Examining the impact of learning technologies on social justice in higher education

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ABSTRACT

Learning technologies are often uncritically adopted with little considerations to social justice implications. From a critical theory theoretical framework, this study aims to investigates: 1) how learning technologies are adopted and used; 2) how they shape student learning experience and outcome; and 3) the social justice implications that arise from the use of learning technologies. Using Foucauldian discourse analysis as the analytical framework, the research analyses data collected from semi-structured interview transcripts to provide a rich insight into the impact of the adoption and use of learning technologies on social justice. This research is currently at the beginning of the data analysis stage. Emerging themes emanating from the interview transcripts of learning designers will be discussed.

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INTRODUCTION

The prevalent adoption of learning technologies in higher education is not neutral but values-laden with their operation embedded within social, economic, and political dimensions (Engel & Halvorson, 2016; Williamson et al., 2020). Globalization leading to massification in higher education has led to a proliferation of learning technologies use to address the challenge of meeting the learning needs of large numbers of diverse learners (Lemoine & Richardson, 2019). Neoliberal reforms in higher education have propagated the incorporation of learning technologies to address the demands of neoliberal societies (Munro, 2018; Naidoo, 2010; Prinsloo, 2020). The measures put in place in response to the current COVID-19 pandemic have not only further accelerated the transition to online learning but have provided a rationalization of adopting technologies grounded in existential risk (Baran & AlZoubi, 2020; Crawford et al., 2020). The emergence of constructivism and socio-cultural theories of learning has long shifted the focus from the teacher to the activities of the learner (Biesta, 2004). With the use of learning technologies considered to reinforce particular learning theories, there is a predominant academic focus on the effectiveness of technologies in enhancing student learning and outcomes, as well as engagement levels of students (Bond et al., 2020; Wekerle et al., 2020). However, concerns have grown over how the use of learning technologies could exacerbate social inequity in higher education (Lambert, 2020; Selwyn, 2010; Thomas et al., 2020), or conversely ameliorate it. While extant research has explored how learning technologies can be used in higher education to improve accessibility, opportunities, and outcomes for equity students (García-Holgado et al., 2020; Seale, 2019), there is however less focus on how discourses related to technology adoption in higher education are constituted by power relations, both repressive and productive, that are enmeshed throughout the social body.

METHODS

Based on a critical realist paradigm, this research project has adopted a multi-level analysis approach designed to provide a rich insight into factors that shape the adoption of learning technologies, and the beliefs of different stakeholders about the impact of these learning technologies on the student learning experience. Data informing the analysis include interview transcripts based on semi-structured interviews with institutional leaders, instructors, learning designers, and students. A Foucauldian approach to discourse analysis is employed as the data analysis technique. The recruitment process employs a purposeful snowball approach. Participants are individuals who have used learning technologies from a management, teaching, and learning perspective. The participants consist of 4 institutional leaders, 5 learning designers, 12 academic staff, 14 undergraduate students in an Australian university. Recruited students self-identified as belonging to one or more of these equity groups: 1) First-in-family; 2) Low SES; 3) Indigenous students 4) Women in STEM-related disciplines; 5) Students with disabilities; 6) Students from regional locations; 7) Students from remote locations; and 8) Students from non-English speaking backgrounds.

PARTICIPANTS and INTERVIEWS

Category of participant	Sample size	Discipline	Average duration of interview (min)
Undergraduate students	14	Business (n=1) Education (n=5) Engineering (n=6) Engineering and IT (n=1) Science and engineering (n=1)	51.5
Academic teaching staff	12	Business (n=3) Education (n=2) Engineering (n=6) Science (n=1)	61
Learning designer	5	-	63
Institutional leader	4	-	50.3

RESULTS

Three discourses related to learning technology adoption are revealed based on the analysis of the interviews with learning designers. These discourses are presented with some of the quotes by the participants are presented below:

Pedagogical need

"From my perspective, I think that learning technologies need to be enhancing the delivery of the pedagogies. Well, I suppose that's one aspect of it. Therefore, when people are choosing to use their technologies, it has to be that, that is the second decision, the first decision is actually determining the pedagogy that is being taught and delivered. And then we decide how the technologies are supporting the delivery of those pedagogies." (Learning designer 1)

"The learning designers will work with course teams and unit teams within specific faculties to help them understand how to use it for their context. How it's used in science might be very different for how it's used in creative industries. So the fact that the learning designers are associated with a particular faculty and know the content and the staff really well, they're in a good position to help contextualize that training." (Learning designer 2)

Relationship-building and networking

"But I think that being a learning designer, you have to establish a sense of trust between yourself and the academic. So that, you know, because they obviously have to trust that you have the expertise to help them, and to see the value in what they're getting out of, by working together with the learning designer." (Learning designer 4)

"And those workshops, you know, getting all of the colleagues, getting people together and working with their peers, and that we actually got them reviewing each other's sites and looking in each other's sites. So I think that had a big impact as well, actually looking at each other's sites, and see what other people were doing, and have those peer conversations." (Learning designer 5)

Workforce-readiness

"That kind of tool is fine for, say, a first-year student, so you understand some of the mathematical data science concepts, but when you get to third year, you're probably looking at making your students industry ready, or workforce ready. In that situation, sometimes it might be possible to offer some specialized software on a virtual machine." (Learning designer 3)

"And then I think the choice of technologies may then creep into a different space, depending on, obviously, how technology impacts on the development of skills for particular career outcome." (Learning designer 1)

DISCUSSION

Using foucauldian discourse analysis as the analytical framework to analyse the data, emerging themes emanating from the interview transcripts based on the semi-structured interviews with learning designers revolved around three discourses related to learning technology adoption: pedagogical need, relationship-building and networking, and workforce-readiness. These various, possibly competing yet mutually reinforcing discourses reveal how 'regimes of truth' are being construed by learning designers and is an embodiment of how certain discourses are more privileged than others while alternative discourses are less produced and circulated. Meeting pedagogical needs and emphasis on workforce-readiness are used to rationalize and justify the currency of technology adoption. Engaging in practices such as relationship-building and networking further ensures that the narrative of technology adoption continues to be dominant, while varied, and conserved. Technology adoption becomes an instrument through which power is exercised and forming new knowledge constituted by discourse. According to Foucault, imbalance of power relations produces knowledge constituted by discourse. The principle of hierarchy remains ensuring technology adoption is maintained sustaining a techno-positive culture, overriding other alternative discourses that do not conform to the norm. Discourses related to the challenges faced by equity students in relation to technology adoption might not be as widely (re)produced and (re)circulated in contemporary higher education institutions that have an increasingly diverse population of students including those from equity backgrounds. Further analysis of the interview transcripts aims to then reveal how the exercise of power operates through the discursive practices of adopting and using learning technologies by the other categories of participants in higher education.

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