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Reaffirming Learning – a micro examination of teaching interventions and their connectedness

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Abstract: This case study provides a perspective on engaging postgraduate design students in activities exploring eco-social responsibility in relation to their creative practice. It zooms into the roles and learning impacts of a collaborative online space and series of online discussion sessions, which are situated within wider research trialling a system of teaching interventions that positively disrupt the curriculum, as a mechanism for awakening learning around responsible design. It offers insights and reflection on the teaching and learning system, mapping the interconnectivity of its components whilst synthesising discoveries regarding the roles they play in building connections, reaffirming learning and navigating uncertainty.

Keywords: *design education; responsible design practice; eco-social impact, systems; teaching interventions*

Introduction

This case study captures a micro perspective of two teaching components within a piloted teaching and learning (T&L) system, exploring how they intertwine and have a systemic impact. It unpacks and reflects upon our experiences of engaging postgraduate students in responsible design via a collaborative online space and three online discussion sessions with external contributors. These activities sit within a wider action research project, entitled Disrupting Design Attitudes (DDA), that investigates a system of T&L interventions woven throughout the student experience, to cultivate eco-social awareness and design behaviours.

Our pedagogical research focuses on developing and trialling a sustained, adaptive approach to teaching *responsible design* i.e. "… informed by systemic thinking, but also ethical, aesthetic, social, cultural, economic and, of course, ecological considerations" (Wahl, 2016, p.124). This is motivated by our aims to develop a T&L delivery model that: enriches the student experience, motivates sustainable practices, nurtures responsible design attitudes, showcases purpose-driven curriculum design, and inspires design education strategies.

The DDA T&L project utilises and examines typical teaching approaches (drawing on definitions by Orr et al, 2018), to explore their potential to prompt change. Investigating if well-known methods, when strategically integrated, with imaginative and unexpected content, can become positively 'disruptive', shifting students towards becoming "…responsible, socially aware and ecologically attuned design graduates…" (Boehnert, Sinclair & Dewberry, 2022 p.2). These interactions are woven into the course curriculum, allowing us to consider the effectiveness of the system in

driving change from within. We also reason, that by utilising familiar T&L activities, our research has viable potential for practical implementation within the HE landscape.

Our research is situated within the multidisciplinary T&L environment of the MA Design for Art Direction 2021/22 course at London College of Communication (LCC), University of the Arts London (UAL). Allowing collaboration with a diverse student cohort and teaching team, involved in various creative / design practices. All 54 students engaged in the DDA program, with 23 consenting to participate in the research study.

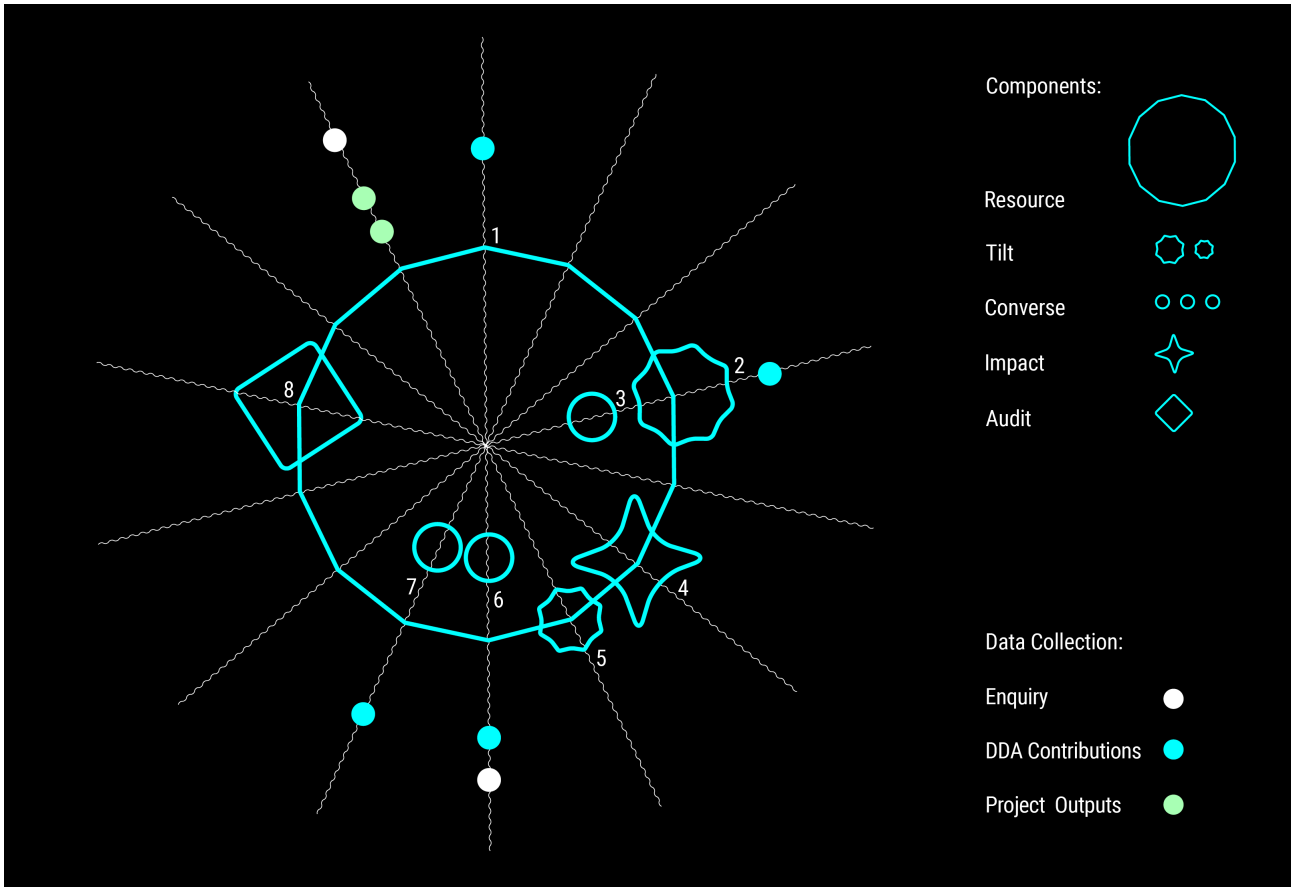

Figure 1. Disrupting Design Attitudes T&L System
(in chronological and clockwise sequence), November 2021 – December 2022.

The DDA delivery consisted of eight sequential curriculum interventions (see Figure 1); however, in this case study, we have chosen to focus on the role of the collaborative online space (*Resource*) [1] and three online presentation/discussion sessions (*Converse*) [3,6,7]; via data gathered at key points (see Table 1). Unlike prior analysis into other aspects of the DDA experience (Sadowska & Hanrahan, 2023), these activities were *the least* referenced in student feedback, sparking our curiosity about the role these *quieter* components may have played.

Table 1. Data gathered from students that informs this case study.

	November 2021	February 2022	June 2022	July 2022	December 2022
ENQUIRY Where we enquired about the DDA experience.			In-person discussion sessions with 7 participants		In-person discussion sessions with 6 participants
			11 responses to questionnaires, completed either in-person or online		6 responses to in-person questionnaires
DDA CONTRIBUTIONS Where students contributed to DDA activities.	22 example project contributions to the *Resource* online space				
		Discussion notes captured during online *Converse* session	Discussion notes captured during online *Converse* session	Discussion notes captured during online *Converse* session	
PROJECT OUTPUTS Where students shared their final projects.					11 degree show exhibits/digital showcases: visual output and project synopsis
					6 Final Major Project submissions: visual portfolio and 5,000-word thesis

Whilst we recognise that both T&L interventions discussed in this case study take place online, this format is a contextual element, not an influencing variable and sits outside of the scope of this case study. The hybrid nature of the DDA program stems from the 2021-22 timing (closely following the COVID pandemic), where this was a well-utilised format, familiar to students and staff. We acknowledge that such a learning environment may have impacted how students engaged, however we did not capture evidence that it impacted learning.

The theoretical framing for this research is rooted in the concept of Vygotsky's 'zone of proximal development' (in Chaklin, 2003), where students require some form of optimal teaching intervention to learn. It draws on Freire's (2017) theorising that learning is a political act of resistance and transformation, and Constanza-Chock (2020) call to action towards design justice, both within real-world practice and education. This was done through investigating a T&L environment where students can bring their whole selves to activities and ideas which intervene, challenge and inspire their design choices; and via an action research methodology enabling our insights on the DDA interventions to emerge from students' interactions with their learning (Egmose, 2019). Finally, we have drawn on the Glossary of Terms within UAL's Climate Action Plan, to assist in defining terminologies (UAL, 2022, p.42-44).

We acknowledge that this case study comes with limitations arising from its framing, context and data capture:

- Some insights from the wider project have been excluded due to our focus on only two DDA components.
- The role of concurrent course teaching in either compounding or countering DDA's impact cannot be defined.
- By supporting fluid integration with course curriculum (and respecting permissions) visually recording classroom outputs was not undertaken.

The System

Disrupting Design Attitudes

The DDA T&L System was constructed to *positively disrupt*, (but not derail) students from their course objectives i.e. "we intend for them to create experiences where participation in learning and/or epistemologies are challenged by the unexpected or unfamiliar" (Sadowska & Hanrahan, 2023). T&L used specifically well-established activities delivered in classroom/studio and online, to ensure that the disruption was not provided by new methodologies, but through activities that questioned and reorientated. The types of disruption within the DDA activities utilised: reimagining scenarios and fictions; interrogating and sense-making; embracing challenges and change. Importantly, not all components within the system were overtly disruptive – the mix of interventions was curated to both support

and challenge participants' understanding and subsequent learning. In this case study we present how the mix worked in practice, with an explicit focus on the *Resource* and *Converse* components.

The DDA components and their sequence of delivery are depicted in Figure 1, and are:

Resource: A collaborative online space exploring and collating examples of eco-social creativity and signposting current discourse and events. [1]
Tilt: Two workshops that deploy sensorial approaches to enquiry and reimagining (one in the studio and one online). [2, 5]
Converse: Three online discussion sessions with external practitioners and alumni presenting diverse perspectives on responsible design. [3, 6, 7]
Impact: A studio workshop interrogating systems and embracing disruption. [4]
Audit: A studio workshop to review, reflect on, and improve design choices. [8]

These five components were applied across eight interventions dispersed over 14 months of the course delivery; they were crafted to be cumulative and to build upon students' prior experiences.

The *Resource* Space

This was a dynamic and collaborative online space (Miro board, see Figure 2) exploring and collating examples of eco-social creativity and signposting current discourse and events, that remained live for the entirety of the course. It housed contemporary references and supporting material for other components within the system (in the form of text, imagery, video and hyperlinks). It was also used to introduce DDA to the cohort and staff through presentations and activities, explaining the Design School Responsible Design Framework (Hanrahan & Temple, 2017) and initiating self-reflection and peer knowledge sharing.

Students were invited to co-create content within the space, and at the start of the program added examples of responsible creativity (i.e. design, art and creative direction). Their contributions spanned Art, Fashion/Textiles, Interiors/Architecture (including related products), Digital, Film, Cosmetics, and Third Sector projects. These choices and their interconnectivity are explored in more depth in the *Connecting with Creative Outputs* section of this case study.

The space also shared local (LCC / UAL) and externally available resources (including links to publications, blogs and organisations) and was updated with events, conferences, exhibitions, awards and competitions – to support students in expanding their learning asynchronously. Importantly, the *Resource* enabled students to add their own references, to reflect on the *Converse* speakers and associated case studies, and to access *Audit* tools and methods. Thus, the *Resource* space acted as a hub at the core of the DDA experience.

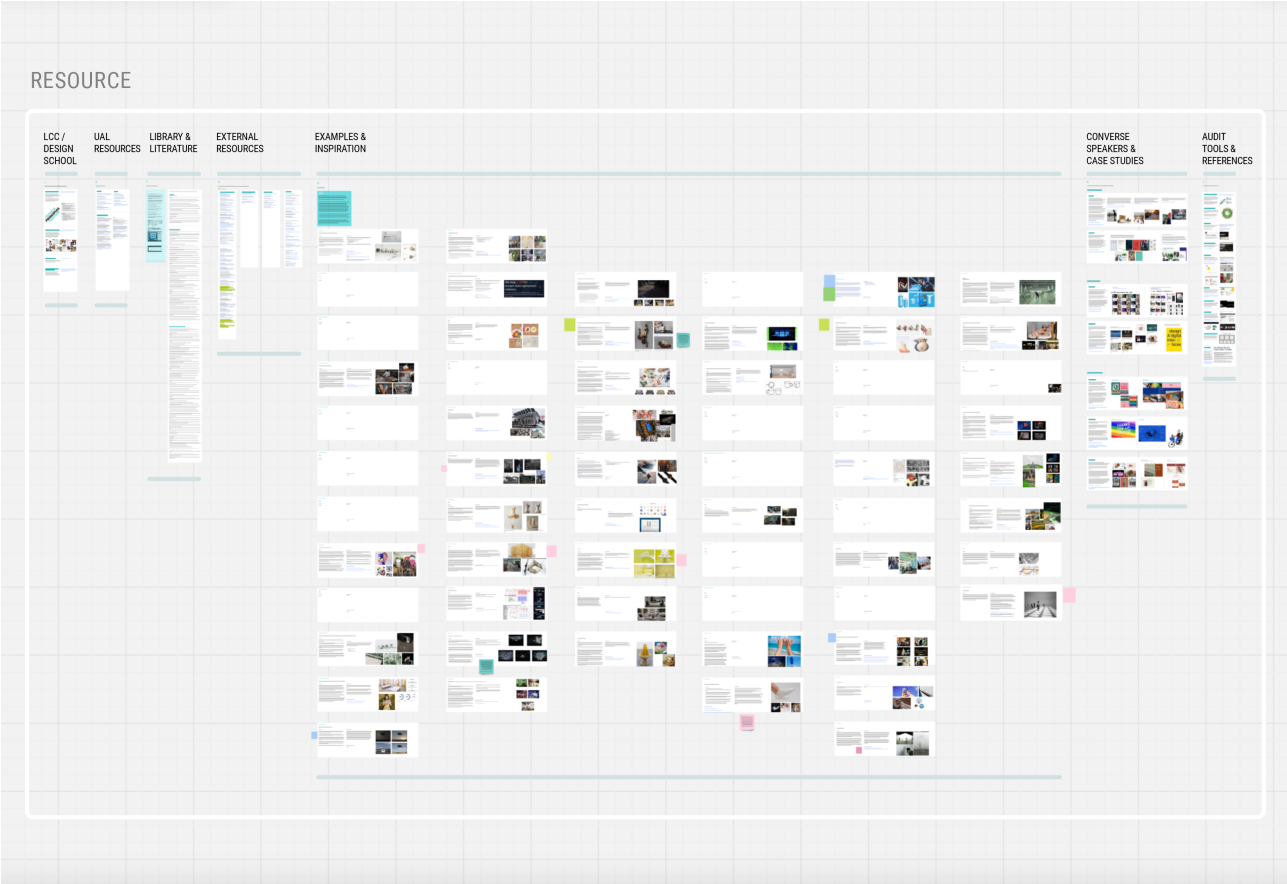

Figure 2. Resource space (Miro board) screenshot, co-created between November 2021 and December 2022.

The *Converse* Sessions

This aspect of the DDA system took the form of three discussion sessions hosted online, featuring design practitioners and alumni presenting diverse perspectives and inviting debate on responsible design, art and creative direction (numbering relates to Figure 1):

[3] Creative Collaboration – Speaker 01: Empathy, social engagement and participation, Speaker 02: Design and nature: new ways of knowing for sustainability.
[6] Systems & Futures – Speaker 01: Complexity at the edge of human and non-human systems, Speaker 02: The intersection of ecological, political and technical systems.
[7] Empowerment & Action – Three LCC MA Design for Social Innovation & Sustainable Futures alumni sharing their professional practice and personal reflections.

The format of these 2-hour sessions was:

- Scene-setting and overarching topic introduction.
- Introduction to Speaker, Speaker 01 presentation, Speaker 01 Q&A (facilitated by Researchers with vocal discussion and chat responses captured/shared in real-time).
- Repeat with Speaker 02 (or 03).
- Collective discussion, adding themes, questions and connections to captured notes (see Figure 3 example).
- Sign-posting references, upcoming areas of interest (within the *Resource* space) and next DDA session.

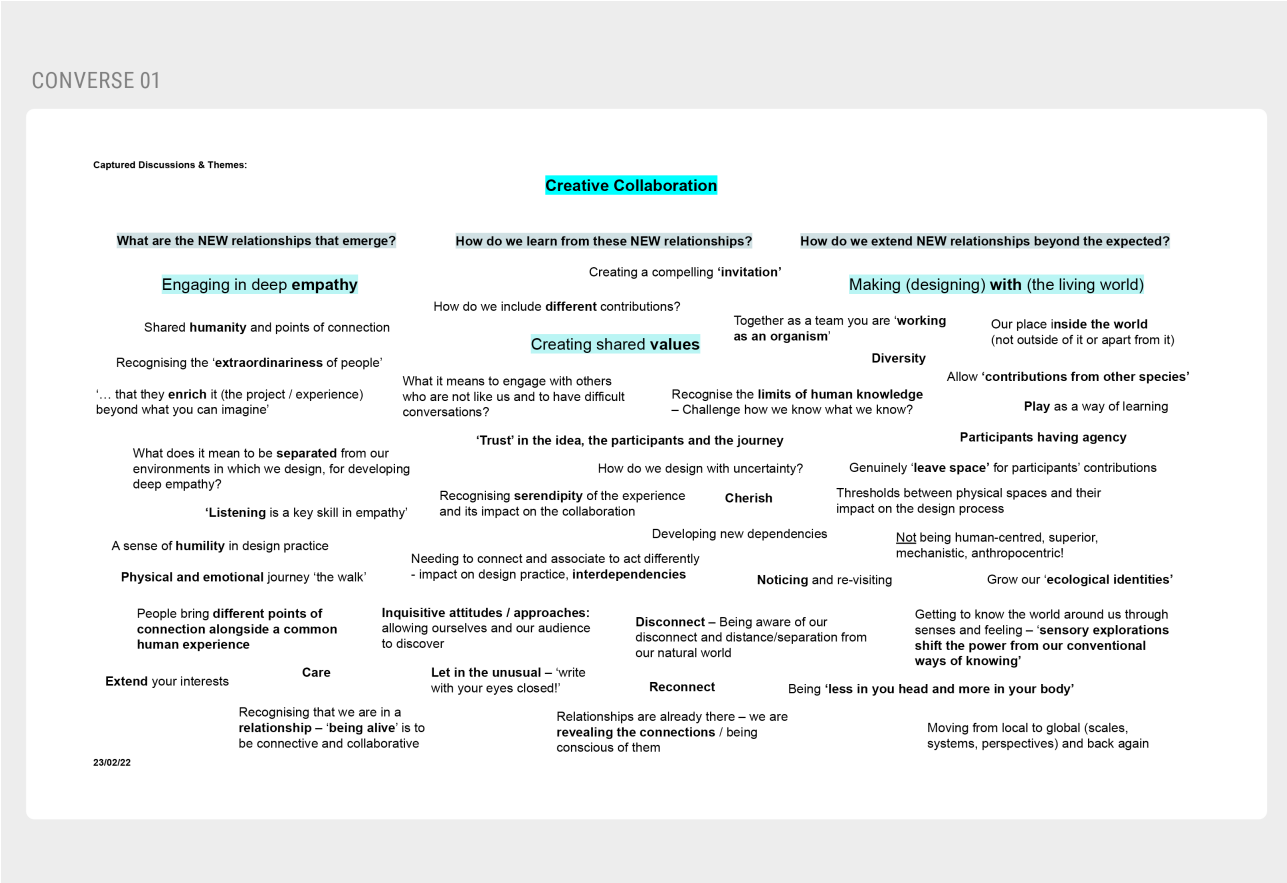

Figure 3. Screenshot of discussion notes, topics and narratives captured in real-time during Converse 01 session.

On reviewing the discussion notes from all three *Converse* sessions, we captured these arising narratives: Engaging in Deep Empathy, Creating Shared Values, Making (Designing) with the Living World, Experimental Futures, Systems, More-Than-Human, Biodesign, Design and Creativity in Action, Engaging with Others Through Creativity, Personal and Professional Development. These subjects offer a useful summary of some of the critical, contextual and transdisciplinary knowledges being explored.

The following sections focus on mapping the DDA T&L System and the role *Resource* and *Converse* play in shaping these connections.

Interconnections within the system

Linking the learning experience

We commenced our analysis by plotting the *Resource* and *Converse* junctions and threads. Whilst these two components were not applied to specific student projects, Figure 4 depicts how they are connected across the DDA T&L System through content, topics, theories and student engagement. Within this mapping, we can observe the significance of the *Resource* space as a continuum; a place to collect (it houses supporting material) and connect (all components link to it regularly).

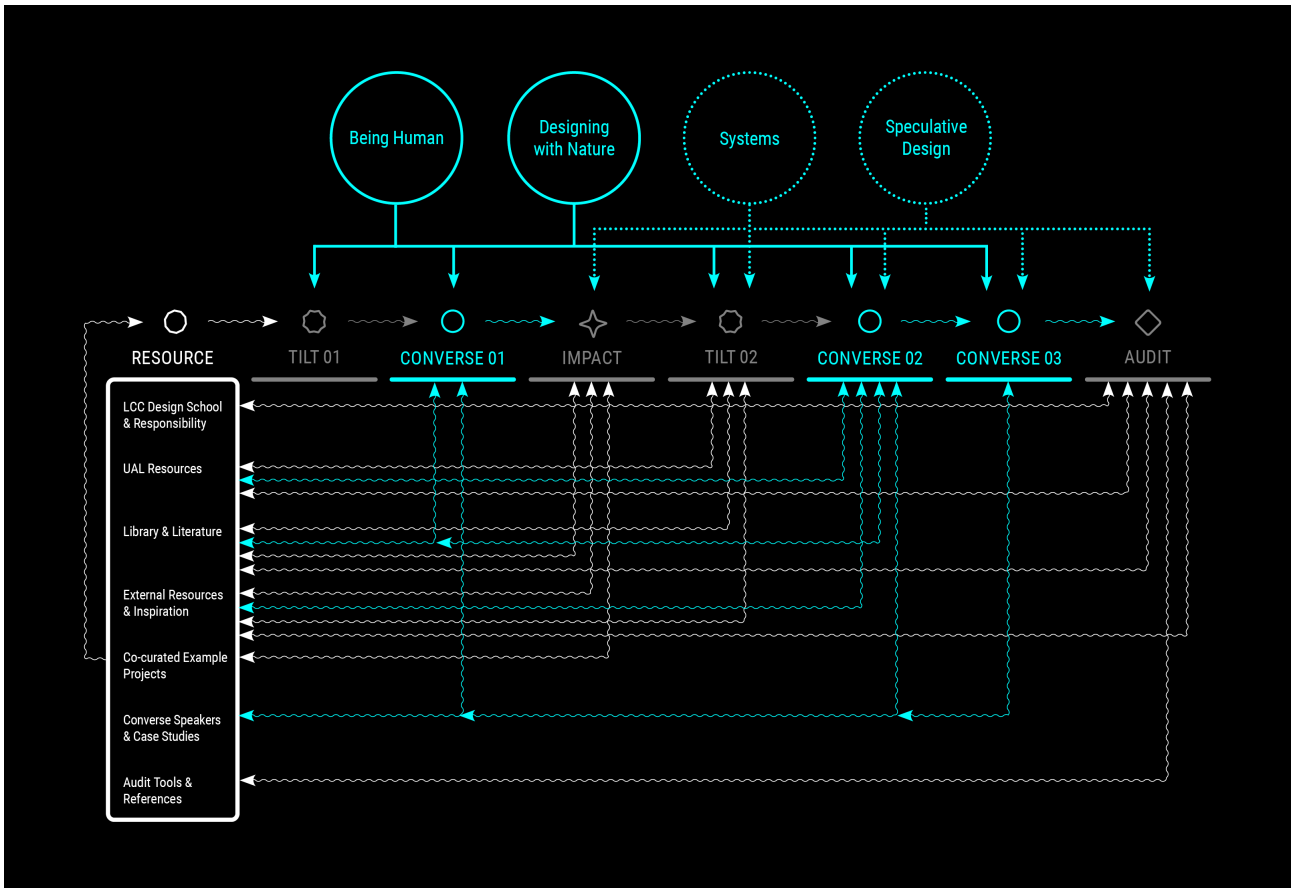

Figure 4. Mapping of components, content, engagement and themes across the DDA system.

This figure also highlights the four overarching themes that thread the DDA System together. *Converse* speakers and subjects were curated to align and affirm topics and approaches occurring within other aspects of the T&L experience and were overtly supported by content within the *Resource* space. More than simply demonstrating the intertwined nature of the two components, we note that our holistic approach to linking concepts across the DDA T&L System resulted in the following recurring ideas: Being Human, Designing with Nature, Systems, and Speculative Design.

To better understand the roles the *Resource* and *Converse* components played in the learning environment, we coded and examined data from student questionnaires and group discussion sessions. Two top-level categories demonstrating how students referred to them emerged: 1) specifically highlighting content as being *useful* to their projects or processes (e.g. "… I personally had been struggling a lot when... making projects about [sustainability]... I'm using the resources…", June 2022); 2) expressing how the act of *participating* was significant in their learning journey (e.g. "…I know that those were really helpful... I can't pinpoint exact moments... things have just developed... and it's been part of the process", June 2022). References to *Use* and *Participation* within the DDA experience map comparably across both components (see Figure 5); however, students seem to perceive the *Resource* space more as useful, and *Converse* sessions as more participatory.

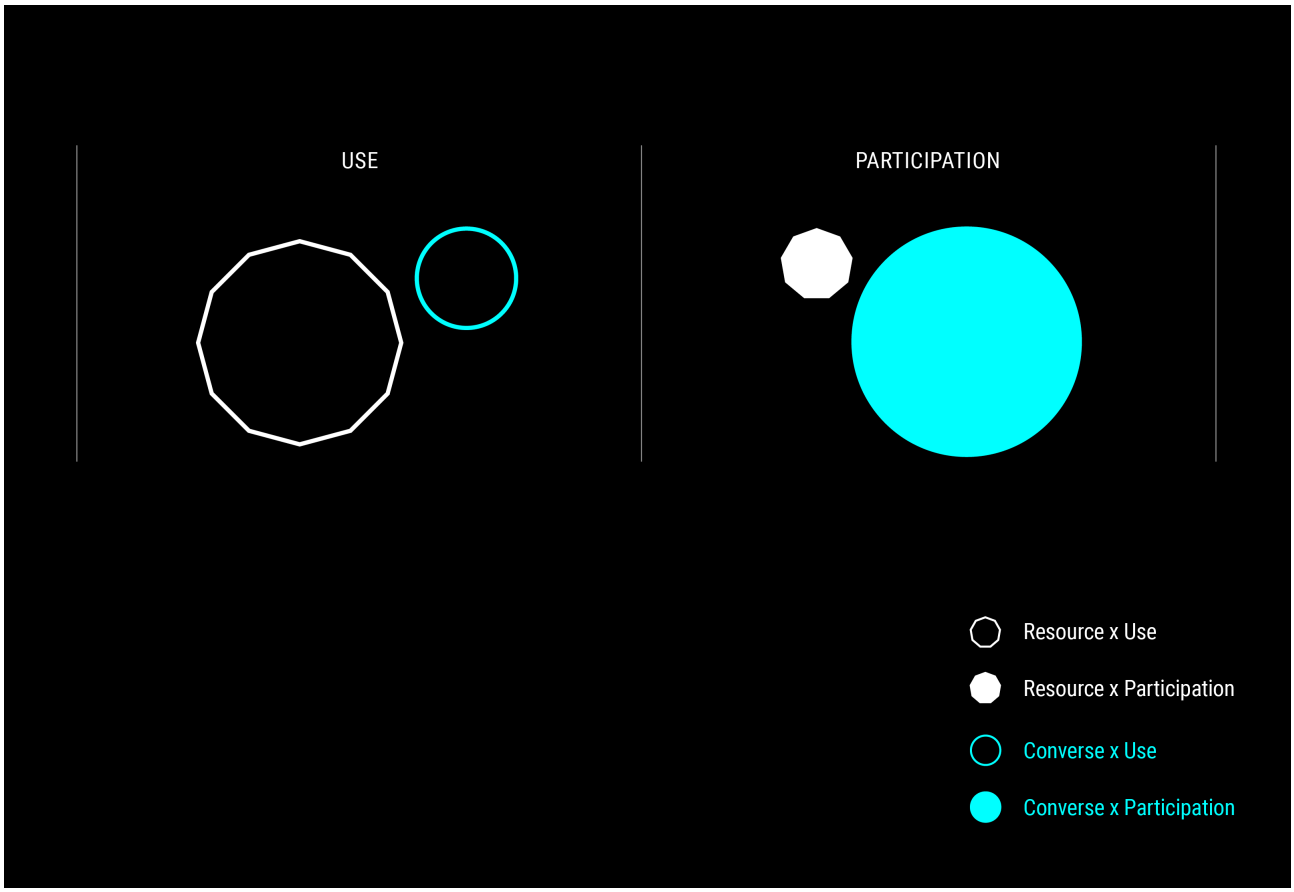

Figure 5. Analysis of 'Use' and 'Participation' across Resource and Converse components.

Further analysis of *Use* and *Participation* across the two T&L activities, reveals four subcategories that provide a more granular understanding. These are: Function, Learning, Connections, and Collaboration.

The *Function* subcategory indicates that these two DDA components played operational roles. For example, a student recalled the *Resource* session as "… the first thing that we did, when we collected all the multiple projects on the Miro board" (June 2022), whilst another commented that the *Converse* sessions provided ways "… to better understand… from different perspectives" (June 2022). The *Collaboration* subcategory positions *Resource* and *Converse* as direct opportunities for peer-to-peer collaboration. For example, one student observed how "… working in groups or pairs during these activities were more thought-provoking" (June 2022), and another stated how co-creating the *Resource* Miro board required them to "… be highly collaborative" (December 2022). The *Connections* subcategory points towards these components as connecting students to people and content in project work. For example, a student noted that the *Converse* sessions connected them to "… people from different backgrounds, providing me with a lot of information" (June 2022), and another highlighted the link to relevant subject material "I am working on sustainability for my [Final Major Project] so… this was extremely helpful for me. I gained new resources and heard from relevant speakers" (June 2022). The *Learning* subcategory suggests that the *Resource* space and *Converse* sessions gave students awareness of their own learning. For example, some mention enhancing their overall learning "I think it made me revisit/encounter various design approaches with workshops and get various perspectives through guest talks" (June 2022), others the role in understanding their value as designers "… I always think those sessions are really, … relevant to our, … personal worth" (June 2022), or as learning that prompts exploration "I wanted to use the [Final Major Project] to explore how art direction could be used to challenge design constructs around sustainability. I don't think this would have been my topic had these lectures and activities around the validity of studying sustainability / responsible design, not happened" (December 2022).

These subcategories enabled us to better understand how *Use* and *Participation* were meaningful to the DDA learning experience. However, we wanted to gain a deeper view of their systemic role, and therefore interrogated the data further, organising the subcategories by component type.

Figure 6 reveals that *Function* and *Learning* span the *Use* and *Participation* categories for both *Resource* and *Converse,* whilst the *Collaboration* and *Connections* only cover *Participation*. This distribution suggests that whilst both *Resource* and *Converse* components play a utilitarian role in conveying knowledge as well as supporting learning, these relationships are more nuanced, positioning the *Resource* space as a more functional provision of information, whilst demonstrating an awareness of the role that *Converse* sessions play in learning. Despite being less referenced, the *Collaboration* subcategory is equally identified by students across both DDA components. Responses regarding *Connections* were entirely about the *Converse* sessions, leading us to interpret that the live interaction with external expertise was more memorable than connecting with similar content asynchronously via the *Resource.* Moreover, students seem to recognise that this opportunity to connect (with peers, and with experts) as part of the *Converse* sessions, enabled awareness of their own learning (as demonstrated in Figure 6, where both *Connections* and *Learning* show parity for *Converse* within the *Participation* category).

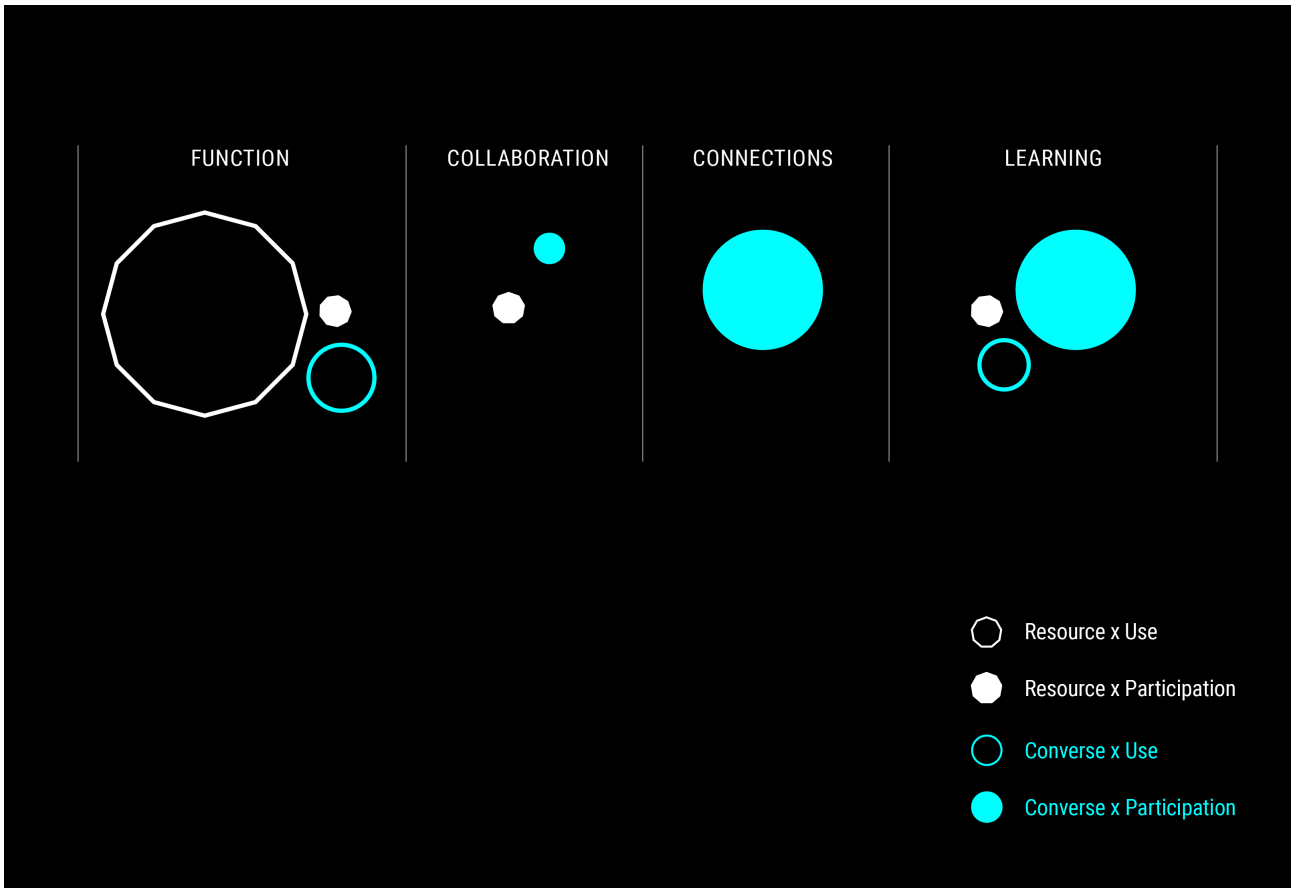

Figure 6. Analysis of coded subcategories across the Resource and Converse components.

The discussion group and questionnaire data confirms that these two learning components have solid roles within the overall DDA system. They establish core information that helps students orientate what it means to have an impact in terms of responsible design and how to influence the design process. At the same time, these two components foreground the students' learning journey, raising awareness of their progress whilst connecting them with others who can offer expertise. Despite being the quieter components within the DDA T&L System, they were valued by students; providing context and connection within their experience.

Connecting with creative outputs

Having explored the links between *Resource, Converse* and the wider system, alongside how participants made sense of these components, we also wanted to examine what influence the two had on student outputs. We utilised contributions at the start of the programme and students' final outputs for comparison.

As students were invited to co-create areas of the *Resource* space, this provided a useful opportunity to review their initial understanding of responsibility and their engagement in the DDA delivery, as well as how it connects to later trends in their own work. In doing so, we note that at the start of the study, 44 students (81% of cohort) contributed

project examples of *responsible creativity* (i.e. design, art and creative direction), including 22 of those consenting to participate in the study, and 100% of all group discussions/questionnaire participants.

These project contributions came from a mix of disciplines and industries (Art, Fashion/Textiles, Interiors/Architecture (including related products), Digital, Film, Cosmetics, and Third Sector). Unsurprisingly, (given the course's focus on Art Direction) 50% of these were art world references and were almost entirely installations and immersive experiences. The Fashion/Textiles and Interiors/Architecture (including products) examples (28%) were largely concerned with waste material innovation. Where projects focused on social and ecological challenges, they were concerned with: Human interaction (50%), Waste (36%), Justice (9%), and Energy (5%). Human interaction (i.e. exploring how we engage with and understand the world) is highest because it relates to the large proportion of art installations/experiences shared. Projects innovating and using waste are also highly referenced, and the types of waste exploration and material innovation demonstrated in these projects can be seen to split equally across the areas of reducing, reusing, recycling and biodegradability.

The students' contribution to the *Resource* space gave a two-fold perspective: 1) it established a baseline for cohort understanding of responsible creativity; 2) it provided an overview of the cohort's disciplinary interests. The students' articulation of responsible creativity (through examples) generated a useful starting point for understanding their latent eco-social design attitudes. This informed what might be expanded or challenged within the DDA sessions. Recognising their disciplinary interests was also useful for shaping DDA content, so that it could be embedded within the students' learning journey and interwoven into the course experience. As a result, these co-curated examples link to other content within the *Resource* space, the topics presented/discussed during the *Converse* sessions and the overarching DDA themes.

Building on our discoveries that the *Resource* and *Converse* components connect and support the teaching structure and student learning experience, we also reviewed participants' final outputs to see if there is evidence of their influence. As these two DDA interventions were not applied specifically to live curriculum projects, (as per the *Tilt, Impact* and *Audit* workshops) but were integrated across the T&L experience, we looked to students' project outputs and final major projects (FMPs) for connections.

Table 2. Topic summary of Project Outputs
from the 11 students who participated in questionnaires and group discussions

Degree Show exhibits and digital showcases (visual output and project synopsis) topics	**Projects for which we were also able to review FMPs (a visual portfolio and 5,000-word thesis)**
Inclusivity in fashion merchandising Memory capture Musical and emotional intelligence Gender and spirituality Messaging within music	Sustainable fashion and promotion Digital animism Social ontology and values Sexual / gender identities and community Waste impact on nature Parenting and cultural influence

Some of these outputs are explicitly *responsible* in their subject enquiry; however, if we delve deeper into this via the six FMP submissions (see some examples in Figure 7), which we gained consent to review, we can surface specific links to the *Resource* and *Converse* components.

Figure 7. Examples of Final Major Project outputs.

In doing so, we observe a strong connection between the type of example projects contributed to the *Resource* by students and their subsequent FMP area of exploration. This can be seen via common topics (e.g. sustainable fashion, waste materials, gender and sexual justice), and/or shared approaches (e.g. speculative, experiential, recontextualising) (see Table 2). In addition, there were direct references to publications, authors, organisations or events listed in the *Resource*, and then cited within FMPs (2-3 on average per thesis).

By cross-mapping the students' FMP topics with our overarching DDA themes of Being Human, Designing with Nature, Systems, and Speculative Design (see Figure 4) we found clear alignment as demonstrated in Figure 8.

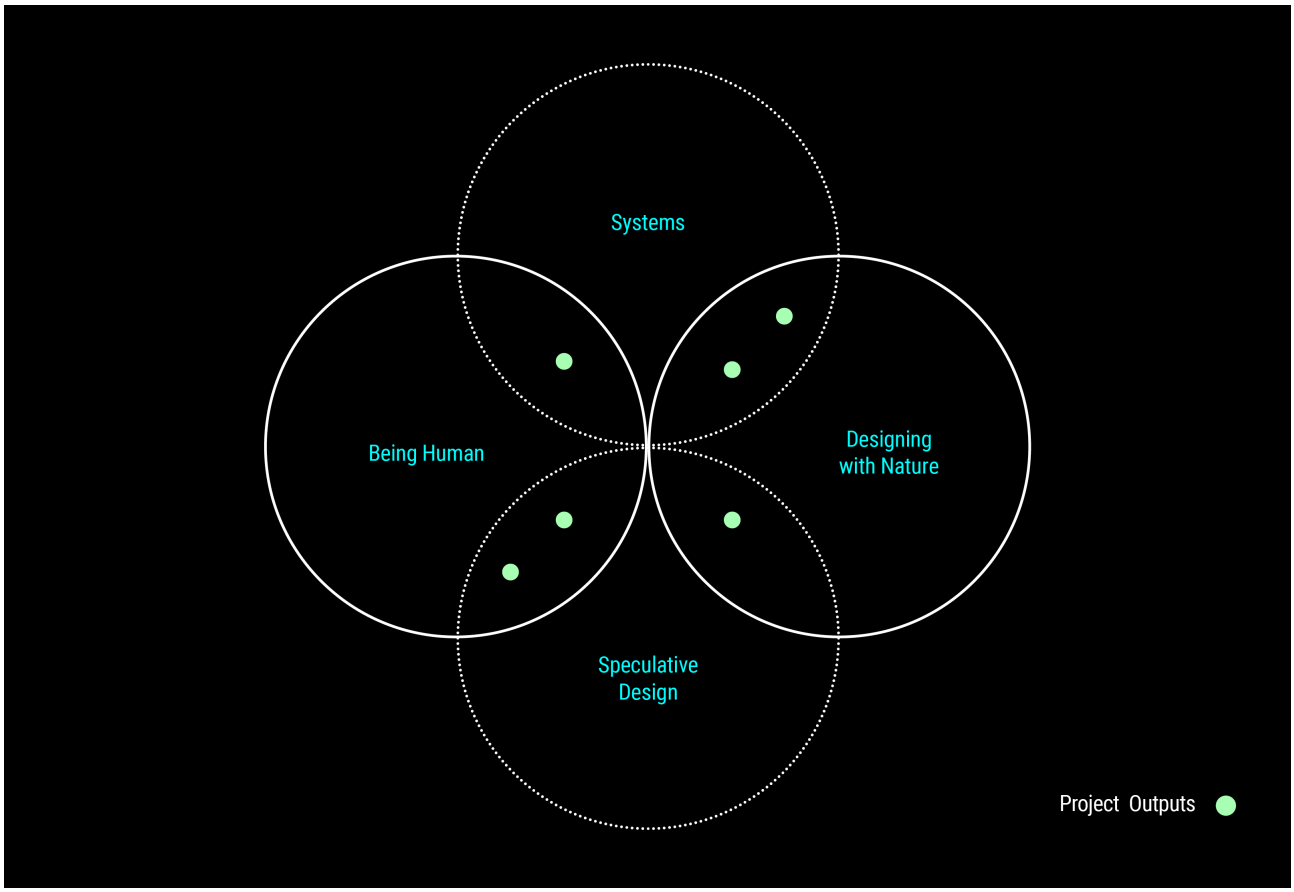

Figure 8. Thematic breakdown of Final Major Projects.

Whilst we cannot rule out compounding factors from the wider course experience, this correlation of topics, in combination with the aforementioned observations, suggests that both components have had some impact on their FMP outputs, including how students have made their creative practice choices. As one student noted in their questionnaire response "I will be using that going forward. I also loved the manifesto around responsible design and will use that as a framework for future projects" (December 2022).

Considering balance within the system

The DDA program prompted students to think differently, critically and responsibly, about their eco-social positionality, context and decisions, however not all components within the system were intended to play a positively disruptive role. As Figure 9 (below) summarises, interventions that were applied to specific curriculum projects were more unexpected and challenging (*Tilt, Impact, Audit*) whilst those we are unpacking in this case study, which were applied more generally (*Resource, Converse*), sought to provide certainty, to help consolidate and reaffirm. This role of certainty within the learning environment is important, because it balances the questioning, reorientating and reimagining approaches elsewhere within the DDA system, where we know from previous analysis, that students experience "uncertainty and flux" (Sadowska & Hanrahan, 2023). This mix of reaffirming (providing certainty) alongside disrupting (generating uncertainty) mirrors real-world design practice as Redström (2020) argues, highlighting how critical such approaches are to how we educate for ecologically and socially just futures.

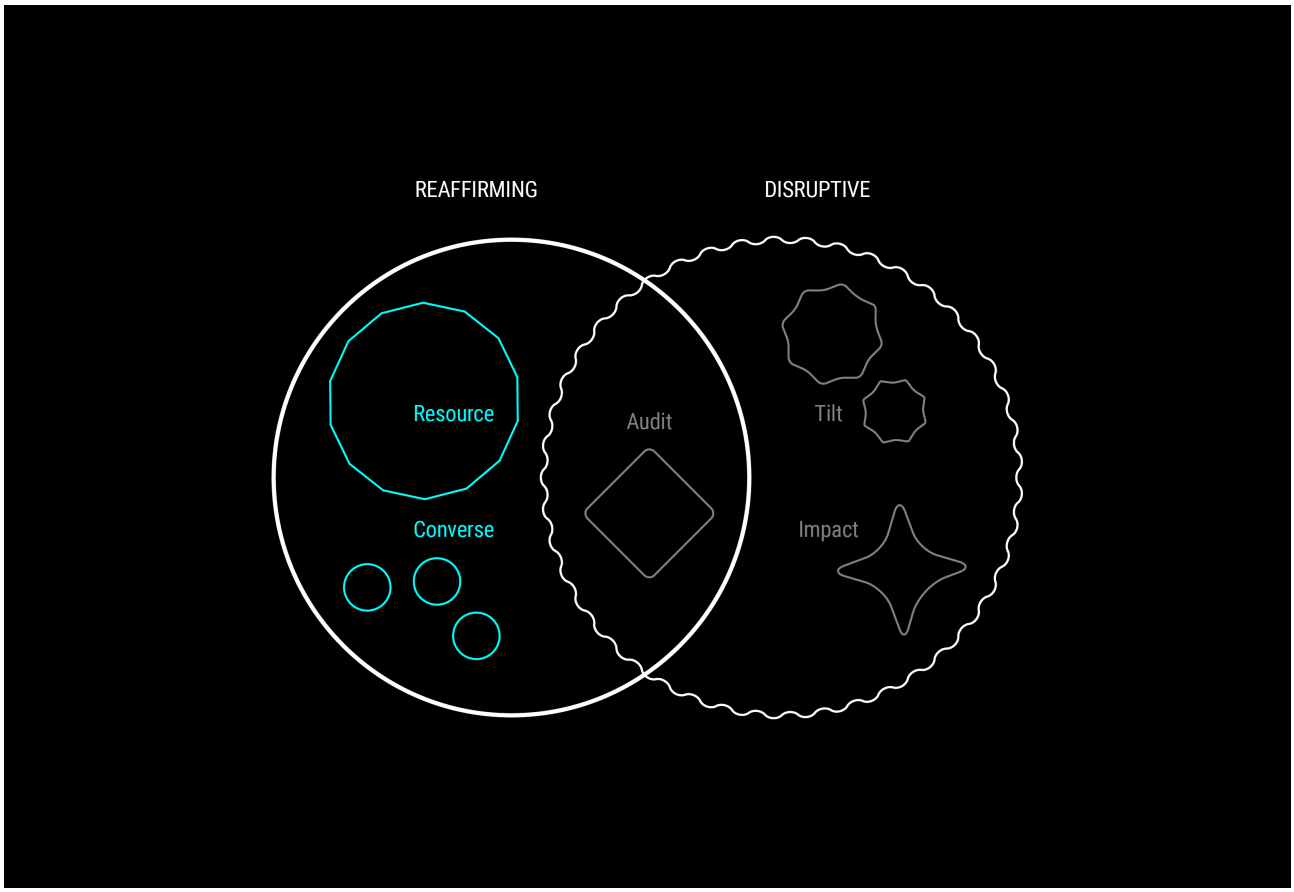

Figure 9. Distribution of reaffirming vs. disruptive T&L interventions within the DDA System.

We also recognise that whilst the more disruptive components were dovetailed with curriculum delivery (i.e. enabling students to focus on and apply them directly to their current projects), *Resource* and *Converse* instead prompted students to step back and expand their perspectives on responsible design practice more broadly. It is possible that this broader role is a factor in participants not recalling or keeping these two components as front-of-mind during feedback moments.

Moreover, we note the interplay of familiar *Foundational Design Skills*, in combination with less familiar or challenging *Green Design Skills* and a *Green Design Mindset* that is set out in the Skills for Planet Blueprint (Design Council, 2025); which demonstrates how a mix of elements some understood, others less so, in combination with an eco-social attitude is needed to support an upskilling towards regenerative practice. The Blueprint also recognises that in embracing this shift that designers will need to "navigate the chaos" that comes with a systemic design approach, "working as part of a wider coalition of changemakers in complex environments" (p.10). Thus, the ebb and flow between the known and the unknown that is modelled within the DDA system can be seen as useful within the T&L experience; creating Vygotsky's (2003) 'zone of proximal development' (where the familiar learning *holds* the unfamiliar enabling students to navigate both); and is vital preparation for real-world practice.

Conclusion

In shaping this study, our approach has been to zoom in on two very specific components to examine how they intertwine at a micro-level. We discovered that in questioning the function of a particular T&L activity, we gained understanding of how it connects with others, what influence it exerts on learning and how it might be shaped and adjusted to create a more transformative impact.

We expected that the *Resource* space and *Converse* sessions would simply help to validate the content shared with students during the program of delivery, (by presenting similar themes via external perspectives), however, analysis of the questionnaires and group discussion responses pointed to a different role, where both components evidenced *Use* and *Participation* whilst validating and reaffirming students' own sense of progress and learning. Moreover, when further reflecting on students' sensemaking of both components, we surmise their role as:

- Providing tangible learning by collating and co-curating content with the capacity for interaction with external voices and examples.
- Ensuring continuity and longevity of learning by creating links that go beyond the moment, offering internal peer interactions and connections across subjects and people.
- Supporting identity-building and self-discovery through the interweaving of eco-social context within their creative practices.

These two components have played essential roles in connecting and rooting the DDA T&L System, as demonstrated by their multi-level connections. Both are described by students as useful and participatory and are seen as contextually grounding and externally linking. We also note how these two components provided a useful window into students' responsible design understanding and application, as demonstrated by their *Resource* contributions and their final creative and critical outputs.

Significantly, we surmise that these quieter components provide a constant that situates the other learning interventions and establishes a familiar backdrop from which to disrupt the design canon. Having a balance of components where some prompt change (disruptive learning) and others support students in processing that change into new design attitudes (reaffirming learning) gives the system the capacity to awaken and sustain learning around responsible design. This balance between types of technique and experience, we argue, creates a learning space that fulfils the characteristics of Vygotsky's (2003) 'zone of proximal development', and our study illuminates the roles of the T&L components within this design education space.

In relation to the overarching study (where the purpose is to create transformation), we can highlight which DDA T&L components act as disruptors and those that create reaffirmation. These are useful considerations for developing educational strategies, if we are to address the "… urgent need [in design and design education] for a more pronounced subversive ontological dimension, of reconnecting design with prefigurative remaking of the world and transforming ourselves as its integral part" (Tlostanova, 2021, p.177). How the DDA teaching interventions connect and intertwine to build impact continues to be key to our research, and we intend to build on this case study through further examination of the T&L System, exploring the role design education can play in a restorative future.

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