Addressing the Barriers to Design-Thinking Driven Problem Solving in Higher Education

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Abstract:
The Higher Education structure was believed to be established to protect itself from either internally or externally motivated change. As time has progressed, 'change' has begun to trickle into Higher Education Institutions, with the belief that individuals with characteristics synonymous with *'innovators'* have spurred change in this space. For Design Thinking to become the primary mode for problem-solving in relation to curriculum and learning design, we must first understand current staff members' experiences of making changes within Higher Education, and identify the behaviours, attitudes and structural processes involved in making change. This paper will address the following research questions: *Through understanding the barriers to making change currently experienced by Higher Educations staff*, *what can we do to create an environment where the principles of Design and Design Thinking can be fully embraced by members of the Higher Education community*? This paper presents the findings from a qualitative research project conducted by the authors, where 32 members of staff in a selected Higher Education Institution were interviewed to understand their experiences of making changes to their teaching and working practices. Emphasis is placed on understanding the barriers to making change, namely: the embedded conservatism in Higher Education and associated fear of change; committee structures; energy; the current institutional understanding of 'collaboration,' and; the Institution's commitment to making change. Drawing on the findings of this research, three actionable insights will be presented which will help Design and Design Thinking methods become embraced in terms of further developing teaching, learning, and working practices in Higher Education.

Keywords: Innovation; Problem-solving; Collaboration; Design Thinking

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1. Introduction

Historically, the Higher Education structure was believed to be established to protect itself from either internally or externally motivated change (Berg and Ostergren, 1979:264). As time has progressed, 'change' has begun to trickle into Higher Education Institutions, with the belief that individuals with characteristics synonymous with *'innovators'* have been central to spurring change in this space (Hasanefendic et al., 2017:101). Higher Education Institutions such as Arizona State University and KU Leuven have been consistent leaders in terms of innovative practices and a Design-led approach to problem-solving. However, the sudden arrival of the COVID-19 pandemic spurred innovative approaches to teaching, learning, and working across Higher Education Institutions at a pace that had not been seen before. With campuses largely returning to normal since COVID-19, it has become evident that the same problems that existed pre-pandemic persist, with the addition of new complexities (Camelliri, 2021; Ewing, 2021; Le Blanc, 2020). It has been shown that Design and Design Thinking both have the potential to address the complexities facing Higher Education (Vaugh et al., 2022). However, it is not sufficient to present the Design Thinking framework and expect it to be implemented in isolation from the approaches to change which already exist in these settings. For Design Thinking to become the primary method for problem-solving in relation to curriculum and learning design, it is necessary to first understand current staff members' experiences of making changes within the Higher Education setting. Specifically, this paper will address the following research questions:

1. What barriers to making change do Higher Educations staff currently experience?
2. What can we do to create an environment where the principles of Design and Design Thinking can be fully embraced by members of the Higher Education community?

This paper begins by reviewing the literature from the fields of Design and Design Thinking, focusing on how these approaches create spaces where the sharing of ideas, testing of prototypes, and an iterative approach to problem-solving is encouraged. The review of literature will touch on the role of neoliberalism in shaping the pursuit of a career in academia as an individualistic one, as well as the role of the individual in motivating change within the Higher Education system. Specifically, it will focus on the common belief that making changes within Higher Education is driven by individuals who are not perturbed by the committee structures and the need for approval at various stages of the implementation of a new idea. Additionally, the literature review will address the role of trust and transparency in facilitating collaboration. Next, the paper will present the findings from a qualitative research project conducted by the authors, where 32 members of staff in a selected Higher Education Institution were interviewed to understand their experiences of making changes to their teaching and working practices within that Institution. In this findings section, emphasis will be placed on unpacking the barriers to making changes in the Higher Education environment, including: the embedded conservatism in Higher Education and an associated fear of change; committee structures; energy; the current institutional understanding of 'collaboration,' and; the Institution's commitment to making change. As this paper moves into the discussion section, attention will be paid to how we might begin to shape a Higher Education environment where there is

potential for Design and Design Thinking methods to become embraced in terms of our approaches to change and development of teaching, learning, and working practices.

2. Literature Review

2.1. Defining the Design-Thinking approach

Proposing the implementation of a Design Thinking approach to address the wide range of challenges facing the Higher Education community begins with a consideration of the skills and willingness of the individual. This discussion will begin with a definition of a Designer and the approaches they employ. This definition will help illuminate the mindsets and processes necessary for individuals to adopt a Design Thinking approach to their work:

> *"Designers are trained to analyse problems holistically, searching to understand not only the immediate or obvious problem but the system that created it. Designers approach the solution from the vantage point of the end-user, seeking to optimise for the specific needs and capabilities of that individual or group. Designers strive to 'do more with less,' they maximise economy (of materials, of investment, of energy, etc.) through creativity and ingenuity; this idea is central to design"* (International Council of Design, 2023).

Importantly, embracing a Design approach to solving a problem involves stepping back and engaging with information from numerous sources. This 'stepping back' allows for the development of a rich understanding of the *context* of the problem, the *actors* involved in the problem, and the *impact* of the problem on those affected by it. Embracing this approach is not necessarily something that can be done by one individual alone. Instead, the authors suggest assembling a team of individuals who can help bring a "designerly" (Cross, 2006: 6) approach to addressing problems. Each individual team member should possess elements of the designers' mindset, a willingness to share their experiences, and learn from others.

Designing services and products that "work" (Downe, 2020) depends on following a structured Design process. There are many versions of the Design process, including but not limited to, the Double Diamond (Design Council, 2023), and the ARRIVE approach to design innovation (Devitt et al., 2020). While there are many formal approaches to using Design to address a problem, they are all based on the same foundations. All Design approaches place the development of empathy with the people who face the problem you are trying to address at the centre of generating a real understanding of the problem. This empathy is developed through deep human-centred research. This is followed by a 'Reframe' phase, where the problem is addressed in a constructive and actionable way.

2.2. Design-Thinking and its requirement for collaboration

Design-Thinking is not an individual activity. Successful implementation of a Design-Thinking approach depends on deep collaboration between multidisciplinary teams (Seidel and Fixson, 2013). Much work has been done external to Design-Thinking to shape an understanding of the factors that contribute to successful collaboration in problem-solving. Importantly, 'collaboration' to address a problem is distinctly

different from 'participating' in solving a problem (Linders, 2012). Collaboration is an active process, which depends on the individuals involved developing "multiple competencies including empathy, negotiation, consensus building, problem solving, conflict resolution, and mediation" (Gosselin et al., 2016). From an individual perspective, the ability to engage in multiple levels of communication is vital for successful involvement in a collaborative problem-solving process (Sopensky, 1994; Bene and McNeilly, 2020).

Generally, collaboration is seen as a "positive process" where individuals come together to "achieve a collective goal" (Chiocchio et al., 2011). While the intentions of the collaboration process seem relatively simple, enabling an environment where every individual feels safe to positively contribute and make progress through collaboration is not as straightforward as it might seem. Design-Thinking acknowledges this and intentionally creates a space where people are invited to "feel comfortable in being uncomfortable" (Liedtka et al., 2017), creating a space for people to share their ideas without fear. While Design Thinking does possess immense potential in terms of creating a collaborative environment for multidisciplinary teams to thrive, there is much that can be learned from other processes of collaboration used within the field of Design. For example, two principles of co-design can offer some direction in terms of establishing a collaborative approach to problem-solving:

> "*The first principle [of co-design] upholds that everyone is creative, although many people are not in the habit of using or expressing their creativity; their creativity is likely to be latent. The second principle posits that co-design is a form of collaborative creativity in which multiple actors promote discussion and expand the range of options. This view on creativity contradicts the idea of the lone genius who wrestles with a problem and breaks through various blocks to find a clever solution*" (Mechelen et al., 2019).

Design and Design Thinking also depends considerably on looking to sources of inspiration and knowledge outside the bounds of the conventional 'team members' who may be used to each other's way of thinking (Bene and McNeilly, 2020:50). Going outside the host institution or organisation and inviting specialists from other walks of life to collaborate on a piece of work brings valuable knowledge to the problem-solving table. These specialists might be from organisations that have faced a similar challenge, or from a not-for-profit group that has a more detailed, 'on the ground' knowledge of the challenge from a users' perspective. This approach to knowledge development and understanding is termed 'radical collaboration' (IDEO, 2013; Scott, 2017; Sense to Solve, 2017; Bene and McNeilly, 2020).

Combining Mechelen et al.'s (2019) principles of co-design, with the 'safe-space' approach to facilitation, and the principle of radical collaboration allows us to propose a definition of collaboration for the sake of this paper. Collaboration depends on providing the scaffolding for individuals from many different backgrounds and perspectives to work together to address problems, with creativity, repeated testing, and multidisciplinarity being central to the success of the proposed solutions.

2.3. Individualism in Higher Education, its impact on collaboration and making change

In this discussion of the role of collaboration in motivating positive change in Higher Education, it might seem contrary to this literature review's function to explain the role of individualism in the Higher Education structure. The ever-growing individualistic Higher Education space owes its existence, in part, to neoliberalism. Coming into existence in the 1980s, neoliberalism has impacted on the structure and functioning of Higher Education Institutions internationally (Falcón and Calallero, 2022). The impacts of neoliberalism are most strongly felt in the aims and function of the Higher Education Institution (Falcón and Calallero, 2022), with research and economic development being seen by some Institutions as priorities (Harland, 2019; Tomicic, 2019). The shift in the priorities of Higher Education Institutions has led to a distinct impact on academic staff members of these Institutions; this has been the focus of extensive work by Falcón and Calallero (2022). Additionally, individual scholars have reflected on how the prevalence of a neoliberal approach within the Higher Education space has led to the development of intense competition between colleagues, the pursuit of research individually rather than as part of a group, and the placing of one's own ideologies aside solely in the pursuit of research funding (Pérez and Pasque, 2013: 475). Pérez and Pasque (2013) write poignantly about their commitment to retaining their 'individuality' in the pursuit of a career in the neoliberal academic space. They write about the need to remain steadfast in their ideologies and to continue their collaborative work with organisations and individuals with similar levels of commitment to making positive change for the benefit of society (Pérez and Pasque, 2013: 477).

The value of this strong, individual commitment to a personal goal or ideological perspective is immense in collaborative Design work (Goncalo and Staw, 2006). In a detailed study of individuals with highly innovative characteristics, Goncalo and Staw (2006) found that whilst the traits of individualism and collectivism were at odds with one another, individualistic people were especially creative in collaborative settings. To this end, Goncalo and Staw (2006) explained that individualism within an organisation is essential as it ensures the "creative spark necessary for innovation." Should we move to a collectivist culture, which is believed to "reduce social loafing and increase cooperation" (Wagner, 1995) we risk homogenising the experience of Higher Education and rolling-out general solutions to challenges, rather than carefully crafting these solutions with cultural and geographical nuances in mind.

Individuals responsible for driving high levels of change in the Higher Education system are referred to as "Institutional Entrepreneurs" (Hasanefendic et al., 2017:102). Institutional Entrepreneurs are uniquely responsible for "disrupt[ing the] status quo and innovat[ing] in their institutions although constrained by environmental and institutional factors" (Waldron, Fisher, and Navis, 2015 in Hasanefendic et al., 2017:102). This understanding of the Institutional Entrepreneur contrasts with the belief by some (Meyer et al.2008; O'Meara, Terosky, and Neumann 2008; Hacker and Dreifus, 2010) that true innovation cannot occur within the Higher Education setting due to its institutionalised nature and mindset (Meyer et al., 2008). In contrast to this assumption, Hasanefendic et al. (2017) identified six characteristics which the Institutional Entrepreneur possesses. Along with motivation to "champion change"

(Garud, Hardy and Maguire, 2007) the following characteristics may be seen in individuals committed to making change within Higher Education:

> "motivation to change institutionalized practices, interest in change, experience in the field, multi-embeddedness, authority to act, and the strategic use of social networks" (Hasanefendic et al., 2017, p. 101).

However individualistic an Institutional Entrepreneur is, there comes a point where an idea requires input from others to help it reach its potential. At this point, collaboration is necessary, whether that is through structured facilitation using Design and Design Thinking methods, or through some other form. Whatever collaboration method is used, *trust* is an integral characteristic required between team members. This same *trust* is also required in the Higher Education Institution as a whole, for the successful collaboration and eventual implementation of a new approach to teaching, learning, or working.

2.4. The role of trust and transparency in facilitating collaboration

Most social interactions require some level of trust. Trust is particularly relevant in Design-Thinking, where a group of people from different backgrounds and varying expertise are brought together to try and respond to a problem. Trust in the *actual Design Thinking process* is particularly relevant in this setting, as "no one member possesses the expertise to address all of the design project's challenges" (Chiocchio et al., 2011). For this level of trust to develop, there must be confidence in the professional capabilities of each of the individuals (Ilgen et al., 2005). However, real trust is not something that can be established in a short space of time. Authentic trust can only be established over time, allowing for the four attributes of trust to develop: authenticity, history of fulfilment, the ability to fulfil, and commitment to the relationship (Solomon and Flores, 1998). In addition to trust in individuals involved in collaboration, within the Higher Education Institution there is also a need to develop trust in *its* commitment to implementing real change. However, it has been argued that when innovation and a desire to change are not prioritised by an organisation, authentic trust cannot develop (Hattori and Lapidus, 2007). Some organisations who wish to give the appearance of being committed to change engage in what Hattori and Lapidus (2007) have called "innovation masquerade." In sum, for a new approach to problem-solving to take hold within a Higher Education Institution, its value needs to be understood and invested in throughout the management structure. Only then can authentic trust begin to develop.

Having considered the development of Design Thinking, and the various elements that are necessary for it to be successfully implemented within an organisation, this paper will now turn to understand the current experiences of staff members involved in making change within a Higher Education Institution. Developing this understanding will allow for the barriers to making change within Higher Education to become clear. By identifying these barriers and how they affect individuals, it will be possible to develop informed, human-centred suggestions for the implementation of a Design Thinking approach to making change within the Higher Education Institution. To do this, the results of an in-depth qualitative study with 32 staff members who are actively involved in making changes in a Higher Education Institution will be presented,

focusing on the barriers and challenges they currently face in their efforts to make changes to their teaching, learning, and working practices.

3. Methodology

3.1. Qualitative approach

To develop a deep understanding of individual staff members' experiences of collaborating to make changes within the Higher Education system, this research adopted a qualitative approach. Specifically, semi-structured interviews were chosen as the research method to understand staff's experience of making changes within one specific Higher Education Institution, which will remain anonymous. For the sake of continuity, this Institution will be given the pseudonym of *'Irish University'* (from here, IU). Semi-structured interviewing was chosen as it "permits interviews to be focused while still giving the investigator the autonomy to explore pertinent ideas that may come up in the course of the interview, which can further enhance understanding" (Adeoye-Olatunde and Olenik, 2021). The first step involved obtaining ethical approval for this qualitative research. The two main ethical considerations were:

1. Ensuring the anonymity of the participants.

Because this research was conducted with a specific, potentially identifiable sample, it was important to ensure that the individuals involved would not be identifiable. This involved removing all identifiers, including name, age, gender, the department, or unit they worked for, and subject areas studied, where applicable. A pseudonym was assigned to each participant at random from a list of 32 names traditionally assigned to the male and female genders. This ensured that no assumptions were made by the researchers regarding the gender of the individual. It was deemed important by the researchers to maintain the classification of research participants as either 'academic' or 'professional' staff members. This would allow for comparisons between the experiences of these two groups to be made during the data processing stage.

2. Actionable results from the enquiry process

From an ethical perspective, it was important to inform participants that this research was being conducted from an actionable perspective. This means that the intention of the research was not simply to identify the challenges and barriers facing those making changes within the Institution and present these as a case study. Instead, it was the intention was to identify the barriers and challenges and use them as motivation to develop actionable suggestions for improving the process of change-making within the Institution for all members of the Higher Education community.

Ethical approval for the research was granted by IU's Social Sciences Research Ethics Committee. Following this, the authors used a purposive sampling approach to identify members of the IU community who were involved in innovation and making changes across the Higher Education Institution. This was done by engaging with staff members who had collaborated with the IU Innovation Lab, and those who had been recognised as 'innovative' by IU in terms of being awarded prizes by the Institution. Following contact with these research participants, a snowball sampling approach was used, with these innovative members of the community being asked to refer the researchers to other people in IU who they thought could contribute to the study. Co-authors, AW and SB conducted the interviews individually, completing 16 each. In

total, interviews were conducted with 32 members of staff. 17 males and 15 females were interviewed, with 22 being academic staff and 10 being professional staff. Thirty of the 32 interviews were audio recorded and transcribed verbatim, with the original audio file being deleted after the transcription was completed. Of the two interviewees who did not wish to be audio recorded, handwritten notes of the conversation were taken by the interviewer. Each interviewee was attributed a pseudonym by the interviewer, to allow for easy identification of the data between the researchers. Once the interviews were concluded, AW, SB and TFK then met to discuss the coding approach and the initial themes emerging from the interviews. It was decided that an emergent thematic coding approach would be used to code the transcripts. This emergent coding method allows for the main themes to be derived from the data itself, rather than being pre-defined (Blair, 2015). AW conducted the initial code on 5 transcripts, and one set of handwritten notes, whilst SB conducted the initial code on 5 different transcripts. TFK coded a sample of three transcripts chosen at random. Once this initial coding was complete, AW, SB and TFK met to discuss the themes that arose and to develop a codebook for coding the remaining transcripts. Each code was discussed and justified, with discussion being used to resolve any conflicting codes. Following this, AW and SB coded the remaining transcripts, with a final meeting between AW, SB and TFK to agree on the coding structure and representative data.

4. Findings

Through the extensive qualitative research and analysis conducted, five main barriers have been identified: 1. Conservatism and associated fear of change, 2. Committee structures, 3. Energy, 4. Collaboration, and 5. Institutional commitment to making change. Details of each of these barriers will be presented in turn in the following section through the voices of the interviewees. Following the presentation of these barriers, a short description of each of the barriers will be presented.

Barrier 1: Conservatism and associated fear of change

Resoundingly, the biggest barrier to innovation within the IU community can be defined broadly as a perceived "embedded conservatism:"

> *"The biggest problem with change in universities would be the embedded conservatism and embedded sort of intellectual arrogance, that: 'This is the way we've done it and so will always do it the same way'"* (Joe, Academic Staff Member).

Cited as an "overarching barrier" to change within the Institution, interviewees believed that this conservative approach is coupled with the fear of a new idea "going out of control." One area where interviewees perceived a general discomfort towards change is the Teaching and Learning space. This was explained by Liam, an Academic Staff Member, as follows:

> *"In Ireland they [lecturers] are very much traditional. When I go back to how I was taught, how they were taught before me, that hasn't really changed. You still go into a lecture, you still have someone stand up in front of the class, teaching a hundred students. I don't see the value in that. I don't see the point. So, we're always trying to change it. But as I said, it's like an incremental change. We have to go slowly but surely"* (Liam, Academic Staff Member).

Making progress of any type brings with it risks, increased by fear of the unknown and uncontrollable factors. Interviewees believed that this fear has led to "inertia" within the Higher Education Institution as a whole. Indeed, the idea of traditionalism and a fear of the unknown was cited as not only a challenge in the Teaching and Learning space, but also in cross-disciplinary collaboration with other academics. This was explained by Andrea, a Professional Staff Member, as follows:

> *"I've always found there's a nervousness if I'm running a workshop or something. People enter with a lot of trepidation and they're kind of afraid. Usually, people will begin by saying: 'What are you going to make us do?' There's always that sense because they know we're not going to come in and just get a PowerPoint. They're going to have to do something. I've always found academics are scared of doing and being. A lot of what we do, particularly for working with academics, we would ask them to begin with something that's quite embodied. Where they need to move around the room, where they need to get messy. Where basically there's no pens and no talking and well no lecturing involved. People are very discomforted by that"* (Andrea, Professional Staff Member).

However, some interviewees explained that there are ways to mitigate risk and lessen the fear of making change, by doing this incrementally over time. As Caoimhe, a Professional Staff Member explained, change should be led by clear goals and stakeholder buy-in:

> *"I think everybody has an element of fear and suspicion about change. But I think if you've clear goals, and if you've a clear rationale as to why you want to do something or try something or implement something. It's about open and clear communication and dialogue from the get-go. Knowing who your key stakeholders are and involving them in the process"* (Caoimhe, Professional Staff Member).

The perceived conservative structure of the Higher Education Institution brings with it some challenging concepts for those who oppose this approach to management, specifically, the notion of creating "allies." Some opponents to this style of management "struggle" with the idea of creating allies within the IU community. Others, such as Sarah, an Academic Staff Member, see the process of making allies as integral to making progress within the system. Sarah explained how making improvements for the benefit of the whole Higher Education community drove their desire to build their social network:

> *"Even though we're [IU] really conservative, there's a real drive to work together and be better. People really are supportive, and they want to work together. Even if they don't want to make the change, they still want to make IU better. And they still want to make the system better, even if they're scared or whatever"* (Sarah, Academic Staff Member).

Barrier 2: Committee Structures

Interviewees realised that the function of obtaining buy-in from different committee structures throughout the Institution was to ensure that their new idea lined up with the strategic priorities of the Institution. Whilst staff members acknowledged that this was an important step in the process of making change, engaging with committees is both

challenging and time-consuming. The committee structure was cited as the barrier that consumed the most time, especially when trying to get a new idea off the ground. Firstly, an individual staff member must have buy-in from their Head of Department or Unit before they bring the idea to the wider Higher Education community. Individual departments have relative "autonomy" over the procedures, processes, and new ideas they choose to implement. This is something that is appreciated by staff members, who often see the department as the 'pilot space' for new ideas. Indeed, some staff such as Al, an Academic Staff Member, choose not to make changes outside of their department as they know that this will consume too much time and effort:

> *"I don't have access to the macro [Institutional management] level unless through the meetings. Making changes in the microlayer [department level], it's much easier. It needs more brokerage as you go further up. So, I usually prefer to work within the layer that I can make changes quickly"* (Al, Academic Staff Member).

For new ideas which have the potential to impact the Institution's wider community, it is vital for the staff member responsible to understand the role of committees within the Institution:

> *"If you're trying to do [something that is] university-wide then you're going to have to get committees involved. You're going to have to get various decision layers approving it. All it takes is maybe one layer that gets a bit contrary towards it to kill it or at least frustrate it"* (Rick, Academic Staff Member).

One interviewee explained that an idea they had was required to be approved by four different committees before it could be enacted, placing strain on their time and energy. Additionally, it was noted that this practice of being approved through several committees can mean that the new idea being proposed can be "out of date" by the time it finally makes it to the students and staff.

Committees were viewed as being responsible for providing the most *"honest feedback,"* especially when it came to safety issues. The process of bringing an idea to individual committees for approval is laborious and time-consuming. However, some interviewees found that the input from these committees was beneficial as it helped shape an innovation that responded more broadly to the needs of the general IU community. This was articulated by Tara, a Professional staff member, as follows:

> *"Questions came up with all these different committee meetings that maybe we mightn't have thought of. So, it was great to have all that input"* (Tara, Professional Staff Member).

Barrier 3: Energy

In general, the Higher Education staff spoken to for this research dedicated most of their time to completing the key 'functional' components of their role. Time and energy to engage in additional activities, such as bringing external partners in to collaborate on teaching a module, or changing the means of assessment, were seen as barriers to making progress in these areas. A "very heavy teaching load" was cited by essential staff spoken to, namely tutors, who explained that they carried "three times the load of a lecturer." Even though they were excited to try new things, these staff

members felt that their energy was too depleted after completing the core tasks associated with their role.

The concept of energy was observed throughout this research from a different perspective. Rather than it being viewed as something that people did not have enough of to engage in innovation, staff were concerned that they would be wasting their energy on making changes. They feared that there would be little appreciation for their efforts. This was articulated by Mark, an Academic staff member, as follows:

> *"The energy that it would take to do it. Considering, even if you get it there, there's no clear acknowledgement that you've achieved something good. It's a lot of risk for an uncertain reward and maybe no reward. You can do that a couple of times in your career, but after a while there's no point"* (Rick, Academic Staff Member).

Being able to prove that an innovation was worth the energy invested by staff is important if this change is to be sustained in the long term. One staff member felt it essential to show the *"long term benefits of it [the change being made] … and get that feedback from the students in the process"* as a means for justifying the dedication of time and energy to making changes to their teaching, learning, and working practices.
Engagement with large, collaborative research projects was also deemed to take up a substantial amount of individual energy resources. Upon explaining the level of energy required to work on a collaborative project, Connor, an Academic Staff Member, stated that bringing keen students into the innovation process and matching their energy and dedication to the project can help with motivation:

> *"I think also having the students working on the program and having that kind of responsibility to them really kept me motivated to work. I felt that they were putting in a lot of time and energy from their side as well as doing full-time postgraduate studies and that just kind of kept me a little bit more focused. That it wasn't just yet another thing on my plate, but rather it was the thing these guys are doing a lot of work on, and I want to support them as much as anything. Even interacting with them and bouncing ideas off each other I learned some really interesting things about how students might approach instructional materials that I wouldn't have considered in the past. There was a really nice learning curve on both sides where we bounced ideas off each other and came to an agreement on various things and just keeping everybody on track"* (Connor, Academic Staff Member).

Barrier 4: Collaboration

Collaboration across the Higher Education Institution was seen as essential to "get things done." Collaboration was explained most commonly by interviewees as the process of "getting stakeholder buy-in," rather than the process of actively creating something together from the outset. Getting buy-in from key stakeholders around the Higher Education Institution was explained as a sometimes-arduous process, which involved tweaking an idea to reflect conversations with different members of the community. Once buy-in was obtained from senior members of the community, interviewees explained that this senior staff member could become the "champion" for their idea. Indeed, some staff members start the innovation process by getting these senior members of the Institution involved in the process from the beginning,

explaining this approach as *"bringing them along with us, which is perhaps more effective in the long run."* This approach was explained by another interviewee as follows:

> *"I try my best to work with people so that when you're trying to bring something in, you're bringing them with you. Rather than going to them and saying, 'This is what I'm doing'"* (Alice, Professional Staff Member).

Staff explained that the key to obtaining buy-in from other departments when trying to implement new ideas, especially new modules, is timely and open communication. Open communication leads to less resistance between departments in the long run, and also the opportunity for students to learn from staff outside of their own discipline. Additionally, respecting and understanding the opinions and motivations of other members of the Higher Education community is an important step in attaining buy-in, and for developing networks for future collaborations, as explained by Caoimhe, a Professional Staff Member:

> *"It's [getting buy-in from individuals] about finding out people's motivations and respecting them. Just like I have my motivations"* (Caoimhe, Professional Staff Member).

The process of *"lobbying"* staff within the Institution to attain their support of a new idea was explained by several interviewees. Lobbying is seen to exist on different levels within the Institution. Firstly, when attempting to gain initial momentum for a new, cross-departmental initiative, one interviewee explained that lobbying fellow departments who would directly benefit from the initiative is an important first step in the process:

> *"I personally would have lobbied a few different departments who would be warm to having a facility like that. So, you can start to scale the kind of benefit to other areas"* (Rick, Academic Staff Member).

One challenge in this process of lobbying individual departments can be the lack of internal networks of the staff member trying to implement a new way of working or learning. This barrier to innovation has been amplified by the shift to working from home because of the COVID-19 pandemic:

> *"Hopefully this [new idea] will be followed up by people at higher levels but usually it takes time. So, it's not it's not going to be easy. I'm new here and for the most part I've been working at home because of the pandemic. So, I still do not fully know the power structures in the organisation. I think that in a few years when I better understand the structure it will be easier for me to lobby for things like that"* (Al, Academic Staff Member).

As one interviewee explained, a lobbying campaign starts with the individual or group who are looking to make change collecting as much data as possible and *"creating an evidence base"* relating to the need for change in a particular area. Accessing student and staff data is often difficult as the information and technology systems within the Institution are not *"joined up."* Therefore, much manual effort is assigned to sorting and comparing this data. For professional departments, building this evidence base relies on making connections with academic departments to access those who specialise in research which can support their cause:

> *"We really focus on creating an evidence base. We work an awful lot with academics who specialise in the areas that we work in to make sure that we've proved it [the new idea]. Cleared it [the new idea] from any kind of obvious critique at a high level"* (Alex, Professional Staff Member).

However, even when the right protocol is followed, lobbying is successful and there is sufficient evidence base, Institutional commitment to the idea can fall apart at the last hurdle. This was explained in detail by one interviewee, highlighting the sometimes-volatile nature of the process for implementing change within Higher Education:

> *"We raised it [the idea] up with the campus planning. It was raised with the Dean. We were just constantly making the case and showing them the best examples from outside our culture. That this is the norm. We did some field trips with some of the people as well to other colleges. That was something I was directly involved with that took several years. At one point we were nearly over the line with [it] and then that got pulled last minute. That's probably closer to something that was more of a high-level lobby and that success can come down to a couple of key individuals"* (Rick, Academic Staff Member).

Barrier 5: Institutional commitment to innovative approaches to making change
While interviewees are interested in making changes, they feel that the Institution is not committed to encouraging change-makers, or embracing the change that results if people develop new ideas. One interviewee explained that while they were trying to implement change as best they could in the current environment, the consistent barriers they faced led to a realisation that the Institution was not committed to supporting their new idea:

> *"The minute I was in, I realised, 'Oh, the problem isn't this [the new approach they were suggesting]. The problem is that the University doesn't want this to happen. And actually, the Department doesn't want it to happen"* (Sarah, Academic Staff Member).

Interviewees involved in this research called for the Higher Education Institution to make a more authentic commitment to change, by supporting new ways of teaching, learning, and working. One interviewee was critical of the juxtaposition between the Institution's written commitment to change and a progressive approach, and their lived experience of trying to implement change within the system: "*You'd like to see not just the word 'commitment,' but actual institutional commitment to the actions*" (Lisa, Professional Staff Member). This lived experience is leading some staff members to believe that they are unable to make a meaningful impact on the Higher Education system, no matter how useful or potentially impactful their idea is. Some staff members believe that they are "*too far down the food chain to affect change at a macro level*," leading to their interest in their job decreasing.

Interviewees provided suggestions for ways that the Higher Education Institution could demonstrate a commitment to change and create an environment where individuals feel comfortable and confident developing and testing new ideas. It was agreed that a "culture" of change must come from "the top" if it is to be enacted at all layers of the Institution's community. Additionally, providing open access to student and staff trends would be valuable to a community who are intent on making change for the

betterment of the student and staff experience. One interviewee explained that their ideas would have little impact unless those at the macro layer of the Higher Education Institution were dedicated to supporting staff-driven change:

> *"How would I [lecturer] help the University be a different type of organisation? Well, I can't do that. Only the President can start that. If any President isn't on board, then you can't do it"* (Joe, Academic Staff Member).

5. Discussion

This discussion section is based on Klein et al.'s (2006) premise of *sensemaking,* and will function as a "motivated, continuous effort to understand connections... in order to anticipate their trajectories and act effectively" (2006:71). The beginning of this section will unpack the main barriers to making change experienced by the interviewees. Having discussed these barriers, the challenges they pose for the adoption of Design Thinking as a means for making change within Higher Education will be framed as *insights*. Within Design Thinking, insights are the crux upon which new ideas and solutions to current challenges hinge. From these insights, a series of 'How Might We' questions will be presented to prompt ways forward in terms of adopting a Design Thinking approach to working, learning and curriculum change in Higher Education. The process of insight development, their corresponding needs and 'How Might We' questions is guided by the work of Stickdorn et al. (2018:109). Ultimately, this discussion section will show that there is a need for more humanity-centred (Norman, 2023) approaches to learning and working together, with Design Thinking being the conduit for delivering that humanness.

Cited as the "overarching barrier" to making change in Higher Education, the embedded conservatism of the Higher Education Institution is associated with traditionalism and a fear of new ways of working and learning. From the staff spoken to for this research, it is evident that new approaches to teaching and learning are challenging, with those who are attempting to implement change being met with scepticism. However, some staff members have found ways to navigate the conservative attitude towards change, namely by creating very clear goals and forging alliances with colleagues. The value of a collective desire and responsibility to improve Higher Education shaped by the neoliberal environment is something which can be used to scaffold positive change. The conservative attitude of the Institution has paved the way for systems to be put in place that protect it from change, with some interviewees seeing the committee structure for the approval of a new idea as the epitome of the conservative attitude towards change. Whilst some viewed the committee structure as a positive experience, allowing for additional feedback on a new idea, others saw the committee structure as a confusing maze. For new staff, this structure was especially deterring when attempting to make change, as their networks were not strong to navigate it. Even those who were familiar with the committee structure explained that sometimes, even when the correct steps are followed, and the new idea is approved by each committee, it can be turned down at the last minute. Such experiences with making change are frustrating for the individual, as they see this as a waste of their limited time.

The current understanding of 'collaboration' in the Higher Education space is the most challenging barrier facing the implementation of new approach to making change, such

as Design Thinking. Instead of collaboration occurring from the conception of a new idea right through to its implementation, a stakeholder 'buy-in' approach to collaboration currently taken in Higher Education. There may be many reasons for this, one being the individualistic nature of the academic career (Jandrič, 2022). Whilst academics work collaboratively to write articles, funding bids and conduct research, Jandrič (2022) reflects on the ultimate isolation of academics outside their circle of close colleagues and collaborators:

> "*This group [the people whose work we read, but do not know personally] is the academic fighting cage of Google Scholar citations and other (usually numerical) symbols of success—a cage that resembles a curious combination of* Full Monty *and* Fight Club*. Academic work is one of paradox and contradiction. We work with people, yet we spend most of our working hours on our own. We all smile into each other's faces, yet these smiles often mask ruthless competition*" (Jandrič, 2022).

With career promotion of academic and professional staff members being made based on individuals' performances including their individual impact in the field (Schimanski and Alperin, 2018), the requirement or desire to collaborate may not be a priority for individuals. These factors lead to solutions to problems being designed in isolation, with the consultation of a few specialists, and then brought to committees to get their approval. Buy-in from these stakeholders seems to depend on the person with the new idea adapting it to suit the committee members requests. This might be perceived as what was termed earlier, a 'masquerade' approach to collaboration. Indeed, this attitude towards collaboration will be the fundamental challenge that will need to be addressed if a Design Thinking approach to problem-solving is to be successful across Higher Education. Redefining the concept of 'collaboration' across the "macro, meso and micro layers" of the Higher Education community (Vaugh et al., 2022) will be required, where every individual is an active participant in the development of new ideas. This new definition of collaboration can only be developed once there is trust in the Institutions' commitment to change. Adopting an Institution-wide approach to change, along with a transparent system to support staff-led change, could help develop trust in the Institutions' commitment to change.

With this review of the barriers presented, it is necessary that this paper embrace the actionable perspective from which the research that has informed it was collected. It is important that these barriers to change in Higher Education are not simply presented as a case study but are processed using a 'Designerly' approach to provide actionable starting points for adopting Design Thinking as a means for problem solving. These 'actionable starting points' are provided by this paper in the form of 'Insights.' Each Insight is accompanied by 'Stakeholder Needs,' which focus on what the Higher Education change-maker *and* Higher Education management need for barriers to change-making to be lessened. Drawing on the insight developed, and the needs of the stakeholders, three 'How Might We' questions have been developed by the authors. It is envisioned that addressing each of these questions would lead to the creation of a Higher Education environment with conditions that would allow for Design Thinking to flourish. The insights and corresponding actionable 'How Might We' questions can be found in Figure 1.

Figure 1: Insights and Corresponding 'How Might We' questions which could assist with the adoption of a Design Thinking approach to problem solving in Higher Education.

6. Limitations

It is recognised that the participant sample chosen for this research may limit the applicability of this work. Focusing on those who had received recognition for making changes in IU, either by IU itself or their Head of Department, led to the exclusion of people who may have been engaged in making change 'under the radar.' Additionally, the decision to limit this research to staff from one Higher Education Institution may mean that there are other barriers and challenges in other Higher Education Institutions that are not covered here. However, the discussion section provides a useful starting point for generating conversations around the barriers for making changes in Higher Education, maintaining that a Design approach to collaboration is essential if Design Thinking is to be successfully adopted and implemented.

7. Conclusion

This work has focused on multiple elements which are essential in shaping a constructive environment where a Design Thinking approach to problem-solving can be developed. Firstly, through the literature review it was identified that even though neoliberalism has led to an individualistic view of a career in academia, remaining committed to an individual's goals and ideologies in the face of this can lead to the development of individuals who are in the perfect position to positively contribute to radical collaboration through Design Thinking. In attempting to instil a collaborative Design Thinking approach to problem solving it is vital not to stifle the experience and knowledge of the individual. In addition to this, attention was paid to the barriers and challenges that currently exist for individuals attempting to make changes within the Higher Education environment. The barriers of embedded conservatism, fear, a lack or waste of energy, the committee structure in the Institution, and the attitude towards making change, were presented in detail. The identification of these barriers, namely the current approach to collaboration in the construction of new ideas provides an important base upon which to create a cross-Institutional approach to making change in Higher Education. Direction for Higher Education Institutions interested in creating an environment where Design Thinking can thrive was also presented, using actionable 'How Might We' questions to help Higher Education change-makers understand how to lessen the barriers to change that exist in these Institutions.

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