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ORIGINAL ARTICLES

Equity-Oriented Learning Design: An Entangled Future

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Abstract

There is growing interest in the literature towards a more distributed, collaborative view of learning design that focuses on relationships and connection. In this paper, we propose a vision of learning design that is entangled and crosses boundaries, framed by an equity-oriented mindset that blurs and resists boundaries, and merges learning design with facilitation, external with internal communities, and academia with activism. Based on interviews with learning design practitioners across the world, and framed by theories of posthumanism and postdigital education, we share eight orientations that form a future and equity-oriented learning design pattern: awareness of context, matter matters, co-creating with humans and non-humans, relationality and connection, modelling vulnerability, the entanglement of the personal and political, and creating transformative spaces. We then use one of our responses to the advent of ChatGPT to show how these orientations have helped us in times of uncertainty and disruption, an agential cut that highlights the value of acknowledging the material-discursive relationships emerging in and through our work. As such, rather than focusing on conventional, static definitions and models, we are interested in knowledge-making processes that come into existence when we practise learning design and engage with each other and the world around us, and who we become in our relationships with others, both human and non-human, and the patterns that we form in this entanglement.

Keywords Learning design · Learning designers · Equity oriented · Higher education · Emergence · Postdigital · Posthumanism · ChatGPT

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Introduction

Learning design continues to be an ill-defined field with no universal shared understanding(s) of what it encompasses (Prusko and Kilgore 2020). Understanding learning design as a practice is complicated as it can be embedded in roles and positions linked to technology support, course, and curriculum design, educational development, and training. Learning design can be taught as part of a formal certification or can be part of scholarly and/or policy endeavours (Costello et al. 2022; Grupp 2014). This requires a wide range of skills such as project management, creativity, design thinking, knowledge of pedagogy and educational technology, content creation, and more and more caregiving and sometimes 'in loco therapy' (Prusko and Kilgore 2020). While traditionally learning design definitions focused on methodologies, processes, models, and systems, there is a growing interest in the literature towards a more collaborative, relational view of learning design, within which humans, their relationships, values and practices, and the technologies they act upon and that act upon them are multidimensional and entangled in complex ways (Fawns 2022).

Attempts have been made at better defining or narrowing down the field of learning design, and defining standards and competencies of learning designers, intended to strengthen the profession (see for example Martin and Ritzhaupt (2021), on how to standardise instructional designer roles and practices). However, we see this as potentially harming the growth, diversity, and inclusivity of the practise of learning design and misrepresenting its complex nature. Rather, we would like to suggest that embracing the ill-defined nature of the field offers potential for more distributed, entangled, and equity-oriented learning design practices. We see similarities with the postdigital, which has been described as 'hard to define' and both a rupture in our existing theories and their continuation' (Jandrić et al. 2018: 895). Another resonance is 'wider acknowledgement of the co-constitutive social, political, economic and environmental facets of our digital education endeavours' (Jandrić and Knox 2022: 6).

We thus follow authors who call for a more collective view of educational development (Ashwin 2022), and we would argue learning design as well, focusing on the relationships of human and non-human actors (Fawns 2022), and who we become in relationship with each other, rather than focusing on processes and models. This paper draws on a study conducted in 2022, in which we interviewed 34 women across the world (including ourselves) who practise learning design within higher education. We purposefully selected our participants based on their public presence on social media and their equity-oriented learning design practices, as our original intent for the study was to co-design a socially just learning design model or framework. It is important to note that the women we interviewed carry different titles and might not necessarily see themselves as learning designers. As such, we employ the term *learning design practitioner* (LDP) to include everyone engaged in the process of supporting learning design in higher education in the broadest sense, irrespective of their title and official role in our research. In our paper, we will first provide a short introduction to the evolution

of terms such as 'instructional design' and 'learning design', discuss posthuman and emerging perspectives to learning design, share our practices and narratives, and introduce orientations that form a future and equity-oriented learning pattern, which emerged in our encounters with our participant and each other, both human and non-human. We will then use the sudden arrival of large language models (LLMs), such as ChatGPT into higher education at the end of 2022 as an important moment in recent times to show how these orientations enabled us to respond to uncertain presents and futures.

We will end this paper with our vision for learning design, which goes beyond definitions by role or departmental affiliation, or models and approaches, which is shared and distributed across an institution and beyond institutional borders opening up new futures that call traditional roles and authorities into question (Costanza-Chock 2020; Networked Learning Editorial Collective et al. 2021). Such a vision of learning design centres relationships, nurtures the entangled, boundary-crossing dimensions of this practice, blurs and resists binaries and boundaries, and merges learning design with facilitation, external with internal communities, and academia with activism.

A Brief Overview of the History of Learning Design

Learning design is defined differently across the world. Writing from the UK, Conole defines learning design as 'a methodology for enabling teachers/designers to make more informed decisions in how they go about designing learning activities and interventions, which is pedagogically informed and makes effective use of appropriate resources and technologies…[making] designs more explicit and shareable' (2013: 7–8). In the USA, the term 'instructional design' is more established. Branch and Dousay (2015) note how identifying a single definition of instructional design is difficult, despite attempts to define it as a field and standardise meanings of various terms but the results have not been widely adopted nor used consistently in the literature. The definitions cited in their work demonstrate how definitions have evolved over time, impacted by various orientations, from productionist concerns to human learning experiences. Their taxonomy of instructional design models reflects the historical significance of various models and their foci: classroom, product, and systems. Similarly, African authors Pallitt et al. (2018: 1) argue that '[l]earning design is a complex and socially-situated practice' and recognise its multi-faced nature as a process, product, and profession.

The history of instructional/learning design is nuanced, complex, and interesting. With its roots in World War II, to optimise large-scale training for American soldiers (Reiser 2001), it was, for a long time, framed by issues of scalability, instrumentalisation, and measurability, aimed at providing context-independent models for designing efficient learning interventions drawing on behaviourist learning theories. In the 1950s Bloom and colleagues became interested in cognitive learning models, introducing taxonomies of learning based on various learning outcomes, requiring different conditions to promote learning. Models such as ADDIE, created in the 1970s, offer a linear model for designing instruction to be used across different

contexts and by different stakeholders. Often linked to the use of technology, such as computer-based instruction, within blended, online, and distance learning contexts, instructional design had an emphasis on the teacher and teacher-centred design. In the 1990s, in the wake of constructivist and student-centred approaches to learning and teaching, the term 'learning design' was introduced, emphasising the importance of the learner and the learning process when designing learning and teaching interventions. Integrating elements of design thinking, the process became iterative, user-centric, and creative, promoting ideas of co-design or participatory design. Also, context and culture became important, and more recently equity-oriented learning design models (equityXdesign 2016; Costanza-Choc 2020) argue for a multi-stakeholder approach to learning design, but also a more critical view of how learning design spaces engage these stakeholders differently, focusing on power and positionality of all involved (Gachago et al., 2022). Finally, the idea that one can backward design, assuming that there are fixed learning objectives, is being challenged in times of increased uncertainty and disruption (DeRosa 2017; McCreary 2022).

Learning design in higher education is often located in centres for eLearning, online learning, or educational technologies, as it is predominantly associated with designing for blended or online learning. This foregrounding of technology (such as supporting an institutional learning management system), rather than pedagogy, has created tensions between centres of teaching and learning, which are often seen as more academic, pedagogically focused, and the more technology-centred spaces for blended or online learning support (Costello et al. 2022). Learning designers train and support academics to develop their courses or design and develop fully online courses, such as MOOCs.

Learning designers played a critical role during Covid-19, as 'heroic "first responders" answering the emergency online learning call of the pandemic' (Costello et al. 2022: 1), although many authors also argued that emergency remote teaching and learning should not be confounded with well-designed online learning (Moore et al. 2021; Czerniewicz et al., 2020). What became particularly clear to anyone in the field of learning design/educational development when the Covid-19 pandemic occurred is that this novel situation was one where no pre-existing framework would suffice. Previous roles of learning designers had to be redefined. For example, most learning designers had previously worked within centres where educators within their institution sought their support, but where their responsibilities were not towards the entire institution, and suddenly they were responsible for supporting unprecedented numbers of teachers in their institution. Others were in pedagogical support roles, not focused on technology integration, and suddenly, all pedagogy had to integrate technology to support remote learning, so they had to learn to support this type of learning literally overnight. Moreover, pre-Covid-19, the context for learning online was different: people designing online learning could take months to design and develop their courses, and now all of a sudden, they had to design, develop, and teach a course fully online overnight using technologies they were not familiar with and which impacted their pedagogy and how students learned, whether or not they were aware or intentional about it. Academics whose main role was to teach instructional design were being called upon to support the whole institution. More important than

the technical skill of knowing how to use online tools for teaching, educators needed to have a mindset of imagination and agility, an attitude of willingness to find new ways of reaching their students to enhance learning.

Learning designers could not cultivate these attitudes overnight but could provide care, support, and modelling. There were learning designers who had already built relationships and trust with educators at their institutions that they could build upon, or learning communities who could support each other through this transition time, and others who were becoming known and acknowledged for the first time, forming new relationships, and building new trust (Costello et al. 2022; Czerniewicz et al., 2020). The entanglements that learning design involved during the pandemic were different to those before, and they further challenged dominant framings of learning design. The landscape had also shifted significantly. Jandrić and Knox (2022), for example, note that growing private investment in, and development of, educational technologies that expose public education to capitalist exploitation intensified during the pandemic.

As mentioned before, there is a growing interest in the literature towards a more collaborative view of learning design, moving away from an individual, role-based terminology to a more collective view of educational development (Ashwin 2022), including learning design, that 'seeks to connect designers, technologists, learning center staff, librarians, and other key pedagogical partners with faculty to help faculty learn what they need to make intentional decisions about their course architectures' (DeRosa 2022). Learners can and should be part of this process (Gachago et al. 2022; Pallitt et al. 2022), as should non-human actors (Fawns 2022). This has become particularly interesting with the global popularity of ChatGPT and other large language models (LLMs), forcing learning designers to again play a pivotal role since late 2022, whether designing resources or professional development opportunities or consulting with educators about what AI tools such as ChatGPT involve, and how to co-design activities and assessments that integrate particular or multiple AI tools in ways that also consider AI literacies and ethical dimensions of AI integration into teaching and learning.

Postdigital Education

We position this paper within a postdigital space, framed by posthuman theory. Barad quotes Pickering (1995) to define a: '…posthumanist space [as] a space in which the human actors are still there but now inextricably entangled with the non-human, no longer at the center of the action calling the shots' (Pickering 1995 in Barad 2003). As Barad (2007, our own emphasis added) continues to explain, '… rather than focus on who we are, we see posthumanism as concerned as to *who we become* in our encounters with others, both the human and non-human, and what patterns emerge when our multiple identities and realities encounter each other'. We find Barad's agential realist philosophy, based on a relational ontology, which presumes that relationships are what bring things into being as part of the world, particularly useful for this paper. We believe that practices of knowing and being are not isolable, but are mutually implicated. We do not obtain knowledge by standing

outside the world; *we know because we are of the world*, as Barad reminds us (2007). The learning design practitioners we interviewed were intentionally selected for their passion for their work, and because their work extends beyond their institutional boundaries, into the public space of Twitter and other social media platforms.

Posthumanism also challenges the idea that knowledge can be discovered; that knowledge is external, given, pre-existing, and pre-given. In our paper we focus on knowledge-making practices, in our case on knowledge-making practices within the context of learning design in (and beyond) higher education. The actors in these knowledge-making practices are both human and non-human. This entanglement of human and non-human actors has never been so acutely felt as in the advent of large language models (LLMs), such as ChatGPT. Here we become partners in what Haraway (1988) terms 'worlding'—referring to the notion that the knower and the known cannot be separated. We, as human partners, can never step out of these knowledge-making practices, but are part of it, complicit, entangled, and emergent as 'the knowing subjects …immanent to the very conditions they are trying to understand, change or resist' (Braidotti 2019: 154). What is further relevant to our argument in this paper is that knowledge-making practices are co-constitutive and performative. We can read texts about learning design, we can think and talk about our collective practices, but when we engage with/in learning design, at specific moments in time, such as Covid-19 or the advent of ChatGPT, new possibilities emerge in our relationships with socio-material entities. Drawing from quantum mechanics, Barad's (2007) concept of a relational ontology explains that there are no pre-existing, separate, or bounded entities, but rather that entities come into existence through their relationships. The notion of enacting *agential cuts* institutes boundary-making practices that bring things together in new relations (Taylor 2019). Agential cuts do not mark some absolute separation but a cutting together/apart, a 'holding together' of the disparate itself (Barad 2012: 46). Barad (2007) explains that cuts can be violent, and importantly for our work, can open up and rework the conditions for agential possibilities. In other words, humans and non-humans come into being through their relationships—a process of *becoming with others*. We do not exist on our own as independent intentional entities. Agency does not reside in the individual but is enacted in the entangled relationships through time, space, and matter.

Following on, knowledge-making practices are world-making powers and practices that acquire ethical agency and responsibility. And this world-making is not neutral or innocent, as things are brought into being through practices that privilege certain entities and can exclude their 'binary others' (for example, humans/nonhumans, male/female, White/Black, abled/disabled), and as such 'we make the world in morally and politically consequential ways', according to Mauthner (2019: 680). What matters is where we draw our attention to, *where* we place the agential cut.

Thus, postdigital education is interested in a view of education that challenges the binaries of the digital and non-digital and rather engages with how human and non-human actors are entangled in complex relationships. For postdigital education, this means that '… all education—even that which is considered to lie outside of digital education—takes account of the digital and non-digital, material and social, both in terms of the design of educational activities and in the practices that unfold in the doing of those activities' (Fawns 2019: 132). This inclusion of the non-human

results in a relational ontology and has implications for epistemology, as we as learning designers and researchers are not separate selves, but an important part of the assemblage we are investigating (Gravett et al. 2021).

Designing for Emergence

The focus on who we become in our encounters with others, both human and non-human, and what new patterns emerge when our multiple identities and realities encounter each other (Barad 2007) is also of concern in the (learning) design world. Pendleton-Jullian and Brown (2018: 51) make emergence the central theme of their design unbound approach. Applying a systems view, they argue that our world has become a 'whitewater world' characterised by 'dynamic flows in which so much of what we do and know is radically contingent on the context at the moment one is looking at it or operating in it' and promote principles of *emergence*. These include the belief that small-scale, simple interactions among the diverse individual parts can lead to more complex behavioural changes to the social systems themselves. Consequently, they suggest 'muddling through' as the best strategy to work on a complex problem, which they describe as a system of successive incremental changes 'successive small manoeuvres that one can do quickly, and then assess in order to move on' (81). Thus, rather than designing the future, they suggest that we focus on the present: 'The future cannot be designed. The future emerges out of actions in the present as they are influenced and interpreted through actions of the past' (ibid.). This resonates for us with Barad's (2007: 315) writings on *spacetimemattering*, where she argues that because identity is never fixed, it can be open to both future or past reworkings: 'the "past" and the "future" are iteratively reworked and enfolded through the iterative practices of spacetimemattering … space and time are … intra-actively produced in the making of phenomena; neither space nor time exists as a determinate given outside of phenomena'. The complexity and uncertainty of this 'whitewater world' (Pendleton and Seely Brown 2018) have been felt strongly, twice in recent years in the learning design space: once during the pandemic and once more recently, with the advent of ChatGPT. In *Emergent Strategy*, brown (2017) builds on the work of the Movement Generation, using the analogies of natural *shocks* and *slides* as ways of describing instability and disruption that we face in social contexts. Shocks are 'acute moments of disruption', such as earthquakes and political uprisings, and slides are more 'incremental', such as rising sea levels and rising unemployment (brown 2017: Kindle loc 1181). One of our key roles, as social movements, must be to harness the shocks and direct the slides—all towards achieving the systemic, cultural, and psychic shifts we need to navigate the changes with the greatest equity, resilience, and ecological restoration possible (brown 2017: Kindle loc 1191, citing Movement Generation).

If we replace 'social movements' with 'equity-oriented learning design practices' in the above quote, we can imagine that learning design practitioners aim to continually imagine their roles within their institutions and beyond as ones where they need to navigate shocks (i.e. the pandemic) and slides (i.e. the impacts of AI in mainstream

higher education) towards achieving equity. adrienne maree brown (2017) sees our responses to change as systemic, long-term and deeply interconnected, and relational. Emergence also has a strong political or ideological aspect, challenging neoliberal individualistic agendas, and favouring more participatory, community-oriented, sustainable solutions to life and living. The link to transformative justice shows their conviction that we need to work not just individually, but systemically to effect change. To design for emergence is to value uncertainty and unpredictability as 'emergent systems are complex systems that exhibit self-organizing behavior' (Bass 2020: 163). Transferring these principles into (postdigital) education, which to our knowledge has not yet been explored, would lead to processes and practices that value collaboration, and small iterative changes, and may lead to greater adaptability of structures and practices, more flexibility and diversity in interactions, and heightened capacity for rapid organisational learning. It is important to note that some systems find it easier to adjust to uncertainties than others (Moore et al. 2021), which we have reflected on in detail elsewhere (Gachago et al. 2023).

Our Participants, Our Practice, and Our Research

This paper draws on a larger study, which interviewed 34 women (including ourselves, as we as learning design practitioners and researchers do not consider ourselves separate selves but as important parts of the assemblage we are investigating) who practise and support learning design across the world. We purposefully selected our participants based on their public presence on social media and their equity orientation. Elsewhere (Gachago et al. 2022; Pallitt et al. 2022), we have discussed what we mean by an equity-oriented learning design, characterised by a focus on participation, an awareness of history and power, and based on practices of care. We also sought diversity in our participants. As the EdTech and learning design literature have historically been dominated by White men from the Global North, we intentionally decided to only interview women from around the world (15 interviewees are from the USA/Canada, six from Europe, seven from Africa, and five from Australasia). We also intentionally sought out participants of colour (18 of our participants are of colour, 16 are White), with broad disciplinary backgrounds. These interviews were conducted between February and April 2022, across multiple timezones, while Daniela completed a Fulbright Fellowship in the USA, and lasted between 60 and 90 min each. Where possible, all three of us were part of the interviews, although some were also facilitated by one or two of us. The interviews were semi-structured and explored five topics: participants' backgrounds and journeys into becoming learning design practitioners (LDPs), the origin of their passion for equity-oriented work, a description of their learning design practice and their role in their departments and institutions, possible tensions based on their equity orientation, and finally models and theories they use to inform their work. Interviews were conducted over Zoom, recorded, transcribed using otter.ai, and checked by a research assistant. We all read through the hundreds of pages of interviews, which

threatened to overpower us, and we met over many months weekly to discuss and eventually capture what *glowed* for us in these interviews (Maclure 2010, 2013).

In our engagement with our participants, a *collective story* emerged that we will share below along with what we term an emerging pattern for a future and equity-oriented learning design practice. It was difficult to choose from the extremely rich and detailed interviews we conducted, and by choosing what glowed for us, we are not favouring one story over the other, but share it rather as a piece of a shared pattern that emerged; a collective story that is larger and more powerful than our individual stories. As Mazzei (2013: 733 cited in Bayne 2016) reminds us, voice in posthumanist-oriented research does not emanate from an individual person, but should rather be seen as elements that are part of an assemblage of a complex network of human and more-than-human agents that exceed the traditional notion of the individual: an '[a]ssemblage of interviewer, interviewee, recording device, room, technologies of transcription, software… as an assemblage by which voice is performed'. As such we see this collective story emerging from our engagement with our human and non-human actors at the point of the interview, but also from our ongoing conversations with each other, through our writings, Twitter feeds, podcasts, and webinars facilitated and attended over the last year in response to the events that happened around us, such as on the impacts of AI in higher education. To do these complex and interrelated relationships justice, we applied what Jackson (2013: 745) would call *emergent coding*. In other words, 'not intentional or planned in advance', emphasising a temporal emergence in response to the events happening around us, over human intentionality. Jackson asserts that in this way, we analyse stories not just for what they are but also for what they *do*. These often highly personal and intimate interviews changed and keep changing all of us in how we think about, do, and are, in our learning design practices. These interviews established ongoing connections, collaborations, and networks of like-minded practitioners. They were *performative* in establishing an awareness of others who work passionately in the field of equity-oriented learning design. In this, we were hyperaware of both the inclusive and exclusive natures of technology and, drawing on Pickering, we were manifesting both resistance and accommodation in the interplay of human and material agency (often under very difficult conditions, as we have explored elsewhere (see Gachago et al., 2023). As Obexer (2022) reminds us, it is through this collective, reflective practice that we can make sense of our complex roles, identities, and practices, but also our values and options.

Orientations Forming a Future- and Equity-Oriented Learning Design Pattern

As discussed, we see learning design as a practice that resides across different centres and different roles at an institution. The women we interviewed (including ourselves) do not all formally carry 'learning designer' as their job title, but we *all practice and support* learning design work in some form or another. We are working across our institutions, some of us in centres for teaching and learning, some in centres focused on supporting the integration of technology into teaching and learning, and others in schools or faculties, and either as decentralised academic staff developers, or learning designers, or as academics teaching in the field of learning design.

In some institutions these centres are separate, in others, they are more integrated. All of us talk about designing learning, but this learning design is beyond the narrow definition of 'instructional design' or 'learning design' that we are used to.

Out of the 34 participants (which included the authors here), 24 are educational developers or instructional designers (in academic or support roles), seven are academics, two are in leadership positions, and one is in a consultant role. Our job titles are as diverse as our journeys. Those of us in support roles carry titles of instructional designers, educational technologists, instructional technologists, and learning designers. Those of us in academic roles are referred to as academic staff developers, faculty developers, or educational developers. Others of us are academics, adjunct professors, associate professors, full professors, and professors of practice. Those of us in managerial roles are coordinators or directors. Across the board, these titles are used in very different ways and for very different roles. Some of our roles consist of learning technologies support, focusing more on imparting technical skills across a range of learning platforms and digital tools, some are more concerned with the practical and theoretical knowledge in relation to learning design more generally, supporting academic staff to affect change in HE, some do scholarly work in the field of learning design, others have managerial roles coordinating centres for learning and teaching or teaching with technologies (see Aitchison et al. 2020 for a model to position these roles across different job titles). Sometimes these roles or foci overlap, but not always. Here are some examples of learning design practices our participants (including ourselves) hold (at the time of the interviews).

LDPs in Staff Development Positions (Academic)

Alexandra is an academic and educational developer at a European higher education institution within the School of Business and Economics. She both supports her colleagues in course design and teaches in formal degree courses modelling good learning design practices. She is also engaged in scholarly work and is very active in the public space, blogging, and running her own podcast.

Camille is an academic learning designer (a rarity in our field) based in the Teaching and Learning Unit in the Faculty of Science at an Australian university.

Daniela works as an academic staff developer at a large research-intensive university in South Africa. This is a central role, concerned with staff development, teaching, research, and supervision in the field of online and blended learning design.

Maha is a professor of practice at the Centre for Teaching and Learning at a university in Egypt. She is a faculty developer, supporting colleagues in learning design and teaching herself. She has an active blog and has co-created several grassroots online communities.

Nicola works at a small public, research-intensive university in South Africa as an educational technology specialist in both a service and academic role. She is involved in academic development and learning design support, and teaches and supervises at postgraduate level.

Shanali is an academic staff developer at a large research-intensive university in South Africa. She offers workshops on various aspects of learning design, supports learning design processes, and teaches learning design at postgraduate level.

LDPs in Academic Staff Development Positions (Support)

Chahira supports lecturers in designing internationalisation programmes at a German university. She is based as a support staff member in the digital learning and teaching service within the department of academic and teaching services.

Edran works as a (non-tenure-track) faculty developer at an Ivy League University in the USA, supporting staff to think about DEI issues in their learning designs and teaching.

Michelle is a (non-tenure track, temporary) faculty mentor who provides professional development to faculty who teach online in a statewide community college system.

LDP in Managerial Positions

Bonni holds an administrative faculty leadership position (Dean of Teaching and Learning) at a centre for learning and teaching at a small private Christian higher education institution in the USA. She teaches and is involved in academic staff development work, leadership, and policy work in relation to learning design. She is also engaged in scholarly work and is very active in the public space, running a podcast.

Brenna holds a tenured faculty role as the Coordinator of Educational Technologies within the Open Learning division at a smaller regional university in Canada, focusing on developing and supporting faculty use of technology. She is also an avid tweeter and has her own podcast.

Mays is the coordinator of a centre for teaching and learning at a small community college in the USA.

Robin is the Director of the CoLab at a community college in the USA. She is involved in leadership, policy work and staff development around openness and learning design at her institution.

LDPs in Teaching Roles

Enilda coordinates the Instructional Design and Technology programme in a school of education at a small private teaching-oriented college in the USA.

Virna runs a professional development programme for teacher educators at a university in the UK, focusing on learning design.

There are also important *non-human actors* involved in our study, first and foremost are the technologies entangled in our learning design work, the technologies that enable our work, such as data and devices, but also those that we find limiting and that encourage us to write and act against, such as proctoring software,

the technologies that brought us together, such as Twitter, technologies enable us to engage and collaborate across our time zones, such as Zoom or Google Drive. Learning design practitioners and institutions also do not work in a vacuum; they influence and are influenced by global shifts in pedagogy and educational technology, by local and global events, such as Covid-19 or the advent of ChatGPT, and they influence and are influenced by the media through which they interact, including less formal channels such as social media and video conferencing, and more formal channels such as academic papers and conference.

While our research initially intended to collectively develop an equity-oriented learning design model, we decided, based on our participants' stories, to move away from the idea to develop a model, towards what we would call a range of *orientations*, that emerged in our engagements, and which we see forming a future and equity-oriented learning design pattern. These orientations are discussed below.

Awareness of Context

In our participants we found an acute awareness of context challenging existing learning design models for their lack of contextuality. Nicola, for example, mentions how although ADDIE has been around for a long time, it does not 'analyse the context and the people you are designing for… I think technology should follow once you understand the human side better'. This understanding of context includes a heightened awareness around the diversity of the learners that we are designing for or with, and colleagues we are engaging with. Enilda, for example, reminds us about the importance of 'taking into account …, the intersectional aspects of the learners, that not all learners are the same'. Edran supports a similar approach, and points to the fact that these models often privilege the privileged: 'so we have Carol Dweck, … she talks about grit and the growth mindset. … I think that they're useful, but we have to really think about when and where they're useful. Those models are really serving our more privileged student'. Our participants agree that these models do not necessarily consider the diversity of students' experiences and needs, as Enilda shares, '[t]he current Learning Design models, focus on processes and they don't really consider the learner as an intersectional element in the learning process'.

Matter Matters

Context is socio-material and our participants emphasise the importance of considering the socio-material, the non-human actors, in their learning design practice. Robin, for example, explains that thinking about access is complex and involves many layers: 'I'm a big champion of OER, as many people know about me, but I can't go into class and say, "Hey guys. Guess what? All the books are free in this class. So just take out your laptop, and you can access it here"', as many of her students do not have their own computers, high-speed internet, or even stable electricity'. Similarly, Nicola is concerned about the social context and social practices when supporting colleagues in designing learning resources, that in the South African context have to be mobile phone friendly: 'so you've always got to think through what's the social situation and then what are the affordances of the tool and how's

that going to fit…it's often small, little things like that just happens on the fly, even if it's a thing like compressing your video which one thinks is a very technical thing. But actually, there are reasons why you should compress your video and share it in a particular format to make it more accessible to students, who are often relying on interacting with it on a mobile device'. She continues to explain how she believes access is relational rather than technical: 'access being relational… [it] goes beyond data and devices. … What kind of technologies were you exposed to before coming to universities and what resources do you bring? Do you have a peer network?'.

Co-Creating with Humans and Non-Humans

Closely related to the awareness of context and the socio-material is the recognition that we are not independent entities but come into being through our relationships with each other. To be able to understand our students and our colleagues, we need to involve them in the learning design process. Rather than seeing ourselves as imparting knowledge, our participants share a view of learning design as a partnership between themselves and their colleagues, between themselves and students, and between themselves and their non-human partners. This is a partnership in which all of the partners develop, as Bonni explains: 'I think the values that I hold are that learning should be something that we do with other people [we] shouldn't do things to people, but we should do them with them … mostly what we have at our institution are people who we could best describe as coaching faculty to design their own classes…most of our work is working alongside someone, versus actually developing courses on behalf of someone else'. This view of a shared, co-created learning design practice involves students as well, as Alexandra shares:

> [Y]ou can't keep the students out of the discussion ... but I ask [my colleagues] to have a dialogue with their students ... and to try to find out as much as possible about who their students are, to be able to be welcoming to their students as much as possible. Because if you don't know who your students are, you have very few chances to actually get it right… you have to get to know the students. But even this, as I'm saying, it was a change of perspective, because a lot of teachers that come to me are like, tell me how to teach this, you know, telling me how to create this module. And I always try to switch them while I tell them of course, all right, I work together, as I said, but then I want to say here, and how about involving your students in that maybe not fully in the design, but giving them a voice too.

Although our participants never explicitly spoke of technology platforms or tools as 'agentic' per se, they would speak about how the certain technologies like learning management systems, proctoring tools, and plagiarism-detection tools, as well as online conferencing tools such as Zoom interacted relationally in an entangled manner, enabling affordances and limitations not necessarily planned or intentioned. The smoothness of a Zoom class experience depends on a plethora of entangled non-human actors, such as each individual participant's connectivity, quality of sound, willingness/ability to turn cameras on or off, and comfort with using the multiple

tools within the platform, as well as which version of Zoom each person has, enabling certain functionalities and not others; each individuals' experience differs also according to the physical embodied experiences they have away from and around the screen—and this all leading to inequities that educators and learning designers need to anticipate, as well as adapt to in the moment.

Relationality and Connection

If we see our learning design practice as shared human and non-human actors, what counts are the relationships we build, as Brenna explains: 'I used to kind of think of it as like I have to present information in a workshop and now I'm thinking of it much more in terms of building individual relationships as much as possible'. Many of our participants practise learning design from within learning communities, as Robin shares:

> We do most of our faculty development through learning communities and we actually, a lot of our first [encounters] are called starting with 'why?' I'm only trying to help faculty think about how they approach the work. So, I was thinking, you know, it's really less about 'are you getting this right?' And more about, 'do you have the support? Do you have the frameworks? Do you have a place to talk about this? Have you re-thought about everything that you're doing?' ... we don't always have the best practices - to use that phrase, but we have a lot of practitioners who are thoughtful about their work and why they're doing it…

It is also an orientation towards creating critical connections rather than large networks, as Camille explains: 'I believe if I can influence one person and I can get it right with one person, then that person can help me influence the second person and therefore, it continues like a domino effect'.

Modelling Vulnerability

Working in relationship with human and non-human actors means acknowledging our vulnerabilities, as Lee points out, to open up about something that is usually not necessarily shared, our teaching and learning practices, especially when it is entangled with technology, which can be scary and risky:

> And so you really have to ... recognise all the time, the humanity of the person sitting in front of me, that even if I don't agree with their pedagogy and their pedagogical choices, they are putting themselves in a vulnerable position with me to have a discussion around something that is typically in academia considered private, which is what I teach and how I teach it. And so to open themselves up to that kind of vulnerability is difficult. And they already have their guard up, they already are feeling probably anxious, excited, unsure, nervous, … coming in and sharing your pedagogy and saying, this thing that I always do entirely by myself, I am opening up this process to another person, and maybe even a team of people. And …that's an extraordinary place of vulner-

> ability. I try to be conscious of that, and work within that space, and then be able to hopefully, model the kind of empathy and the kind of teaching that I would like the faculty member to do with their students in my interactions with the faculty member or the subject matter expert.

As Lee mentions, this vulnerability can be supported by practices that *model* our own relationship with technology. Many of us challenge the idea of learning design as a 'tick box exercise'. It is a practice that needs to be modelled, that is not easy to learn, that needs time. Lee continues to explain,

> [I] try to model how, you know, what, how I would like them to engage with their students, and the kind of experience that they set up with their students, I try to model that experience for them when they engage with me, and then when they engage with the team as much as possible, which drives the traditional instructional designers and project managers absolutely bonkers. Because there is a checklist, and there is a spreadsheet, and we need to do all of these things in this order. And why are we doing it this way? Why are we talking so much about feelings?

Nicola also talks about the importance of modelling certain practices as skills, such as online facilitation, that became important skills during the pandemic but need time to develop: 'I use models tacitly rather than explicitly because often I've got to do something really fast and in a very responsive way … modelling … how they should be interacting with their students ... [a] skill that people can't develop overnight'.

The Entanglement of the Personal and Political

As we approached our participants because we knew them through their political work on Twitter, it may not be surprising that for our participants, learning design is an entanglement of the personal and political. They are deeply embedded in questions around the ethics of EdTech, as we can see in Brenna's work around proctoring tools or Robin's advocacy work on openness. We have written about this in more detail elsewhere (Gachago et al., 2023), but this comment by Mays shows how advocacy is a crucial part of our learning design practice: 'When I don't speak up and advocate, no, we need to change the system, we really need to and I just power through it and I cover it, it's wounding for me. … At the same time, when I [work] with colleagues and I don't engage in questions of the social, the economical, the geopolitical, knowing how every day everywhere, it shows up with the students, then I am also that silence [that] is impacting my own humanity and the humanity of others'. It is also not surprising that our values then often clash with those of our colleagues and institutions (which we have expanded on in the above-mentioned paper), and in as much as we aim to listen and not assume in our engagements with our colleagues, we sometimes walk a fine line between staying true to our values and 'meeting our colleagues where they are', as Chahira explains. We recognise that colleagues themselves are not simply human actors acting out of context: the reactions and actions of administrators, for example,

are entangled with accreditation concerns, neoliberal values, and their fears and hopes about technology.

Creating Transformative Spaces

Many of the participants spoke about learning design being less about models and more about changing mindsets, enabling the opening of spaces where lecturers can unlearn some of the beliefs and assumptions they have carried with them for a long time but that might not be relevant anymore. Maha shares the importance of working with colleagues on a more long-term basis:

> [W]e have a faculty learning community for people who are new and they stay with us for a year. We have several workshops so we have a cohort and you know, you have to see them as they grow and I start to see in them how they used to talk about students and rigor and that kind of thing, and towards the end and maybe a year later when they talk to me about what they've been doing in their course and they come to the workshop and I hear them and I see that their mindset has shifted.

This transformative learning merges theory and practice as Robin explains:

> I think a lot of instructional design is much more about practice. I really like to merge practice with frameworks and concepts and approaches and mindsets - all that stuff. I think that's a big difference. We use the word praxis, like right at the top of our CoLab stuff, even though sometimes I think it's sort of a pretentious word, but if you explain it, it's actually an awesome word, you know? Think about why. And then we'll talk about how. Let's do both. Right?

Emergence

Throughout our interviews what became abundantly clear is that nothing is fixed, but that we work within a field that is constantly changing and emerging. Rather than work with fixed models and bounded processes, we need to stay open to learning and adapting, to be responsive to the human and non-human actors that we encounter in our practices. Again, Robin shares that rather than engaging in a backward design process, with established learning outcomes that engage both students and staff in

> ...a much more emergent approach with learners to give them more agency and autonomy, but also emergence with our faculty, to say that faculty development should also not be backward designed. We need to think about where faculty is and where they want to go. So, there's a lot of goal-setting with our faculty. ... Stepping back from content and talk[ing] about teaching, is already kind of a radical act for some of our faculty.

This means constantly learning, looking for feedback, adjusting, and redesigning, as Shanali explains, reflecting on how a learning designer's own identity itself shifts and emerges within changing contexts:

> That's a quality, like the willingness to call up your flag from wherever the hell you planted it and go shift it somewhere else because that's what's appropriate. So not getting stuck down or bogged down into a perspective or a position but being willing to say, 'You know what, the world changed, I changed, I'm moving my position and it's okay'. And I think that might be an interesting quality to think about for learning design.

How Does this Future and Equity-Oriented Learning Design Pattern Help Us to Respond to Uncertainty and Disruption?

We spoke earlier of 'emergence' and 'shocks' and 'slides' as disruptions. In the context of higher education, two of the recent 'shocks' that learning designers faced were the 'pivot' to remote learning due to Covid-19 in early 2020 and the sudden impacts of publicly accessible, generative AI in late 2022. The orientations described above (context awareness, matter matters, relationality and connection, entanglement of personal and political, modelling vulnerability, transformation, and emergence) helped us weather these storms. One of the things that was clear during the pivot to emergency remote learning and the entrance of ChatGPT into higher education was that while the institutional context was important, there was insufficient knowledge or know-how within any one institution about this, and so learning from others beyond our institutions became more important than ever. The move to online created opportunities to share knowledge beyond our institutions, and many of the women learning designer practitioners we interviewed, became public scholars in this time of uncertainty. Established networks of relationships and connections allowed us not only to share our knowledge but also draw from others and collectively develop responses for our institutions. In the story below, Maha reflects on how these orientations supported her response to ChatGPT. (Reference to orientations has been added using **bold** and **[square brackets].)**

The new developments with ChatGPT were heavily influenced by private and public interactions with people like Brenna Clarke Grey—in the Twitter group DM and on her blog and in a public session with Dave Cormier. They were influenced by podcast episodes with Bonni Stachowiak, where, yes, she was interviewing big names who had influenced many of us on these topics, such as Autumm Caines and John Warner, but she was also ***sharing*** *her perspective on this, which was valuable* ***[relationality and connection]****. It was influenced by my interactions on Twitter and my Tweeting and blogging aloud and getting responses* ***[emergence]****. Anna Mills, who had been curating resources on AI, had reached out to me to co-author something together, and instead, we realised people needed a workshop, which we offered* via *Equity Unbound but made available to my institution locally as well. My perspective on ChatGPT itself evolved in a 'dialogic' manner with the tool itself, where at times it impressed me, at others, it frustrated me, and it evoked an emotional response in me with some of its behavior* ***[emergence; matter matters]****. The response to my public engagements gave me confidence that my perspective was worthwhile to the global education community* ***[entanglement of personal and political–modelling vulnerability]****.*

Some of my reaction to AI as a writing tool was influenced by watching how my own 11-year-old child reacted and responded to it and used it (yes, we played with it together!), and with how a former student of mine updated me on how it is being used in student circles ***[relationality and connection; entanglement of the personal and political, co-creation]****. I also continue to be influenced by conversations with students in my classes, and private conversations with faculty members in my institution, as well as more public conversations in community conversations and workshops we hold on campus, which were different than the international conversations due to the cultural differences and ChatGPT's mostly Western/Anglo dataset—and the additional inequity of ChatGPT not being officially available to Egypt, and the need for workarounds to be able to access it* ***[co-creation, context awareness; relationality and connection; personal and political]****. In my institution, we held multiple community conversations and workshops to respond to the 'emergent' nature of what was possible with AI and how we would respond to it, and to allow for multiple touchpoints with educators to effect '****transformative****' learning (*Mezirow 2006/2018*)* ***[co-creation]****. In workshops I've given locally and internationally, I've often asked people to relay their metaphors for AI, how they are feeling about it, and its impact on their practice; this was to encourage* ***vulnerability*** *and recognise that there was an emotional not just a professional impact of AI on us all, that it was* ***personal as well as political****, and to promote a shared understanding of this new landscape, rather than relay a top-down one* ***[emergent, co-creation, personal and political; matter matters]****. We had to address the political dimension of educators feeling threatened by the kind of media hyperbole on how AI would be the end of writing and the end of education—we could not look at it on a micro level without addressing that, nor addressing the kind of epistemic challenges of how AI text generators were trained with majority white, Western Anglo data sets, and what that meant for people from non-dominant regions of the world* ***[personal and political, context awareness]****. We had to show how AI was influencing our lives and education, whether we chose to address them in our courses or not, and choosing to use or not use them was a spectrum of possibility and it was not simply a 'tool' we plug into existing pedagogical philosophy, but something more entangled within our practice where we and our students enact our agency, and the tool also acts upon us to influence us in a relational manner* ***[matter matters; personal and political]****.*

Some Concluding Entangled Thoughts…

In this paper, we have made a case to see learning design in higher education as orientations forming a future and equity-oriented learning design pattern across our different contexts. With this view, we are challenging artificial boundaries set up in higher education, which we argue are not generative but rather force us to work in hierarchies and isolation. Our vision of this learning design pattern is not embedded in a position or a role or a model but is shared and distributed across (and beyond) an institution. It is a practice that emerges through multiple dynamic relationships between human and non-human actors, as Barad would say, a relationship that brings things into being as part of the world (Barad 2007: 33). Our collective experiences and research highlight

the complexity of this learning design pattern which is richer and more nuanced than currently limited definitions and roles suggest.

What the women we interviewed shared and what emerges from Maha's story are not models or approaches but their orientations towards teaching and learning, learning design, educational development, equity, and the future, and how they go about supporting themselves and their colleagues in their practice, given their particular context and in particular in response to moments of uncertainty such as Covid-19 or ChatGPT. This draws our attention to what comes into existence when we engage with each other and the world around us, who we become in relationship with the other, a process that expands beyond human-centred intellectual growth and professional development. It is important to note that we chose our participants purposefully for their equity orientation. However, we would argue that considering such orientations might be useful in the broader learning design space. A learning design pattern that considers relationality, connection, the personal, often vulnerable, that is aware of context and matter, always emerging, and ultimately political in nature, has the potential to transform the direction in which education is going within our institution and beyond. Through our practice, we can influence the extent to which we 'intentionally adapt' to change (brown 2017) by iterating thoughtfully towards equity-oriented approaches rather than adopting kneejerk and neoliberal reactions to slow and fast changes in technology and the sociopolitical environment. There are deeply ethical questions we need to consider in our practice as we are creating the world around us through our engagements with each other, human and non-human actors alike, such as who we become with ChatGPT, who benefits from our becoming, what new inequities are being set up and how or if we can resist these. These are questions cannot answer on our own but that need our collective, sustained engagement, beyond the boundedness of our institutional roles and affiliations.

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