophisticated architecture, Blackboard is set to continue dominating the LMS market way above its competitors and almost on an equal footing with

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Moodle. Meanwhile, Juhary (2014) presumes that the astronomical cost associated with Blackboard subscription could be the primary reason why HEIs in Malaysia shun it in favor of Moodle. As of 2014, only two out of 20 public universities and more than 100 private HEIs in Malaysia held a Blackboard subscription (Juhary, 2014). In the USA, Bradford, Porcellio, Balkon and Backus (2007) established that Blackboard is in demand among private colleges more than any other LMS on the market. Parislo (2011) adds that owing to its praiseworthy savviness in enabling effective teaching and learning, Blackboard's popularity will continue to soar to unprecedented levels. Accordingly, Downes (2005) – supported by Parker and Chao (2007) – state that Moodle constitutes the most popular open-source learning platform. Other researchers rate the efficiency of both Blackboard and Moodle equally. These researchers include Chen, Wang and Hung (2009) and Northup (2001), who assert that throughout the years, both platforms have respectively cemented their dominance and sufficiently pioneered virtual student collaboration, faculty communication, critical reflection and personal learning. The features that set Blackboard and Moodle apart from their competitors (Subramanian, Zainuddin, Alatawi, Javabdeh & Hussin, 2014) are the “online chat, student progress tracking, group project organization, student self-evaluation, grade maintenance and distribution, access control, navigation tools, auto-marked quizzes, electronic mail, automatic index generation, course calendar, student homepages, and course content searches” (Mann, 2009, n.a). In the context of this study, Badaru and Adu (2022) established that of the 26 public universities in South Africa, 11 use Blackboard, eight use Moodle, two use both Blackboard and Moodle simultaneously, while the remaining five used other LMSs. They calculated that among these universities, Blackboard usage was 46 percent versus the 36 percent for Moodle usage (Badaru & Adu, 2022). It is worth noting that despite their popularity in the global academic space, Moodle and Blackboard – just like their less popular competitors – are not free of inefficiencies. For instance, in a Ghanaian university, Essel and Wilson (2017) established that 229 students who participated in their study encountered challenges with navigating Moodle course content. Carvalho, Areal and Silva (2011) observed that such challenges

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occurred as students attempted to access course-related files and to perform submission of assignments. In South Africa, Mpungose (2020) found that first-year university students preferred to use WhatsApp for academic dialoguing, after having noted that Moodle was comparatively less efficient when it came to cultivating a climate of robust student collaboration. Furthermore, Phejane (2022) reported that a sizeable chunk of the sampled medical students in one of the South African universities found Blackboard Collaborate troublesome in terms of connectivity when they were not using Google Chrome as a primary browser to access it, and they experienced glitches whenever they attempted to share advanced PowerPoint slides that contained music or videos.

## ***2.2 Relating academic inclusion to learning agency***

Ainscow (2005) defines “inclusion” as the continuous effort to eradicate the pervasion of barriers to diversity, physical presence and equitable participation and achievement. Inclusion is a much-talked-about issue in educational research and practice. Panesi, Bocconi and Ferlino (2020, p. 3) cite Ainscow (2016) and Messiou (2017), who perceive “the concept of inclusion as dealing with the removal of negative responses and/or attitudes to diversity regarding a person’s race, ethnicity, gender, sexual orientation, social class, economic status, religion and achievement levels, not to mention disability”. Basing his comment on the dynamics of HEIs in sub-Saharan Africa, Mtebe (2015) argues that academic inclusion can be fostered through pragmatic adoption of LMSs. That assertion is backed by evidence suggesting that a well-designed learning platform fosters a rich learning climate and increases students’ self-efficacy (Azevedo & Hadwin, 2005; Chang, 2007). Regrettably, as noted by Alokuk (2018), this is often not fully realized in most HE contexts because of e-learning platforms’ habitual failure to anchor inclusive education, interactive learning, grading outcomes and diverse teaching and learning approaches. As also underscored by Blackboard (2018), Kushrestha and Kant (2013) and Matarirano et al. (2021), the key to creating an inclusive LMS lies in the designers of instruction’s consideration of the dynamics around the cognitive levels, physical developmental needs and the learning styles of diverse students. One

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such method of looking at the design of learning from an inclusive point of view is known as the universal design for learning (UDL). This approach aims to improve the learning experience and outcomes for all students, including students with disabilities, students from diverse cultural and socioeconomic backgrounds, students of advanced age and international students.

As noted by Bassit (2023), inclusion in an educational setting is linked to enhanced creativity, innovation and motivation. The author implies that when a curriculum and LMSs are designed with a semblance of inclusion, they translate into individual students' development of learning agency. The facilitation of students' development of learning agency starts right when they are admitted into the institution by ensuring that they are kept motivated to continue with their academic programmes. For example, for students with disabilities to develop learning agency, they should be assisted through the provision of assistive technologies and responsive psychosocial and academic support systems. Bandura (2001, p. 1) defines "learning agency" as a person's "power" to actualize a specific ideal through "action." The concept of student agency stems from the learning agency theory, as propounded by Bandura (2001, 2006). The hypothesis is that "the self-as-agent" (i.e. the student) should mirror four indicators, namely *intentionality*, *forethought*, *self-regulation*, and *self-efficacy*. **I**ntentionality relates to students' ability to choose a social context that is complementary to their intentions, beliefs and strengths (Code, 2020; Jääskelä, Poikkeus, Vasalampi, Valleala & Rasku-Puttonen, 2017). **F**orethoughts are concerned with students' application of intrinsic and extrinsic motivation, which are demonstrable in how they take part in their academic pursuits relative to the outcomes they ought to achieve. **S**elf-regulation is a strategy that entails comprehensive planning and positioning of oneself to leverage tacit and explicit knowledge resourcefulness during studentship (Code, 2020). **S**elf-efficacy pertains to the persistence with which the students carry out their academic affairs, leading to the achievement of their academic goals.

Through adequate provision of a student support structure, DE can facilitate students' development of learning agency. This may require that even though individual students enjoy the autonomy to

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explore the learning content without the guidance of the lecturer, they are not left entirely to their own devices but are guided indirectly to stay motivated and on track to explore problem-based learning and sense-making that will, in turn, enable them to acquire tacit knowledge. A good LMS is able to mold the content around “the learning styles of the students, their interests, prior knowledge, cognitive levels, comfort zones and socialization needs” (Blackboard, 2018, p. 63). Accordingly, in this study the researchers point to the need for the eradication of a “one size fits all approach” to designing LMSs. Instead, they make a case for HEIs to view “the construction of the LMS as [the construction of] a place, a repository for educational materials, a space for education, learning, and engagement” to increase the likelihood of having almost “barrier free” student participation, self-regulated learning, collaborative learning, easy access to instructors and student-centric undertakings (Veluvali & Surisetti, 2022, p. 107).

### ***2.3 Profiling the past and present shape of distance education***

The *shape* of DE is changing, especially in the digital era (Qayyum & Zawacki-Richter, 2018). Here, the word “shape” is used as a metaphor to depict the transformation of DE since its early days to what it has presently become. Toumi (2022) defines “DE” as the learning enabled by a combination of pedagogical and technological systems, aimed at extending a learning experience to students who are not physically on site, through asynchronous and synchronous print or electronic media, or any other technological means necessary. With a history spanning “three generations” (Anderson & Dron, 2011, p. 80), the initial rolling out of DE was modelled on a paper-based mode, whose tutelage was dispatched via post/mail. At that point in time, it was commonly referred to as studying through “correspondence”. To accommodate students’ learning challenges, course instructors provided limited academic support telephonically. That effectively rendered DE a secluded learning climate, premised on personal learning without peer-to-peer or group learning opportunities (Council on Higher Education [CHE], 2014 p. 79). According to Brown (2023), the correspondence mode of distance learning invited a measure of skepticism around its reputation. However, soon thereafter, gradual

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improvements were affected, and it evolved to incorporate “satellite broadcast, audio, video and audio-visual broadcast via television” (Bervell & Umar, 2018, p. 310). While this improved communication between universities and students, there were still some elements of academic support and dialogue that were missing. Fortunately, the advent of the internet was a game changer. It gave credence to the diversification of DE knowledge transmission tools and student engagement flexibility through “different media, tutorial support, peer group discussions and practical sessions as modes of curriculum delivery” (CHE, 2014, p. 79).

Despite these inroads, traditional on-campus learning universities viewed the idea of incorporating some elements of DE in their academic programmes as rather impractical and unnecessary (Anderson & Dron, 2011). Most of them regarded DE as a distilled version of quality HE (Brown, 2023). Nonetheless, the status quo changed at the apex of the novel coronavirus (COVID-19) (Brown, 2023). The virulent nature of COVID-19 (Nkambule, 2023), which resulted in a series of educational institutions’ closures – colloquially known as “lock downs” (Mayonga & Ngubane, 2021) – forced them either to replace on-campus learning with online distance learning indefinitely or to blend it to avoid forfeiture of ongoing content coverage. Interestingly, in the post-pandemic era, most of these institutions that initially resisted the idea of using technology mediated tools in their teaching and learning ecologies decided to retain some form of distance learning modalities to support face-to-face learning. They began to understand that the flexibility presented by DE is unconstrained by “time and space” (Na Ubon & Kimble, 2002, p. 1), and guarantees students the freedom to access their tutorial at a time that is convenient for them.

“As distance education has changed shapes, many new terms are used to define activities that are the same as, or overlap with, distance education” (Qayyum & Zawacki-Richter, 2018, p. 6). According to Orr, Neumann and Muuß-Merholz (2017), terms like “e-learning, distance learning, open learning, blended learning and flexible learning” constitute some of those used in the education technology scholarship. Rapanta, Bottori, Goodyear, Guardia and Marguerite (2020, p. 924) attest that “online learning” is also used

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interchangeably with “eLearning and digital education”, all of which are modes of education that employ “a full range of digital tools and resources”, including the “internet and a focus of digital competences and development.” Discontented with the influx of terminologies that seek to symbolize the technocentric nature of teaching and learning processes in non-resident tertiary education institutions, CHE (2014) advocates for the use of “open and distance learning (ODL)” because of its all-encompassing meaning and its resonances with the prescripts of the 21<sup>st</sup> century education. However, since the focus of this paper is not on critiquing the merit of each of these terms, the researchers opted to use the term “DE” throughout the paper. Their decision is based on their understanding that the overlapping undertones in all these terms is something that must not be treated with oblivion (Amrane-Cooper et al., 2023). The researchers’ mindset is consistent with Abu Shawar and Al-Sadi (2010), who maintain that because of the interplay between all these terms, trying to pit them against one another is of no significant value, as they all carry similar connotations. Hence it must be understood that “all the varieties and platforms” that bear resonances with DE (Qayyum & Zawacki-Richter, 2018, p. 7) serve the common purpose of ensuring that the distance between students and instructors does not become a barrier to the achievement of effective teaching and learning (Kanuka & Conrad, 2003). It is within that context that the researchers/authors recognize the present shape of DE as a mode of learning underpinned by the principles of student-centeredness, lifelong learning, flexibility of learning provision, the elimination of barriers to access learning, the recognition of prior learning (RPL), the recognition of credit for prior learning experience, the provision of student support, the construction of learning programmes in anticipation of high students success rate, and the sustenance of quality assurance over the design of learning materials and support systems (Department of Education [DoE], 1995).

The World Bank Education Overview (WBEO, 2018) estimates the number of DE students at 220 million, which is a steep increase from the year 2000, when the figure hovered around 1.1 million. Among the European countries (Owusu-Boampeng & Holmberg, 2015), the United Kingdom and Germany have cemented

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their position within a cluster of leading DE-appreciative countries (Qayyum & Zawacki-Richter, 2018). Outside Europe, the United States of America, Australia, Canada, South Korea and Japan (Qayyum & Zawacki-Richter, 2018) continue to experience a remarkable rise in DE applicability. Among developing countries, Indonesia, Nigeria, South Africa and Brazil are said to fall within the threshold of DE-thriving environments (Qayyum & Zawacki-Richter, 2018).

Reasons to study through DE vary. Specifically in Africa, DE serves to redress past political injustices and cultural inequalities. Ambe-Uva (2010), Foluke (2010) and Olakulein and Ojo (2014) noted that in Nigeria, women seek refuge in DE to acquire skills that will facilitate the removal of the shackles of patriarchy, gender stereotypes and economic inactivity. Accordingly, Letseka and Pitsoe (2013) point out that in the context of South Africa's discriminatory political past, DE has become a tool for reducing socioeconomic disparities and for urging the country to take a step closer towards diminishing the stereotype of studying in HEIs being a privilege for a select few people rather than a basic human right for all. Similarly, Light (1999) posits that DE, through its sophisticated communication technologies, makes it tenable for Africa's marginalized population to achieve self-determination and the tenacity needed to facilitate change in their living conditions and reclaim their dignity.

Choosing to study through DE requires students to change their mindset and make personal adjustments by applying self-discipline and self-determination. Additionally, in light of the findings that DE can be a lonely learning environment (Croft, Dalton & Grant, 2010; Cuisia-Villanueva & Nunez, 2020; Krotera, Chircop & Hutchinson, 2021) that is besieged by high student dropout ratio and low graduation rates (DHET, 2017; Ngubane, 2017), HEIs ought to provide context-specific academic courseware, support systems and monitoring and evaluation systems.

#### ***2.4 Theoretical framework***

Techno-progressivism constitute a theoretical lens for the study. It can be viewed as a political philosophy that is premised on the assumption that technology plays a critical role in promoting social justice in

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life/social environments, including education. Underscored by the notion that [distance] education is a conducive space for furtherance of social justice (Aluko & Mampane, 2022; DHET, 2014), techno-progressivism posits that in such a setting, technology can be used to transform the way students interact with the world and help them to surmount structural barriers that limit their personal freedom, learning agency, academic success, self-realization and self-actualization. It emphasizes the importance of the utilization of evidence-based decision-making and scientific inquiry and views technology as a tool for informing policy and practice (Combs, 2023). It also points to the deployment of technology as socially empowering and emancipatory tool, provided it is regulated by legitimate and accountable stakeholders (Carrico, 2006). The objective of this paper is to analyze the extent to which the Unisa ODL policy espouses social justice in how it directs the deployment of the LMS. Considering that Unisa is home to a majority of students from previously disadvantaged sectors of society, the adoption of techno-progressivism as a theoretical worldview tie well with the objective of understanding how its technology policy informs the deployment of the LMS to engender academic inclusion and learning agency.

### **3. Research methodology**

#### ***3.1 Profiling the research context***

Recognized as a mega public DE provider in Africa (Letseka & Koenane, 2016; Msekela, 2022), Unisa has a headcount of close to 400 000 students (Mphaphuli, 2020), 389 876 of whom are enrolled in undergraduate programmes and 45 000 of whom are enrolled in postgraduate programmes (Unisa, 2022a). Female students constitute 30% of the student population, whereas male students constitute 69% (ibid). In terms of the racial composition of students, Africans constitute 82%, Coloreds 5%, Indians, 4%, and Whites, 9% (ibid). The institution is configured into eight colleges, namely the College of Accounting Sciences; the College of Economics and Management Sciences; the College of Science, Engineering and Technology; the College of Education; the College of Graduate Studies; the College of Law; the College of Human Sciences; and the College of Agriculture

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and Environmental Sciences. In addition to the eight colleges, it has a School of Business Leadership. The institution uses the Moodle-powered LMS known as my Unisa to facilitate teaching, learning and student grading (Msekelwa, 2022). The adoption of Moodle appears to be a recent development, as some studies show that Unisa previously used the Sakai LMS (see Badaru & Adu, 2022; Van den Berg, 2020). Currently, Moodle is used to host the processing of formative and summative assignments, perform easy-grade entry transactions, utilize a rubric-based scoring of tasks, facilitate student submissions and provide rich feedback on their academic work.

### ***3.2 Data collection and management***

To review the Unisa ODLP's effectiveness in fostering academic inclusion and learning agency through deployment of the LMS, the researchers used a critical discourse analysis (CDA), a method which, according to Dalglish, Khalid and McMahon (2020), prompts researchers to 1) prepare the policy material (in this instance, by downloading it from the institution's website); 2) extract data by browsing through the policy document and underlining key points to understand the gist of it; (3) critically analyze data word by word; and (4) judge whether the policy adequately pioneers social transformation in the institution. Such a formula is in keeping with the interpretivist norm of documentary policy analysis (Browne, Coffey, Cook, Meiklejohn & Palermo, 2019), which enhanced the researchers' inclination to focus on the sections of the Unisa ODLP that were responsive versus those that were not responsive to the diverse needs and inclusion of the students from diverse social and educational backgrounds. Similarly, Nkambule and Ngubane(2023), supported by O'Connor and Rudolph (2023), point out that CDA enables the researchers to generate a sense of which areas of the policy are tantamount to strengths and weaknesses. CDA has the propensity to endow researchers with comprehensive findings, in terms of which researchers can be able to propose possible mitigating factors for the weaknesses and have sufficient grounds to lobby the legislators to consider amending the sections of the studied policy that were found to be unresponsive to social problems.

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### ***3.3 Data triangulation strategy***

In addition to analyzing Unisa's ODLP, the researchers drew on secondary data via desktop research. This is in keeping with Dalglish et al. (2020), who argue that for the findings of policy [document] review research to have the necessary rigor, they must be triangulated with other forms of data. This prompted researchers to apply a Boolean operator AND as well as IN to combine words that align with the content of the study. The Boolean search hovered around words such as 1) "learning management systems in distance education;" 2) "distance learning and learning management systems;" 3) "learning agency in distance/higher education," and 4) "academic inclusion and higher education." The search yielded multiple sources including peer-reviewed journal articles, dissertations and other forms of secondary data sources, such as educational policies that suited the scope of the research. Ultimately, 35 abstracts passed the screening, of which 21 were selected for inclusion. The reason for exclusion of the remaining 14 was their outdated nature (Nkambule & Ngubane, 2023), as the researchers had mutually agreed to exclude data sources older than 10 years, except for a few seminal work and legislative frameworks, which were deemed critical to the argument that the researchers sought to advance.

## **4. Analysis and interpretation of the research data**

As mentioned earlier, the paper is based on the *interpretive* review (analysis) of the Unisa ODLP. According to Dixon-Woods et al. (2006), interpretive reviews generally consider the process of synthesis as inclusive of both induction and interpretation. As such, the researchers' "analysis of the evidence, in order to produce a synthesizing argument, was similar to that undertaken in primary qualitative research" (Dixon-Woods et al., 2006, p. 6). This saw them inspect the shortlisted data sources (i.e. ODLP, literature and further documentary sources) to 1) acquaint themselves with data sources to establish their relevance to address the phenomena; 2) propose initial codes; 3) arrange the proposed codes into preliminary themes; 4) assess the suitability of the themes in relation to the codes and data extracts; 5) decide on the final themes; and 6) present the final themes and realign them with the narrative that the research aimed to advance

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(Braun & Clarke, 2006). In the end, the final synthesis embodied four themes and six sub-themes that were used to convey the findings of the study, as discussed below.

***4.1 Instructional policy position on LMS deployment***

To understand the role played by Unisa in widening student access/inclusion (Letseka, Letseka & Pitsoe, 2017) and fostering learning agency (Bandura, 2001), the researchers inspected the educational policy of interest to the investigation (Nkambule & Ngubane, 2023, p.130), namely the OLDP, in terms of which they established that Unisa knows that being in control of systems that support the academic project is the only way to avoid being imprisoned in a technological web. The policy highlights the importance of making technology accessible, understandable, and subservient to the intellectual enterprise of the university and for linking learning with systems (Unisa, 2022b).

This statement resonates with Duggan (2013), who deduced that technological advances have the propensity to promote access and inclusive learning practices in HE. Unisa academic operations are underpinned by the principles of advancing social justice with an emphasis on redress, equity and empowerment of the previously disadvantaged groups in South Africa such as blacks, women, people with disabilities, the rural and urban poor and adults generally who have missed out on opportunities to access higher education (Unisa, 2008). Unisa's infusing of social justice into the planning and implementation of distance learning (DHET, 2014) demonstrates their awareness of the role it occupies and the expectation that the public has of it around the issue of the deployment of technologies to redress past inequalities that were inflicted upon the continent by oppressive political dispensations (Letseka et al., 2017), patriarchy and gender-based violations (Foluke, 2010), as well as the infringement of disability rights (Aluko & Mampane, 2022) among the majority of social groupings who were previously sidelined from mainstream HE (DHET, 2014).

***4.2 Practical deployment of LMS to promote academic inclusion  
Diversified courseware***

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In the context of DE, “academic inclusion” can be defined as the inclusion and active engagement of students of all abilities and learning backgrounds in teaching and learning proceedings. Briefly, academic inclusion refers to accepting, understanding and catering for students’ differences and diversity, whether that’s physical, cognitive, academic, social or emotional (Rice & Dunn, 2022). The researchers established that in recognition of the presence of students with different learning needs and abilities, Unisa provides various mediums to transmit academic content. In the main, these include the following: Print media courseware should prepare the student for learning, develop the necessary skills, attitudes and knowledge that the student needs, guide the student through the learning process and include sufficient and appropriate learning activities to enhance knowledge. Some of the technologies which are asynchronous such as wikis, blogs, social networking facilities and e-portfolios can be used to effectively support teaching and learning (Unisa, 2008).

In that sense, students exercise their preference between paper-based (print media) learning material (which is sent to them via courier services) and electronic learning material (which is downloadable from the LMS). While the institution uses paper-based and electronic modes of transmission (Van den Berg, 2020), for compulsory online portfolios, students are required to log on to the *my Unisa* LMS and upload their formative and summative e-portfolios (Van Wyk, 2018). Where students do not have access to technologies that are needed to perform academic transactions, Unisa encourages them to visit any of the regional centres, which are scattered throughout the nine provinces of South Africa, to utilize internet connectivity and computer laboratories free of charge (Letseka et al., 2017). The institution thus employs e-tutors to, inter alia, provide technical assistance to students who experience challenges with navigating the online learning environment (Msekelwa, 2022). Moreover, through flexible open and distance learning academic offerings (Neculau & Anghel, 2022) and constant improvement of disability academic support systems, the number of students with disabilities undertaking a range of postgraduate studies continues to rise (Zongozzi, Sefora, Mokiwa & Agejivwie, 2019). These are some of the measures that the institution

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has taken to ensure that DE embraces the virtues of fairness and human rights (Aluko & Hendrikz, 2011).

*Technological support*

Extant research emphasizes the critical importance of the role of technology in promoting inclusion in education (Panesi et al., 2020). Having noted that a majority of the students enrolled at the university are unable to follow online tutorials consistently because they lack prior online learning experience and/or have no computer or access to internet connectivity (Queiros & De Villiers, 2016), the institution partners with the Mobile Telephone Network (MTN) Group, which is one of the country's largest mobile network providers, to deposit "30 gigabytes of data" to every student so that they need not incur the cost of buying data to access teaching and learning via the LMS (Leketho, 2022, p. 54) and to write research, assignments and examinations (Msekelwa, 2022). In addition, the majority of the students from low-income brackets funded by the National Student Financial Aid Scheme (NSFAS) receive laptops as part of the funding package (Ngubane-Mokiwa & Letseka, 2015). This is in addition to their being encouraged to visit their nearest regional centre to gain access to computer laboratories so that they can study, type their assignments and follow online tutorials (Msekelwa, 2022).

***4.3 Practical deployment of LMS for self-directed and collaborative learning agency***

*Synchronous collaborative learning via e-tutoring*

Collaborative learning is the process of students working together and sharing ideas and best practices by undertaking academic assignments in a group and/or by sharing their experiences of the individual tasks (Education Endowment Foundation [EEF], 2021). Through its e-tutoring model, the institution creates a platform for tutor-to-student collaboration and peer-to-peer collaboration. E-tutors are employed on a contractual basis to help students to overcome hurdles that can prevent them from succeeding in their learning outcomes. "It is required from the e-tutor to spend 75 hours of online contact per semester with students and to provide guidance and facilitate learning processes. A group of 200 students are allocated to one e-tutor" (Joubert & Snyman, 2020, p. 8). By monitoring students' learning progress and rendering further academic support and guidance

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(Pitsoane, Mahlo & Lethole, 2015), students acquire much-needed attention and prompt feedback (De Metz & Bezuidenhout, 2018; Horner & Gouws, 2016; 2017; Joubert & Snyman, 2020; Ngubane-Mokiwa, 2017) and are thus able "to transfer, translate and transform their educational experience" (Madge et al., 2019, p. 272). The positive effect of the e-tutoring model was demonstrated in the findings of the research on 14 469 Unisa students who did not attend e-tutoring and 5 173 who attended e-tutoring regularly, showing that the latter group achieved better grades and had a more positive learning experience than did the former group (Mare & Mutedzo, 2021).

*Asynchronous (self-regulated) learning via interactive coursework and feedback*

Brookfield (2009) defines "self-directed learning" as the students' motivation to regulate their own intake of the learning content and determine strategies to absorb the content and evaluate their level of determination in achieving an academic outcome. Evidence suggests that a well-designed learning programme fosters a rich learning climate and increases students' self-regulation (Azevedo & Hadwin, 2005; Chang, 2007). To actuate students' development of agency for self-directed learning, the institution tailored the learning material to suit mobile learning. Currently, facilitators design and upload activities, notes and assessments via "online distribution of content and information via myUnisa and corporate websites, audio and video podcasting and streaming" (Unisa, 2008). These instructional formats, coupled with lecturer support, are strategically placed to ignite the motivation that is needed for individual students to develop agency for self-directed and collaborative learning. It was noticeable that even though students are encouraged to work independently with limited contact with the instructors and peers, the learning materials they receive enable them to avoid feeling that distance learning is lonely and non-interactive (Lephalala & Makoe, 2012). Research conducted at one of the colleges within the selected institution ascertained that most of the sampled students (Van Wyk, 2019) characterized their learning experiences as being "socially situated, dynamic, active online connection using a learning management system (LMS) between the lecturer and the student, using various resources to

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support the student” (Farrel, 2018, p. 1). To base synchronous learning on a variety of sources, learning perspectives and collaborative undertakings, the lecturers attach additional material, such as video podcasts and audio lessons, to keep students stimulated and to prevent their learning from being a monotonous experience.

#### ***4.4 LMS deployment drawbacks***

##### *Provision of assistive technologies for students with disabilities*

As pointed out by Coleman and Berge (2018), “disability” refers to impairments associated with learning, cognition and development, as well as mobility, seating, hearing, vision and speech communication. Despite an increased number of students with learning disabilities enrolling with the institution (Ngubane-Mokiwa, 2017), the provisioning of technological learning tools for online learning to students with disabilities is not proportionate to the demand (Zongozzi et al., 2019). “Assistive technologies at this particular ODL institution were regarded as insufficient to cater for students with disabilities’ needs, with availability being less than 50%” (Ditlhale & Johnson, 2022, p. 11). Such technologies are, but not limited to “slant boards, colored writing papers, braille, applications, tablets, laptops, computers, projectors, recorders, interactive boards, internet, learners’ cell phones, adapted keyboards, mouse that one can use with a foot, yellow backgrounds, wheelchairs, crutches, and others” (Ditlhale & Johnson, 2022, p. 9).

##### *A semblance of underappreciation for e-tutors by some students*

E-tutors are sourced nationally to work on a virtual platform from anywhere in the country and need not be in the same location as the students (Pitsoane et al., 2015). Notwithstanding the positive influence that e-tutoring has had on students’ academic success (Maree & Matezo, 2021; Ngubane-Mokiwa, 2017; Pitsoane et al., 2015; Pitsoane & Lethole, 2020; Snyman & Joubert, 2020), it became apparent that students held different opinions on the importance of e-tutoring. Research indicates that a corpus of Unisa students does not value the contribution of e-tutors (Joubert & Snyman, 2017) as an important component of their academic growth, mainly because they lack a clear understanding of the role of e-tutors. Owing to their misunderstanding of the importance of e-tutors, students preferred to engage directly

with their lecturers, and they often failed to interact favorably with the e-tutors (Joubert & Snyman, 2017).

## **5. Conclusion, recommendations and implications for future research**

Leketho (2022) observed that the dropout rate was considerably higher in DE institutions when compared with traditional on-campus learning institutions. According to DHET (2014), the problem is partly due to the state of technological systems that are used to facilitate DE and the quality of learner support systems provided to students. In this paper, the researchers investigated the deployment of the LMS from a policy perspective in an ODL institution. While a range of data sources were used to compile the paper, special reference was directed to the ODLP of 2008, which was subsequently revised in 2018, containing a comprehensive outline of the deployment of the LMS and other educational technologies as a source for the achievement of academic inclusion, particularly for those students who, according to Van den Berg (2021), would otherwise not have had the opportunity to study through on-campus learning. The best LMSs are known for their ability to facilitate seamless teaching and learning, as well as submission, retrieval and academic grading processes (Song, Ernise, Janette & Myung, 2004). In view of the finding that through proper alignment with students' social contexts and learning styles, the LMS can enrich student interactions with their tutors, lecturers and peers (Van den Berg, 2020), the researchers analyzed the ODLP alongside other pertinent documentary data and literature sources to develop insights into how, especially in an unequal society like South Africa, it anchored the deployment of the LMS (the Moodle-powered learning platform called myUnisa) within the tenets of techno-progressivism by ensuring that learning tools do not become an impediment to students' potential to experience academic participation (inclusion) and to develop self-regulated and collaborative learning agency.

The findings indicated the following: 1) Unisa's ODL policy position has the impetus to influence the deployment of the LMS to promote academic inclusion; 2) Practical means of promoting inclusion were mirrored through provision of both manual and

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electronic learning material, computer laboratories and free internet connectivity at regional centres across all nine provinces, as well as laptops for (NSFAS-funded) students, 30 gigabytes of free monthly mobile data to all students, and assistive technologies for students with disabilities; 3) Practical utilization of the LMS to foster self-regulated learning occurred through problem-based individual activities, supplemented by asynchronous demonstrative learning material (e.g. audio, video), while collaborative learning was enabled through e-tutoring, which afforded students the opportunity to interact with e-tutors and their peers about the learning content and other related matters; 4) The drawbacks of the deployment of the LMS were the insufficiency of assistive technologies to enable students with disabilities to undertake online learning effectively, and a corpus of students who displayed non-committal behavior towards attending e-tutoring sessions and cooperating with the e-tutors. Hence the researchers recommend that the disability support budget be increased to scale up the provision of assistive technologies to all students with disabilities so that they can also fully enjoy academic inclusion and, in turn, develop learning agency. Also, on the basis of students' socioeconomic conditions and psychological unpreparedness for virtual learning (Matei, 2022) there is a need for all students to be oriented on the importance of regular attendance and the overall contributory role of e-tutoring to their academic prospects, as well as the protocols that they must observe when attending e-tutoring and the expected attitude towards their academic work and the e-tutors. By bringing to bear the applicability of the LMS within the context of one of Africa's largest ODL institutions, the findings of this paper contribute to narrowing the literature gap on the topic in Africa and beyond.

While the researchers did all in their might to search, synthesize and convert data into findings, they nonetheless acknowledge that the paper is not without limitations. The methodology used was thus identified as a limitation. The study relied on secondary data sources. In retrospect, the researchers concede that it would have been more beneficial to have also engaged students, lecturers, and e-tutors – in their capacity as primary users of the institution's LMS – on their perceptions of the responsiveness of the ODLP in fostering academic

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inclusion and learning agency. This leaves a gap for future researchers to address. They are encouraged to conduct further research (Shange, 2021) using methodologies and data collection instruments that will enable them to gain a deeper understanding of the effectiveness of the LMSs in enhancing learning agency and inclusion in the DE landscape across the Global South.

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