

PGCertHE

UNHE7007 Portfolio

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Teaching Intervention Cycle

1.0 Introduction

My teaching practises are grounded by a synthesis of active experience, a deep learner understanding and an awareness of further contextual demands and challenges in relation to the discipline. This document is contextualised within the revalidation of the Product & Furniture Design (PAFD) course and explores how my beliefs and approaches, furthermore, the relevant current disciplinary trends are embedded within the course via the revalidation process via dialogue with professionals across the discipline. In addition, the course has gone through a structured process directed by the university, and I intend to communicate how the PAFD delivery has applied creativity and understanding within the process.

1.1 Scope

This reflective cycle intends to discuss the revalidation process that has just been undertaken by the PAFD course. Considering some of the driving factors within the discipline and how they affect the structure of the course itself. Building upon my previous work regarding my approaches to delivering and its initial impact on the course, I will look to discuss how they have altered in response to the context of the discipline and how this shift has manifested in the development of the revalidation document.

In the book, Curriculum Design, Matt Bromley discusses key judgement areas concerning the development of curriculum: Intent, Implementation, and Impact. I have collated a condensation of these categories in terms of their concerns & considerations (as shown in *Figure 1*). Within my writings, I will discuss the Intention and implementation at a structural level.

	Concerns	Definitions	Analysis
Intent	Curriculum design & Provision with an emphasis on balance and broadness.	Framework for setting out the aims of a programme of education including knowledge and understanding to be gained at each stage.	Why and What?
Implementation	Curriculum delivery; teaching, assessment & feedback.	Translating framework over time into a structure and narrative within institutional context.	How?
Impact	Regarding pupil progress and achievement as assessed by exam/test as well as understanding good outcomes are also measured in how well students are well rounded citizens.	Evaluating what knowledge and understanding pupils have gained against expectations.	How successfully?

Figure 1: Paraphrased from Curriculum Design (Bromley, M., 2018)

The intention will be discussed as a response to the changing context of design. This is where governing bodies are identifying the value of design and the relevant skills that are intrinsic to these areas. Identifying key themes and drivers that will allow the course to produce graduates that are appropriately equipped and prepared to make a meaningful impact within their careers.

Implementation will be discussed at a structural level and curriculum delivery. Comparing previous course structures to the structure that we have proposed as we move forward. Including how those

structural changes are driven by the intention of the courses that are identified within the document. Whilst the initial implementation considerations are structural, a shift in context and intention has driven revitalised learning outcomes within specific modules, these will also be identified.

2.0. Design in context

Design by its very nature, is all about fulfilling humanity's imagination and creating a blueprint for the desired future. It is the responsibility of the designer to realise, direct and enable society to reflect, evolve and function. The design council describes the intention of design as 'To make life better by design' (designcouncil.org.uk). This is the Design Council's mission statement which champions for design to be better understood, better used, and better valued, thereby helping individuals, communities, businesses, the economy and, critically, the planet. (K1,K3,V3,V4)

2.1. The Well-being of Future Generations Act (Wales)

Ultimately, the discipline is shifting toward a wider consideration for cultural structures, and this is reflected in the process of revalidation. Design declares is a movement that recognises the value of design as an impactful force upon society particularly its impact on the climate crisis, "As designers working within an industry that relies on production and powers global consumption, we must acknowledge that we have had a role in bringing us to where we are now, and that we have an important role in what comes next." (Design Declares, 2023). As a central theme of the 'Design for Planet 22' conference, Design Declares are the epitome of the disciplinary recognition of the context of Design. Furthermore, during the revalidation process, we were required as a team to map the programme against The Well-being of Future Generations Act (Wales) 2015.

This is evidence of the organisation and the wider educational system holding a substantial awareness of its importance in the direction of society. This is apparent in the discipline of Design and applied creative practise, and its relation to the Well-being of future generations act (Wales) 2015. (V3,V4,A4,K1,K6)

"The Well-being of Future Generations Act requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change." (WOFGA,2015).

The Well-Being of Future Generations Act (2015)	Justification
A prosperous Wales (efficient use of resources, skilled, educated people, generates wealth, provides jobs).	The programme creates opportunities for collaborative working and professional engagement to provide students with industry focused experience which will enhance their future employability.
A resilient Wales (Maintain and enhance biodiversity and ecosystems that support resilience and can adapt to change (e.g. climate change)).	Knowledge and practice-based modules provides students with the ability to consider, adapt and be resilient within the ever-changing current climate.
A healthier Wales (People's physical and mental wellbeing is maximised and health impacts are understood)	Wellbeing is integrated across the curriculum from an academic and personal perspective.
A Wales of cohesive communities (Communities are attractive, viable, safe and well connected)	Students will engage in projects that are aligned to support, build and benefit community development and interaction.
A globally responsible Wales (taking account of impact on global well-being when considering local social, economic and environmental wellbeing)	Knowledge and practice-based modules provide students with the skills in innovative thinking and personal responsibility enabling them to have the

	capacity to establish new and sustainable responses to improve the economic, social, environmental and cultural well-being of Wales.
A Wales of vibrant culture and thriving Welsh Language (culture, heritage, and Welsh language are promoted and protected. People are encouraged to do sport, art and recreation).	Students are encouraged to participate in activities beyond core curriculum, to consider the wider social impact of design and how they may contribute to the colourful Welsh culture and language.
A more equal Wales (people can fulfil their potential no matter what their background or circumstances)	Students, irrespective of background or circumstances, are encouraged to fully reach their potential, and are provided with equal opportunities in all aspects of their study.

Figure 2: Signposting the course values against the Well-being of Future Generations (Wales) Act

2.2. The challenges of Design education.

Design as a practice is ultimately reflective. This means that as the flux of society redirects itself, so does the discipline. Ultimately the course must refract to allow learners to be prepared for the challenges of contemporary society and the demands that society places upon the objects or systems within it. The Design Council's 2023 report on the Design Economy draws further attention to the locality of the challenges we face as designers. "Design shapes the world: from the products and services we use each day, to the buildings and places that surround us, and the systems that underpin how we live. Faced with the climate and biodiversity emergencies, and high levels of social and regional inequality, the scale of what we need to design – and re-design – is enormous." (Design Council, 2018)

Furthermore, it is the embedding and nurturing of the relevant skills, to tackle the previously mentioned challenges that shape the PAFD course and ultimately the discipline. In reference to the World Economic forums report of the "Top Ten Skills of 2025" the Design Council states "Creativity, originality, initiative, critical thinking, attention to detail, flexibility, complex problem solving, emotional intelligence was foremost among the skills they identified, and they correlate heavily with the skills most used by designers. Evaluation, analysis, and ideation were also identified as important and feature prominently" (Design Council, 2021). These skills are all intrinsic to the discipline of Design and the challenge within the context of the revalidation process is ensuring that the structure enables the integration of these skills and behaviours in a manner that allows students to develop and progress into a rapidly changing professional landscape. (A1,A2,A4,K1,K3,K4,V3,V4)

The challenges of the twenty-first century are vast and complex. These challenges are often defined as "Wicked Problems". Defined by Rittel and Webber in ten points that demonstrate the complexity and fluidity of the challenges that society faces (Appendix A.)

In response, the discipline of Design formulated its process via iterative, cyclical, and understandable models. Examples of these are the Framework for Innovations by the Design Council and the emergence of Design Thinking which has become a sub-discipline of Design itself. Ultimately, these thinking models are universal and have developed and evolved to reflect the vastness of 21st Century Design challenges. It is the embedding of these models within the structure of the course that is critical to the development of a learner's ability to have a positive impact on society post-graduation. Ensuring that the conceptual models upon which the course is structured are as contemporary as possible means that the course structure itself must promote flexibility.

2.3. Relevant Context & Industrial Validation.

As part of the revalidation process, it was crucial to attain the requirements of the industrial landscape when employing graduates. As a team, we utilised the Design Council's evidenced-based commissions as well as our industry contacts.

The Design Council define Design Skills as "a skillset and a mindset – a particular way of thinking about a problem, putting materials together to achieve a function" (Design Council, 2020) and categorise them under three titles: head, heart, and hand:

Head – Problem-Solving – The ability to visualise and conceptualise the intangible.

Heart – Human-Centred – the passion and curiosity to design solutions that are right for the people and planet.

Hand – Practical Skills – the technical abilities to enable the end goal to be reached.

The categories and subdivisions that are defined by the Design Council allowed the team to structure the different skills and traits that are intrinsic to the discipline. Building upon the Design Council's identification we also recognised the importance of professional opinions concerning employability and valued skills. This led the team to disseminate the following question to our industry contacts to justify individual aspects of delivery within the course structure. "What are the 5 "must have" criteria that a Product Design graduate should possess upon graduating (listed in order of preference) – that you would look for if employing within your organisation?" The feedback from this was quantified and helped build the foundation of the intention that the academic team would progress.(A1,A4,K1,K4,K5,K6,V3,V4)

3.0. Intent – Course Direction & Outset

Within the present context "of the Environmental Apocalypse, 'metrics' isn't a dirty word, 'theory' isn't just for academics, and 'design' can't solve everything. The studio needs to respond faster and more radically, especially at the undergraduate level, where the foundations of design are laid. If knowledge is power, it's past time for some redistribution of both." (Hagan, 2022)

With this in mind, our programme's objective is to educate individuals to redress the challenges that our society is facing through good design practice and philosophy. The revalidation of the Product and Furniture Design programmes focuses on a renewed approach to design, looking beyond individual needs and introducing students to:

- Collaboration, inclusivity, and diversity for greater impact.
- Inquiry, curiosity, questioning and expansion of knowledge.
- Visualize, instigate, and catalyse positive change.

The programmes have based their foundational design thinking approach around the Design Council's Double Diamond Design Process. This will be enhanced with the recently published document Beyond Net Zero: A Systemic Design Approach, fostering and developing a transdisciplinary methodology to design practice. (A2,A3,A4,K1,K2,K3,V1,V2,V4)

In addition, the programme has the following general educational and specific aims:

- To encourage students to challenge, disrupt and be innovative in their approach to Product and Furniture Design.
- To develop a student's knowledge and understanding of designing for the real world while observing sound and ethical working practices and professional responsibilities.
- To enable students to develop communication and technical excellence in digital and traditional visualisation & modelling (2D/3D) and oral & written skill sets.
- To enable students to become independent learners able to collaborate, communicate and problem-solve as professionals.

The application of the above aims and approaches will see the course creating a renewed platform for learning styles via a fluid and encompassing structure. The intention for the course structure is to enable refractive practises throughout the tenure of this course document and enable both learner and educator to engage with contemporary technology as well as societal narratives. (A1,A2,A3,A4,K1,K2,K3,K4,V1,V2,V4)

As part of the structural review of the programme, we intended to further implement the University's Learning and Teaching Enhancement Strategy which focuses on four key principles for all teaching and learning: collaborative, professionally focused, inclusive & personalised. These principles will find themselves integrated inherently within the programme due to their natural and intrinsic links to applied creativity and the discipline of Design.

The culmination of the contextual study that was undertaken during these processes will see the creation of a framework that delivers opportunities for students to develop their cognitive and communicative skillsets within modules and projects that are reflective of societal narratives. (A1,A2,A4,K3,K4,V1,V2)

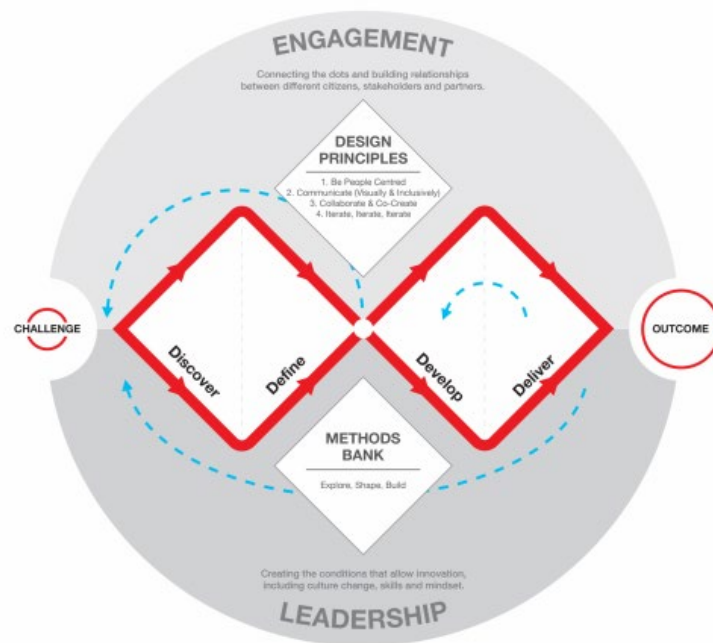
4.0 Enhancement via contemporary conceptual models.

In my previous teaching reflective cycle, I discussed the importance of the Design Councils Framework for Innovation (FFI) as a central thematic structure for my delivery. The validation process offered an opportunity to integrate these models into the structure of the course as well as the learning outcomes of the modules.

4.1. The Framework for Innovation.

As discussed previously, the importance of the FFI to learner understanding & development was utilised in two ways.

Firstly, as a direct teaching tool to allow learners to understand the design process in both linear and cyclical fashions. The model which has four main constituent parts; Discover, Define, Develop & Deliver, allows teaching staff to de-compartmentalise the skills, processes and methodologies that are utilised within a project, and teach students in a structured format that is appropriate in terms of development and ability.



© Design Council 2019

Figure 3 The Design Councils Framework for Innovation

Source;<https://www.designcouncil.org.uk/news-opinion/what-framework-innovation-design-councils-evolved-double-diamond>

Secondly, the framework for innovation has been directly aligned with the marking criteria set by the central university procedure (Appendix B). This has grounded the delivery within the assessment process through the categorisation of 'Design Skills', cognitive & communicative. This direct alignment has led to an improvement in communication & understanding in all areas concerning the relationship between teaching and assessment. (A1,A3,A4,K1,K2,K5,K6,V3)

4.2. A Systematic Design Framework.

Between my initial reflective cycle and this body of work, the Design Council has released an updated model building on the Framework for Innovation. The latest report is directly focused on the previously discussed wicked problems, or more specifically, the climate crisis. “The systemic design framework builds on our existing framework for innovation by recognising the interconnected, complex nature of challenges and prioritising the planet as well as its people.” (Design Council, 2021). The impact of the Design Council’s Systematic Design Framework upon the revalidation process is largely related to the scope of the individual modules and the importance of the contextualisation within larger thematic or narrative learning techniques. (A1,A2,K1,K4,V3,V4)

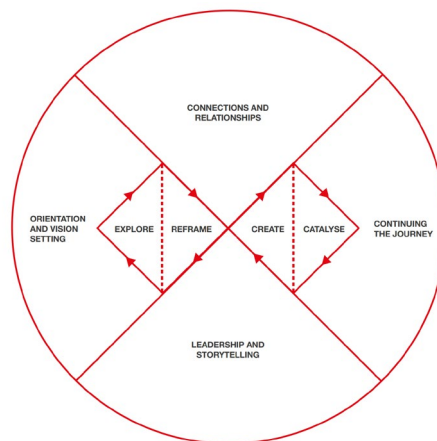


Figure 4: The Design Council’s Systematic Design Framework (Design Council, 2021).

Furthermore, the latest report highlights the value of Design in future economies and its importance concerning the link between policy, regulation, standards and their integration toward legitimate and worthwhile application. “This is where design is critical - closing the gap between the theoretical take-up and the actual implementation of something that is going to change the world.” (James Taplin , as cited in, Design Council, 2021). It is within this capacity that the revalidation can begin to be directed toward allowing students to be exposed to high-complexity challenges that are underpinned and directed at an economic, ecological, and societal level. This type of direction will see the synthesis of andrological practises whilst also incorporating pedagogical learning methodologies where relevant and appropriate.

The blend of these techniques will ensure the development of hard and soft skills throughout a learner’s experience and build upon the independent lifelong learning practises of heutagogy. Furthermore, the latest model from the Design Council emphasises the need for an approach that looks past the initial engagement with a challenge and identifies the perpetual nature of problem-solving indefinitely as evidenced in *Figure 5*. The inherent nature of these models demands that, as a course, we “should be determined by the most fundamental understanding that can be achieved of the underlying principles that give structure to or inherent to the discipline” (Schiro, M., 2012. p.33).

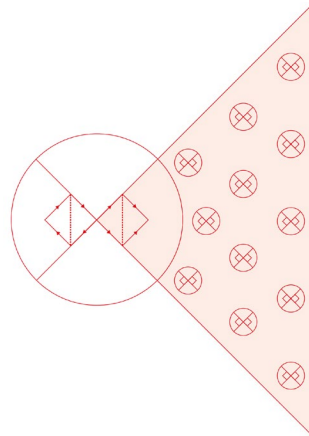


Figure 5: The Design Councils Systematic Design Framework (Design Council, 2021).

5.0. Implementation

Building upon the intent of the course, we reviewed the existing structure, with the ambition of accommodating more contemporary approaches and best practices. This review would see the integration of intent at a structure level rather than at a modular level and give a platform for implementation and application of the module learning outcomes at delivery.

Upon structural review, the existing course showed a clear opportunity for enhancement concerning the rejuvenated intention of the delivery team. The current structure, as demonstrated in *Figure 4*, was made up of three twenty-credit modules per term during L4 and L5, forty credits across two modules during L6 – S1, a twenty-credit module across S1 and S2 and a sixty module in L6 – S2. Initially, it was recognised that there was a lack of continuity concerning the weighting of credits when studying at L6 in comparison to L4 and L5. This meant students only had a singular opportunity to evidence the ability to experience ‘cradle to cradle project’ management. This was identified in our research before revalidation as an employability trait. Furthermore, the rigid structure of 20 credit modules offered a distinct lack of opportunity to create learning environments and opportunities that related to different aspects of the practice of Design and Design skills.

L4		L5		L6	
S1	S2	S1	S2	S1	S2
DESIGN MAKE 1 - 20C	DESIGN THINKING - 20C	DESIGN EXPLORATION - 20C	DESIGN MANUFACTURE - 20C	INDEPENDENT PROJECT - 20C	
WAYS OF THINKING - 20C	WAYS OF PERCEIVING - 20C	DESIGN REALISATION - 20C	DESIGN SIMULATION - 20C	ADVANCED CREATIVE ENQUIRY - 20C	INDIVIDUAL MAJOR PROJECT 60C
TECHNICAL DESIGN - 20C	TECHNICAL DESIGN - 20C	PROFESSIONAL PRACTICE 2 - 20C	COLLABORATIVE PROJECT - 20C	PROFESSIONAL PROMOTION - 10C	PROFESSIONAL PROMOTION - 10C
			STUDY ABROAD MODULE		

Figure 6: Existing Product and Furniture Design Course Structure as a Modular Breakdown.

5.1 – Structural Changes.

The updated structure would need to encompass the complex nature of the design. This complex nature demands learning techniques that are varied and draw on themes that are pedagogical, andrological as well as benefiting from heutagogy practises and it is felt as though larger more expansive modules offered a great opportunity for this. As a substructure, it was identified that we could utilise the Design Skills Commission to direct individual modules towards a particular aspect of learning related to the discipline. This meant that during L4 and L5, modules could be distinguished as Head, Heart or Hand themed modules ensuring that the educator, learning outcomes and learner had a full understanding of the direction of the learning itself.

The following changes were made to the updated structure.

- The increased weighting of modules throughout the course with continuity of weighting at L6. This will offer the educator greater opportunity to curate learning environments and techniques that are appropriate and varied throughout the lifetime of a module, whilst working under the contextual narrative of the complex demands of design. In addition, learners can experience larger projects that are reminiscent of the career pathways appropriate to the discipline.
- A 20-credit module during both terms of L4 and L5 that is largely directed by student self-reflection and understanding. With the modules 'professional practice' and 'collaborative projects' students will be offered the opportunity to direct their study in a way that is related to their interests. This is in relation to heutagogy opportunities, which allows the learner to be "the major agent in their own learning, which occurs, as a result of personal experience" (Hase, S. and Kenyon, C., 2000)
- A cross-level collaborative project during S2, with L4 & L5 working together on the same project. This offers an increased opportunity for collaboration in comparison to the previous structure, as well as promoting a learner-to-learner interaction across levels of study in line with social constructivist ideologies (Vygotsky, L. S. (1978).

L4			L5			L6			
S1		S2	S1		S2	S1		S2	
HAND	DESIGN PRACTICE - 40C		DESIGN EXPERIENCE & INTERACTION -BA-20C		DESIGN EXPLORATION & RECOGNITION -BA-40C		EXPERIENCE DESIGN PROJECT - BA - 40C		THINKING/SKILLS
			DESIGN SIM & TECHNOLOGY -BSC - 20C		DESIGN INVESTIGATION & DEFINITION -BSC -40C		INDUSTRIAL DESIGN PROJECT - BSC - 40C		THINKING/SKILLS
HEAD	DESIGN RESEARCH & THINKING - 40C		ADVANCED DIGITAL REALISATION - 20C						
							INDEPENDENT PROJECT - 40C		THINKING/SKILLS
HEART	PROFESSIONAL PRACTICE 1 - 20C		COLLABORATIVE PROJECT - 20C		PROFESSIONAL PRACTICE 2 - 20C		COLLABORATIVE PROJECT 2 -20C		
					STUDY ABROAD MODULE				GAF

Figure 6: Proposed Alternative Product and Furniture Design Course Structure as a Modular Breakdown.

Furthermore, as identified by multiple stakeholders, there was a demand for greater differentiation between BA and BSc pathways. As demonstrated in *Figure 5*, pathways split at L5, beginning with a 20 credit differentiation at L5 S1 and increasing to 40 credit differentiation at L5 S2 and L6.

(A1,A2,A3,A4,K2,K3,K5,V1,V3,V4)

5.2 – Tapering of hours.

As a structural transition toward the output of lifelong learners, in line with course intent, it was proposed that there should be a restructuring of delivery hours. This restructuring would see an increase in the delivery of weekly contact hours in the first year and a reduction of contact hours in the final year. This proposition is driven at large, by the increased value of resilience and independence within the professional landscape and their relation to heutagogy as a teaching practice.

The tapering of delivery would see the total credits studies per year, 120, remain the same as well as the total hours of contact time over the entire course, 864 hours. Although, hours per week would decrease from 5 to 4 in the transition between L4 and L5 and 4 to 3 between L5 and L6. Meaning total weekly hours would reduce from 15 hours per week to just 9 hours per week from L4 to L6.

(A1,A2,A3,A4,K2,K3,K5,V1,V3,V4)

EXISTING PROGRAMME STRUCTURE HOURS/MODULE FORMAT						
	CREDITS/MODULE	HOURS/CREDITS	HOURS/WEEKS (12WK DELIVERY)	WEEKLY HOUR PER 20 CREDITS DIFFERENCE	TOTAL CREDITS/YEAR	TOTAL HOURS/YEAR
L4	20	48	4	0	120	288
L5	20	48	4	0	120	288
L6	20	48	4	0	120	288
TOTAL					360	864
PROPOSED PROGRAMME STRUCTURE HOURS/MODULE FORMAT - OPTION A						
	CREDITS	HOURS/CREDITS	HOURS/WEEKS (12WK DELIVERY)	WEEKLY HOUR PER 20 CREDITS DIFFERENCE	TOTAL CREDITS/YEAR	TOTAL HOURS/YEAR
L4	20	60	5	+1	120	360
L5	20	48	4	0	120	288
L6	20	36	3	-1	120	216
TOTAL					360	864

Figure 7: Proposed Structure for the Tapering of Hours Compared to Existing Deliver Structure.

It was identified that the transition from pedagogical learning to heutagogical learning would be intrinsic with a reduced level of contact time, ultimately increasing the opportunity for self-directed study and the independent characteristic of the lifelong learner. The previously mentioned characteristics aligned with several aspects of the motivating factors that define the intent of the course increase the likelihood that students would develop into self-directed autonomous learners and create learning cycles that perpetuate beyond their academic studies. "Heutagogy is otherwise known as self-determined learning. Unlike pedagogy it is an instructional strategy where the learners are more self-determined and autonomous." (Paul, I. and Kumar, K., 2020).

This currently goes against university regulations concerning the structure of delivery and contact hours. Therefore, the concept would face several different challenges in proving to the university that all parties would see the benefit and accept the changes proposed. This would therefore require a data-driven approach. Challenges include ensuring students understand that they are receiving an equal level of contact time across their degree programme and that fees would not change concerning the degree of contact hours schedule for the level of study. Furthermore, proving to students and the organisation that a decrease in hours would promote several aspects of the Learning and Teaching Enhancement Strategy, particularly individuality, as demonstrated by the increased level of self-determination concerning heutagogy practises.

Intending to prove these principles, as a team we presented the potential structure to current and prospective students. In addition, parents or guardians of students were identified as key stakeholders in the decision to study at a particular university. Following the presentation, participants were asked to answer a questionnaire to gather the opinions of stakeholders and their perspectives on the changes (Appendix C). Following the gathering of responses, the data demonstrated an overwhelming understanding of the benefits of a potential structural change and the underpinning concepts. (A4,K2,K3,K5,V2,V3,V4)

6.0. Conclusion.

To conclude, the process of revalidation has seen the integration of the approaches and techniques that I utilise being integrated into the structural framework of the course. I believe as we transition toward Academia 4.0, the use of a linear pedagogical approach to learning will become less appropriate for the creative industry's applied creative practices such as Product Design. Whilst pedagogy as a learning framework will always have value in a higher education setting, as the discipline transitions toward complexity and rapidly developing technological advancement, graduates will have a far greater need to learn continuously and autonomously. It is, for this reason, I believe the integration of frameworks that support active learning, live project work and greater

scope of exploration will enable students to learn and develop in relation to the challenges of industry and the wider context of society.

The rejuvenated course structure promotes deep learning. The opportunity for students in L4 and L5 to experience a larger weighting with regards to credits means that educational staff have scope to focus on depth in terms of learner experience and understanding. Furthermore, a larger credit weighting will mean that the challenges educators can present can be far more complex. These approaches concerning these challenges will be far more dynamic in terms of learning, collaboration, discussion and debate within the project work. The tapering of hours further compounds the autonomy of the learner. Ensuring that learners are given skills and fundamental knowledge at the initial stages of a course will mean further opportunity for Kolb's notion of 'concrete experience' and 'observation of reflection' at the later stages of the curriculum.

As a reflection, I feel as though the structure that the delivery team are proposing futureproofs the programme and allows the structure itself to be refractive and reflective of contemporary challenges and technologies. These components define the disciplines and direct their core conceptual approach. The course structure now promotes evidenced based deviation. This ensures students are prepared with skills, knowledge and perpetual learning habits that prepare them for post curriculum.

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Appendix A – Rittel & Webbers 10 points of Wicked Problems

1. There is no definitive formulation of a wicked problem.
2. Wicked problems have no stopping rule.

3. Solutions to wicked problems are not true/false, but good/bad.
4. There is no immediate and no ultimate test of a solution to a wicked problem.
5. Every solution to a wicked problem is a “one-shot operation”; because there is no opportunity to learn by trial and error, and every attempt counts significantly.
6. Wicked problems do not have an enumerable (or exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan.
7. Every wicked problem is essentially unique.
8. Every wicked problem can be considered a symptom of another wicked problem.
9. The existence of a discrepancy representing a wicked problem can be explained in numerous ways; the choice of explanation determines the nature of the problem's solution.
10. The designer has no right to be wrong.

Appendix B – Feedback Criteria Aligned with Framework for Innovation Aspects

STUDENT FEEDBACK FORM			
Student Name:			
Programme:			
Module:			
Module Code:		Contribution to Module:	80%
Assignment Title:			

This section details the extent to which the assessment criteria are demonstrated by you, which in turn determines your mark. The marks available for each category of skill are shown. Lecturers will use the space provided to comment on the achievement of the task(s), including those areas in which you have performed well and areas that would benefit from development/improvement.

Generic Assessment Criteria	% available	% awarded
1. Engagement with Literature Skills (Discover)		
☐	20	
2. Knowledge and Understanding Skills (Define)		
☐	20	
3. Cognitive and Intellectual Skills (Develop)		
☐	20	
4. Practical Application Skills (Deliver)		
☐	20	
5. Transferable Skills for Life and Professional Practice (Deliver)		
☐	20	

Assessment Mark (Assessment marks are subject to ratification at the Exam Board. These comments and marks are to give feedback on module work and are for guidance only until they are confirmed.)	Late Submission Penalties (tick if appropriate)		%
	Up to 1 week late (40% Max)		
	Over 1 week late (0%)		

Updated Feedback Sheet referemcing 'The Framework for innovation' us the 'The 4D's'

Appendix C – Revalidation Stakeholder Questionnaire

PROGRAMME STRUCTURE QUESTIONNAIRE

BA|BSc PRODUCT & FURNITURE DESIGN

Please answer the following questions as discussed in the presentation regarding the proposed changes for the new programme structure.

#		
1	Do you understand the Proposed contact hour changes to the delivery of the Level 4, 5 & 6 modules for the duration of the programme (3 years)?	Y/N
2	Do you understand that the total contact hours a student receives does not change from the existing programme structure currently being delivered?	Y/N
3	Do you understand that the Fees will remain the same for each year with these Proposed changes?	Y/N
5	Are you a prospective applicant/student?	Y/N
6	Are you a parent/guardian/teacher?	Y/N

2. Teaching Intervention Cycle 2 – Poster

An Immersive Learning Experience

Introduction

An immersive learning experience is a concept that has emerged throughout this teaching intervention. By implementing the teaching techniques related to storytelling or narrative through the technology related to Industry 4.0, I have identified the amplification of student engagement due to the immersive nature of the technology. Within this reflective teaching cycle, I have focused on the application of previously discussed theories and structures. These have directly impacted the immersion of learners within the educational process via the introduction of new technologies and narrative-based study. I hope to demonstrate the links between my previous teaching interventions, and the pedagogical techniques I currently utilise alongside the related content leads to the demonstration of learner immersion. As a caveat, an immersive learning experience does not relate directly to the technology itself but rather the immersion of the learner within the process of learning.

04

Industry 4.0.

Often considered to be the fourth industrial revolution, Industry 4.0. can be seen as the fourth technological push that creates a profound shift in societal behaviours. Spanning four key areas – physical/digital technologies, network technologies, data processing technologies and physical/data technologies (Hermann, M., Pentek, T. and Otto, B., 2016), Industry 4.0 is vast. It covers a multitude of different industries and has ultimately led rise to the concept of Academia 4.0, which "is proposed to bring out best graduates with the required skill sets to match the industry" (Rekh, S. and Chandy, A., 2020). Within the context of design education, we are directly utilising aspects related to 3D printing & immersive technologies such as immersive rooms, and augmented and virtual reality. In this instance, they directly feed into the concept of an immersive learning experience by enhancing student engagement using digital concepts. Whether that engagement is analytical, experiential or empathy based these technologies create environments that promote student learning in an enhanced way. Steel, p et al, discuss the opportunity for immersive technologies in the following areas; Observing, envisioning, expressing, reflecting, engaging and persisting, stretching and exploring and perfecting. In my experience all these aspects apply to the discipline of design, Moraes et al. say "It is concluded that the technologies of Industry 4.0 support the entire learning process, but they are not used as much as they should" (Moraes et al, 2022). As Academia 4.0 emerges the introduction of these technologies will be a central driver and their integration into the Product & Furniture Design course @ UWTSD will be critical.

Enhancement of studio based learning (SBL).

Creating opportunities for engagement, and giving a platform for further inclusion of narrative, debate, and storytelling within the studio environment. The integration of these technologies is critical when concerned with producing end-of-curriculum learners that are versed with appropriate technical skills and understanding. Furthermore, this technology can improve the learning environment itself, which in the case of the Product and Furniture Design at UWTSD is the design studio. Studio-based learning is vital to the development of learner's ability to integrate into industry roles, Hettithanthri, U. and Hansen, P., 2022 say SBL "enhances deep learning and sustainable retention of the learning outcomes of design studies". In addition, SBL aligns itself with the notion of lifelong learning and independence as explained by Emam et al., (2019, pp. 164–165), "within the conventional design studio context, students engage in a single open-ended, project-based problem, allowing students to solve the problem in their way." These environments dependent practises can now be curated and elevated scenarios that are pedagogical as well as experiential.

05

Immersive Learning & Narrative

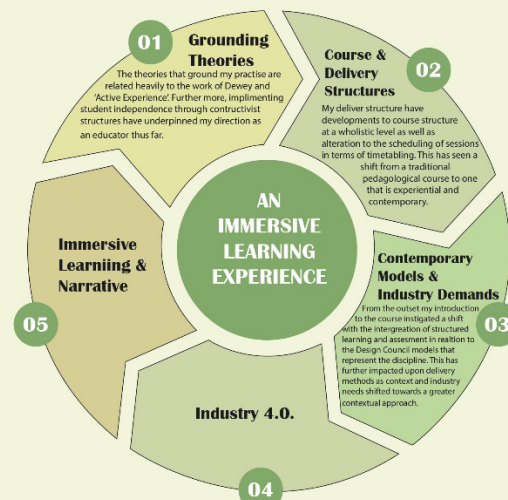
When considering immersive and narrative-based approaches I was determined to defer from the linear approach of using storytelling as a pedagogical technique but one that is immersive both in terms of learning engagement and experience of the learner in the entirety of their studies. This includes the creation of a narrative, that alongside delivery, encourages learners to role-play as if they were within a professional environment. Building upon Kolb's four-step experiential learning cycle which places 'concrete experience' as the basis for learner development, I identified that narrative was a crucial tool in creating experience and engagement within the learner population. Ultimately, under these conditions, learning becomes an emotional experience rather than a pedagogical one which Andresen et al, describe as the "foundation for all learning" Furthermore the author describes the inability to bypass experience within the learning process, "learning can only occur if the experience of the learner is engaged" (Andresen et al., 2020).

Engagement is critical to learning and underpins the process at a fundamental level. Based upon the value of emotion and its relationship to engagement, the introduction of immersive technologies should see an increase in opportunity to create a narrative and implement storytelling which Egan discusses as "one of the most powerful cognitive tools students have available for engaging with knowledge" (Egan, 2005)

Immersive learning is therefore directly related to narrative which will ultimately be amplified by the introduction of technologies related to industry 4.0 further enhancing learning engagement in curated environments.

Learning Experience Propositions

- Learners actively construct their experience.
- Learning is a holistic process.
- Learning is socially and culturally constructed.
- Learning is influenced by the socio-emotional context in which it occurs.



Conclusion

•Experience is the foundation of learning.

•Creating studio environments for immersive experiential learning is the platform to promote inclusion and engagement.

•Learning & application through active experience models promote students understanding and reflection concerning industry-standard techniques.

•Embedding these practices within the structure of a course compounds the experiential nature of the learning environment throughout the curriculum

•Delivering experiential philosophies in line with industry-driven technologies and skills enables students to engage with practises that are aligned with the future of the discipline.

•Industry 4.0 and the related technologies will embed themselves within Academia 4.0 and enable educators to create graduates that can excel post-curriculum.

•Immersive technologies aligned with Academia 4.0 will promote learner engagement. Enabling students to have experiences, engage with skills processes and techniques that are the reality of the industry

•This conclusion evidences the cyclical nature of the immersive learning experience. As the technologies, conceptual models and industry needs advance, the immersive nature of the learner experience will be compounded further.

UKPSF MAPPING

Industry 4.0 (A1,A2,A4,A5,K1,K2,K3,K4,V2,V3,V4)

SBL (A1,A2,A3,K2,K3,K4,V1,V2,V3,V4)

Immersive Learning & Narrative (A1,A2,A3,A4,K1,K2,K3,K4,K5,V1,V2,V3,V4)

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CPD 1 – Design for Planet Conference

A4, A5, K5, K6, V3, V4

Description

Design for Planet conference is an event run annually by the Design Council aimed at galvanising and supporting the design economy in tackling the climate crisis. Taking place on a digital platform Design for the Planet is a series of workshops and talks that centre around the design communities' relationships to the environment we exist within as well as our impact upon it. Talks, seminars and workshops are delivered by a variety of stakeholders including designers, businesses, visionaries, and government officials.

Discussion surrounding what design is currently doing for the planet circulated the Design Council expert knowledge sharing, their impact upon legislative action and their empowerment of the design community. Furthermore, Design for Planet encouraged the design community to do more, encouraging acceleration in the actions that we are undertaking. Identifying the facts around the impact that designers have on the economy concerning the climate crisis, Design for Planet contextualised the challenges faced within the discipline.

The three central themes of the conference identified where design is most needed concerning the climate crisis and creating a net-zero future.

- Designing products and services that make it easy and inclusive to live more sustainably.
- Designing sustainable and resilient places, with communities.
- Designing a circular economy which regenerates natural resources.

A talk from 'Design Declares' is a movement that recognises the value of design as an impactful force upon society particularly its impact on the climate crisis. This was extremely impactful with the opaque recognition of the challenge humanity faces from the perspective of the designer.

Reflection

Ultimately Design for Planet offered a great depth of insight about the disciplines' interdependency to the environment, and the impact that we are currently having. This furthered my understanding of techniques and practises that were multidisciplinary although will transfer directly to Product & Furniture Design.

In relation to my practice both as a designer and educator, there were some very useful techniques presented. These include design for reparability, design for lowering energy consumption and design for waste reduction.

Within the context of education, ensuring students are aware of the climate crisis and the impact that designers can have has been a crucial aspect of contemporary graduates in every sector but particularly in Product & Furniture Design. Design for the planet has fed directly into the practises we have undertaken with regards to level 6 students who are proposing concepts for their 'major projects' and has enabled for the communication of net zero or sustainable decisions during their project work ensuring that students make these decisions early in their projects is crucial and the information that Design for Planet has communicated has allowed this in far greater depth. This information will feed throughout the levels of the course as we look to maintain and progress a delivery that is contemporary and appropriate.

CPD 2 - Matter Conference

A4, A5, K2, K5, K6, V3, V4

The Matter conference is a focused event aimed at the integration of digitalisation advancements and future technologies into the public sector. A format that circulates workshops, demonstrations, and masterclasses from the leading technology providers to inspire further innovation and new ideas.

Offering masterclasses that integrated technology in several different ways, communication, and collaboration as well as bridging the physical-digital product experience the technology on display has a huge impact on higher education.

The universities state-of-the-art virtual reality rooms, provide students and partners with world-leading learning spaces which transform education and utilize 17m LEDs across 3 walls creating a fully immersive user experience. These learning spaces will allow our students and partners to experience 360 videos, and custom applications, through a variety of software including Microsoft and Google Applications. The first of its kind in Europe the immersive room on the SA1 campus uses a Samsung LED screen to create an immersive experience. Furthermore, the course has begun to utilise AR & VR, and this technology further increases the impact of blended technologies throughout the course.

Reflection

I had a particular interest in the demonstrations that utilised the university's new immersive suite. The university is currently championing immersive learning, AR & VR as well as motion capture. All of which, can be utilised throughout the design process and ultimately the experience of our students.

The understanding and knowledge that I have gained from the masterclasses that circulated this technology will see a greater integration into the course itself. In addition to this, we hope to utilise this technology as marketing communication to the schools and colleges that the course studios.

With this technology being relatively unknown, the intention is to create opportunities for innovative applications. This offers an opportunity for the creation of new practices both as teaching and real-world integration. The intention is to integrate the technology within modules in the upcoming year. We are hopeful that students can use current skills that are being delivered to transfer their visual communications in the context of immersion and in particular the immersive room itself. We are hopeful this will enhance the quality of delivery and deepen learner engagement.

Furthermore, we are looking to apply these technologies for a scope of increasing depth of understanding with regard to the empathy aspect of the design thinking process that is a central theme within the structure of the course. Immersive technologies allow students to experience processes, environments, or scenarios that they would not be able to experience with ease outside of this technology. We are hoping to align narratives and challenges with scenarios that can be experienced within these technologies to deepen learner empathy and understanding at the forefront of a project. Ultimately the integration of this technology will enhance learner engagement, communication and understanding in several different aspects.

CPD 3 – Conference speaking.

A4, A5, K2, K5, K6, V3, V4

On two occasions in the previous academic year, I have been asked to speak at conferences. The first was at the Cerebra Innovation Centre. The conference took place in Alex Design Exchange, Swansea. The second was a remote delivery to the Hubei Institute for Fine Arts Conference.

I think both occasions are valid pieces of continual professional development due to the nature of the content, differing contexts as well as the differences in audience. They have challenged me as an academic to curate and present content to stakeholders that varied and have differing levels of understanding with regards the discipline of the design.

Cerebra Innovation Centre Conference

Description

The CIC is a collaboration between UWTSD and the charity Cerebra, aimed at helping children with brain conditions. CIC is made up of a team of Product Designers who are challenged with unique problems to help children in their day-to-day lives. The conference itself was aimed at communicating how CIC achieves its goals to different stakeholders who engage with the charity. This was largely medical professionals – nurses, case handlers and occupational therapists. The ambition of the conference was to enlighten these stakeholders so that we could engage in direct feedback and reflect upon the needs of the target user and how those needs are being met.

Reflection

My involvement in the conference was a talk that included a demonstration of how CIC utilise traditional design techniques to solve problems for the children that the charity work to support. The challenge faced in this scenario is ensuring that the layperson understands the concepts and techniques that are being discussed. This includes the skills that are involved in the problems solving process.

Creativity and divergent and convergent thinking are central to the process and to communicate this we offered a live demonstration. Asking the audience to offer up any challenges or scenarios that then were solved in an open discussion with the stakeholders within the room. Utilising a projection of the sketch creation process we were able to demonstrate an accurate representation of how we tackle challenges in real time.

The value of the different perspectives within the room to add to the design process was paramount. Offering a different perspective to my own it was clear that there was value in the empathy and understanding that these stakeholders have for the intended users. In this scenario, I was able to analyse and understand this information to create real-time insights that were applied to the concepts being developed.

This experience was beneficial to my practice in multiple ways. Firstly, it compounded the importance of working with stakeholders within the Design process. The utilisation of individuals who have differing perspectives, understandings, and insights to elevate the design process and therefore its outcome to create something fit for purpose. This has transcended furthermore into the revalidation process as a curation of industry needs and standards to develop the course frameworks and content into something.

Teaching Observation 1

A1-4, K3, K4, K6, V1- V4

Name of Candidate; David-John Jarvis

Name of Observer; Matthew Archer

Date; 28.10.23

Student Level; 4

Location; Swansea

Topic; Design Fundamentals – A roadmap to being a Designer

Aim/s of session?

- To introduce new learners to the fundamentals of the discipline
- Create a scenario where learners can nurture a 'design sprint' at a basic level.
- Articulate to learners, how and why there is value in the different aspects of design
- Begin to introduce learners to experiential learning in a series of small demonstrations
- The individual aspects of the design process will be contextualised within an overarching problem/challenge that learners will have to create a solution for.

Any Factors/Problems considered when planning the session?

- Ensuring that the studio learning space is utilised appropriately
- Ensuring that the students are supported appropriately throughout by the technical and learner staff.
- Enabling students to access the different resources that are needed during the session

Any Aspect of this session that are new to you?

- Running a design sprint of this nature as a learning tool is a new technique for me. These are usually utilised to demonstrate understanding as appose to demonstrating the fundamentals of the practice.
- Asking students of this introductory level to engage with the various resources at such a fast pace is a new practice. We hope this will instigate confidence and begin to build relationships within the group and with the various technical support staff.
- Learners will be working in groups. The intention is to use collaboration as a learning tool and a 'buddy system'.

Observers' comments

Teaching Characteristics: Preparation, selection of aims/ objectives, statement of aim and learning outcomes. Selection and organisation of content. Planning. Choice of teaching/learning methods.

- The session was structured in a series of hands-on workshops that were fluent from the offset. Breaking the fundamentals into empathy, problem statement, concept development, 3d visualisation and delivery meant students were able to engage with the individual components that make up the design process and also see the relationship between the components themselves.
- The intention to introduce students to fundamentals at a fast pace is new to the course but something that was well engaged with. An introductory presentation was given describing the value, application, and techniques within a particular aspect. This was followed by a hands-on workshop where students were asked to apply the practices against a time constraint.
- Working in groups allowed students to bounce ideas off one another and compound their learning through collaboration. This appeared to also give students more confidence when engaging throughout the sessions.

Presentation; Beginning class, introduction, continuity with other sessions, students' prior knowledge. Clarity of presentation. Pace. Attitude to subject matter. Use of appropriate reinforcements. Ending sessions – summary, future work etc.

- The introduction to the class was informative and enthusiastic. Ensuring learners of the introductory level engage is an important aspect of this level of learning.
- The session was very fast-paced. Learners were asked on several occasions to work independently of the taught session in time-constrained workshops. This meant making decisions on the direction of their work and utilising the skills that were being presented.
- Support was available within the workshops although this was passive allowing learners to work independently in their groups.
- The sessions ended with the student presenting the respective concepts. This was delivered to the group, presentation in delivery is a crucial skill in a design. Introducing this at such an early stage is an excellent practice.

Techniques and aids; General apparatus – board, data projector, use of handouts. Question and answer technique. Other evaluation procedures, class management, instructions to students.

- The studio space was utilised throughout the session. Creating spaces for model making and presentations in the final workshop ensured that the session had flow. Students were able to access appropriate resources throughout.
- Presentations for each aspect of the workshops were clear and concise, delivering crucial information that communicated the core techniques was crucial to the success of the session. This was achieved throughout.

Student Responses; General class atmosphere, level of participation, attention, and interest. Student attitude and ability to carry out class work. Were the learning problems identified and overcome?

- Students were well engaged and participated throughout. Whilst learning outcomes were 'raw', which is to be expected at this level of study.
- Students utilised different knowledge and skills at different degrees dependent on previous skill levels. Each group demonstrated the use of each technique in their presentations.

General; Was effective communication achieved? Was there good student-teacher rapport? Were the aims/outcomes achieved? Appropriateness of teaching/learning methods.

- Excellent student's teacher rapport throughout, beginning to build relationships with this student is important within the learning methods that the course utilises and within sessions such as this one we being to develop these relationships.
- Teaching methods were progressive and fast pace in comparison to previous years although this delivered a level of dynamism to the learning environment.
- Learners demonstrated the use of most learning outcomes in the final presentations. This is a testament to learning outcomes being achieved through direct demonstration.

Future areas of focus.

- Contextualising this fast-paced technique within different areas other than the studio might be workshop or CAD studio based. This could offer opportunities for different learning outcomes and engage learners in different contexts.

Strengths.

- Inspiring engagement through positive reinforcement throughout meant learners was engaged and enthused by the micro workshops.
- Prepared and curation of such a fast-paced and at times chaotic session was excellent, students were managed well and directed appropriately.

Course members notes and observation.

(Complete Post session)

How helpful were the comment about the observation?

- I am interested in the notion of recontextualising this high-paced introduction that has an outcome in differing contexts. I am also interested to see if the depth of knowledge can also be altered with regard to its contextualisation. The deconstruction of a process like the Design process is natural and whether this can be reapplied to an individual skill such as model making, or 3D CAD would be an interesting challenge.
- I was aware of the pace being above that of a traditional session and perhaps this was over-paced. This offers further opportunities to curate different paces depending on the stage and context of the learner's development.

In the light of the comments made are you likely to make any changes?

- The analysis of this session has led to further consideration of the potential of this type of learning in the studio context. I feel as though it can be curated and altered further and I look forward to undertaking this experimentation.
- I am likely to recontextualise at a later stage of the learner experience. The current model is contextualising within the making process so this will take place under the title of 'model making sprint'

Teaching Observation 2

A4, A5, K2, K5, K6, V3, V4

Name of Candidate; David-John Jarvis

Name of Observer; Matthew Archer

Date; 3.3.23

Student Level; 4

Location; Swansea

Topic; Design History – the future of Design & society

Aim/s of session?

- To recap the previously discussed historically important Designs, Designers and design movements.
- To present the current trends with regard the discipline.
- The open discussion about current societal narratives – cancel culture, our dependency on tech, 'influencers' & their impact on design.

Any Factors/Problems considered when planning the session?

- Ensuring the discussion and debate that takes the place is in a controlled manner that allows individuals to voice opinions appropriately.

Observers' comments

Teaching Characteristics: Preparation, selection of aims/ objectives, statement of aim and learning outcomes. Selection and organisation of content. Planning. Choice of teaching/learning methods.

- The session was well grounded within the previous session and compounded the format of the module and the schedule for the coming weeks which included students' presentations. Highlighting what was expected of the students and the reasoning behind the task.
- A varied selection of contemporary and progressive technologies was presented offering a broad set of examples of further inquisition.
- Using narrative and a teaching method, the session was aligned with societal patterns highlighting the impact of current trends on historically significant designers or design. This inspired a well-engaged debate among the learner population.

Presentation; Beginning class, introduction, continuity with other sessions, students' prior knowledge. Clarity of presentation. Pace. Attitude to the subject matter. Use of appropriate reinforcements. Ending sessions – summary, future work etc

- The communication was clear and professional throughout, this meant that students had a full grasp of the learning outcome and what was expected from them as they progressed through the module.
- as a vehicle for discussion in this the subject area is appropriate with several opposing points of view coming to the fore, students were able to voice opinions and perspectives on topics that are moral or ethical.
- The session ended with a concise recap of the previous 3-week teaching block that presented the significant aspect of the discipline from a historical, contemporary and futuristic standpoint.

Techniques and aids; General apparatus – board, data projector, use of handouts. Question and answer technique. Other evaluation procedures, class management, and instructions to students.

- The arrangement of the teaching environment into a circular, open seating plan promoted the debating style of the session and allowed for direct communication between all learners and educational staff.

Student Responses; General class atmosphere, level of participation, attention, and interest. Student attitude and ability to carry out class work. Were the learning problems identified and overcome?

- Professional curation and management of debate ensured students were engaged throughout the session.
- Offering up several topics and standpoints throughout the session, discussion meant that student engagement was high.

General;

Was effective communication achieved? Was there good student-teacher rapport? Were the aims/outcomes achieved? Appropriateness of teaching/learning methods.

Excellent communication throughout delivery and during engagement of discussion.

The methodologies used were very appropriate for the subject matter meaning learning outcomes were achieved within the session

and the learning outcomes of the module.

Strengths. Communication was clear and instructive although did not dictate the direction of the conversation and allowed students to be independent in a discussion.

- Management of the dynamic was excellent throughout.

Course member's notes and observations.

(Complete Post session)

How helpful was the comment about the observation?

Helpful in promoting my confidence in using varied techniques throughout my delivery. The discipline is collaborative but often individual in its nature. The encouragement of debate and narrative as a learning technique will mean students are more engaged and aware of the discipline's relevance to society.

In light of the comments made are you likely to make any changes?

Taking into consideration the comments I feel as though open debate surrounding societal narrative will be a technique that I integrate further into my teaching practice. ·

As a methodology for learner-to-learner engagements and building ideologies about the discipline within the context I feel debate increased student engagement and gave the learner ownership of their experience.

Furthermore, the arrangement of the learning space is something I have been attempting to curate and the comments surrounding this as encouraging.

Teaching Observation 3

A4, A5, K2, K5, K6, V3, V4

Name of Candidate; David-John Jarvis

Name of Observer; Matthew Archer

Date; 23.3.23

Student Level; 4

Location; Swansea

Topic; Human Centred Design, Human Factors + Skills workshops

Aim/s of session?

- To give feedback given by an external client aimed at skills. The feedback came from presentations that were delivered by learners in the previous week. Large improvement is needed in sketch & verbal communication.
- Discuss the importance of Inclusive Design under that larger umbrella of Human Centred Design as a creative approach to problem-solving.
- Introduce Students to the basics of ergonomics and human factors in relation to human-centred design and the role they play in creating parameters within the design process.

Any Factors/Problems considered when planning the session?

- Delivering criticism of a basic skill can be difficult for some learners at this stage as most as building confidence and can often feel disheartened. Framing this criticism as an opportunity to improve would be crucial

Observers' comments

Teaching Characteristics: Preparation, selection of aims/ objectives, statement of aim and learning outcomes. Selection and organisation of content. Planning. Choice of teaching/learning methods.

- The aim of the session initially was to build upon the sketch communication skills of the learner population. This was communicated via a demonstration of the basic techniques that support the skillset. Followed by a 'sketch challenge' that saw students apply the previously mentioned techniques.
- Setting out clear learning objective for the session were referenced against the learning outcomes of the module and how the content was relevant to the discipline, the module and the live brief.
- In-depth descriptions and examples meant that the broader topic of Human Centred Design was explored initially followed by more in-depth and supporting concepts.

Presentation; Beginning class, introduction, continuity with other sessions, students' prior knowledge. Clarity of presentation. Pace. Attitude to subject matter. Use of appropriate reinforcements. Ending sessions – summary, future work etc.

- The initial workshop was dynamic whilst clear. Giving students the immediate opportunity to enhance skillsets allowed for inquisition from students throughout and allowed for individuality in the learning experience.
- The presentation on HCD was text heavy and made for difficult reading at times although it was explained that the presentation has been curated as a resource for dissemination and post-session reading.

Techniques and aids; General apparatus – board, data projector, use of handouts. Question and answer technique. Other evaluation procedures, class management, instructions to students.

- The use of curated still objects enhances the workshops and its relevance to the discipline. The use of 'Product Design Sketching' as a live resource allowed students to see exemplary work.
- Question and answer opportunities were offered throughout the session ensuring that students understood the concepts before progressing toward deeper more complex learning.
- Ergonomics and Human factor discussion were contextualised with examples throughout the learning environment.

Student Responses; General class atmosphere, level of participation, attention, and interest. Student attitude and ability to carry out class work. Were the learning problems identified and overcome?

- Students were engaged and vocal throughout the initial workshop.
- Some students questioned the deeper learning aspects before discussions began to evolve and explanations were delivered.

General; Was effective communication achieved? Was there good student teacher rapport? Were the aims/outcomes achieved? Appropriateness of teaching/learning methods.

- A good working relationship between teacher and learner within a less relaxed structure than previously observed.
- Aims and outcomes achieved in an effective session continually reference their relevance to the overarching module learning outcomes.

Future areas of focus.

- Breaking down sessions and allowing for more time to be given to core skills in other areas of delivery, although under the constraints of timetabled hours and staffing challenges, this is understandable.

Strengths.

- This session delivered was aligned with David's expertise and this was clear throughout.
- Evidence of a high-level skillset with regard to core skills related to the discipline meant that students could experience industry-standard skills first-hand.
- A deep understanding of Human Centred Design.

Course members notes and observation. (Complete Post session)

How helpful were the comment about the observation?

- Very helpful, the session was deep within my expertise and the recognition of this gives confidence to my work. Offering that information to the students and having confirmation of their understanding compounds my beliefs within the context of the learning environment.

In the light of the comments made are you likely to make any changes?

- Considering the comments teamed with external client feedback there will be an increase in core skills workshops. Sketch communication is something we introduce with core techniques and then promote independent learning, but this may need an increase in terms of depth.

Reflective Practitioner Statement

This qualification has allowed me to compound my beliefs, ideologies and approaches to applied creativity within an education setting. I am a firm believer in the positive impact that Design can have within my practice and this qualification has seen these ideologies transcend into working practises, structural approaches and intention and implementation of the course itself. Initially introducing industry-renowned conceptual models that frame innovation in a human-centred fashion directly aligns with the concept of human-centred design and learner centre education. My approach is holistic, and looks at the discipline at a meta-level, considering how the discipline of design is emerging within society and the value of individual sub-disciplines. This means that as my practice progresses, I allow students to direct their interests within the discipline whilst keeping the learning outcomes and frameworks relevant and appropriate. Allowing students to engage via personal interest improves the experience and therefore increases engagement. Engagement is the foundation of all learning and is there imperative. (A2,A3,A4,K1,K2,K3,K4,V2,V3,V4)

Immediately I was aware of the impact that my own experiences as a practitioner were having on the learning that I was inspiring. Drawing on my own experiences I considered the creation of scenarios that were beyond my reality but still crucial to the learning frameworks and opportunities

of the students. The concepts of active experience and reflective learning cycles to compound these experiences immediately delivered opportunities to create scenarios for learning rather than deliver direct pedagogical sessions. This is something I will continue into my further practice as a central theme. The creation of these scenarios creates perpetual learning and gives students real opportunities to direct, reflect and compound their learning. This I feel is my greatest strength as an educator. (A2,A3,A4,A5,K1,K3,K4,K5,K6,V1,V2)

An awareness of the fundamental frameworks of being an educator has been teamed with a deeper analysis of the discipline itself. This has meant my educational practises have become external to the classroom or studio. This is concerning the ideas related to the lifelong learner. I feel as though the educator must stimulate perpetual learning and exceed the tenure of the student within the curriculum. This has given scope to my practice to become experiential and engaged within the context of a problem or challenge. Level six practises are now entirely learner-centric throughout modules as opposed to workshops at Level four. As we progress through the course, we hope to deliver a course that is aligned with the practices of heutagogy at the latter stages. This will require a shift within the current curriculum, particularly when considering assessment and continuity across projects.(A1,A2,A3,A4,K2,K3,K4,V1,V2,V3,V4)

Future developments will see the implementation of the concepts that I have identified throughout the course. These will further align with industry professionals and practitioners as quantification of learning and understanding outside of assessment. I believe this practice has the potential to 'close the loop' on educational frameworks through formative and personable feedback and direction. Meaning students and educators are 'assessed' by external practitioners as to the success of learning and understanding. (A4,A5,K6,V3,V4)

Evidence of Teaching Hours

I currently hold a 0.4 contract teaching on the product and furniture design course at UWTSD. Over the last academic year, I have 8 hours per week totalling 192 hours. This has been logged and evidenced in the below table.

Module Name	Level	Semester (1/2)	Hours Per Week	Total Hours
Design & Make 1 ADDA4002	4	1	4	48
Independent Project ADDA6006	6	1	2	24
Advanced Creative Inquiry M6X01787	6	1	2	24
Design Thinking ADDA4009	4	2	2	24
Contemporary Challenges: Making a Difference ADDA4015	4	2	2	24

Individual Major Project ADDA6003	6	2	4	48
Total Hours				192