

Dominant discourses informing e-learning policies in Higher Education Institutions in South Africa

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ABSTRACT

Over the past two decades, Higher Education Institutions (HEIs) in South Africa (SA) have formulated various e-learning policies. E-learning policies are neither neutral nor value free as they reflect policy makers' ideas about the role of technology in teaching and learning. Although several e-learning policies have been developed in SA, few studies have examined the discourses that underpin them nor the implications they have on teaching and learning. Using Critical Discourse Analysis (CDA) as its methodology and Feenberg's typology of e-learning discourses as its framework, the study analysed the dominant discourses that underpin e-learning policies in HEIs in SA. The study's findings show the dominance of deterministic and instrumentalist discourses in the e-learning policies. These discourses conceptualise technology as autonomous and value neutral. They also view technology as a magic wand that will solve all educational problems while fostering progress, effectiveness, and efficiency. Critical discourses on e-learning are largely marginalised in the policies. The paper contends that the dominant discourses in the e-learning policies analysed offer narrow technological fixes to nuanced educational problems in SA. They promote pedagogically poor applications of technology that perpetuate transmission models of education. These findings indicate the need to embed critical discourses in e-learning policies.

Keywords: *e-learning policy; technocratic policy; educational technologies; policy discourses*

INTRODUCTION

Over the last two decades, technology has re-organised and disrupted the context of teaching and learning in Higher Education Institutions (HEIs) in SA (Maphalala & Adigun, 2020; Moyo, 2019). To date, most HEIs in SA have some kind of e-learning system or Learning Management System (LMS). Mobile and social media technologies have also become ubiquitous. This changing context has presented both opportunities and challenges for HEIs, with little or no time for reflection. Between 2006 and 2010, one of the main challenges faced by HEIs in SA was on how to regulate and institutionalise the use of technologies in teaching and learning (Maphalala & Adigun, 2020). Consequently, an array of e-learning policies, strategies, plans and other guidance documents have been developed to help deconstruct as well as institutionalise the change from traditional ways of teaching, where the teacher acts as the hub of knowledge and learners are drilled through rote learning and recitation, to modern ways of teaching aimed at developing critical thinking (Ng'ambi et al., 2016). However, recent studies contend that the practice of teaching and learning in HEIs in SA has remained unchanged despite the presence of technology (Maphalala & Adigun, 2020; Mpungose, 2020).

Thus, various e-learning policies and programmes have become instrumental in making e-learning feasible (Mpungose, 2020). However, e-learning policies by their very nature are neither neutral nor value free, as they reflect dominant assumptions and discourses about the role of technology in teaching and learning (Czerniewcz, 2006). The policies adopted by HEIs in SA are underpinned by institutional ideas about the role of ICTs in teaching and learning. The policies can therefore be viewed as constructed by social practice while also shaping and influencing practice (Mattheis, 2017). Within the context of e-learning, policy discourses are capable of not only re-organising teaching and learning spaces, but also ushering in new practices. Thus, an understanding of e-learning discourses is useful in understanding potential teaching and learning practices. This point is reiterated by Fischer et al., (2015), who posit that analysing a communicative event provides information about real actions.

Although many HEIs in SA are now using technology in teaching and learning and have developed e-learning policies to guide and institutionalise their use, few studies have devoted their attention to analysing and understanding these e-learning policies. There is a paucity of studies that have sought to understand the dominant discourses and assumptions that underpin e-learning policies in HEIs in the country as well as the potential implications these discourses might have on teaching and learning. In light of this background, this paper sought to understand the dominant discourses that inform e-learning policies in HEIs in SA as well as the implications they might have on teaching and learning. The study focuses on the e-learning policies of three diverse HEIs in SA, a university of technology (UniUoT) a historically disadvantaged university (UniHDI) and a historically advantaged university (UniHAI). It emerges from a broader doctoral study (Chikuni, 2017) that explores the relationship between policy-making processes and e-learning policy discourses in higher education institutions in South Africa.

THE MACRO CONTEXT OF THE ADOPTION OF E-LEARNING IN SA

One of the legacies inherited from apartheid in SA is entrenched inequalities within the higher education system. Almost two decades after the demise of apartheid, SA's higher education system is still characterised by two sets of institutions (Odhav, 2009; Maphalala & Adigun, 2020): Historically Advantaged Institutions (HAIs) and Historically Disadvantaged Institutions (HDIs) DHET (2013). This distinction is based on the Bantu Education Act of 1953, which created separate universities for the different ethnic populations and racial groups (Odhav, 2009; Maphalala & Adigun, 2020). On assuming power in 1994, the majority government broke with this policy polarity of differentiating HEIs based on race. It sought to open doors to HEIs to learners of all racial groups (IEASA, 2009). The policy shift saw an influx of learners entering HAIs, resulting in massification. South Africa as an independent nation is not immune from some inherited challenges from past colonial educational policies (Maphalala & Adigun, 2020), one of them being how to deal with the diversity of learners from different backgrounds, some of whom came ill-prepared for tertiary education (Hodgkinson-Williams, 2009).

The founding principles and philosophies that shaped e-learning policies in SA were informed by broad educational goals like widening participation and access and equipping learners with digital literacy skills to survive in the knowledge economy (Hodgkinson-Williams, 2009; Mhlanga & Moloi, 2020). The main attraction with technology was its capacity to reach out to a broader community of learners. ICTs were therefore seen and continue to be seen as powerful tools that can increase access and redress for marginalised learners (Mhlanga & Moloi, 2020). The formulation of e-learning policies further provides evidence of HEI's top level management's commitment to providing ways to muddle through a changing context of teaching and learning in SA.

DISCOURSES ON THE ROLE OF ICTS IN TEACHING AND LEARNING

A survey of literature on ICTs in HEIs shows that there are four dominant contesting macro discourses on e-learning: technological determinism, instrumentalism, substantivism and critical theory (Feenberg, 1999; Ravjee, 2007; Matthews, 2020). In the SA context, these four discourses invariably reflect competing ideas about the role of technology in teaching and learning (Czerniewcz et al., 2006). The dominant discourses on e-learning serve as a means or basis for the adaptation of service strategies in HEIs (Fischer et al., 2015). Dominant discourses produce and circulate power amongst people by regulating their thoughts and behaviours (Lee, 2020).

Technological determinism

Technological determinism informs most enthusiastic uses of technology in teaching and learning. It largely views technology as value free, politically neutral, predictable, and outside human control (Feenberg, 2003; Servaes, 2014; Bardakci & Kocadağ Ünver, 2020). The discourse is based on claims that technology exercises causal influence on social practice. Thus, technological determinists assume that when technology is introduced in educational contexts, educators will almost automatically improve their pedagogical practice leading to better quality education (Ornellas et al., 2009). Technological determinism also assumes that the use of technology automatically enhances teaching and learning by motivating students and facilitating local, regional, and global synergies (Mlitwa, 2006).

Technological determinism has been criticised for several reasons: First, for attributing the negative consequences of technology to poor use without interrogating the nature of technology itself (Servaes, 2014). Second, for treating technology as an external variable which shapes society, without examining how society and people dialectically shape technological trajectories (Hess, 2015). Technological determinism focuses more on how people should adapt to technological change without equally examining how they can also shape technology (Mackenzie & Wajcman, 1999; Matthews, 2020). Consequently, technological determinism is viewed as limited because it ignores human agents who are a critical part of how technologies, their meanings and uses are socially and culturally constructed (Servaes, 2014; Webster, 2017). It overlooks a complex set of relationships and practices which determine the utility and meaning of technology in teaching and learning. How technological determinism is placed into a position when considering the integration of ICTs into educational praxis clearly warrants further investigation (Bardakci & Kocadağ Ünver, 2020).

Substantivism

Substantivism views technology less as a means and more of an environment and way of life which reduces people to mere objects (Feenberg, 1999; Westera, 2015). The discourse assumes that technologies have the power to change human beings and society. Substantivists contend that institutions of learning must go through radical changes if they are to survive the technology revolution. However, substantivists differ on the loci and nature of change which needs to take place. Post-modern substantivists recommend radical changes in the school structure focusing on theoretical teaching and learning, institutionalised division between adults and children as well as teachers and students. They posit that the potential of ICTs cannot be realised without instituting these changes. On the other hand, other substantivists prefer to preserve existing structures of education (Aviram & Tami, 2004). Substantivists posit that technology by its nature is value laden and not neutral. For example, they argue that learning management systems limit the way instructors teach online and how students interact (Kruger-Ross, 2013). Thus, substantivists view technology as beyond the control of human beings. As a result, substantivists aver that it is society that must conform to the demands of technology (Kruger-Ross, 2013; Westera, 2015).

Substantivism awards magical powers to technology in ways that erase human agency in the use of technology in teaching and learning. The discourse assumes that technologies subjugate human beings, and the more human beings are affected by technology, the more they become controlled by it (Heidegger, 1977). However, scholars such as Fitzsimons (2002) argue that substantivism contradicts the commonly held view that technology frees human beings from the ravages of nature rather than produce their current condition. Consequently, substantivism has been criticised for viewing technology as constituting a new cultural system that restructures the entire social world as an object of control (Fitzsimons, 2002; Westera, 2015). The implications of substantivism on teaching and learning vary. While substantivists who adhere to postmodern culture argue for the institutionalisation of radical changes to the school culture and fostering a radical approach to teaching and learning, other substantivists prefer to preserve and consolidate existing structures of education (Aviram & Tami, 2004).

Instrumentalism

Instrumentalism offers the most widely accepted view of technology in teaching and learning (Feenberg, 2003; Bayne, 2015). It views technology as neutral but human controlled. Thus users are seen as capable of independently defining their goals (Hamilton & Friesen, 2013). Instrumentalism views technology as a tool that can be used to accomplish defined objectives. Mpungose (2020) opines that the use and importance of modern resources such as technology tools pervade across the university. The discourse has found resonance in the education sector because it acknowledges that human beings have control and power over the technology. However, some scholars still view instrumentalism as deterministic. They argue that instrumentalism associates technology with progress and improvement in teaching and learning (Brooks, 2011). It focuses mostly on the positive outcomes that can be derived from technology (Omotoyinbo & Omotoyinbo, 2016).

Like other discourses on the use of technology in teaching and learning, instrumentalism has received its fair share of criticism. "Instrumentalist discourses treats technology as a tool for individuals to use while downplaying its broader social implication" (Pasquale & Cockfield, 2018, p. 821) It is argued to be uncritical and overly positive in its approach to the role of technology in teaching and learning (Hick, 1997). It largely assumes that every educational problem can be solved through technology (Dahlberg, 2004). Furthermore, by singling out cost as the main hindrance to the use of technology in teaching and learning, it overlooks other critical factors that hinder the use of technology such as user attitudes and lack of know how. The discourse has also been criticised for overlooking the value of technology as well as its undesirable outcomes. It overlooks the fact that there are instances where technology can influence people's actions negatively (Jonassen, 1996; Bayne, 2015).

Critical theory

Critical perspectives develop more nuanced analyses by problematising the claims and assumptions surrounding technology in teaching (Castenada & Selwyn, 2018). Unlike other discourses discussed so far, critical theory problematises technology, its role, effects, meaning, and assumptions informing its use (Yanchar, Gibbons, Gabbitas & Matthews, 2016). It refutes the notion that technology is neutral given that it operates within broader social-economic, political, cultural, and educational contexts which shape how, where, for what purposes and by whom it is used (Ravjee, 2007). Critical theory differs from other discourses due to its ability to identify and problematise ideas and claims that are often presented as obvious and inevitable in theory and praxis. It therefore allows one to explore alternative and often contradictory ways of understanding the role and use of technology in teaching and learning (Friesen, 2008).

Critical theory believes that people should not simply submit to the dictates of technological development offered by TD and instrumentalism but rather be involved in “encoding and enacting the values meant to shape technology” in their contexts (Pasquale & Cockfield, 2018, p. 824). Besides seeking to understand cultural, pedagogical, and theoretical differences in educational technologies, critical theory also engages with concepts like digital natives, digital literacy, digital divide, and digital media that underpin 21st century teaching and learning (Thomas et al., 2015). Its ability to critically engage and reflect on the use of technology in teaching and learning enables it to assist educators to enhance curriculum delivery, improve the quality of education, appropriate relevant technologies, while also understanding the kinds of things that technology allows one to do (Bytheway et al., 2010).

METHOD

This study made use of Fairclough’s three-dimensional approach to critical discourse analysis (CDA) to understand the major discourses and assumptions that inform e-learning policies of three HEIs in South Africa: a highly disadvantaged university (HDI), a highly advantaged university (HAI) and a university of technology (UniUoT) which was formed through a merger between a HDI and a HAI.

The CDA focused on the e-learning policies of the three HEIs. CDA is an amalgamation of various approaches to studying language and analysing texts in their social contexts (Unger, 2016; Fairclough, 2013). The policies analysed through CDA were available online and the internal web servers of the three universities. The three HEIs were selected on the basis of having a diverse practice environment and resources as represented by the taxonomy: HAIs, HDIs and UoT. Besides convenience and access to the researchers, the three HEIs were chosen because they have stand-alone e-learning policies that are not embedded in other policies. The diversity of the cases selected raised the possibility of producing diverse results and analytical variety capable of enriching findings on the major discourses informing e-learning policies in HEIs in SA. Notably, the selection of the three cases was not aimed at achieving generalisability. Rather, the aim was to use the diversity derived from the selected cases to test theoretical propositions and to increase the explanatory power (Yin, 1994; Stake, 2013).

The three policy documents were viewed as texts underpinned by dominant e-learning discourses. Their analysis was aimed at deconstructing the meanings of the policies and to reveal dominant discourses and their assumptions. The analysis was done in five stages: First, the policies were read to understand issues and themes. Second, dominant discourses on the role of ICTs in teaching and learning were identified using Feenberg’s (1999) framework. Third, the discourses were then coded using the discourses identified in the literature. Fourth, the coding framework was incorporated into Atlas Ti to generate patterns that corresponded with different discourses and themes in the framework. The fifth stage involved conducting a CDA of sections of the policy texts that were coded. This stage of the analysis involved three levels: textual analysis, discursive practice, and social practice (Fairclough, 2013). The first level involved analysing the linguistic features of the text such as the vocabulary and text genre. The second level identified the discursive practices emerging from the policy texts. This level of analysis sought to understand how the text drew from existing discourses and discursive practices. These two levels were then related to social practice in order to understand the dialectical relationship.

CASE DESCRIPTION

The e-learning policy at UniUoT was formulated in 2011 after an institutional quality audit. The audit revealed that academics were unhappy with the ICT infrastructure, particularly Blackboard. Academics preferred to use publicly available technologies for teaching and learning. Consequently, an e-learning policy was formulated to encourage academics to use a multi-modal

approach to teaching and learning. The policy was approved in May 2011 after wide consultations with stakeholders.

The e-learning strategy at UniHDI was developed with the aim of laying the foundation for using technology to improve the quality of teaching and learning. The Director of the Teaching and Learning Technologies Unit championed the process. Subsequently, the Senate Academic Planning Committee (SAPC) decided to develop an e-learning strategy in 2004. A working group was appointed to formulate the strategy using an incremental process. The university already had an Integrated Information Strategy which was reviewed to develop an e-learning strategy. An e-learning division was then created to drive implementation.

The e-learning policy at UniHAI was developed by the Multimedia Educational Technologies Group under the Centre for Higher Education Development (CHED). The group was established in 1997 to transform the delivery of teaching and learning through educational technologies. It had been running under CHED for about five years with the support of an international grant. Towards the end of the grant, the group proposed the need to establish an independent Centre for Educational Technologies (CET). The absence of an e-learning policy was identified as a stumbling block in the establishment of CET. A report to council in 2004 that prepared for the transformation of UniHAI stated that an e-learning policy was needed to create an enabling environment for the work of CET, and to enable the institution to harness technology in teaching and learning.

FINDINGS AND DISCUSSION

The data analysed in the study shows that there are three major discourses that inform the three e-learning policies studied. UniUoT is largely underpinned by the instrumental discourse; UniHDI reflects a predominance of technological determinism, while UniHAI shows evidence of critical discourses which problematise the use of technology in teaching and learning.

Technological determinism

The evidence gleaned from the study shows that technological determinism is a key feature of the e-learning policies. E-learning policies that are informed by technological determinism mainly focus on technology (in this case the LMS) and its use as opposed to teaching and learning that needs to take place. Consequently, e-learning is narrowly conceptualised as the use of technology (LMS). This reductionist approach to e-learning is reflected in UniUoT's policy statement below:

Programmes are required to have a minimum web presence for all academic offerings, consisting of, or showing evidence of active use of:

- i. The relevant subject guide posted online*
- ii. Effective use of a populated calendar with all key dates for the duration of the offering*
- iii. One of the communication tools activated to ensure effective asynchronous communication between the lecturer and student*
- iv. A grade book or other means of giving feedback to the student regarding moderated assignments.*

The use of additional technology and tools should be incorporated or enhanced in all the processes of teaching and learning, unless it poses a security threat to assessment procedures or institutional systems

It is evident from the above policy statement that UniUoT's policy draws from a technological deterministic discourse of technical rationality. The policy foregrounds technology (LMS) while overlooking teaching and learning objectives and the suitability of the LMS to meet defined tasks. The data shows that UniUoT's e-learning policy views technology, in this case the LMS, as an end rather than a means to various ends. This approach to technology overlooks the fact that the ends to which technology can be used for are divergent, shaped by different education-philosophical and pedagogical underpinnings (Teräs & Kartoğlu, 2017). Thus, online learning should not be seen as 'one thing' or a pedagogy in its own right (Teräs, Suoranta & Teräs, 2020).

Arguably, the foregrounding of technological determinism in UniUoT's e-learning policy results in a narrow focus on teaching and learning. The policy equates e-learning to feeding the LMS with content. This approach to e-learning tends to promote teacher-centric and didactic pedagogies at the expense of dialogic, collaborative, and participatory approaches to learning (Mpungose, 2020). Hannon & Bretag (2010) argue that an exclusive focus of LMS on content in the management of learners impacts negatively on teaching and learning because it places pedagogy and co-construction of knowledge with learners in the background. Thus, the reduction of e-learning to the LMS which is reflected in UniUoT's e-learning policy negates current efforts in educational praxis to embrace emancipatory and collaborative pedagogies.

The literature reviewed in the study shows that one of the main assumptions of technological determinism is that the adoption of technology widens access. This assumption is reflected in the e-learning strategy of UniHDI where the word 'access' appears frequently in the policy text:

Assist educationally disadvantaged students gain access to higher education and succeed in their studies. Access to higher education involves more than merely opening the doors of learning; access requires building strong foundations that lead to digital academic literacies.

The frequency with which the word 'access' appears in the policy reflects a bias towards technological determinism. Scholars have argued that under-resourced institutions such as UniHDI tend to foreground 'access' to technology while failing to consider other factors that could impede the use of these technologies in their contexts. The assumption underpinning the policy, that educational problems can be solved when people have access to technology has been widely criticised for being deterministic (Marx, 1987). However, although the e-learning policy foregrounds access, it also problematises 'access' by identifying key impediments in the SA context such as division of universities by race, inherited inequalities, and academic cultures (Ravjee, 2007).

UniUoT's e-learning policy also shows evidence of the technological determinist assumption that technology is value-neutral. The policy conceptualises technology and the Internet as value neutral tools that connect students with teachers and fundamentally mediate the learning process. This assumption has been criticised in e-learning scholarship. Hoofd (2011), argues that new media such as the Internet are not neutral nor value free tools that innocently mediate the learning process. Rather, e-learning technologies and the Internet are viewed as novel forms of cultural imperialism that privilege western ideals of learning (Hoofd, 2011).

Furthermore, the e-learning policies of UniUoT and UniHDI show evidence of a globalisation discourse that resonates with technological determinism. This discourse views e-learning as geared towards acquiring skills for the knowledge society and national economic development as well as creating citizens who can participate in a global economy (Postman, 1995). Notably, the discourse does not ask questions about the values of education nor engage critically with what technology does to people's lives in light of their basic values (Postman, 1995). A case in point is that of UniHDI where the dominant discursive theme is that of creating a learning society and

meeting the need for skills for the knowledge society. Notably, learning societies are central to the economic globalisation discourse (Edwards & Nicoll, 2001).

In line with the globalisation discourse discussed above, UniHDI's policy is underpinned by neo-liberal ideas of skills for the knowledge economy. This discourse is articulated in the policy through the foregrounding of views on the acquisition of digital academic literacies as opposed to other literacies germane to teaching and learning. Scholars have described digital literacy as a deficit model of student learning and teacher competencies (Lea, 2011). Although its vision is to transform teaching and learning, the change envisaged is not cognisant of the knowledge and skills that teachers already have. The change suggested is therefore top-down and prescriptive. It promotes a hierarchy where educators are marginalised (Lea, 2011).

Notably, all the three e-learning policies depict globalisation as a potent and irresistible force that makes the adoption of technology in teaching and learning inevitable. The discourse of globalisation is informed by neo-liberal notions of efficiency and adaptability which are seen as critical for institutions to adapt to (Fairclough, 2013). The discourse of globalisation comes to the fore in UniHDI's policy:

Further global perspectives among its staff and students, thereby strengthening intellectual life and contributing to South Africa's reintegration in the world community;

It is difficult to imagine how global perspectives can be strengthened in the current world without a well-reasoned approach to the use of ICT in teaching and learning. Nothing can overcome national barriers like sound communication practices using the global information highway to supplement face to face encounters...

Responding to the challenges and opportunities of globalisation will require a sound e-learning strategy at both national and institutional level, and one that recognises the importance of responding to globalisation...

Clegg, Hudson & Steel (2003) note that the passive acceptance of globalisation reflected in the policy engenders a technologically deterministic view of technology as a phenomenon with its own independent trajectory. The language used in the policy reinforces technological determinism by drawing from terms such as 'digital academic literacies'; 'global information highway'; 'equitable and dynamic societies'. These terms are synonymous with the globalisation discourse and its economic rational view of education which promotes a monolithic culture founded on western views of learning (Clear, 2001).

Instrumentalism

The study's findings also reflect the presence of instrumentalist discourses in the e-learning policies of UniUoT and UniHDI. Instrumentalism associates technology with progress or efficiency (Pasquale & Cockfield, 2018). As a result, instrumentalism, does not problematise the undesirable effects of technology on educational praxis. UniUoT and UniHDI's e-learning policies are replete with instrumentalist diction. The policies repeatedly state that e-learning has to bring about progress. The policies assume that the adoption of technology in teaching and learning will result in greater efficiency and effectiveness. Instrumentalism manifests itself in the policies through synonyms like development, growth, and improvement. The assumed benefits of technology are not questioned but projected as natural. Some of these benefits are enumerated in UniUoT's policy:

Transfer of students: E learning must first be seen as part of the transition process of students from secondary education where some or all have been exposed to the use of

technology as part of the Department of Education e-learning policies, to the efficient use of technology in the workplace. Existing staff must be able to develop and enhance their teaching methodologies through the use of e-learning.

Access to University educational services: providing all students, including part time and distance education students, convenient access to the educational resources of the university

Capacity building: Existing staff must be able to develop and enhance their teaching methodologies through the use of e-learning. Students must be encouraged to grow to become lifelong learners

Outreach: The application of these methodologies is appropriate to create an enlightened and liberally educated citizenship, provide professional development opportunities, enhance the global competitiveness of HEIs business and industry, inform public policy development, enhance the effectiveness of public institutions, foster economic development, provide convenient access to educational programmes.

Similarly, UniHDI's policy shows evidence of instrumentalism. The policy associates e-learning with change and progress. Instrumentalism does not only conceptualise technology as value neutral but also as critical in leapfrogging. Leapfrogging is captured in words like 'jump', 'transform' and 'impact' in the UniHDI's policy:

In helping to build "an equitable and dynamic", UniHDI will need to draw on ICT to enable us to jump beyond the disadvantages of apartheid education, because correctly applied according to socially and educationally sound principles, technology can transform teaching and learning for the better and have an impact on the broader society.

The focus on the benefits of technology in the two policies resonate with Omotoyinbo and Omotoyinbo's (2016) findings in the Nigerian context where there is singular focus on the benefits of educational technologies. Worryingly, the process through which technology accrues these benefits is not articulated. E-learning policies that are premised on instrumental discourses assume that the adoption of technology will leapfrog institutions and countries into economic development and prosperity. However, there is no explanation on how this change will take place. Instead, a cause-and-effect relationship is assumed. This assumed cause and effect relationship is evident in the e-learning policy of UniUoT where the adoption of e-learning technologies by learners is thought to automatically lead to efficient use of technology in the workplace. This assumption fails to acknowledge other factors like prior knowledge and experience that can impact the use of technology in the workplace.

UniHDI's policy conceptualises e-learning technologies as value-neutral tools which facilitate the achievement of predetermined results for teaching and learning. Furthermore, in line with instrumentalism, the policy assumes that technology and the curriculum are mutually dependent. Severing the link between technology and the curriculum is viewed as impossible. Thus, technology is assumed to be an ideologically neutral tool that will promote digital literacy skills. These skills are over-valued compared to other work skills as shown in the UniHDI's policy:

Information and Communication Technologies will be integrated into the curriculum to promote the four digital academic literacies, including basic computer literacy, digital information literacy, digital information fluency, and digital knowledge creation.

Teräs, Suoranta & Teras (2020) believe that the instrumentalist capitalist view says that education is broken, and it should be fixed with technology. Such technologization often seen as neutral is

foregrounded and viewed as intertwined with the market function of education brought by global capitalism.

Critical discourses

Critical discourses seek to critique and expose the contested and ideological nature of ideas, claims and assumptions that are considered legitimate and commonsensical in the field of e-learning (Castenada & Selwyn, 2018). Similarly, the e-learning policy at UniHAI assumes a largely critical view of the use and role of technology in teaching and learning. For instance, critical theorists posit that the means affects the ends, while human purposes also influence what technologies are developed (Friesen, 2008). This critical view of the relationship between technology and human beings underpins the e-learning policy of UniHAI. It is against this background that the policy at UniHAI recognises that there is no one size fits all approach in the use of technology for teaching and learning. Rather, it emphasises the criticality of flexibility as articulated in UniHAI's policy:

While the university remains committed to being a residential institution providing a high-contact experience, it recognizes that specific course objectives require flexibility and that educational technologies can support flexible delivery.

With regard to online learning environments, there should not be a single, required, instructional approach or technology. This means that the requirements of specific learning and teaching situations should drive the selection of appropriate technology.

The policy extract cited above shows that the e-learning policy of UniHAI problematises the relationship between technology and teaching and learning (see Yanchar, Gibbons, Gabbitas & Matthews, 2016). Consonant with critical discourses, the policy posits that there are multiple pathways to follow when using technology in teaching and learning. These pathways are contingent on curriculum objectives and other contextual nuances. In this light, UniHAI's enumerates three pathways educators can use to facilitate teaching and learning:

1. *ICT-supplemented pathway whose focus is on supporting overall course management. It involves course management, administration, information sharing among other organising activities.*
2. *ICT-curriculum integration. The focus of this pathway is on the curriculum. It relates to ICT activities that directly relate to and support curriculum objectives.*
3. *ICT-based courses. This pathway focusses on online courses which range from extreme to little or no face to face contact with learners.*

A close look at the three pathways articulated in the policy reflects a nuanced understanding of the multiple ways through which technology can be used in teaching and learning. Unlike the e-learning policies at UniUoT and UniHDI, which prescribe singular approaches to the use of technology by educators, UniHAI provides a flexible and multi-pronged approach to the use of technology in teaching and learning. The approach resonates with the critical position that technology plays diverse roles in teaching and learning and we note that Teräs, Suoranta & Teras (2020) aver that online learning should not be seen as 'one thing' or a pedagogy in its own right.

The first pathway in the use of technology in teaching and learning identified in UniHAI's elearning policy, defined as the ICT supplemented approach, assumes a measured and cautious approach to the use of technology in teaching and learning. It views technology as useful in teaching and learning but largely as supplementing and supporting traditional pedagogic approaches. The ICT supplemented approach differs from the technological determinist approach which view

technology as the sole harbinger of better teaching and learning (Ornellas et al., 2009). Instead, the ICT supplemented approach views educators as having the necessary agency to drive teaching and learning and to choose the appropriate technologies to supplement traditional pedagogic approaches (Bytheway et al., 2010). However, it is significant to note that other dimensions of the ICT supplemented approach, for example where educators are expected to make use of the LMS to post educational material online, can entrench teacher-centric pedagogic approaches similar to those found in UniUoT's e-learning policy.

The second pathway in the e-learning policy at UniHAI, defined as the ICT curriculum integration, is premised on the understanding that technology can add value to the curriculum by supporting specific teaching and learning activities. Consistent with critical approaches to the use of technology in teaching and learning, technology in this approach assumes a complementary as opposed to a central role espoused in instrumentalist and determinist discourses. Moreso, the educator is viewed as a key player with agency to make choices on the appropriate technologies to embrace. These technologies include digital videos, chats, discussion forums, and simulations. It is important to note that from a critical perspective, the efficacy of this approach to teaching and learning is contingent on students' access to Information and Communication Technologies which enable them to create, present and publish content (Mackenzie & Wajcman, 1999). Without access to technology, learners will not benefit from the added value provided by the educational technologies. Critical scholars argue that policy makers should be cautious about entrenching approaches to teaching and learning that perpetuate exclusion. They view access as not physical but as consisting of socio-economic and cultural factors such as literacy levels, ability to use the technology, affordance of technology and availability of the technology (Mackenzie & Wajcman, 1999; Yanchar, Gibbons, Gabbitas & Matthews, 2016).

The third pathway in the use of technology in teaching and learning that is identified in UniHAI policy is the ICT based approach. This approach considers access to technology as compulsory if students are to engage in learning. This approach has attracted criticism from critical scholars due to concerns about exclusion and access particularly in the African context where most learners come from economically challenged backgrounds. Thus, the ICT based approach is premised on the instrumentalism and determinism assumption that the Internet is a neutral medium that can deliver learning from any place and time. This assumption is contested by critical scholars who argue that learners' broader social-economic, political, cultural, and educational contexts determine and govern how, where, and for what purposes technology is used (Ravjee, 2007; Bayne, 2015).

Notably, although the e-learning policy at UniHAI provides some options whose assumptions on the use of technology in teaching and learning have been criticised by critical theorists, the broader policy is attentive to the ways in which social structures shape opportunities and constraints on the use of technologies in teaching and learning. The acknowledgement of contextual nuances and structural disparities is reflected through the three options provided by the policy on the use of educational technologies in teaching and learning. In line with critical approaches to the use of technology in teaching and learning, the e-learning policy at UniHAI is informed by the assumption that human beings have agency to shape technology and that technology does not determine but presents us with choices (Mackenzie & Wajcman, 1999). This approach to the use of technology in teaching and learning differs from the assumptions of the e-learning policies at UniUoT and UniHDI where human agency is subsumed by the discourse of technological rationality.

Consonant with the critical approach to the use of technology in teaching and learning, UniHAI's e-learning policy does not take on overly deterministic accounts of the digital divide characteristic of deterministic and substantivist discourses which see a straightforward cause-effect relationship between the provision of electronic technologies and learning. The policy is cognisant of the diversity of learners served by the university who include the economically and academically disadvantaged ones; digitally savvy learners with good socio-economic backgrounds; as well as

learners from Europe and America whose experience with technology is largely different from that of SA learners. The inclusivity reflected in the policy reflects the policy makers understanding that technology does not operate in a vacuum but within broader social-economic, political, cultural, and educational contexts which educators need to engage with (Ravjee, 2007).

Furthermore, unlike the e-learning policies of UniUoT and UniHDI which approach technology as value neutral, the e-learning policy at UniHAI views technology as value laden. This conceptualisation of technology is reflected in the UniHAI's policy below which cautions against embracing e-learning approaches that are driven by technological 'bells and whistles':

While the commitment is always to effective educational innovation rather than technological "bells and whistles", it is acknowledged that complex and/or expensive solutions may also be appropriate in certain circumstances

Embedded in the policy excerpt above is the critical theory thesis that the role and use of technology in teaching and learning should not be uncritical, simplistic nor instinctive, but driven by contextual realities and sound pedagogical principles as well as the needs of both the learners and academic staff.

CONCLUSION AND USABLE INSIGHTS

The study examined the dominant discourses on the role of technology in teaching and learning that underpin e-learning policies of three purposively selected HEIs in SA. It was also within the purview of the paper to use the discourses gleaned from the policies to draw possible implications of these discourses on teaching and learning.

The data analysed in the study shows that e-learning policies in the selected HEIs in SA are underpinned by technological determinist, instrumental and to some extent critical discourses. While the e-learning policies of UniUoT and UniHDI showed the predominance of technological determinist and instrumental discourses, the e-learning policy of UniHAI was largely underpinned by critical discourses that question and problematise the role and use of technology in teaching and learning.

As evidenced in the findings, the dominant discourses informing the e-learning policies at UniHDI and UniUoT largely associate technology with progress, efficiency, and effectiveness without clearly explaining how this will be realised. The policies foreground issues of access, digital literacy, and globalisation without problematising critical issues like pedagogical integration, learner needs, contextual and structural factors that impact on the role and use of technology in teaching and learning (Mackenzie & Wajcman, 1999). In light of these findings, the paper contends that the dominance of deterministic and instrumentalist discourses in the e-learning policies analysed will potentially result in pedagogically poor applications of technology that promote transmission models of teaching and learning.

The study's findings also show that although determinist and instrumental discourses are dominant in the policies analysed, the e-learning policy at UniHAI is informed by critical discourses that promote more nuanced and effective approaches to teaching and learning. The policy discourses allow educators to be attentive to the ways in which social structures and context shape opportunities and constraints for the use of technologies in teaching and learning in SA. This is particularly important in post-apartheid SA where deep structural factors continue to impact negatively on teaching and learning.

These findings suggest the need by policy makers in HEIs in SA to question and problematise the role that technology plays in teaching and learning. They indicate the value of embracing alternative

e-learning policy discourses that are attentive to the specific contexts and structures in which teaching and learning takes place in the country. Embracing alternative discourses on the role of technology in teaching and learning will assist HEIs to overcome the documented limitations of deterministic and instrumentalist discourses in teaching and learning with technology in HEIs in South Africa. However, further empirical research needs to be done to understand the full impact of policy discourses on teaching and learning praxis.

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