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The workshop model: Teaching ways of knowing and doing

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Abstract: A design workshop is a pedagogical tool employed in student studios **focusing on a process rather than a product**. Ambiguous in nature, open-ended, and self-directed, workshops create low-stakes conditions for iterative and experimental outcomes. The nature of these design charrettes makes them approachable to all levels, encouraging students to **let go of expectations and learn essential skills for professional practice**. Critical in a post-pandemic environment, the design workshop is a compelling approach to teaching new concepts, theories, and even craft. This paper details five case studies that utilize the workshop model to teach students various complex topics and skills. Supported by the case studies, educators may utilize a framework to structure design workshops for student projects in which the goals are to learn ways of knowing, doing, and designing rather than a specific final artefact or outcome.

Keywords: *design pedagogy; design workshops; student studios; ambiguous design; student-led education*

Introduction

Defining the Design Workshop and Research Goals

This paper concerns the design workshop, a pedagogical tool focused on exploration and discovery. As a pedagogical approach, design workshops lack a clear and agreed-upon definition within the literature. Although, design educators may assume them to be quick and iterative learning moments, often situated within the framing of a larger project or course goal. Borrowing a definition from architecture, workshops themselves can be classified as educational tools created to facilitate strategies for defining and exploring design problems, generating novel ideas, and fostering decision-making in a short period of time (Turgut & Cantürk, 2015).

Existing research provides countless documentation of “design workshops” with little to no explanation of how or why they are labeled as such. The purpose of this research and subsequent paper is to further define the design workshop within pedagogical discourse through case study analysis. This contribution will also introduce a prospective framework for the planning and implementation of design workshops. The framework is based on five case studies and their shared characteristics and effective qualities. The paper presents not only the framework and case studies, but is followed by a discussion and concluding thoughts, which offer a summation of the paper’s main principles and contributions to the field.

Justification for the Design Workshop as a Pedagogical Tool

Many design workshops aim to allow students to shift away from an obsession with the final artefact and instead work iteratively, creating unexpected results. Design workshops create the conditions for a low-stakes way of designing. Students are often asked to create toward an open-ended prompt in a playful or gamified manner. Workshops are designed to provide room to create without commitment. Students are encouraged to make as much as possible and let go of their expectations that they will produce anything of “value.” The value of their production is the process of creating. Over time, a vision for the final outcome might begin to take shape, often unexpectedly. The workshop structure offers information delivery that is approachable from all levels. While workshops sometimes incorporate purposeful confusion, the prompts are often simple. Make. Create. Iterate. Play. Assess. Repeat.

There is a call for design to encourage participation without the fear of “doing it wrong” (Abdullah & Crisp, 2018, p. 12), a quality that is inherent to design workshops. Artefacts are approached as being in the process of realization. Abdullah and Crisp (2018) discuss the benefits of improvisational teaching methods where there is a “larger goal of generating appropriate and surprising design rather than on boosting individual performance” (p. 16). Workshops offer an opportunity for improvisation teaching in the studio environment.

Design workshops allow students to experiment without the risk of failure while defining their identity as designers. It is a low-stakes way of making where there is little consequence to the obsession with outcomes. In a field where people often tie their identities to the final product, workshops limit the fear of imperfection, and “accidents” become opportunities for invention.

Aaron Seager (2022) describes workshops as a “highly effective method of energizing and unlocking creative thinking at the start of a project [which] provide the foundation in the design process of a successful, purpose-led product” (para. 1). While playful, iterative, and low-stakes, workshops are ultimately working towards developing skills and thoughts that lead to newly designed visions.

This paper describes the characteristics of the design workshop and provides case studies of its usage. The case studies span education levels, from first-year undergraduates to graduate students, and engage in several design contexts. We have observed an uptick in the call for design workshops at conferences, from visiting scholars, and in other professional settings. As educators, we frequently use the workshop as it best fits our more contemporary approach to pedagogy. In investigating this pedagogical tool, we see an opportunity to build a framework for successful and impactful design workshops that prepare students for the complexities addressed by an evolving discipline.

Prospective Framework for the Design Workshop

In the ever-evolving landscape of design education, it is imperative to equip students with the right tools and mindsets to thrive in a world characterized by ambiguity and uncertainty. This section introduces a comprehensive framework for design workshops that addresses this need. This framework is built upon three core aspects: Ambiguous Design, The Open-Ended Project Prompt, and Student-Led Education.

Building the Framework

Our framework for the design workshop evolved over several years as we embarked on a journey to gain a deeper and more comprehensive understanding of the pedagogical practices employed by design educators, particularly those focused on rapid, iterative education. Our foundational experiences at North Carolina State University, where we pursued our Master's in Graphic Design concurrently, provided a fertile ground for learning and hands-on experiences within a workshop-based setting.

However, we were driven by the desire to establish a precise and context-rich definition of the principles we were actively shaping. As we transitioned into our academic careers at different institutions, we continued to draw upon the knowledge and insights gained during our graduate studies. Simultaneously, we endeavored to further refine and articulate the fundamental tenets that underpin the pedagogical approach of workshoping.

We have developed a visual framework diagram (Figure 1) to pursue clarity and practicality in implementing the principles discussed in this paper. This diagram is a distilled representation of the intricate concepts presented, offering a visually intuitive guide for educators seeking to enrich their pedagogical practices. Comprising three

interconnected circles, each representing a core principle – the diagram not only encapsulates the essence of our framework but also provides further insights through descriptive words within each node.

Figure 1: The visual framework diagram is comprised of three interconnected circles, each representing a core principle of the design workshop: Ambiguous, open-ended, and student-led.

Ambiguous Design

Throughout the projects reported here, students often ask, “am I doing this right?” A substantial value that is being impressed upon them is that design is never “right” or “wrong”. It just is. While in the profession, some formal qualities are praised over others, the purpose of problem-solving through the process of making is an open-ended mess of creativity. The best solutions come from opportunities for confusion.

Design is ambiguous in nature. There is no solid footing to stand on in the place of invention. The process is unclear, inexact, and uncertain. The Oxford English Dictionary defines ambiguity as “open to more than one interpretation; a choice between alternatives has not been made.” Designers must accept that there is no right answer. The process of design takes place in the face of unknowns.

According to Ben Holliday (2019), ambiguity “points us to the uncomfortable gap between ‘what is’ and ‘what could be’” (para. 1). Designers are called to accept that there are still “unknown, unknowns.” Ideas do not always sit neatly in unison. There is conflict and discomfort. Designers must be willing to work around existing constraints to a space where invention exists.

Abdullah and Crisp (2018) encourage design educators to help prepare students for uncertainty. We must get them to engage in “responsive, flexible thinking” (p. 11). Abdullah and Crisp (2018) call educators to “teach students that uncertainty is an asset and that responsiveness to change is an essential skill that enhances the design process” (p. 15).

In uncertain conditions, designers learn to rely on their intuition. Introducing uncertainty in the classroom prepares students to address the “normal chaos” (Ghassan & Bohemia, 2013, p. 526) of the complex world we live in today.

The Open-Ended Project Prompt

One way to introduce students to the ambiguous nature of design is through open-ended project prompts. Open-ended project prompts allow students to drill down into untapped levels of creativity. Students struggle purposefully through the design process, expanding their capacity as designers. In this way, students become more iterative and more willing to take risks.

With open-ended project prompts, anything goes. Students are not called to answer through a limited set of design solutions. Instead, the process is boundaryless. Prompts offer questions that lead to more questions. Students have the opportunity to develop their own problem statements. They begin filling in the gap of what is “required” and developing a designed system.

Hadassah Damien (2018) describes open-ended design thinking prompts as “messy, lighthearted, futuring, speculative or quick n dirty questions that spark the mind” (para. 4). They say,

sharp questions help people adjust the focus on their problems, gain new frameworks for understanding them, and clarify their ideas on how they might address them. Questions can create a possibility space for innovation and needed change. They can bring people in, invite people to know themselves better, and set the stage for collaboration and deep empathy (Damien, 2018, para. 7).

Student-Led Education

There is a growing movement of educators exploring empathy-led pedagogy and the pursuit of putting power back into the hands of students to interrogate the traditional power structures in a classroom. Many undergraduate students start their university education with competitive grade school experiences in which they are rated against one another. Therefore, they enter design school with core values of individual authorship, competition, and a tendency to hoard their ideas. Primary and secondary education creates a need to memorize material, take tests, and get grades, which encourages students to commit to the idea that there is only one correct answer to any given problem. In undergraduate and sometimes graduate education, these experiences may manifest certain ineffective behaviours in the studio. For example, students may strive to win hidden competitions and desire to be the best. They may get caught up in trying to do work that is “right,” aiming to meet the teacher’s assumed expectations. In some circumstances, students may resist working with others and thinking collectively. These ego-driven practices are solidified through traditional teacher-student power structures that rely on the instructor presenting the content of the course, depositing their knowledge upon students with the expectation that they will absorb it all.

This approach is sometimes referred to as the “sage on the stage.” Conversely, the “guide on the side” approaches education from a student-driven perspective rather than teacher-driven. In a teacher-led model, the instructor provides directional feedback that controls the project’s outcome, limiting students’ creativity. This reinforces the student’s idea that there is a “right” way to design. Their ability to think and create at a higher level, a requirement for today’s complex landscape, is stifled.

A student-led approach fosters self-directed creativity and discovery. In controlling a student’s output, educators do little to prepare them for life as a professional, where demands require flexibility, adaptability, and initiative (Ghassan & Bohemia, 2013). Student-led education requires a dialogical, ongoing, and equitable approach, encouraging a give-and-take relationship between students and educators to foster curiosity, exploration, and growth. This can be achieved through intentional disruption or what Ghassan and Bohemia (2013) call the “Global Studio.” Disruption allows students to experience “normal chaos” (p. 526) by introducing radical elements. In some ways, students are intentionally “confused” to encourage new ways of thinking. Essentially students “learn how to learn,” preparing them “for uncertainty by helping them feel comfortable in postulating, guessing, hypothesizing, conjecturing, and testing their theories” (Ghassan & Bohemia, 2013, p. 527). Dialogue and disruption support student-led education, especially when students participate in the forming the process and next steps.

Workshop Analysis in Practice

The preceding sections have laid the foundation for a comprehensive understanding of the design workshop as a transformative pedagogical tool. We’ve explored the essence of design workshops, delving into their role in nurturing creative exploration, promoting iterative learning, and encouraging students to embrace ambiguity. As we transition to the forthcoming case studies, we shift from theory to practice. The case studies offer real-world illustrations of the principles outlined in the framework, spanning different education levels and diverse design contexts. They serve as concrete examples of how design workshops can be successfully implemented to encourage students’ creative growth and development, equipping them with essential skills and mindsets for a rapidly changing design landscape.

In essence, the case studies bring the theoretical framework to life, demonstrating how the principles of Ambiguous Design, Open-Ended Project Prompts, and Student-Led Education can be applied effectively in various educational settings. These case studies provide a tangible roadmap for educators and institutions looking to harness the power of design workshops in their teaching practices.

Case Study One: Experiencing Information in 2D, 3D, 4D

Based on an initial design by Denise Gonzales Crisp from North Carolina State University, this project begins with a series of workshops where students respond to prompts designed to promote the discovery of user engagement possibilities within space. Students are encouraged to work with various materials throughout all workshops.

Focused on community-oriented learning spaces, instructors give students the option of a site at their university (at Virginia Tech, Newman Library, and at the University of Arkansas, a new School of the Arts building under construction) where they can situate a complex information system comprised of multiple touchpoints. At the start of the process, students explore the nature of the space through the creation of short video compositions (20-30 seconds). Videos are created using Spark (a free app available from the App Store) and then often edited in iMovie or After Effects. They are encouraged to focus on the details and particulars of one specific location within the overall space where they will apply their information system. Students are encouraged to see the space as the character of the movie. They are asked, “How do you make a personality of a space? How do you give a space a point of view?”

After developing a message about their space, students begin a process of brief writing. When writing project briefs, students are encouraged to consider what is meaningful about their space, What's the experience the users will have? What are ALL the touchpoints? Do those go beyond pretty things to look at to deeper interactions? What's the deeper meaning/concept/context/goal? Many students explore precedents of spaces with similar concepts to what they are developing. The project briefs frame how students are to move forward with the project.

After students' discoveries in the video workshop and brief writing sessions, we begin by exploring methods for developing 2D information for the space. Students begin to develop designs using a software program of their choosing (often Illustrator). However, we encourage students to realize it is difficult to visualize how such 2D designs will appear in the space from the perspective of the screen. They construct spatial models of their space (Figure 2), within which they apply print-outs of their 2D materials. They move on to capture at least five trials of applications of differing 2D material designs represented in 3-6 photographs and/or videos of the spatial models. The instructions for the workshop are Study. Assess. Repeat. Study. Assess. Repeat. The aim of the 2D workshop is to develop and design an engaging, hopefully unexpected, application of 2D information within the space where students choose materials, scales, and placement of their informational materials.

Figure 2: Students build spatial models of the area they've chosen within the library to add 2D information to as a tool for designing iterative applications of material. The models allow students to see the material in a 3D application contextualized within space, rather than a flat application on the screen.

Before progressing to the 3D workshops, students develop user experience maps from various methods: Empathy mapping, customer journey mapping, experience mapping, and service blueprinting (Figure 3). Sarah Gibson (2017), for the Nielson Norman Group, explains these mapping methods and when each is appropriate to use. Empathy maps aid designers in understanding the user's mindset. It externalizes user knowledge to develop a shared understanding and help with decision-making. Customer journey maps are more focused on a specific customer's interaction with the product or service, aiding in discovering the user's needs and pain points. Experience maps, which are not tied to a

specific product or service, map an end-to-end experience of a user through which they attempt to accomplish a chosen goal. Used for understanding human behaviour, experience mapping is always in chronological order. Finally, a service blueprint captures the relationship between people, physical and digital evidence, and processes tied to touchpoints in a specific customer journey.

Figure 3: One stage of the project asks students to develop user experience maps which inform the development of their design systems. Such mapping allows students to deeply understand the users of design as people, putting their wants, needs, behaviours, and emotions at the core of the interactive designs.

For 3D workshops, students are encouraged to create 3-dimensional typography sketches using various found materials. Using tools, such as a laser cutter and 3D printer and multiple modes of analogue cutting applications, students develop active shapes which can be explored within space and time. Students create photographs and videos capturing moments of these shapes, either inside or outside their spatial models. This exploration of typographic material leads to the development of 3D informational applications for their developing information system. Many students chose to develop 3D models of their chosen spaces using SketchUp software (Figure 4). With no previous experience, students progressed through a self-run discovery process of learning the software through individualized methods.

Figure 4: After working in analogue methods, students developed 3D models of their chosen spaces using SketchUp software.

To create rich spatial information environments, students were encouraged to develop 4D materials to go into their systems. Struggling to grasp the concept of 4D, we explained to students that the fourth dimension encompasses a time element. Students explored the rich dynamics offered through the screen by adding motion graphics and video elements. Students easily transitioned into motion exploratory processes by preparing motion sketches and iterations through both the 2D and 3D workshop video captures.

For each level of information in the space, 2D, 3D, and 4D media types, students were required to present media at public, semi-public, and private levels, considering a viewer moving through the experience at these different moments. This project explores media and materials under the rubric of user experience. When considering the user's experience, we encouraged students to ask themselves three questions about their space design: What is it? Who is it for? What is the goal? They were to see the user as the interactor with the space.

We encouraged the students to approach the project from an open standpoint. Fundamental to our teaching philosophy is the principle that design education should train students how to think and problem solve in addition to how to make and visually design. By giving little instruction as to what the final output for each application should be, students were encouraged to explore the ambiguous nature of design. We guided the students to think critically about visual design decisions by asking, "To what end?" and "How will this enhance the experience of the user?"

Throughout the project, we practiced guiding students to discuss their work with a simple four-step lead-in (one we learned from watching Professor Denise Gonzales Crisp): Here is what I was interested in. Here is what I explored. Here is what I discovered. And here is where it might go next. By encouraging students to remember that design is never "done" and to embrace the process, the work is richer in concept, depth, and delight. Students report unexpected results that they would not have produced if they focused only on the end goal.

Not all students initially responded to the open-ended nature of the project in a positive way. Some students expressed a desire for a stricter project description, a list of needs, and structured feedback that would define rather than simply inform, project outcomes. The process of play and discovery encouraged through the workshops aided in winning these students over, who ultimately reported a new sense of freedom as developing designers. As one student reported, the project was "very different from what I am typically used to, and I enjoyed learning new sides to what graphic design entails."

Case Study Two: Design Futures Graduate Studio

While it becomes increasingly imperative that undergraduate students expand their design knowledge beyond software mastery, graduate education must also encompass more than an "advanced understanding" of the discipline. Graduate students should be prepared by their institutions to take on emerging roles in the field involving many stakeholders and collaborative processes. Furthermore, it should be a focus of graduate programs to continue informing and defining the discipline regardless of a chosen career path.

First-year graduate students at the University of Arkansas enrol in a "Design Futures" studio course each Spring that addresses the state of the design discipline and asks students to speculate about its future. Inspired by *Designing Designing* by John Chris Jones (2021), the studio is "concerned with the design of the design process itself" (p. iv) and "turning of creative activity upon itself" (p. vii). The course recognizes the continually evolving role of design as it addresses complex social, political, and environmental problems. Students explore the design of design itself, investigating methodological, ethical, and cultural shifts that influence the discipline. The studio focuses on interactive and inquiry-based design investigations to examine the design discipline. Students routinely form provocations (Figure 5) throughout the semester that generate reflection and propositions about their specific interests in design. By nature, the studio course is an appropriate venue for workshop-based project prompts, given the general focus of the course is to ask questions and speculate.

Figure 5: Students design visual maps investigating questions related to the discipline.

An overarching goal for this course was to encourage graduate students to simply “make things.” These “things” should examine an aspect of the design discipline, and the nature of these “things” should also reflect each student’s perspective and understanding. Structuring the studio in this way allows for students to embrace the ambiguous nature of design, situating themselves in the uncertainty of “what is” and “what could be”. At the beginning of the semester, students were given an overall class structure:

1. Provocate, ask a question
2. Research, read, discuss
3. Write
4. Make
5. Discuss, critique, revise
6. Edit writing
7. Repeat

Students worked synchronously through this structure, with inquisitive critiques encouraging them to build and add at each step. The constraints of the studio were loosely set leaving the outcomes and deliverables open ended. Students were asked to capture their process rather than produce neatly prepared products. Through this open-ended approach, students developed their own inquiries as they worked.

The entire semester operated as one ongoing design workshop in many ways, but “mini-workshops” were integrated into the curriculum to introduce students to new equipment or interactions with visiting designers. For example, students participated in a one-day risograph workshop to familiarize themselves with printing. A few weeks later, they worked with Rick Griffith for an afternoon on a letterpress workshop that they could integrate into their work.

Students began the semester designing toward a single prompt, “What is the graphic design discipline?”. Through individual investigations, they investigated several broad topics from design research and practice to design history and education. They formed initial inquiries that influenced their work for the rest of the semester. Examples include: What is the value of design processes over design outputs? What role does emotion play in the creation of design rituals? How can the design discipline reclaim the design thinking process? By the end of the semester, students presented many artefacts that interrogated several design-based inquiries. One student designed a tarot deck of design rituals. Another student designed a typeface based on Nepali signage (Figure 6). Another student 3D printed towering letterforms representing design history. For graduate students with diverse experiences and backgrounds engaging with masters-level education, this workshop-based approach to interrogating the design discipline provided a comfortable space to become near-experts on specific design issues. The workshop structure created a low-stakes environment free of academic jargon and vigor. Nevertheless, students could familiarize themselves and experiment with very “academic” design theories and topics. As they progressed through the semester, they were encouraged to venture down their individual paths to become pseudo-experts in a variety of topics.

Figure 6: Student designs a typeface based on Nepali signage that utilizes red and blue transparencies to reveal a commentary on the design discipline.

While introducing the course, students were hesitant to lead their own educational experience. This was to be expected, especially as many of them were returning to academia after a period of professional-based practice. Students with professional experience were more willing to work through open-ended project prompts but struggled with the ambiguity of the course. We addressed this disconnect by sharing presentations of our personal work that was crafted through similar processes. We shared previous workshops we've facilitated or participated in. These examples showed students that there was no "right" or "wrong" in the class, but endless possibilities. The strength of this workshop-based studio was its flexibility. Students were able to tailor their inquiries to their individual needs, many choosing to do work with unfamiliar materials as a way to practice their craft. Some students used the course as a venue for unlearning their preconceived notions of design practice. Most importantly, this studio provided students with the opportunity to explore complex design with no limitations, which set them up for their future thesis research.

Case Study Three: Disrupting Genius

As instructors, we became interested in examining the theme of ego and idea hoarding in student studios and design culture. We wanted to develop methods for disrupting the existing monological status quo approach to design pedagogy and uncover possible opportunities for future culture shifts. We developed a series of workshops that employed disruptive making methods to teach collaboration, discourage individual bias, and support understanding and connection among design students.

The initial concept for the workshops came from a masters-level course called Design as a Cultural Artefact at North Carolina State University. We developed a set of Rules of Play where participants would make selfishly and refine through collaboration. The experiences learned developed into a collaborative design charrette where students responded to questions about design authorship, origination, and agency. Using rapid prototyping, iterative processes, design dialogue, and making methods, students created multiple compositions reflecting their insights. Disruptive prompts were introduced throughout the workshop. A formal discussion followed the charrette, and participants engaged in a conversation.

The initial workshop was conducted with high school juniors and seniors at North Carolina State University's Design Lab. Students sat in groups of four and created work as individuals toward a prompt. Without warning, the workshop was disrupted, and students had to pass their compositions to the student at their left. Thus, forced collaboration ensued. The receiving student had complete authority to continue the development of the work in any way they desired. Each work began to take on a new imaginative form, and as the creations were passed for a second time, the final works were something that no single designer could have created. After the session, students reported understanding the collaborative nature of design as different from the individualized art culture they were accustomed to.

Based on this previous experience, we devised a workshop for first-year Foundations BFA students at the University of Arkansas. First, students designed a 4-panel polyptych based on the legacy of Fay Jones, a local architect, while also examining the theme of art vs. design. After an initial critique, students “stole” panels from one another, which they used to design a poster or broadsheet. The workshop was disrupted a final time when students used scissors to physically cut bits and pieces from each other’s in-progress work to incorporate into their own final deliverable (Figure 7). While students worked with stolen bits from one another, they carried one “solo” piece through until the end of the workshop using only two of their original panels. We questioned which piece the students would prefer; the solo or their “stolen” work.

Figure 7: In the final stage of the workshop, students physically cut elements from peers’ works to incorporate in their own final deliverables.

When the process began, students were extremely uncomfortable with this idea of forced collaboration. They were fearful of not meeting the intended outcomes of classmates and apprehensive about having their own work confiscated and torn apart. But what we found was that students highly favoured the work they created through the collaborative process compared to their solo compositions. They reported stepping outside of their comfort zone and seeing things with fresh eyes and new perspectives. Students experimented with unfamiliar ways of making, both analogue and digital, to create work that surprised all of us.

Case Study Four: Grids in Space – Sketching in Motion

Sketching is a foundational step in the design process. It allows designers to quickly put down ideas on paper, moving past the slower confines of working within advanced software. While some students prefer to make strictly through the expression of an interface, others demonstrate a need to be more physical in their learning. This is where we see the power of analogue sketching. Students who are anxious to jump directly into computer work often benefit from analogue exploration to sift through their thoughts and ideas. When students engage in sketching, they ideate more effectively and creatively, demonstrate more freedom of thought, and work through their design processes more organically. When students are freed from their laptops and software limitations, they cease to limit themselves to what they know how to do and begin to see new opportunities.

We strongly encourage our students to sketch before designing, and we began to wonder how they might sketch in motion. The act of sketching in two-dimensional space is well understood. We questioned whether similar results would be found if sketching processes were possible in a three-dimensional medium. Additionally, we wondered if students can sketch in four dimensions, including time-based iterations. We have observed the value of analogue sketching related to students’ ideation, creativity, and final artefacts. We assumed there must be similar benefits in applying sketching practices to motion design. We imagined a possibility beyond storyboarding, which is a 2D sketch for 3D and 4D media. What opportunities presented themselves for students to sketch across space and time? This opportunity could also be an adaptable method for teaching motion regardless of student access and experience with technology and tools. As cell phones become ubiquitous in the classroom, students could experiment with motion simply with their devices and paper.

We developed a workshop called “Grids in Space,” introducing design students to typography in the third and fourth dimensions. Based on pedagogy developed by Denise Gonzales Crisp (North Carolina State University), participants are presented with “tools for type”—in this case, a 3D grid for hands-on application of text material. During this

workshop, we provide students with art straws, an affordable paper material often used in engineering practice to create 3D structures. Students build forms that will become their typographic grids—visual structures to guide the reader's eye. Following a set of improvisational prompts, students use printed typographic material and ephemera to construct type within their three-dimensional grid space (Figure 8). The low-stakes environment allows students to explore the many characteristics of typography, hierarchy, grid formation, composition, and white space related to motion graphics and dynamic media. During and after construction, participants use their cell phones to record low-fidelity, analogue, “DIY” videos to explore the typographic matter. We encourage students to “guide the reader’s eye” within the Z-axis. The results are experimental “motion sketches,” bringing something as accessible as the sketchbook to the motion design realm. Sometimes, we ask students to use their motion sketches as a first draft for digital refining. After the analogue discovery phase, students animate using software. We demonstrate using Keynote (pre-installed Apple software) as an accessible tool for digital animation, but we encourage students to explore any software they like.

Figure 8: In this workshop, students build a 3D grid using art straws and then they iteratively apply typographic material to the grid as a means of exploring type in space.

We consider this workshop a success, demonstrated by the rich student outcomes (Figure 9) and the inherent analog qualities of the processes. As expected, students were initially resistant to the process, wary of the 3D aspect, and overthinking their construction. In general, students required a bit of coaxing to jump into their iterations. It may be helpful for the project to be introduced all at once, rather than bits and pieces so that students can anticipate the next steps. Still, this method of sketching in motion is disruptive, which allows students to shift their focus away from outcomes. In doing so, students naturally generated unexpected artefacts, which resulted in more meaningful reflections. Our students became more iterative and vulnerable in response to the open-ended and uncertain project prompt. Additionally, using analogue tools means that students work at the same level with the same skills and abilities, no longer dependent on advanced software knowledge.

Figure 9: Students capture both still and motions “sketches” of their typographic compositions.

Case Study Five: Mashmaker

Design education is often approached from a “Bauhaus” perspective, focusing on outcomes rather than process. This strategy can sometimes lead to a design student feeling “creatively constipated” (Lynam 2019) or that their work is irrelevant. To avoid the effect of often paralyzing conditions, first-year design students were introduced to a workshop that encouraged designing in “real-time” rather than a more passive experience. The Mashmaker workshop emerged to redesign learning in first-year student studios. The workshop used “principles of defamiliarization to present familiar things to students in unexpected ways” (Slone & McMahon, 2021). Inspired by musical “mash-ups”, the workshop used oppositional compositions crafted together to create something unexpected. Using prompts encouraging them to experiment with software, students “designed songs” in real-time. Unlike other case studies, this workshop implemented more stringent constraints or “rules of play”, but emphasized the ambiguous nature of the process.

The workshop began with an in-class charrette in which students used analogue materials to respond visually to several songs. These songs varied in tone and cadence, from instrumental scores to punk rock. Each round introduced a new constraint, whether using a particular material or a physical component. One round had students work collaboratively with hands bound together using a single Sharpie. Another round had students work independently but blindfolded. One rule remained the same; they must finish their composition by the song’s end. In this way, the final deliverable remained open-ended, shifting the focus away from finished products and onto the process itself.

Once students were familiar with this process, it was applied to traditional software used by design students, the Adobe Creative Suite. First, students compiled a shared Spotify playlist, each contributing a single track. For each song, students created a square composition (Figure 10) designed within predetermined constraints. The constraints changed with each track change, some dictating the piece’s content (use the top Google search result of the song’s artist, a specific Pantone color swatch). In contrast, others limited students to specific tool (Pen tool only, three different gradients).

Figure 10: Students design quick and iterative compositions within the time frame of a single song.

Students felt a high degree of anxiety when first introduced to this workshop, especially since a key component was the time limit of each composition (designing in real-time to the song’s length). It became crucial to the instruction to encourage the value of process over the final product. So, in addition to the changing constraints of each composition, three additional “rules” were made for the workshop: (1) *Do not worry about what it looks like*; (2) *Allow yourself to have fun and take risks*; and (3) *There will be no critique*. This workshop spanned several class periods, so students journaled alongside their visual work. They reflected on their observations, fears, accomplishments, and journeys for each designed composition. Once students understood the process, they took the lead in executing their work. All final compositions were printed and assembled as a giant grid that showcased the entire studio collection of over 250 visualizations (Figure 11). As a final artefact, students assembled a process book synthesizing the entire project. While students thoroughly enjoy this project and are often proud of their outcomes, some still experience a disconnect in applying some learned design processes to prospective projects. In the future, it would be helpful to end the workshop with a collaborative reflection on what they learned about their personal process and how they might shift their approach.

Figure 11: Students assemble every composition into a grid on the studio wall.

Discussion

Design workshops have established themselves as indispensable tools in developing emerging designers, offering a unique environment that cultivates creativity and critical thinking. However, while these workshops provide numerous advantages, they also present certain challenges. In this section, we explore the strengths and weaknesses of design workshops, drawing from our case studies.

Design workshops excel in promoting an iterative approach to problem-solving, instilling in students a deeper understanding of design processes and fostering innovative outcomes. These workshops allow students to explore, experiment, and take risks without the fear of failure, allowing them to embrace the beauty of imperfection and the valuable lessons that can be drawn from "mistakes." Moreover, workshops challenge students to step out of their comfort zones, adapt to new and unexpected situations, and explore a diverse range of making methods, resulting in a more versatile approach to design.

The concept of vulnerability takes on a positive aspect in workshops, as students learn to share their work openly, inviting feedback and collaboration. This process often leads to more profound self-discovery and growth and an increased sense of ownership over their work, ultimately fueling a greater commitment to and passion for design. Furthermore, workshops encourage collaboration among students, fostering an environment of rich learning experiences and cultivation of a supportive, creative community.

However, not all students respond uniformly to the workshop format. Some individuals may require more concrete assignment descriptions to alleviate uncertainty, as the open-ended nature of workshops can lead to anxiety for those who seek structured, step-by-step instructions. Additionally, while workshops encourage independence, some students prefer more directed instruction from professors, seeking clear guidance and specific goals. A subset of students may also gravitate toward stricter feedback and evaluation criteria, finding the fluid and exploratory nature of workshops disorienting.

Furthermore, some students may resist experimenting or embracing unconventional ideas due to a focus on portfolio-worthy work. Design workshops are undeniably transformative, but it is essential to recognize that not all students respond to them similarly. To harness the full potential of these workshops, educators should strive to strike a balance, acknowledging and addressing their students' varying needs and preferences while fostering a culture of openness and adaptability.

Conclusion

The five case studies detailed here share the three previously outlined characteristics; ambiguous design, open-ended project prompts, and student-led education. In our experiences and observations of workshops, we see these characteristics as consistent qualities incorporated by educators that contribute to successful student learning. Furthermore, when these qualities are pillars of course design, the design workshop naturally emerges as the primary

pedagogical approach to the course. In this way, the design workshop as a “tool” represents a need for the future of design education and the discipline. These characteristics are tools for our course and project design in macro and micro fashion. They can be applied to the “big picture” approach to the course and the small exercises between projects, work days, and critiques.

Through this research, we aim to make a new contribution to the field of design education. In enhancing the pedagogical understanding of design education by delving into the intricate dynamics within design workshops, we shed light on their profound impact on the learning process. This in-depth comprehension of design workshops not only enriches the academic discourse but also equips educators and institutions with valuable insights for creating more effective and innovative curricula.

The case studies are a practical manifestation of the research findings, offering concrete evidence of the positive influence that design workshops can exert on students' creative development and overall educational experiences. These real-world examples provide a benchmark for educators and institutions to replicate and adapt successful strategies within their unique teaching contexts, fostering a culture of innovation in design education. The subsequent framework can be employed as a practical tool for designing, implementing, and assessing workshops, thereby aligning teaching strategies with the principles outlined. As educators, we recognize that this research is incomplete, and we hope to iterate upon the framework we've constructed as we continue to learn through our teaching.

Students often enter design programs with assumptions associated with tangible outputs and a capitalistic approach. Through workshops and a coordinating framework, we see an opportunity to encourage students to be more speculative, future-thinking, and empathetic. Because of the student-led nature of workshops, this pedagogical approach can break down power structures in both education and professional spaces.

In the future, we want to see the characteristics outlined in this paper described in greater detail so that they might be applied in broader educational contexts. We see the potential for these characteristics to serve as a measure or rubric for curriculum, course, and project planning and design. This is especially important as the demand for design education increases, and there is a greater need for consistency across programs and effective scaffolding within curriculums. We also hope to create a repository of design workshop case studies for further pedagogical reference. In the realm of iterative design education, there is a concerted effort to promote boundaryless and improvisational approaches, vital in shaping designed futures. We must harness our collective knowledge and encourage collaboration among institutions to achieve this.

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