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RESEARCH ARTICLE:

Designing in the Times of AI: Co-Creation as a Strategy towards Emergent Learning Design

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Abstract

This paper explores co-creation as a strategy for emergent learning design in developing a new postgraduate diploma in blended and online learning (BOLD) at a large South African university. In this conceptual paper, grounded both in theory and critical collaborative autoethnography, we examine how co-creation functions as an epistemological, ontological, and political project in learning design. The "Designing with AI" design process illustrates the complexities and uncertainties inherent in emergent learning design. Our reflections reveal that co-creation challenges traditional notions of expertise disrupts established roles and processes, and addresses issues of social justice and equity in education. We propose a set of principles for co-creation in emergent learning design, including the affirmation of multiple knowledges, embracing entangled processes, and recognising the importance of affect and power dynamics. The paper highlights the potential of co-creation to navigate the uncertainties of rapidly evolving fields like AI in education while acknowledging the challenges and tensions inherent in this approach. We argue that co-creation when applied thoughtfully, can lead to more flexible, inclusive, and responsive learning designs. However, we also recognise that institutional contexts and individual positionalities within higher education may influence the ability to engage in such emergent practices.

Keywords: *blended and online learning design; emergent learning design; generative AI; co-creation; higher education*

Introduction

The need for higher education systems that enhance access to learning while offering inclusive learning opportunities has never been more pressing for South Africa and Africa (Salmi and D'Addio, 2021). Blended and online learning design, while by no means the whole answer to the problem, has the potential to play an important role in making education across the continent more flexibly available, more responsive, and, over time, more affordable to a wider range of students. However, to do this, South Africa and Africa need to develop a skilled and knowledgeable pool of professionals across the continent with the capacity to work in learning design in a variety of national and regional contexts.

This paper draws on our experiences in designing a proposed postgraduate diploma in Blended and Online Learning Design (BOLD) to be offered at a large institution of higher learning in South Africa. The diploma is aimed at upskilling and professionalising the field of online and blended learning design in South Africa, with a strong focus on widening access and providing flexibility, using innovative approaches such as micro-credentialing. We

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focus on the course design process of one BOLD course - *Designing with AI* - which is currently offered as a short course but will eventually form part of the diploma.

Online and blended learning design is an interdisciplinary, fast-changing and contested field globally and locally (Pallitt *et al*., 2018; Jonassen, 2000). We draw in our understanding of learning design on Conole's (2018) view of learning design as the process of creating pedagogically informed learning activities that effectively utilise appropriate tools and resources, but also on the recent development to seeing learning design as a collaborative practice, moving away from an individual, role-based terminology to a more collective view of learning design (Ashwin, 2022). Within higher education, this may be seen to be part of academic development. However, in the context of BOLD, which targets learning designers in and outside academia, such as schools, corporates, EdTech companies and NGOs, we must be mindful of using a learning design definition that is wide enough to encompass these different and constantly evolving practices and contexts. In this complex and diverse space, courses about blended and online learning design thus cannot be designed solely based on an established body of knowledge; new practices to course and programme development, which we term *emergent*, are needed.

To design for emergence is to recognise the potential value of uncertainty and unpredictability. Creating the course *Designing with AI* presented us with three kinds of uncertainties. First, the explosion of generative AI into the world in November 2022 created unprecedented kinds of uncertainties in education. While generative AI as a field of study and a tool for practice is by no means new, it is only in the last two years, with the rise and packaging of large language models such as ChatGPT, Claude and Perplexity, that generative AI has become easily accessible to the non-expert user. Updates are released regularly, and there is a proliferation of tools, apps, and platforms that integrate and use, in some cases, multiple AIs to meet user needs. Teaching with and about the use of relatively stable technologies for educational purposes in diverse contexts is challenging in and of itself. However, the rapidly developing phenomenon of generative AI in education overwhelms teaching about this technology for educational purposes. Second, participants in our course are likely to come from a wide range of contexts. Participants serve various institutions, including schools, higher education, non-governmental organisations, agencies, EdTech companies, and corporate training contexts. Furthermore, they will likely be employed in various roles, such as learning designers, instructional designers, academic staff developers, educators, materials developers, and trainers. We anticipate attracting participants from other countries, including other African countries, but also potentially from further afield, resulting in cohorts with varied national and linguistic contexts and varying economic and material conditions, including varied access to educational technologies. Finally, AI as an entity challenges ontological and ethical boundaries. It is unclear exactly what kind of entity we are engaging within the 'black box' of LLMs. Debates in the AI community about the nature of generative AI rage on, leaving us asking who or what we are co-creating our courses and programmes with, who or what we are bringing into our learning designs, and in what ways when we design with AI.

Taken collectively, our contextual complexity, alongside the integration of AI into the process of co-designing individual courses and programmes and into learning designs themselves, creates a kind of constructive interference, disrupting well-established ways of knowing, doing and being in the practice and teaching of learning design, and in the learning design products themselves. Here, we see this contextual complexity as both a challenge and an opportunity. This course, and the BOLD programme as a whole, has committed to various co-creation strategies and practices that take advantage of the diverse situational knowledge and experiences our participants bring with them. These strategies and practices include, for example, deliberately composing course design teams to include staff actively working in a variety of roles related to learning design work, a strong emphasis on voices from industry, capacious assessments that allow students to mould them to suit their learning purposes, and the development of a curriculum that invites student choice during course design and facilitation.

In this conceptual paper, we thus put emergence and co-creation into conversation, framing *co-creation* as an epistemological, ontological and political project contributing to an emergent learning design practice. The paper will first discuss co-creation through these three theoretical lenses, describe the context of the design and apply our methodology, i.e. critical collective autoethnography involving the course design team, to explore emerging ways of designing programmes and courses. The paper ends with a first range of principles for emergent learning design in times of AI.

Who are We?

We are a group of four lecturers/academic staff developers, one professional staff member and one researcher, all working on designing a fully online postgraduate diploma on blended and online learning structured through a suite of micro-courses. We are based at the University of Cape Town, a medium-sized, research-intensive, historically advantaged, historically English-medium institution in the Western Cape province of South Africa. Located in the Centre for Innovation in Learning and Teaching, we all work in higher education, with strong interests in learning design and educational technology, informed by a commitment to social justice and equity. Most of us have taught for many years in the PGDip and master's Programme on Educational Technology and Higher Education Studies but have also supported our colleagues in course and programme development and have written extensively on blended and online learning and course design in the context of inequities (see for example Govender *et al*., 2023 or Gachago *et al*., 2023). While we are all interested in co-creation, our paths and orientations to co-creation differ.

Daniela, as an academic staff developer and learning designer, has initially come to co-creation through design thinking (Gachago *et al*., 2021), which calls for the inclusion of multiple voices and stakeholders into a design process and more recently through student-staff partnership projects. Her interest is in the process of engaging more equitably in these partnerships across substantial power differentials. Rather than aiming for equity in partnerships, which might be unachievable in our strong hierarchical institutions, she is interested in using these spaces to shine a light on these power dynamics and find ways of unpacking and possibly challenging them. Cheng-Wen sees co-creation as a strategic approach to navigating the intricacies and diversity of knowledge in our current times. She got to co-creation through teaching on the PGDip on Educational Technologies programme and designing for the *Designing with AI* course, where she sees co-creation being employed to ensure that educational content and engagement with this content are relevant to the students' varied contexts. Christine was introduced to co-creation through participatory curriculum development at the beginning of the Covid-19 pandemic when all teaching and learning suddenly had to be moved online. Whilst her general practice had been to consult students on their needs, the uncertainty and chaos of the pandemic provided the impetus for the realisation that students are the experts of their own lived experience and would be ideal design partners. She embarked on a co-creation journey with diverse students to design leadership programmes. She noted that the diversity of the student co-creators facilitated the inclusion of marginalised voices, and many intersectional factors could be considered in the programme design. As a result of these experiences, she became interested in how students can enhance curricula to be more relevant, relatable, inclusive and accessible to students by drawing on their own lived experiences when co-creating (Immenga and Redelinghuys, 2023).

For her part, Glenda advocates for and research open education. She has worked with many open textbook authors at the University of Cape Town. These authors were motivated to share the teaching materials openly to save students money, make texts more relevant, and include more collaboration with colleagues and co-creation with students. Students were included in writing and/or giving feedback on the textbooks. The students shared how they felt proud of their contributions and more included in their departments, giving them an increased sense of belonging (Cox and Masuku, 2023). Tefo believes co-creation provides a viable avenue to advance social justice and equity in teaching and learning by giving marginalised groups a voice and allowing their perspectives and experiences to shape curriculum and pedagogy. He joins the world of co-creation through the *Designing for Social Justice Partnerships* short course and working group. In this, Tefo hopes to employ a collaborative approach, challenge dominant narratives, promote critical thinking about systemic inequities, and foster an environment where diverse viewpoints are valued and incorporated into the pursuit of knowledge. Shanali comes to co-creation with an unhealthy wariness of the idea of co-creation. Having spent her whole life teaching, she has always understood learning and teaching as a dyad, with learners and educators defining the engagement's nature. While both learners and educators are equally important in a teaching and learning relationship, their roles and responsibilities, experiences, skills, and knowledge are fundamentally different; she worries that co-creation can mask rather than address power differentials in a formal educational context, characterised by accreditation and grades.

Locating *BOLD*

The course under study in this paper forms part of a newly developed Postgraduate Diploma in Blended and Online Learning Design (BOLD), which is currently undergoing accreditation processes. BOLD seeks to respond to a

growing need for professionals to be able to support educational systems in their online aspirations within, but also outside, the higher education sector. The contextual, developing and interdisciplinary nature of the emerging field of blended and online learning design is an important resource to support professionalisation. BOLD sits at the intersection of three cognate disciplines: education, design and information technology. While these disciplines can draw on a well-established canon, BOLD as an interdisciplinary area is poorly established in Southern Africa (Pallitt *et al*., 2018). The need for widening access and flexibility has led the programme design team to promote the idea of micro-credentialing, offering a range of 10-credit courses to make this programme as personalised, contextual, and meaningful for participants as possible, offering choice in content, sequence and pacing of the programme. Micro-credentials are relatively new in the higher education globally and even more so in South Africa. They are delivered in a relatively short and compressed timeframe, are usually offered online, and are usually formally accredited (Pollard and Vincent, 2022). However, their unusual form and flexibility also seriously challenge existing institutional administration and bureaucracies. South Africa is in the process of establishing a micro-credential framework (CHE, 2023) on national and institutional levels, and it is the goal of the developing team to use BOLD to pilot some of these principles of micro-credentialing.

Co-Creation and Emergent Design

Emergence, when linked to systems thinking and complexity, refers to a process by which, through many interactions, individual entities or "agents" create patterns that are more sophisticated than what could have been created by an individual agent (Green, 2023). Emergent design suggests that design needs to be open, responsive and iterative. For example, Pendleton-Jullian and Brown (2018) promote principles of emergence, which include the belief that small-scale, simple interactions among diverse individual parts can lead to more complex behavioural changes to the social systems. Consequently, they suggest "muddling through" as the best strategy to work on complex problems, 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" (Pendleton-Jullian and Brown 2018: 81). Similarly, Brown (2017) shares a range of principles for an emergent strategy which includes a focus on small step changes, relationship and community building and resilience, which they describe as the ability to bounce back from challenges and setbacks. It involves learning from failures, adapting strategies, and maintaining a commitment to the overall vision of achieving systemic change.

Various practices have emerged in the learning design field to support emergent learning design. For example, the idea that one can "backward design," assuming that there are fixed learning objectives, is being challenged in times of increased uncertainty and disruption (McCreary, 2022). DeRosa (2017) suggests moving towards a forward design that recognises the uncertainty of our teaching and learning contexts. Emergent learning design also recognises that the locus of expertise may change and invites us to create space for co-creation and participation. To respond to the need for widening access to learning design education, professionalising the field and providing the flexibility of micro-credentialing, the course design team embraced co-creation as a guiding principle for this programme, focusing on co-creation as an epistemological, political and ontological project. Embracing co-creation has a significant impact on how we decide what knowledge to base our course design on, the values and beliefs underpinning our course design, how we see the field of learning design, and our roles as learning designers.

Co-Creation as an Epistemological Project

Co-creation can be considered an epistemological project that recognises the changing nature of what counts as knowledge. This aligns with decolonial thinking, which critiques the assumption that Eurocentric/Western thought is the only valued knowledge (de Sousa Santos, 2007). Traditionally, in higher education, there were steadfast notions of what legitimate knowledge is, who can produce such knowledge, and where the knowledge should reside. These notions are increasingly challenged thanks to emerging technologies and changing social dynamics (Cope and Kalantzis, 2013). The internet, social media and digital platforms have democratised access to information, allowing diverse voices to contribute to the pool of knowledge. This democratisation has been further augmented with the rise of artificial intelligence, which enables new forms of knowledge creation and discovery and dramatically blurs the boundaries of traditional expertise and scholarship. Shifting social dynamics, such as globalisation and the call for decolonisation, have also played a crucial role in reshaping our understanding of what counts as knowledge. There is a recognition of the pluralities of knowledges and truths that "[m]eaning and knowledge are more recognised to be matters of perspective up for negotiation" rather than being disseminated

by a single authority or perspective (Cope and Kalantzis, 2013; Morreira *et al*., 2020). Co-creation, in this sense, can be seen as a strategic endeavour to navigate this landscape's complexities by bringing multiple perspectives to sense-making. It can be argued that it will counter what de Souza Santos (2007) refers to as the 'epistemicide' of non-Western cultures.

Co-Creation as an Ontological Project

Instructional design or learning design has a long history. The term instructional design was prominent for most of the 20th century, emphasising a technocentric and teacher-centred view of design. However, 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. By integrating elements of design thinking, the process became iterative, user-centric, and creative, promoting ideas of co-design or participatory design. There is also 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 centre staff, librarians, and other key pedagogical partners with faculty to help faculty learn what they need to consider to make intentional decisions about their course architectures' (DeRosa, 2022). This has substantial implications for the role of the learning designer and the practice and field of learning design.

Co-Creation as a Political Project

Co-creation as a political project focuses on equity-oriented or socially just learning design models (Costanza-Chock, 2020; equityXdesign, 2016), which 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*., 2023). This perspective emphasises the role of learners, educators, and other stakeholders, such as community members, industry or professional bodies, in collaboratively shaping the educational process, challenging traditional hierarchical structures, and promoting equity and inclusivity (Atenas, 2020; Bovill *et al*., 2011). In South Africa, in particular, the student protests of 2015 and 2016 have pushed for a decolonisation of teaching and learning, calling for a greater inclusion of student voices to create more meaningful curricula for students. In designing this course for BOLD, we approach co-creation to be intentional about whom we include and challenge traditional power dynamics in knowledge production and dissemination, particularly those that privilege Global North perspectives over others. This approach is grounded in principles of social justice, care, compassion, and relationality, with a specific focus on recognising and affirming alternative forms of expertise. We adopt these practices to decolonise the curriculum, disrupt established canons of knowledge, and create a more equitable and inclusive learning environment (Gachago *et al*., 2023).

Methodology: Towards a Critical, Collaborative Autoethnography Approach

Although this is a conceptual paper exploring co-creation as a strategy for enabling more emergent learning design, we ground our claims in a series of recorded conversations alongside our design process as we opt to make our method underpinning this theoretical claim more explicit. The BOLD project has provided us with a site to design from scratch collectively and has offered valuable opportunities to collect a wide range of data from conversations that centre programme and course development and design. Initially, we turned to the work of collaborative auto-ethnographers for inspiration, and given our context, existing interests and ideological commitments, adopted a critical perspective, drawing on social justice and equity lenses to inform both the design and research practices associated with this paper.

Collaborative autoethnography is rooted in ethnographic and autoethnographic traditions (Gant *et al*., 2019). In ethnographic work broadly, data collection and generation tends to focus on eliciting narratives about "specific practices, events and moments" (Gant *et al*., 2019) but is also associated with methodological innovations such as the use of a range of texts, including, for example, diaries, emails, SMSes, captured and constructed images, audio recordings of voices and soundscapes, video recordings, artefacts and field notes of observations (Hernandez *et al*., 2017). In autoethnographic research, the narrative and the researcher are understood to be woven together in a complex relationship: the researcher is simultaneously the source of the data, collector or generator of the data, and analyser or interpreter of the data (Chang, 2016). As Francis and Hester (2004: 35) assert, in autoethnographic research, the social world is as much "in here" as it is "out there".

In our preparation for this paper, we met in pairs and recorded and transcribed our conversations. Each pair was comprised of one person from the *Designing with AI* course team and one from the BOLD programme development team. Moving away from a strict interview protocol into a conversation, we could foreground the "in here" and the "out there". We set out to elicit narratives about learning design experiences by asking questions: (1) What kinds of course design experience have you had previously? and (2) What has the course design process for *Designing with AI* been like? These questions generated rich and complex conversations in the interview pairs, which we brought into a series of group conversations. These research team conversations were all also recorded and transcribed. Ultimately, we coded the interviews and used the subsequent conversations to make sense of the coding. Using the three co-creation lenses discussed above (co-creation as an epistemological, ontological, and political project) as an analytical tool, we discuss emerging themes within these lenses and commonalities across them.

Collaborative autoethnographic researchers are interested in the study of society through "the study of ourselves" (Roy and Uekasa, 2020; Gant *et al*., 2020), allowing for the study of "complex relations between identity, emotions, agency and investment in professional lives" (Yazan *et al*., 2022: 3). By working collaboratively, we were able to explore the nuances of co-creation as a strategy for emergence. This allowed us to create a "polyphonic space" (Apraiz *et al*., 2020) and, in so doing, generates "a richer pool of data from multiple sources" (Chang, 2016: 89). Allowing interviews to happen in pairs and then bringing that data to the collective highlighted the differences in our understanding of learning design practices.

Co-Creation as an Epistemological Invitation

In our conversations and reflections, we discuss how we typically approach course design and contrast this with the approach to *design the Designing with AI* course. In the past, when designing a course, we relied heavily on our expertise and experience in the subject matter. As Daniela says: "[I]f we teach online blended learning, for example, for our PGDip, we draw a lot from our work, research and writing". For the *Designing with A*I course, however, we recognise that we are delving into a rapidly evolving field where we are not experts but still discovering the subject matter.

Daniela describes knowledge as a constantly emerging and shifting field:

> *We are designing a course where [...] the knowledge is also changing all the time and the tools: "[So], we are still really discovering what it is that we are teaching, like the field is changing all the time."*

Knowledge, in this way, is seen as "decentred", "distributed", and "shared", as explicated in the following quotes:

> *[so, we rely on our] shared expertise and knowledge, so not positioning us as experts, but to see expertise and knowledge distributed among everyone.* - Daniela

> *We want to be thinking about how we can include the participants and their knowledge and how they can share their knowledge with each other and how we bring in experts that are not necessarily us.* - Glenda

The selection of materials that are locally relevant and represent diverse views of knowledge from the Global North and South is also important.

> *…what are we using as our content, and how are we teaching the curriculum? Are the examples relevant to the students? What knowledge are we using? Are we using knowledge only from theorists from the Global North? Or are we bringing in local theorists as well?* - Glenda

Daniela makes a similar comment about readings being local and relevant:

> *…becoming more aware of what readings you have offered, trying to put in more local readings, from colleagues of ours, more diverse reading.* - Daniela

As mentioned before, the idea that one can "backward design", assuming that there are fixed learning objectives, is challenged in times of increased uncertainty and disruption (DeRosa, 2022; McCreary, 2022). While institutional accreditation requirements force us to put learning outcomes on paper years before the courses are offered, we kept learning outcomes as open and flexible as possible for this programme. Being held by more tentative

outcomes leaves us with more 'wriggle room', manifesting an awareness and appreciation of things that might emerge, as Daniela explains:

> *we knew we knew the big parameters in some ways, but then we decided for the like the nitty gritty the detail, we would approach other people. So, we approached, people with thought could be positioned as experts in the field, across the different contexts that we identified, which is higher education, schools, NGOs, corporates, and EdTech companies. We approached these people, and we invited them for the interview [to collect] their ideas, their experiences, their thoughts.*

Co-Creation as an Ontological Disruption

Working across roles to design courses - academic staff, professional staff, expert guests, learning designers, graphic designers, and animators - has led to learning design experiences that are different and more complex from our previous experiences of learning design. Coupled with the BOLD programme's commitment to various co-creation strategies and practices, we have found existing learning practices disrupted, bringing under scrutiny, by extension, our understanding of the nature of learning design and the role of a learning designer. This has led us repeatedly to questions such as "What is learning design?" "What does it mean to be a learning designer?" and "What is the dividing line between learning design and teaching"? Is it still possible to unbundle learning design from the learning designer and/or teacher?

All the interviewees' reflections on course design foreground who is involved in learning design processes: in each case, students or “the student” is invoked, although in different ways. Cheng-Wen, for example, in talking about designing an undergraduate course on multimodal argumentation, highlights the centrality of her experience as a student in the course design:

> *So deliberately, I didn't want them to produce an essay… I wanted them to be able to create contemporary argumentation, … an approach to argumentation that would be relevant to their actual practice when they got into it… despite graduating from a Media Studies degree all I knew was how to write an essay, and I thought that was a lack.*

Glenda and Daniela, both more senior academics, point to the role of recent or current students in learning design. Daniela asserts, “Ideally, we co-design courses with our participants.” Glenda describes her approach as: “informing that process is always thoughts about how we can include students how student voice can come out in the process” and later,

> *As a fundamental, and if we are looking at what we're using as our content, and how are we teaching the curriculum, are the examples relevant to the students? Do they make sense to the students? What knowledge are we using? Are we using knowledge only from theorists from the Global North? Or are we bringing in local theorists as well? And then in a kind of representation, and having students participate? I think that's the kind of principle of students finding their voices.*

This emerging focus on bringing learners into the course design process, in both the initial (pre-implementation) stages and subsequently into the enacted form of the course, challenges the established norm, making learning design a more porous and democratic activity. However, the feeling of not being the expert as learning designer and to have to rely on others' expertise can also be unsettling, as Daniela says:

> *It's much less structured, it's much less planned, it's much more fluid and emerging, iterative. It takes much longer the back and forth, it's a lot more uncertainty. We don't know before we do an interview, [...] what we will get and whether it's actually as interesting as we think it will be.*
>
> *…it's scary. [...] we are putting our heads on the line in some ways, because if we don't get interesting stuff from the interviews, and if we don't get interesting stuff from our research, and from our colleagues, then we are left with like, a wishy washy [course design].… [will we have] enough information for people to find it useful? But at the same time, you know, [we need to] model that we [the world] cannot be known anymore in the way we used to know. I think it's important.*

Also, when co-creating with others, with a larger team as usual, boundaries between clearly defined roles and responsibilities, such as course designers, subject matter experts and course developers, become blurred, with

processes happening in parallel through an entangled process involving multiple contributors. There is need for an acceptance that mistakes will be made that require revisiting earlier decisions, as Shanali explains:

> *And I think what's interesting is we have like design and development intermingled here. And then moving from the design process to the development phase. And I think what's interesting is the gaps in each of those, particularly when the people doing design are not the people doing development.*

There is thus an understanding that these learning design processes will be iterative but also might take longer, as Daniela shares:

> *The iterative design and emerging design [means] you're taking it really, really slow and possibly that's important. Trialling and piloting across different contexts and spaces. The research aspect of reflective practice; we're constantly reflecting on what we're doing; [...] writing about the process as you're doing it; [this] might be a bit early and ambitious, but at least we are starting to reflect and document the process. Because it's so new…*

These more sustained, reflective processes allow us to develop a community of learning designers who are passionate about co-creation and who are taking this passion into course facilitation to provide necessary coherence for our students. So, while the course design process is messy and unsettling, we are committed to holding a space for our students where they can feel safe enough to learn, as Shanali explains:

> *So, if it's about content, then no, definitely not [we are not coherent]. But if it's about [being] part of community, you're part of a community of educators on a programme who talk to each other, and work together to ensure that you have a coherent experience. That's really important, because otherwise, it's like, you know, like an undergrad student have to do all the stringing together themselves.*

Co-Creation as an Intentional Political Practice

In our interviews, we reflected on our underlying philosophical beliefs and values and how co-creation in this course aims to achieve social justice with a specific purpose of recognising and affirming other/alternative forms of expertise.

As learning designers, we share a passion for principles of social justice, care, compassion and relationality:

> *I've been using a social justice framework, specifically the work of Nancy Fraser, and looking at the kind of key areas of maldistribution and redistribution, misrecognition and recognition and misrepresentation and representation.* - Glenda

> *…for me, it's more [than social justice but rather] about equity to understand where my learners are and what my learners' needs are, and to create the kind of environment that would allow every learner to thrive and succeed.* - Daniela

> *What else underlying philosophical principles, care compassion? Maybe those are more like values that guide us... relationality and on the idea that learning has to do with relationship building, belonging and community*. - Daniela

> *to make learning meaningful means to relate it to somebody's lived experience... a combination, maybe of critical pedagogy and some more compassionate, caring pedagogies*. - Daniela

We agree that co-creation as a political project for us includes accessibility, relevance, and addressing representation by including student voices.

> *And then what about representation, and having students participate? I think that's the kind of principle of students finding their voices.* - Glenda

Open education resources that are openly licensed were considered an important accessibility solution for students who would like to read materials but cannot afford to enrol in the course:

> *So, in the design of courses, if we have content in the course, is it openly available?* - Glenda

Finally, some of us express the need to intentionally disrupt the power dynamics between Global South/North knowledge systems where the North dominates, with the aim of making knowledge meaningful to students in this course.

> "*how do we decolonise our curriculum, our teaching teachers, what we teach, where we teach, and to kind of rethink everything we do, and not settle for our learnt beliefs and assumptions about teaching and learning*" - Daniela

> *"previous courses, have all been around topics that are established, and have a, let's say, to use the Western term 'canon', or have specific leaders in their field that we know we can get content from…" Glenda*

We recognise that designing in this emerging way, one's professional network and access to diverse knowledge sources becomes extremely important. This points towards potential inequalities, as more established educators and institutions will likely have more extensive networks and resources to draw from. Those without a broad base of colleagues and networks, thus, may be at a significant disadvantage, as Cheng-Wen comments:

> *If I was a junior lecturer with no power, no network, I wouldn't be able to design something like this. I couldn't possibly put it off. You need to have some established network of people whom you can draw on to pull this off.*

Towards Principles for Co-creation in Emergent Learning Designs

In this paper, we reflected on the first course developed for BOLD, *designing with AI*, as a pilot to test co-creation approaches for emergent learning design to respond to the uncertainty of this field, as discussed above. Co-creation from an epistemological point means that knowledge is contingent, contextual and not stabilised yet. The importance of the local and local expertise becomes prominent. Knowledge is distributed, shared and co-created to be meaningful, responsive, relevant and up to date. What is important here is that co-creation here moves past co-creators simply having a 'voice' through consultation and feedback to a direct involvement in design processes (Brown *et al*., 2023). Ontologically, we understand that co-creation repositions learning designers and questions traditional roles and responsibilities of learning designers and other key stakeholders in learning design processes. Design, development and facilitation are far more entangled and iterative, challenging established learning design processes and responsibilities. With the recent neoliberal move to the unbundling of education (Cliff *et al*., 2022), dividing complex learning design processes into small steps done independently by a large design team becomes difficult, if not impossible in an emergent learning design process (Gachago *et al*., 2023).

We also recognise the tension of trying to professionalise a field while understanding that the kind of control professionalisation necessitates is contrary to our need for flexibility and responsiveness. As such, we understand that we are designing on a continuum of emergence, depending on context, content and discipline. From a political perspective, co-creation recognises the importance of including all stakeholders' voices but also of being intentional about which voices to foreground. We recognise the unequal contexts we are embedded in and intentionally foreground voices and knowledges that are usually not heard. We affirm diversity and openness and embrace the messiness of co-creation. Although there is a clear intersection between co-creation as an epistemological, ontological or political project, we all have our own experiences, beliefs, and reasons for coming to co-creation, as we shared in the section above. We see these as complementary perspectives even though, at the moment, they create certain kinds of tensions. What emerged from our interviews is that while we believe in co-creation as an epistemological, ontological and/or political project, being amid such an uncertain process is as liberating and exciting as it is unsettling. Our reflections have led us to the following co-creation principles for an emergent learning design practice, which we will keep experimenting with in further course designs for BOLD:

Affirmation of multiple knowledges: Rather than relying on established expertise residing in particular individuals, the course design leverages distributed expertise across different contexts like higher education, NGOs, corporations, and EdTech companies. Taking advantage of large and established networks, we draw from our colleagues, in and outside the institution, and former students as experts and guest lecturers in our course. Expertise is seen as shared, collaborative and shifting, not fixed in one authoritative source. The participants become co-creators by contributing their contextual problems, experiences, and resources, and they are acknowledged and recognised as partners in this process.

Entangled processes: When designing, developing and facilitating learning with a larger team than usual, boundaries between course design, development and facilitation phases become blurred, happening in parallel through an entangled process involving multiple contributors. This emergent approach can result in gaps in communication and process when designers and developers work in distinct teams. This can also lead to moments of confusion and tension as we iterate and feelings of moving too quickly into course production before solidifying the overall vision and framework. There is need for an acceptance that mistakes will be made that require revisiting earlier decisions (Brown, 2017).

Different tempi: The design process unfolds at different paces - sometimes slow and reflective, allowing for trialling and piloting across different contexts, and sometimes immediate, fast and reactive, requiring last-minute internet searches and content creation. This fluidity and variation in tempo is an important element of the emergent design approach.

Facilitation for relationality and coherence: As content may lack a predefined coherence, it becomes essential that we, as both course designers and facilitators, provide a coherent learning experience and sense of community for participants, providing structured guidance and oversight of the process that individual students may lack. Our design is held in our collective, contingent on the people in the room. Our ongoing conversations and reflections on the process help us build a community of practice with shared beliefs, norms and values around our emergent design, which then becomes part of the product, the short course we facilitate. As such, design, development and facilitation are entangled at a level that traditional course design processes do not necessitate.

Making space for affect: Emergent design must consider affect, the feelings of the course design team and ultimately students in the course. There must be space to engage with both our thinking and feelings. Working in uncertainty can be messy, difficult and scary. Making space for affect is challenging well-established norms and practices that we and our students may take as a normal way of doing things. We see the awareness of affect as a way to recognise learning design as a critical project through acknowledging the affective experiences of doing learning design and experiencing learning designs in more human and holistic ways. This means leaving ample time, for example, check-in and check-outs in every design meeting and offering coaching sessions for additional support.

Considering AI: In the world in which we live, we cannot ignore AI. If we do not proactively and explicitly incorporate AI ethically and critically in all our practices, it will find its way into our classroom through our students. In designing this course, we also actively experiment with integrating AI tools and workflows into our creative process as a way of "walking the talk", modelling ethical use and practice and pushing the boundaries of what is possible and desirable with these emerging technologies. Examples include using AI to create course personas and scenarios, as well as to plan specific course sessions and co-create assignment briefs. Much of what we do is unpacking, making our thoughts visible around AI to enhance AI literacy and reduce the fear and the risk of engaging with AI among our students.

Recognition of power: When co-creating in large teams, we need to be cognisant of the positionality of each of the members of the course design team. Working with people involved in learning design on a programme about learning design has created intersections for co-creation that are not typically present in traditional learning design projects. This process allowed us to engage in conversations about which voices are usually silenced and which are emphasised in a learning design process and intentionally create spaces where voices that are usually marginalised are heard more loudly. It also helps us shine a light on learning design processes that usually limit agency and the capacity to work flexibly. In our case, this means making time to bring everyone on board, both novices and experts and establish common ground.

Emergence requires and creates receptive ground: Emergent ways of working often challenge established sectoral and institutional practices, procedures and policies. While we can find "wriggle room" around institutional limitations in some instances, some of our ideas for this programme need change on a national and institutional level, such as a policy on micro-credentialing. As Brown (2017) reminds us, small changes repeat at large across the system if you have built a network of receptive allies in the institution. Emergent work needs time and relationship building in and outside the learning design project.

One last caveat: Finally, we are very aware that an emergent design based on multiple layers of co-creation may only be possible for us because of the positioning of our institution, our position in the institution, and our own

experience. We can draw on many years of experience teaching similar courses, have strong, established networks within and outside our institution, and have a wide range of experiences and strengths in our team and our networks. Both our personal and institutional voices matter.

Conclusion

In conclusion, we can see that the view of learning design practice has changed substantially over the last decades, moving towards a more embedded, distributed, relational and critical practice (Ashwin, 2022; DeRosa, 2022). While co-creation may remain an aspiration in many contexts as a goal to achieve social justice, we also see the importance of taking steps towards this, pushing institutional boundaries and challenging established processes. We see the promotion of co-creation in course and programme designs as resisting the 'individualistic and performative audit cultures' of neoliberal higher education that usually do not prioritise collaborative practices and approaches, as Brown *et al*. (2024: 304) argue. Instead, we support a more relational view of learning design, even if it takes more time, feels riskier, and might sometimes put us in opposition to institutional cultures and practices.

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