Uncovering People Centred Design in the Context of Curriculum and Learning Design in Higher Education

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Introduction

This Special Issue explores design thinking, also known as human or people centred design (Grau and Rockett, 2022), in the context of curriculum and learning design in higher education. It highlights a number of innovative applications in this area from a range of disciplines, professional areas, and contexts of higher education. While Kimbell and Sloane (2020) argue that design thinking as a practice can be difficult to neatly define as it seems to have multiple interpretations and perspectives, there are some shared principles and part of the attractiveness of design thinking is that these principles and processes are adaptable and useful in the increasingly uncertain area of academic and learning development. This variability of contexts and issues requires design thinking’s malleable methodologies with their emphasis on empathy, inclusion, co-creation, playful experimentation and creativity. These qualities align with Lockwood’s (2010, p. 5) explanation of design thinking as “a human centered innovation process that emphasises observation, collaboration, fast learning, visualization of ideas, rapid concept prototyping and concurrent business analysis.”

In the last few years, design thinking has increasingly interested those exploring new approaches to curriculum and learning design in Higher Education (HE) and has been used to initiate and boost transformative ways to design curricula and learning experiences (Grabill, Gretter and Skogsberg, 2022; Morgan and Jaspersen, 2022). Bene and McNeilly (2020, p. 55) highlight “the potential for design thinking to nurture collaboration among team members and the use of radical collaboration to encourage students to step outside their comfort zones to gain new perspectives warrants further study.” However, whilst the awareness of design thinking in the context of curriculum design and learning design have increased, the use of such approaches in practice may have not been curated widely and the inclusion of students in this process seems to remain largely aspirational (MacNeill and Beetham, 2022).

This special issue presents a variety of design thinking interventions and studies by practitioners working at a range, of institutional levels. These examples elaborate the different perspectives at play in design thinking frameworks highlighting how students as partners and co-designers can contribute in such processes together with other stakeholders. They confirm the need for further research into the benefits and potential challenges and barriers offered by design thinking in the context of curriculum and learning design in higher education. This collection offers academics, learning technologists, academic developers and other professionals who teach or support learning in HE settings inspiration to explore the potential design thinking can offer.
their practice, to transform learning into a radical collaborative endeavour and purposeful experience across a wide range of settings and approaches.

This Special Issue goes deeper into exploring the potential uses of design thinking in the context of curriculum and learning design and highlights some of the implications for practice in the context of HE through showcasing emerging work and research in this area from around the world.

The following provocations were offered as triggers to explore the current status-quo of design thinking and the opportunities for change in HE.

- **HE mostly values thinking.** The culture in HE puts a strong emphasis on conversations and discussions, with an emphasis on thorough thinking with a host moderating the meeting. However, in a design process, we talk about a facilitator that designs conversations, people centred design puts emphasis on doing, visualising those conversations as a means to facilitate the connections, making them tangible and bringing rhythm. The question is: Is it possible to move from a meeting-based culture to a designed, visual and actionable way of working? What does that mean in practical terms?

- **Collaboration or individualism.** Design thinking requires transparency, trust and collaboration. Collaboration and an openness to ideas that differ from our own. It is not possible to apply the process in a context with a strong individual mindset that protects itself and is judgemental. In a context where promotion for example is dependent on the narrative connected to the individual contribution, how can we bring a design approach to HE? Design is a deeply collaborative process and requires open sharing of diverse and often contradicting ideas, a safe and none-judgemental space that will help ideas develop and grow and become something useful for the design team. How can we recognise contributions collectively?

- **Embracing uncertainty and error.** Design thinking requires the openness to play with initiatives that might not work. The university is used to long pilots with associated evaluation models that require strong investment in resources to evaluate. The more invested we are and time dedicated, the more likely the initiatives we define will be safe. Design thinking encourages experimentation, which means designing small prototypes of our initiatives to get quick, more informal feedback to adjust or completely discard our trial. In a context where people might be strongly attached to their own initiatives and with fear of failure, how can we bring a culture of trial and error?

- **Contextual insight and academic insight.** One of the key values of people centred design is that it starts by framing the challenges from a contextual perspective. What do students, academics, employers perceive their opportunities and challenges are in this specific school or programme, in relation to a specific topic or goal? However, from an academic perspective, one could ask: why do we need to learn about their experiences when we already know from the literature what works and doesn’t work? In HE we need to explore the effective integration between the lived experience of
people in a particular context (in a particular school, faculty, programme) with the extensive academic literature on the topic. How can we effectively integrate both worlds?

The papers presented in the special issue, offer a number of insights that are useful to highlight to the reader and are shared below. Some of the insights point to critical reflections in the papers, and others point to directions of future thought or inquiry to be found in the papers.

01 Mindsets: Helping academics and educators to learn how to feel comfortable with uncertainty and be open to making mistakes.

The word uncertainty is mentioned in multiple papers. The ability to feel comfortable with uncertainty and not knowing, are important mindsets needed to embrace a design process. This section highlights some of the papers that discuss those attitudes.

“Designed co-spontaneity: a new model for facilitating pedagogic practice” (Khara and Lickiss) addresses the issue of uncertainty in classrooms, and propose a model to help reflection on the level of control and spontaneity that teachers allow themselves in these situations.

Exploring the unexpected theme of clowns, “Where educators can benefit from the wisdom of clowns” (McCusker) presents the role of the clown as an inspirational figure for academics. The authors highlight how uncomfortable educators can feel with being perceived as uninformed. Lecturers and teachers often encourage students to make mistakes, yet they don’t want to be seen as making any mistakes themselves. The article proposes that most of what design thinking values is second nature for clowns who seem comfortable with making mistakes and thus are proposed as a good character role model for educators.

These papers highlight two important attitudes. One, feeling comfortable with uncertainty. For example, uncertainty during the discovery phase means dedicating quality time to understanding the context and challenges in an empathic way, before jumping to solutions. The second, feeling comfortable with making mistakes, this is also needed at different stages in the design process. Being creative sometimes starts with a ‘spontaneous’ or ‘silly’ idea, also accepting that some initiatives might not work. In that sense, trusting a design thinking journey can be uncomfortable for the mind that need to feel in control.

“Discovery grants for education innovation- supporting the adoption of people-centred design in HE one step at a time” (Dyer and Deacon) reflects on the use of funding grants to apply design methods. It draws on other academic perspectives that point to evidence of a growing number of organizations developing a more creative culture through the adoption of people centred design.

The paper sets out how the use of design methods helped in promoting tolerance for ambiguity, seen as key among the mindsets needed for participants to be able to innovative. This is contrasted, in “Addressing the Barriers to Design-Thinking Driven Problem Solving in Higher Education” (Finnegan-Kessie, Vaugh, White, and Baker)
which considers academics’ fear of feeling processes are out of control, and how this can represent a barrier to embracing people centred design.

Collectively these papers emphasise how in societies with high levels of uncertainty, having educators comfortable with not-knowing all the answers is critical in offering role-models or perhaps real models that allow students to develop that flexibility and openness to learn. Whether educators need to already have a flexible disposition towards wanting to engage in an uncertain design process or whether it is possible that by embarking on a design process, educators can develop abilities to navigate uncertainty better and be more open to its possibilities remains an open question. Further studies could provide more evidence supporting the usefulness of design thinking in promoting mindset shifts.

**02 Scope for further exploration of the role of the design facilitator.**

In our provocations for this journal, we asked whether it is possible to move from a meeting-based culture to a designed, visual and more active way of working. In response, several papers discuss the usefulness of visual and physical artefacts produced during design processes. Among others, three authors highlight the value of visual artefacts in collaborative sessions.

“The Conceptualisation of the E(ducation)-Pizza Game as a Radical Collaborative Thinking and Curriculum and Learning Design Transformation Tool” (Nerantzi, McDonald, Hammersley, and Briggs) presents e-pizza, a game that uses pizza ingredients as metaphors for curriculum elements. The resource can be used by educators, students and community members to co-create initiatives or to identify insights, in a fun, visual and interactive way.

“Beyond the survey: Service design approaches to inclusive programme review” (Newton and Doherty) focuses on the divergent stage of Design Thinking and the gathering of insights to co-create a curriculum between students and programme teams. It provides illustrative examples of co-created personas, journey maps and objects used during collaborative sessions. These examples may help Design Thinkers move away from conversation-only meetings and offer tools that may reduce hierarchies and enhance ideation. Key to their potential impact is how such resources can engage and empower students.

Many papers value Design Thinking’s potential as an enabler of collaboration, through the use of co-creation sessions and visualised maps and artefacts. “Design Thinking and Co-creation in the Business Curriculum” (Klutar and Flecher) advocates for design thinking in just such a manner, arguing it is a useful approach to co-create a shared curriculum amongst different stakeholders (employers, community members, academics..), while acknowledging that multiple perspectives can contain contradictions that Design thinking can help to renegotiate towards a shared vision. Yet, shared processes can face barriers in Higher Education contexts, as observed in “Addressing the Barriers to Design-Thinking Driven Problem Solving in Higher Education” (Finnegan-Kessie, Vaugh, White, and Baker). The authors identify the potential for such difficulties in creating shared visions to lead to a sort of mascarade
or pretence at collaboration, a risk that Design Thinking facilitators might need to be attentive to. This suggests that it could be interesting to further explore the role of the design facilitator in such DT workshops and sessions.

03 The need for a shared understanding of what prototyping and testing means.

In this section, we highlight reflections that different authors make around prototyping and testing, specifically when it comes to designing a new module, or a pedagogical approach. We conclude that there is a need to develop a shared understanding of terms, and a need to further explore how to make changes in an agile way, considering the internal approval processes.

“The ability to make things tangible through prototyping, useful to the user of the product or service, aesthetically appealing, and creatively interesting are values that can get lost when design thinking is adopted by those who don’t come from a specific design training” is one argument in “Discovery grants for education innovation-supporting the adoption of people-centred design in HE one step at a time” (Dyer and Deacon). This paper reinforces the perspective that the designer is a doer, and thinks by doing. This is a key idea that remains important to the values of design and key to Design Thinking. The adoption of Design Thinking in diverse areas other than Design may help explain why prototyping and testing, even if mentioned across many papers, are not described in great levels of detail, especially when a paper focuses on curriculum design as opposed to Design Thinking in student projects.

“Design Thinking to Integrate Academic Literacies into the Curriculum” (Nova, Ritchie) describe how the authors made iterations to the design of a module, by simplifying activities. “Theoretically rich design thinking: blended approaches for educational technology workshops” (Scott) describe how they co-created pedagogical digital tools with students.

The concept of prototyping and testing might be more commonly used in digital-only contexts, and therefore there could be a perceived need to have more examples of prototyping a new module, new assessments, a new programme in hybrid or face to face only contexts.

“Fostering student-centered learning with design thinking in higher education” (E. Heiner, Schnaithmann, Kaiser, and Hagen) point out how traditionally HE has understood prototyping and testing: “we embraced DT’s concept of “bias toward action” through iterative “prototyping”. In the HE context, making changes to teaching and learning is often resource-intensive, both in terms of finances and time. The traditional approaches involve either costly "pilots" or going through complex administrative procedures to modify study structures.” These differences of interpretation could be due to the different biases of disciplinary language.

This suggests that there is potential value in developing a shared and inclusive understanding of prototyping, testing and iteration in HE; particularly considering that changes in curriculum can be more difficult to get approved than changes to the design
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of an artefact. One potential response is offered in “Imagining the Future as Different: A Participatory Evaluation System” (E.Martin), where the author presents a participatory evaluation system for overcoming the challenges of approval by adopting ways to be agile and try out changes through integrating QA into the co-design process.

04 Developing a shared understanding of what it means to integrate the students voice in designing new modules.

The importance of including the student voice in curriculum and learning development has been an increasing feature of Higher Education in recent years.

However, the notion of voice can be understood and treated in different ways to different effects. Voice can be a metaphor for the reflection on experience, the articulation of problems, or a process of fostering a sense of being included.

“Beyond the survey: Service design approaches to inclusive programme review” (Newton and Doherty) highlights that human-centered design approaches offer a rich way to understanding student experience. Design focuses on discovering the tacit and the why. However, this paper questions and challenges the use of surveys and student-staff committees as the main source of eliciting and understanding the learner's experience.

“Design Thinking to Integrate Academic Literacies into the Curriculum” (Nova and Ritchie) mentions that during their interactions with students, they weren’t able to deliver an optimal response to the problems students were identifying. This would suggest that the problem/s they were trying to address were re-defined based not only on what academics and tutors had observed, but also on what students themselves had expressed.

“Fostering student-centered learning with design thinking in higher education” (E. Heiner, Schanaithmann, Kaiser, and Hagen) argue that “...it is beneficial to use these real experiences as starting points, as the inclusion of some student information is better than the standard approach where instructors make most (or all) teaching decisions without much (or any) student involvement. As we collect more information and feedback throughout the iterative DT process, we can further mitigate any bias effects”

This last reflection seems especially useful to help us clarify the benefit of understanding students lived experiences in an authentic way. The majority of papers oriented to use DT to redesign a module or programme mention the involvement or interaction with students to co-create these. However, it is still unclear how much of those interactions and co-creation sessions with students authentically informed decisions around the curriculum or pedagogical approaches used. We return to this point in the reflections below.
05 A focus on the use of Design Thinking to redesign modules or as a pedagogical approach for student projects, but fewer explorations of Design Thinking as a driving force for institutional transformation.

The growing popularity and importance of DT for transforming the learner experience seems to be reflected in many papers but what is often less apparent is the potential for such processes to transform the institutional structures of education. Design thinking can be a practical method and pedagogical approach, a framework or tool box for reworking modules or programmes, and a set of principles that make up a different mindset or disposition towards education. Without this latter contribution, DT risks being limited to a stylistic trend in curriculum development, without realising its full revolutionary and transformational potential.

The papers in this collection broadly fall into three categories.

Category one is where DT is used as a pedagogical approach; for example in “Design Thinking as Pedagogy in Practice” (Hatt, Davidson, and Carrion-Weiss), “Using Design Thinking to Create Sustainable Communities” (Barile and Kelestyn), “Design Thinking in the Executive MBA” (DeClercq and Grette) and “Teaching frugal innovation development to business students” (Albert).

Category two are those papers in which DT is presented as a set of principles or method for the redesign of modules or programmes. The following papers would be the ones that could follow under that category: “Intersecting Programme Design Thinking in Business disciplines in a new Technological University” (Donnelly and Harvey), “Design Thinking to Integrate Academic Literacies into the Curriculum” (Nova and Ritchie), “Fostering student-centered learning with design thinking in higher education” (Heiner, Schnaithmann, Kaiser, and Hagen), Design Thinking in Open and Distance Learning” (Abdo), “Beyond the survey: Service design approaches to inclusive programme review” (Newton and Doherty), “Design Thinking in the Executive MBA” (DeClercq and Grette), “Design Thinking in Education: Adding Collaboration, Uncertainty, Phronesis and Fairy dust to Curriculum Design” (Abegglen, Sinfield, Burns), “Design Thinking and Co-creation in the Business Curriculum” (Kutar and Fletcher), “Theoretically rich design thinking: blended approaches for educational technology workshops” (Scott), “People are People”: Making people centred design central in the co-creation of University learning experiences” (Rofe and Grimaldi).

The last category is where DT is understood as a mindset. In particular these papers present Design Thinking methods and principles, as a driver for institutional and cultural change. Papers that fall under this category would be “Addressing the Barriers to Design-Thinking Driven Problem Solving in Higher Education” (Finnegan-Kessie, Vaugh, White, and Baker), “Discovery grants for education innovation—supporting the adoption of people-centred design in HE one step at a time” (Dyer and Deacon), and “Imagining the Future as Different: A Participatory Evaluation System” (E.Martin). These papers focus on both barriers and the opportunities to bring about change at scale. Others, such as Papers “Where educators can benefit from the wisdom of clowns” (McCusker), “Designed co-spontaneity: a new model for facilitating
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“pedagogic practice” (Khara and Lickiss), focus on one aspect, mindset, principle or angle in relation to institutional and cultural change.

The elaboration of barriers in a number of papers may be of interest to others seeking to set up their own DT projects for institutional change.

It’s worth mentioning that papers in the first category (DT as a pedagogical method, student-led), seem to follow a very structured DT approach to guide the students. They follow the design process (discover – frame – ideate – prototype—test – iterate) in a more thorough and detailed way than papers in the second category; where, projects seem to have followed DT principles to redesign modules or the curriculum, but not necessarily a full structured design cycle.

Another observation is that only papers in the first category mention the use of design sprints to operationalize people centered design. In “Design Thinking as Pedagogy in Practice” (Hatt, Davidson, and Carrion-Weiss), the author/s generate energy in students by asking them to participate in a 3-day intense set of exercises that end up with a set of prototypes. However, that approach doesn’t seem to be used when the project would require academics and other stakeholders to dedicate that amount of time to redesign a module or another initiative.

Another observation is that only papers in the first category mention the use of design sprints to operationalize people centered design. In “Barriers to Design-Thinking Driven Problem Solving in Higher Education” (Finnegan-Kessie, Vaugh, White, and Baker), they mention: Conservatism and associated fear of change, Committee structures, Energy, Collaboration, and Institutional commitment to making change.

“Discovery grants for education innovation- supporting the adoption of people-centred design in HE one step at a time” (Dyer and Deacon) adds further layers to an understanding of barriers, such as: the misfit between existing processes and structures, how resulting ideas and concepts are difficult to implement, the value of DT is difficult to prove, and how DT principles/mindsets clash with existing organisational cultures threatening existing power dynamics, DT skills are hard to acquire, and, communication styles are different among different participants and stakeholders.

This paper suggests that HE institutions could offer grants to apply design thinking tools, as a potential way to affect cultural change. It encourages academics to use those tools, without the need to understanding the bigger picture of what a full design cycle is, thus reducing the barrier of time dedication. The evaluation they conducted indicates that the use of DT tools can trigger mindset shifts (increase empathy, and foster the ability to reframe the problem, cross-disciplinary working, openness to different perspectives and team working). It is encouraging to learn of efforts to evaluate how the use of Design tools can affect an institutional cultural change.

Editors’ reflections
We would like to make the following three reflections:
The first reflection is around the role of the design facilitator outside design projects. We would like to go a bit further and explore how the use of design as an approach that helps clarifying complexity and creating shared visions, can be brought in the day-to-day work of educators and staff meetings. Outside a structured and intentional people centred design project, there are many conversations that happen in HE, internal staff meetings, with academics or with professional services. Those day-to-day meetings where discussions happen in order to make decisions, are normally not designed unless we interpret the agenda as a distinct design feature or approach.

The actual original intent of this issue’s provocation “is it possible to move from a meeting-based culture to a designed, visual and actional way of working?” had the underlying intention to call for papers that reflect on those internal staff meetings, and how we can use a design mindset and design methods to affect them.

The lived experiences of educators in staff meetings, will impact the way they shape their interactions with their students, and ultimately will impact the way they design learning experiences.

We argue that if we want students engaged and stimulated, we need to have engaged and empowered educators, comfortable with more experimental, visual, playful and creative approaches in their day-to-day interactions and activities. The nature of how these daily internal meetings are being hosted and facilitated is important.

In the context of internal staff meetings, outside a design project, the role of the design facilitator largely doesn’t seem to exist. What we currently see is a person that hosts the meeting who might or might not have an understanding of design thinking. The role of the design facilitator outside design projects and in daily meetings is to ease away from discussion (from thinking) to interaction (to doing). From right or wrong (internal conflict and academic confrontation) to somewhere in-between and work towards a shared understanding for shared sense of belonging.

The second reflection is around the use of design tools, this came as one of the papers mentions the use of design tools by educators, as opposed to the application of the entire design cycle, as an effective way to drive institutional cultural change as well as embedding DT practices. As much as we recognise the use of tools as a valid approach to start, that is time efficient, there is a risk to applying design tools without understanding the entire design process. For example, without any discovery phase, there is a risk of applying an ‘ideation tool’ that is ideating on the wrong problem. We are curious to explore how the need to make this process accessible can be reconciled with the need to make it effective.

The use of sprints, as an intense and efficient way to operationalise full design cycles and stages has been mentioned only in the context of student projects, and we would like to gain insights into whether institutions have tried to apply design sprints in curriculum design and module design contexts.
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Last but not least, our third reflection is in relation to co-creating the curriculum with students. We feel there is a risk of wanting to involve students as a ‘tick-box’ exercise, as opposed to understanding students as experts in their lived experience, and valuing this as of equal importance as the pedagogical or subject-expertise. As long as students’ lived experience as learners is considered of a lesser importance than academics’ experience as subject or pedagogical experts, it will remain difficult to develop a productive collaborative culture and partnership working between students and educators.

One of the key challenges of bringing Design Thinking to HE as opposed to other sectors, is that education is humanistic in nature, pedagogical expertise implies that the pedagogical expert already knows what students need. As much as that should in principle be an advantage, it can become a challenge in itself, as knowledge can be a barrier to paying attention to the details of the context and develop understanding with fresh eyes and perspective.

Some of the contributions, offer only a few contextual insights that might help the reader understand why the curriculum, module or initiative was changed in a certain direction, and how that change made sense for the needs of those specific students and school. What seems somewhat unreflected upon by authors is what unexpected or surprising discoveries they made that re-framed their understanding of their design questions or challenges. Without descriptions of something unexpected emerging during the discovery phase, or interesting insight coming to the fore while testing a prototype, readers can only speculate on shifts in direction. This leaves future scope for inquiry where the tested prototypes demonstrate the need to go back to starting discoveries or better understandings the problem and context.

Conclusion

This collection of papers in this special issue responds to growing interest not only in the application of people centred design in HE, but interest in overcoming the cultural barriers or considering the cultural challenges that HE has in harnessing the potential DT represents for curriculum and learning design. The collection here includes articles from emerging and more established educators, practitioners and researchers who collectively have been using design thinking principles, practices and processes across disciplines and professional areas. Many examples presented here also reflect working with students, who are using DT as part of their learning at undergraduate, postgraduate or doctoral level on programmes around the world.

- There are five single authored papers.
- There are six papers focused on business disciplines.
- There are eleven papers from the UK, three from Ireland, two from Germany, one from Sudan, one from Canada and one from USA. Three papers fall under the research type, nine under the reflective type, two are categorised as a viewpoint, and finally four as innovative cases.

This special edition seeks to promote the work of our contributors to a wider audience in the hope of sharing and gaining new insights and deepen understandings of the
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potential of DT to transform curriculum, teaching and learning in the future. Further empirical research in the area of design thinking and its effectiveness in using in higher education contexts would be beneficial and grow the evidence-base.

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References


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Dr John Hammersley is a Lecturer in Design Studies, Curriculum Redefined, Transformative Educator and Programme Leader at the University of Leeds, UK. John’s research is focused on applying dialogue as a framework for practice and understanding within art and design, demonstrating dialogical praxis as the enfolding and performance of knowledge in a manner intended to offset essentialist interpretations of dialogue, art and design. He is a Fellow of the Higher Education Academy, and founding member of The Dialogic Artist-Researcher Network.

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