

Thoughts On the Ideal LMS

Dreaming of Agency, Connectivity, and Empathy

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Recognizing that online teaching and learning is placed within an environment where neither the teacher nor the student has complete-control is the first step to actioning capabilities towards a humanized environment. The tool that is typically used in higher education, the learning management system (LMS), has a design that constrains learning more than it readily affords (McGee et al., 2005). It is believed that designs produced in LMSs can address feelings, agency and behaviours towards enhancing learner experiences—thus humanizing the digitized learning space (Dickson-Deane, 2022; Moore et al., 2014). What is challenging this notion is the understanding that context includes, in this case, the information communication technology (ICT) infrastructure which guides the relevance of the knowledge as it is situated within the system/environment where it would be actioned (Alexander et al., 2009; Dickson-Deane, 2023). As Bourdieu's (1990) habitus describes the behaviours and dispositions that are achieved whilst being socialized, a LMS can also be seen as a digital pedagogic habitus which can control how, what and when humanizing interactions can occur. This contribution seeks to alert the field that understanding what learning LMS infrastructural possibilities there are, is key to aid the online learning process towards agency, connectivity and empathy. This thus, provides a theorized view of practical, yet conceptual needs of LMSs as they contribute to designing flexible yet humanized learning environments.

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THE PROBLEM SPACE

Online learning aims to provide flexibility, variety, and access by using internet technology to connect learners with strategically delivered content and resources (Blaschke & Bedenlier, 2020). The experience of learning this way, allows for a reduction of geographies whilst empowering individuals to share, collaborate, and grow in specified ways and varied disciplinary knowledges. Learners who were characterised as having self-directedness and self-regulated abilities were said to thrive in digitized learning environments (Persico & Steffens, 2017). Here, the expected characterization of the independent learner meant that the delivery system also needed to afford such to ensure that the intended goals were met.

Online learning and its associated field saw early versions of digitized learning environments, known as Learning Management Systems (LMSs) (e.g., WebCT, FirstClass, etc.) being used to deliver and consume content. The technological and pedagogic activities normally seen in the physical face-to-face realm were now being transferred and, in some cases, translated into digitized learning actions (Dickson-Deane & Sutherland, 2022). These LMSs made their appearances in higher education to aid in achieving the goal of learning in the digital realm ; a space which had terms such as online learning and eLearning used synonymously yet comparatively (Corbeil & Corbeil, 2015; Cross, 2004). LMSs, a key part of the digital learning realm, served as part of the pedagogical infrastruc-

ture required to achieve the management, delivery, and tracking of information in the learning process. This removed the responsibility of the learner of being self-directed and self-regulated and directed this management capability to technology administrators (i.e., *informatic* regulators) (Müller-Sarnowski, 2023). Here regulators, known to some under an umbrella term as LMS administrators, had no direct interaction with learners yet [they] clearly influenced the learning process.

Instructors, intentionally used as intermediaries between the learners and regulators, also had little or no control over the management and design of the LMS—an issue that is not present in face-to-face environments. Understanding that to manage the return on investment of digitizing learning, higher education institutions believed that by commercializing online learning through the use of a one-size-fits-all platform (i.e., the LMS) the administrative load and cost would be reduced, not realizing the effect it would have on student learning. To regain the learners' ability to be self-directed and self-regulated, instructors had to rethink their digital pedagogy to reintroduce humanizing elements into the learning ecology. This means revisiting the need for a learner to have the autonomy to plan, monitor, and control their own learning process, where key pedagogical elements are being delegated to a proximal individual (i.e., LMS administrator, designer, or implementor) who is contextually distal to the learning that occurs.

WHERE ARE WE NOW?

Fast forward to today, where information and communication technologies (ICTs) are pervasive and technological innovations and theoretical—and somewhat novel—pedagogies inform the digital learning landscape, much needs to be considered. Globally, through conceptual generalizations of how learners should communicate, access content, be assessed, and interact with anyone in the learning environment, learners may have *some* interaction with LMS-like environments. This forces an acknowledgment that what is known of today's learning systems is that participants who have similar interests, are allowed to connect, collaborate and cognitively change together via some digitally enhanced learning system. These connections theoretically afford intentional learning to occur where the functional learning system (i.e., LMSs) needed further enhancement (i.e.,



instructional/learning design elements) to assure the process (Dickson-Deane & Asino, 2018). Instruction and learning design involve a complex process which some simplify by using strategies that align with the majority population. Instructional designs which occur in LMSs use available features to create the learning ecosystem. As these designs are constrained by the affordances of the LMS, the solutions produced are not optimal but conceded. The designs inevitably include imperfections, technical glitches, and learning flaws which are now embedded within the LMS system design (McGee et al., 2005; Tsaknaki & Fernaesus, 2016). This forced acceptance of design flaws in the LMS, sans corrective action, leads to cognitive gaps in the learning process, creating an oxymoron of use where online learners must now possess specific characteristics to succeed in a one-size-fits all designed environment.

THINKING DEEPLY ABOUT THE PROBLEM SPACE

The original ideal for online learning was never intended to restrict the human elements within the learning process, but rather to provide alternatives. However, we now find ourselves in a conflated space which compounds and confounds how learning should occur. LMSs are designed for control and with control, learners lose their ability to be self-directed and self-regulated. These self-guided abilities can enable controlled decision-making, allowing learners to experience personal agency while navigating multiple connections and collaborations. To reclaim the human elements we lost, we must acknowledge that the core infrastructure restricts behaviours and dispositions that are innately achieved naturally through socialization in the learning process—creating a digital pedagogic habitus. This unintentional digital pedagogic habitus denotes a space where skills and learning resources govern how learning occurs thus creating challenges for a learner's ability to readily contribute to any society (Bourdieu, 1990; Gupta, 2018).

A humanized environment will include designs with embedded interactions where feelings, agency and behaviours enhance learner experiences—thus humanizing the digitized learning space (Dickson-Deane, 2022; Moore et al., 2014). What

is challenging this notion is that learning is contextual, and within any ecosystem, successful learning addresses the relevance of the knowledge as it is situated within the system/environment where it would be actioned (Alexander et al., 2009; Dickson-Deane, 2023). Resisting this, online learning environments are marred a host of different factors such as being individualized, as well as, unintentionally catalyzed by wrongly placed information, harmful colorings, or designs affecting meaning, unavailable paths to guide choice, inaccessible features, and more. Typically desired, but not always available in the online learning environment, is the ability to address the individual learner by showing them they are seen, heard, and understood; encouraging them to modify and own their environments by allowing them to form connections with others in the learning ecosystems and to use what makes us remarkably human. Social norms have allowed the behaviours and belief systems that currently exist to be woven into the already controlling learning infrastructure, thus informing the systems' functionalities, creating constraints that hinder pedagogical solutions (Dickson-Deane & Chen, 2018). As such, this conundrum creates a want for an environment which promotes more learning and less directives to a restrictive learning process.

CONCEPTUAL POSSIBILITIES

Recognizing that online teaching and learning is placed within an environment where neither the teacher nor the student has complete control is the first step to actioning capabilities towards a humanized environment. More flexibility for those directly involved with the learning process should be afforded to creating humanized online learning. Flexibility is neither easily attained nor available when most rely on existing designs to inform future solutions (Meyer & Norman, 2020; Norman, 2009). To aid in some hypothetical views of what ifs, reflecting on current experiences and adding hopeful dreams can provide some conceptual notions of solutions (Veletsianos et al., 2024). The following are three features that can address what is deemed an expectation of humanizing the digitized learning environment with guidance from experiences, reflective practices and individual wishful wants.

HUMANIZING FEATURE ONE

Using language and tone to reduce boundaries whilst showing empathy and increasing participants' awareness of the contextual situation

Possible way forward—Customizable Embedded Multi-Sensory Extended Reality (XR):

In reflection, it would be great if participants in the online learning system can communicate using all of their senses as they would in a face-to-face environment—just all digitized. The ability to customize the digital environment to include some form of XR would increase contextual and situational awareness. When in a physical environment, participants can adjust how and when they respond given the ability to immediately address sensitivities. For an ideal digitized learning environment having the ability for participants to immediately exhibit more feelings and behaviours and in the same regards would allow for a reduction of such boundaries. A suggested design for an online learning environment reduce the delayed experience of how and when the knowledge is conveyed. It will also allow for customization of *learning* situations where the intangible and tangible features meet to convey more multi-directional paths. This presents one way for the design of the digital environment to be managed based on the learning that needs to occur. These customizable realities would enable seamless access to empathic human senses that aid empathy, such as sight, hearing, touch, and smell, all infused with immediate contextual understanding.

HUMANIZING FEATURE TWO

Allowing participants to feel connected without reducing their agency and ownership of their own learning

Possible way forward—Synchronous Discussion Boards: By using one of the most common LMS features the discussion forums, the options for real-time student-to-student or student-to-instructor interaction (Moore, 1989) directly inside the environment will lead to immediate understandings. Removing the need for the LMS to rely on learning tool interoperability (LTIs) (i.e., education technology specific applications that act as bridges between the LMSs and external tools or systems) would be this wish. Some great examples would be to have features represented in Voice-threads or even Apache Wave (formerly Google

wave) embedded into discussion boards. Discussion boards are not designed for synchronous conversations between individuals and groups, as they were meant to imitate a conversation similar to that of a physical bulletin board. This feature—if well designed—would seamlessly integrate synchronous communication dashboards/features where live chats and video conferencing within the discussion forums occur without intermediaries and delays. This would mimic the conversational interactions that occur in a face-to-face environment, by removing the additional steps to switch to a feature or tool within the online learning environment would decrease the procedural access time for discussions—and by association, to knowledge. An ideal LMS will reduce the constraint of connectivity and institute an individualized ability to fully connect and interact with anyone at any time. It will, as expected, have the same constraints as a face-to-face environment (i.e., access to participants will be within specified times) but once they are available interaction is immediate if one chooses to engage.

HUMANIZING FEATURE THREE

An increased social presence yet being personable to those directly involved in the learning process

Possible way forward—Presence Awareness Dashboard (PAAd): The two previously stated suggestions above can all be combined into a PAAd—one like an announced arrival utilizing sound bites which are already present in different spaces in society. If we are to draw from current occurrences where entering a space alerts all present of another presence via some sound, surely stating who has arrived (or existed) in the digital learning space can include the same. This is not a far reach for an ideal digital learning system as the elements are already present in many other everyday digitized environments with the relevant ability to choose if, when and how the presence is conveyed. For example, when you enter certain buildings where you are the customer, the door being used to enter announces your presence with a welcoming chime using sound localization (Kaltenbrunner, 2000). Another space which has similar operations are automobiles where simply opening a car suggests the possibility of a person entering or existing in the immediate space sometimes evoking a feeling of individualized security or quality of future interactions (Cacciamani, 2024). The popup dis-

play of an avatar or profile picture on the PAd can also announce an individual's arrival and further increase accessibility to hearing impaired individuals while fostering embodiment and social presence through human-like representations (Cook & Skrupky, 2023). These suggestive features are present in other spaces and via translations can be deemed remarkably valuable to increase the functionality and then facilitate learning as required (Dickson-Deane & Sutherland, 2022; Grossman et al., 2024).

CONCLUDING THOUGHTS

For any or all of these suggestions to be seriously considered as a practical way forward, assumptions that the technological infrastructure for universities, institutions, students, and instructors is already capable should not be made. Access, equity and quality are key initiatives identified in the United Nations Sustainable Development Goals (SDGs) (United Nations, 2015) and these cannot be addressed if the functional technological infrastructure (i.e., ICTs) continues to ignore clear barriers are logically presented barriers" to "continues to ignore clear barriers" (Ashrafi et al., 2022; Dickson-Deane & Sutherland, 2022; Sharifov & Mustafa, 2020). Additionally, the functional literacies or how use is interpreted and actioned, attached to the global ICT variances in operations and within context need to be considered. For learning in an online learning environment, humanizing the environment requires all of the key senses to be present in the learning ecosystem. Therefore, until feelings and behaviours are functionally addressed, online learning environments will always fall just short of allowing participants to fully be who they are and can be, in the *online* learning process.

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