

CRITICAL WRITING SUPPORTING CRITICAL MAKING

THE DESIGN ESSAY ASSIGNMENT

FERNANDO CARVALHO¹, TOM HURFORD², IAN CAMPBELL COLE²

¹SAN FRANCISCO STATE UNIVERSITY, USA. ²NOTTINGHAM TRENT UNIVERSITY, UK

The paper advocates for a greater emphasis on critical thinking and critical writing by describing and discussing the rationale and implementation of the Design Essay assignment, an applied example of how practice and reflection combined can help students to be more critical, while simultaneously developing writing skills fundamental to their success in and beyond university education. The paper includes initial insights stemming from a qualitative study involving faculty and students from the Product Design, and Furniture and Product Design programs at a higher education institution in the East Midlands region of the UK.

Keywords: Critical thinking, design writing, design curriculum, qualitative research.

1. INTRODUCTION

While traditional design education has been successful in training students in practice-based and problem-solving skills, such overemphasis in applied knowledge seems to occur at the relative expense of developing critical thinking and writing skills to the same level of academic and professional expectation. This gap between the making of and the writing about design becomes particularly problematic moving into the 21st Century, when the focus and scope of professional designers is increasingly expanding towards more complex subjects that demand greater ability to critically articulate the social, economic, political, technological, and environmental dimensions of design (Carvalho, 2021; Wizinsky, 2022).

The Design Essay aims to address this gap. It prepares students for their final-year writing deliverables by requiring them to think more critically and to incorporate thorough reflections on their design making, culminating on a written-visual submission that: i) reflects upon the broader context of their projects; ii) provides justifications for their design decisions; and iii) appraises their process and results according to objective parameters of evaluation.

The present paper describes the structure and delivery of the Design Essay assignment, discussing initial results based on feedback from faculty involved in the development and assessment process, as well as from a sample of students who completed the submission and received varied marks, within the passing-grade spectrum. The paper starts by presenting an overview of some changes in design practice that demand changes in design education. Next, a more specific reflection will be described, looking at

the curricular structure of a higher education institution in the UK that accounts for both product, and furniture design majors. The Design Essay is detailed in the subsequent section, followed by a section that explores the data collection and evaluation of results of a short qualitative study. The paper closes by offering some take-aways based on the research results and their relative significance when considering the education of future designers.

2. A CHANGING LANDSCAPE OF DESIGN PRACTICE AND EDUCATION

As the world accelerates toward the metaverse, a landscape that combines optimism and uncertainty in equal measures emerges. Connectivity has never been more accessible, yet there is mental health crisis; scientific understanding of our planet deepens, yet deforestation and climate issues persist; wages rise, but the wealth divide widens. Such issues present problems and needs to the design community that are characterized by increasing complexities that cannot be solved by a silver bullet. These types of convoluted, or *wicked* problems were first defined by Horst Rittel (as cited by Churchman, 1967, p.B-141) who summarized that they ‘refer to that class of social system problems which are ill-formulated, where the information is confusing, where there are many clients and decision makers with different values, and where the ramifications of the whole system are thoroughly confusing’.

Whilst this paper concurs with Rittel’s concise definition, it also asserts that wicked problems have developed an additional, yet significant layer of complexity: the exponential advancement of technology. When combined, these factors present many challenges to the design community, including in higher education, where instructors must plan and implement strategies to ensure students develop the necessary tools to interpret 21st Century ‘wicked problems’ and respond accordingly. Product designers must ensure their output is underpinned by a robust rationale, therefore Deamer (2020, p.1) asserts that good studio practice should:

... interrogate present-day problems to rehearse a positive future. We need to place in the foreground the demand context for our acts, where demand implies both the implicit demands of our society and the demand for people to find their places in the world. In other words, we need to design, in lieu of objects, scenarios for people to interact.

It is therefore crucial that the pedagogical approach to product design diversifies from the well-established trope that combines practical design skills with critical theory based around design canons, to include an outlook that positions justification for design decisions, at its heart (Scupelli et al., 2018). Consequently, developing curricula that promotes a critical mindset throughout the design process by using materials and tools that allow the designer to do reflection-in-action (Schön, 1983), is paramount. However, such curricula must acknowledge the long-standing dichotomy between writing and design that perpetuates within both our teaching and learning community, and the wider world of design.

In their paper *The process of design is almost like writing an essay*, Orr and Blythman (2002) demonstrate how ‘writing is design’ by asking the reader to consider whether the following quotes pertain to either writing or design:

‘It is like composing an epic poem, a concerto.’ (Papernak, p.17).

‘It is a conscious and creative communication with materials to achieve human effect.’ (Sharples, p.60).

Surprisingly, Papernak was describing the process of design, whilst Sharples was describing the process of writing (Orr and Blythman, 2002, p.40). Not only does this serve to highlight commonality between the two disciplines and indeed, their associated misconceptions, but also the lack of development since its publication toward a point where they enjoy parity within design course structure. This long-standing issue is reflected in the Department for Education’s National Curriculum for A-Level Design and Technology which describes the subject as ‘inspiring, rigorous and practical’ (DfE, 2015). The document also makes links to STEM subjects, highlighting Mathematics and Science, but omits writing as a significant element.

It is therefore unsurprising that students interested in design wish to progress onto undergraduate programs such as Northumbria University’s BA (Hons) 3D Design, a typical representative of UK design courses. Described as adopting a creative approach that puts three-dimensional prototyping at the heart of the design process in the prospectus’ opening gambit, the strong practical elements of the course are further cemented by emphasizing that students are taught how to use the tools and techniques of workshops, computer labs and studio spaces to develop and evaluate designs in three-dimensions (Northumbria University, 2022).

Recruitment campaigns that position practical components of courses front and center are commonplace among British Universities; well-funded, advanced manufacturing facilities are a natural ‘Jewel in the Crown’ that capture the imagination of prospective students while perpetuating the trend of creative courses being sold on physical output, despite that being just a component of both design education, and broader design industry.

3. REFLECTIONS FROM PRODUCT DESIGN TEACHING

Essential to the success of a curriculum that seeks to avoid prescribed responses to a problem or need, is the integration of contextual studies from the outset. Failure to do this will likely result in responses to project briefs that are a replication of existing solutions, as opposed to the innovation of new ones. A legacy of practice-based, skill-focused education, which continues to offer significant value, must be tempered through placing greater focus on critical thinking and writing.

For this to be successful instructors must be privy to the prior learning achieved at each stage so that successive content consolidates and develops a student’s skill set in line with the course’s holistic plan. Embedding these higher skills through critical writing from early on will maximize opportunities for

students to acquire, apply and refine a research-led approach that prioritizes the pursuit of meaningful lines of inquiry to better justify their final design outputs.

3.1 OVERARCHING AIM

The proposition of the Design Essay assignment emerges, as a reaction to philosophical reflections on current and foreseen changes to the design field. Design is becoming more complex – historical, social, political, economic, and environmental aspects are increasingly affecting the expectations and hopes around design practice, and the kinds of futures it can help building. Command of technology and skill-based competencies will, thus, be insufficient to sustain the relevance of the design profession. A more critical stance about which things need to be made and how to make them is paramount, alongside a clearer view of who are the true beneficiaries of the things produced by designers (Böninger, Frenkler, Schmidhuber & Spitz, 2021).

Additionally, the Design Essay also responds to pragmatic and pedagogical objectives which affect immediate goals of university education: preparing students to better deliver the written portion of their final year project requirements. Across their education, students will be required to write in a variety of formats, each demanding discipline-specific language, and a continuous search for style (Heller, 2013). The Design Essay seeks to train students in a more academic format of text, in preparation for a subsequent, culminating piece of writing.

With these two grounding reasons behind the proposition of the Design Essay, an overarching aim could be identified to position this assignment within a broader vision of design pedagogy: *To educate designers as thinkers and makers who can contextualize and critically reflect on their practice, equipping them with the means to justify their ideas beyond the proposition of new artefacts.*

3.2 GUIDING QUESTIONS

Considering the abovementioned aim, two guiding questions can be rendered to inform the crafting of the assignment's specifications:

- 1. How to embed more criticism in the process and practice of future designers coming out of university education? (Philosophical ambition)*
- 2. How to engage design students – traditionally more inclined to perform hands-on tasks – in a more critical assignment focused on academic writing? (Pragmatic ambition)*

4. THE DESIGN ESSAY: WRITING ABOUT MAKING; MAKING TO WRITE ABOUT

The Design Essay assignment is part of the deliverables for the Context and Identity module, within the second year of studies in Product Design, and Furniture and Product Design. The programs are articulated within a user-centered perspective, whereby the focus of study promotes a progressive learning experience via emphasizing different aspects of design training and learning, broadly structured as such: First Year: *Development of fundamental knowledge, skills and experience of the design process and principles*; Second Year: *Exploration of the design industry and broader concepts relating to design,*

focused on professional and cultural demands; Third (or Fourth Year(s)): Application of knowledge and skills within innovative projects that highlight contemporary design expertise, emphasizing personal interests and creative identity.

4.1 THE DESIGN ESSAY ASSIGNMENT

The assignment rationale follows an embedded learning model, whereby students learn while making; practice informs reflection, criticism supports practice. The Design Essay is thus associated with a practical project carried out concurrently. The brief requires students to produce *a 2000 to 2500-word essay providing critical commentary on a self-directed design project.*

The assignment runs for five weeks, during which students have a number of supporting lectures (both skill-focused, and context-based). Additionally, students participate in tutorials – individual and group –, and have optional open studio sessions, which are sign-up sessions with tutors that rotate in virtual classrooms at predetermined days and times. A core team of context faculty (including full-time and lecturers) leads the pedagogic activities supporting the assignment. Plus, the studio faculty, leading the self-directed project front, provides complementary insight and facilitation.

The assessment of the Design Essay is independent of (but related to) the students' self-directed projects. In that way, the assessment criteria for the assignment revolves around the *Critical Evaluation* aspect of their practice-based work, looking at the following elements related to both the format and the contents of the submissions: *quality and relevance of presentation; evidence of academic writing and referencing skills; review of secondary research; contextual awareness of design; critical thinking; quality and justification of personal brief.*

4.2 CRITICAL THINKING, CRITICAL WRITING

Criticism is growing strong in design, as it must. On a higher level, awareness and reflection are being directed at broader issues that circumscribe design history, knowledge, and practice, as evidenced in recent publications such as *The Black Experience in Design* (Berry et al., 2022), and *Extra Bold* (Lupton et al., 2021). While these works build from a strong tradition coming principally from Eurocentric perspectives looking at the roots, evolution, and tensions between design and the capitalistic system of production (for example, Bonsiepe, Manzini, and Papanek), their core contribution lays in shifting the focus to overlooked or subdued issues such as racism, colonialism, gender equality, and representativeness within design.

To facilitate this level and depth of critical thinking, however, undergraduate students must first be able to see themselves as makers whose works impact the reality that extends beyond their immediate creations. Design Essay adopts a two-fold approach to criticism by pointing the microscope to the students' own designs, while inviting them to point the telescope to the world around. Such ambition is achieved via a teaching program where: critical thinking concepts are introduced, discussed, and defined through weekly lectures; concepts are discussed in relation to the students' work through seminars and

individual tutorials; students are tasked to complete weekly deliverables whereby they relate the concepts discussed with their creative work.

More specifically, for the purposes of supporting the assignment, the concept of *Critical Thinking* is framed as an interplay between three subsidiary concepts: *Contextualization*, *Justification*, and *Evaluation*. Each of these concepts is the subject of a dedicated lecture, in which the terms are presented and defined as follows: Contextualization: *Putting reflection and action in context; where context entails a set of facts, interactions, objects, and people making up for a specific sociotechnical event or situation, within a historical timeframe (past, present, and future)*; Justification: *A satisfactory or appropriate reason or explanation for design choices according to contextualized parameters for evaluation*; Evaluation: *Determining the value, quality, or importance of something in relation to a desired objective*.

5. EVALUATION OF INITIAL PERCEPTIONS

5.1 STUDY AIM, RESEARCH DESIGN AND METHODS

The aim of the study was to capture the perceptions of students and staff in relation to the new Design Essay assignment proposal. A qualitative approach was chosen, focusing on a representative sample of participants from both groups via the application of two questionnaires with three open-ended questions each. Questionnaires were sent via email directly to students previously selected to reflect the spectrum of grades achieved, and to all staff involved in the making and assessing of the assignment.

5.2 PARTICIPANTS AND DATA COLLECTION

5.2.1 Students

The first implementation of the Design Essay assignment was accomplished in academic year 2020-2021. Table 1 below summarizes the turnaround, which combines ninety-three submissions from students within Product Design, and Furniture and Product Design:

	Grade Distribution					
	<i>Excellent</i>	<i>Very Good</i>	<i>Good</i>	<i>Sufficient</i>	<i>Insufficient</i>	<i>Zero/No Submission</i>
No. of Students	7	27	27	15	11	6
Proportion of Total	8%	29%	29%	16%	12%	6%

Table 1. Students' Grade Distribution, Design Essay Assignment (Academic Year 20-21)

Of the above, 13 students responded to the questionnaire; accounting for 14% of all students who submitted their Design Essays. All the respondents received passing grades. For students, the questions were structured around *their experience of the design essay, the lessons learnt, and outcomes achieved*.

5.2.2 Staff

A total of ten staff had different levels of participation in the Design Essay, which included conceptualization and structuring, delivering lectures or seminars, providing direct student support, and grading submissions. From these ten, three instructors – two in Product Design, one in Furniture and Product Design – provided feedback to the questionnaires sent, representing 30% of all instructors involved in the assignment. For staff, the focus of the questionnaire was on the *conception and implementation of the design essay, the quality of students' works, and on ideas for future development.*

5.3 RESULTS

5.3.1 Feedback from Students

Regarding their **overall experience** of the assignment, students found that the brief was unclear, that it was difficult to understand what was being asked in terms of expectations of content, and submission format. They said the lectures were good, but the group tutorials were not as helpful and, to some students, even intimidating. Connections between the Design Essay and their practical projects helped understanding whether (design) decisions made were reasonable, students voiced.

In relation to the **lessons learnt**, respondents acknowledged the need for more practice regarding academic writing skills; and that writing alongside the design project facilitated reflection on choices being made. The students also said the lectures helped understanding the importance of critical thinking and evaluation. Participating students identified a necessity for being more analytical and methodical when reading, as well as when structuring ideas.

Considering their **own performance** and grades in the assignment, respondents perceived that the process of working and documenting the work done has notably improved since their first year (even when submission and grades were not excellent). Some recognized a need to use more references to substantiate work and improve the outcome of their Design Essays; and that they may have not explained their solution well enough, all of which was pointed out by faculty in the assessment feedback forms.

5.3.2 FEEDBACK FROM STAFF

When considering the **process** through which the assignment was crafted and the actual **assignment proposal**, staff said that the concurrent timelines between the practical project and the Design Essay made it harder for students to cope (more time to complete the essay would have been positive). Also, instructors observed that the weekly requirement of students to write 300-words was rarely achieved (if at all). Finally, respondents thought the assessment process was very thorough; collaboration amongst faculty provided consistency in marking and troubleshooting/sense-checking.

Regarding students' **outcomes and results**, participating staff noted that the Design Essay was helpful in preparing students for their third-year submissions, via the development of skills in critical thinking and academic writing. There were mixed opinions regarding whether the lectures' delivery structure was

confusing or beneficial to structuring the essay, with some thinking it was too prescriptive in defining the submissions formats (following the lectures' topics/titles). Overall, instructors observed that the design aspects (related to the proposed solutions) were often absent from the submissions (all text, with no visual evidence).

When asked to consider strategies and actions **moving forward**, faculty recognized the need to allow more opportunities to practice writing and critical reflection (in addition to the Design Essay). Like some students, staff also thought the assignment brief needs refining, detailing, and to set clearer expectations regarding deliverables and skills/knowledge (with examples where possible). Finally, faculty felt that more personalized feedback/interaction with students (perhaps via more 1-2-1 tutorials) would likely increase participation and elicit better individual performance on average.

6. ANALYSIS AND DISCUSSION

Emerging literature points to approaches that address the politics of innovation through engagement with critical, contemporary design thought (Rudd, 2022), and that confront historical issues of representation (see Rittner, in Walters, 2021). Looking at the results of the present empirical study, and circling back to the aims and guiding research questions outlined in Section 3, this work elicits the following complementary insights:

In response to *Guiding Question 1: How to embed more criticism in the process and practice of future designers coming out of university education?* This research suggests that a higher interest and degree of criticism may be accomplished within design programs, when and if students can perceive critical thinking and critical writing as core components of their training and educational process; seeing that these dimensions are also (if not equally) valued by faculty, informing curricular structure, and manifested in courses and assignments (such as the Design Essay) which:

- Provide 'food for thought' and engaging briefs that are conducive to critical analysis with an emphasis on contextual issues
- Facilitate connections between practice and theory, allowing opportunities for embedding critical reflection in the making

In response to *Guiding Question 2: How to engage design students in a more critical assignment focused on academic writing?* Notably, no-one goes to design school to become a writer. It is, thus important to recognize that, to promote engagement and learning particularly towards critical writing, dedicated support and clear, stepwise objectives need to be implemented across the educational journey, rather than at isolated, infrequent occasions. Highlighting the role and importance of words – whether spoken or written – in design narratives, is also key.

- Work progressively towards complexity and abstraction with individual support and clear outcome expectations
- Emphasize the importance of academic writing in the present (e.g. final-year requirement), and in the future (e.g. broader context of design practice)

7. REFERENCES

- Berry, A.H., Collie, K., Laker, P.A., Noel, L.-A., Rittner, J. & Walters, K. (2022). *The Black experience in design: Identity, expression & reflection*. New York: Allworth Press.
- Böninger, C., Frenkler, F., Schmidhuber, S. & Spitz, R. (Eds.) (2021). *Designing design education*. Stuttgart: AvEdition.
- Carvalho, F. (2021). *Designing on the edge of civilization: Reflecting on the future of design in times of crisis*. In *International Design Conference, Proceedings of the 2021 IDSA Education Symposium*: online.
<https://www.idsa.org/educationpaper/designing-edge-civilization>
- Churchman, C.W. (1967). Guest Editorial: Wicked Problems. *Management Science*, 14(4), B141–B142.
<http://www.jstor.org/stable/2628678>
- Deamer, P. (2020). Design pedagogy: The new architectural studio and its consequences. *Architecture_MPS*, 18. DOI:
<https://doi.org/10.14324/111.444.amps.2020v18i1.002>
- Department for Education (2014). *Design and technology GCE AS and A Level subject content*. (DFE-00210-2015). Retrieved From: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/485436/D_and_T_A_level.pdf
- Heller, S. (2013). *Writing and research for graphic Designers: A designer's manual for strategic communication and presentation*. Osceola: Quarto Publishing Group.
- Northumbria University (2022). *Northumbria 3D Design Homepage* [Online]. [Accessed 23 March 2022]. Available from: <https://www.northumbria.ac.uk/study-at-northumbria/courses/3d-design-uustdf1/>
- Orr, S. & Blythman, M. (2002). The process of design is almost like writing an essay. *The Writing Center Journal* 22(2), 39–54.
<http://www.jstor.org/stable/43442149>
- Walters, K. (2022). *Black, Brown + Latinx design educators: Conversations on design and race*. New York: Princeton Architecture Press.
- Rudd, C. (2021). A reading list for the politics of design. In A.H. Berry et al. (Eds.), *The Black experience in design: Identity, expression & reflection* (Chapter 2.6, pp.160-168). New York: Allworth Press.
- Schön, D. (1983). *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books.
- Scupelli, P., Wasserman, A., Wells-Papanek, D. & Brooks, J. (2018). The futures of design pedagogy, learning, and education. In *Next Wave: 21st DMI Academic Design Management Conference*. London, 1-2 August.
- Wizinsky, M. (2022). *Design after capitalism: Transforming design today for an equitable tomorrow*. Cambridge: MIT Press.