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Where do we go from here? Rethinking the design studio after the COVID-19 pandemic

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Abstract: Five design educators apply a reflective framework to discuss the who, what, when, where, and why of the Design Studio, how it has been impacted by the COVID-19 pandemic, and the future of design education at North American universities. The educators are dispersed geographically across Canada and the United States and teach in public higher education. They have a working and reflection group that has met weekly or bi-weekly for 18 months to discuss and write about their practice as design educators. They began meeting virtually in 2020, in the midst of the pandemic. This paper is a distillation of the group's experiences and their vision regarding the future of the design studio.

Keywords: Covid-19; Design Studio; Inclusivity

1. Introduction

The COVID-19 pandemic has irrevocably altered how studio education is practiced; this is the result of the rapid pivots to online course delivery, social distancing and other disruptions created by the crisis. The studio environment has always been an essential part of design education. In this paper we consider the design studio's future, post-pandemic.

This paper is a collaboration of five design educators, a reflection on our experiences from 2020–2022 as part of Design Incubation's inaugural writing group. Since 2020, we have met weekly for two hours—reflecting and writing about our experiences as design educators.

These weekly meetings have led to joint publications, manuscripts, and conference presentations that have created opportunities to share our diverse design practices and educational contexts.

We are at various stages of our academic careers and teach in different types of design programs. One of us is in Canada and four are dispersed throughout the rural and urban U.S.



Though four of us teach in the U.S., three are non-U.S. citizens (thus have lived experience as immigrants) and have taught outside of the U.S. (in Canada and Trinidad and Tobago). Four of us teach in Graphic Design programs, with one teaching in a Design Studies program. We teach in degree programs ranging from two or four years. Four of our programs require a portfolio review for program entry, privileging learners with prior art or design knowledge—and excluding learners without. One institution welcomes any learner to enroll in courses and discover design. All of us teach in public institutions—publicly funded state universities in the U.S. have lower tuition costs than private universities and are more accessible to students from a variety of economic and social backgrounds.

Many students attending undergraduate design programs at these public U.S. institutions have less formal exposure to design knowledge and are first-generation college students. They are more likely to lag behind their peers (Fry, 2021). First-generation, immigrant, international, indigenous, and refugee learners face unique challenges in their academic journeys, including ELL (English language learner) challenges, documentation barriers to institutional access, lack of family support to navigate the experience, and others (Kanno & Varghese, 2010).

1.1 How we define studio (notwithstanding COVID-19)

The studio is one of the signature pedagogies of design education (Webster, 2004), long considered the best way to impart discipline-specific knowledge and prepare learners for professional life (Shulman, 2005). Our formative studio content has its inception in the Bauhaus in Weimar (Lerner, 2005). This notion of the design studio is problematic: it embodies the legacy of the master-student relationship of the Ecole des Beaux-Arts and the Bauhaus which, according to Crowther (2013), “favors coercion over dialogue”—the power relationship between teachers and students (Webster, 2004). And the skill-acquisition and project focus of the studio structure, lacking reflection of professional values, is not sufficient for optimal learning and developing expertise (Lawson & Dorst, 2009).

In contrast, we see the design studio classroom as a place for collaboration among teachers and students (Jones et al., 2021) in real time. The duration and focus of the work are designed to simulate real-world activity (Crowther, 2013). The design process blends many ways of thinking and making, continually shifting between analysis and creativity (Lawson & Dorst, 2009). Broadfoot and Bennett (2003), discuss Schön’s positioning of design as tacit dynamic knowledge—learned-by-doing through reflection *in* and *on* action. They suggest that the dialogue that takes place through these interactions is an important aspect of the studio environment: studio is a place where peers learn from and with each other and the teacher is more of a facilitator than top-down instructor.

Our philosophies and experiences align with Orr and Shreeve’s description of the studio as creating the conditions for three outcomes: knowledge (how it is gained through mental activities, social interactions, “embodied and encultured within creative practices”); values (values are applied to student work and are exchanged through discourse); and ambiguity (in

many situations design is about problem-finding which is ambiguous and leads to uncertainty—there is no single right answer) (Orr & Shreeve, 2017). These highlight the complex demands of studio pedagogy, such as; providing opportunities for interactions between peers, faculty and students; learners and faculty recognizing biases; and supporting student uncertainty. Learning design is experiential and transformative (Snow & van Kampen, 2015). Getting to know, trust, and support are all intrinsic to a productive studio experience.

1.2 COVID-19's Effect on the Studio

The continuing impacts of the pandemic brought further pressures to studio-based education (Jones & Lotz, 2021). Profound economic and resource disparities amongst learners were revealed as they were forced to learn online without access to institutional resources. Their own computers were inadequate and their Wi-Fi unreliable. Some shared devices, rooms, even desks with others learning online—“My desk is a TV tray and the corner of my bed,” said one student. They lacked scanners, printers, and other technology that studio courses provide. They could not afford software—initially Adobe provided assistance for “home school” relief, yet rescinded this access in late 2021 (Distance Learning Support for U.S. K12 Students, 2021).

Staying home meant increased domestic responsibilities. In one situation a mother contracted COVID-19 and was hospitalized, leaving her daughter, the student, as primary care-giver to her chronically ill sibling. Learners took on jobs or extended work schedules to support family members who fell sick and/or lost jobs. Some learners contended with complicated family dynamics that impacted their well-being or online participation (Browning et al., 2021). A study on the psychological impacts of COVID-19 among university students across seven states found that students felt lonely, unmotivated, anxious, and overwhelmed (Browning et al., 2021).

The pandemic exacerbated an already existent drop in college enrollments precipitated by a reduction in the number of college-aged individuals in the U.S. population (Nadworny, 2021). International students experienced difficulties continuing their education because of COVID-19 travel restrictions and did not return. Other students were slow to return, wanting either to remain online or to be fully in-person. Lower enrollment has impacted institutions' operating budgets (Hari et al., 2021) both in the present and for the next three to five years. Though enrollment is acknowledged as a generally variable factor, senior administrators can only use available information to make future policy and budget decisions (Day et al., 2021). These economic struggles felt by students cascade and have altered the demographics of the studio.

1.3 Our Methodology

Our methodology is an outgrowth of the challenges. We, like most design educators, faced teaching in virtual space during COVID-19. Most sessions of our group's online meetings

began with discussions about how we were coping with the pandemic in our various design programs and sharing our experiences. To codify these discussions, we adopted a who, what, when, where, and why framework to consider the future of design education. To minimize groupthink, we free-wrote our individual reflections in a shared document. Then we discussed our differing perspectives during our weekly meetings. We analyzed and organized our reflections in conjunction with existing literature into emergent themes.

2. Who is in the design studio?

2.1 Who is in the design studio?

Pre-COVID-19, key studio ‘actors’ were learners and instructors. But the virtual and socially distanced studio amplified our roles as facilitator and mediators, reflecting Webster’s ethnographic study defining the teacher as ‘the entertainer’, ‘the hegemonic overlord’ and ‘the liminal servant’ (Webster, 2004). Our reflections, examining the changes we noticed within our studios during the pandemic, converged on the themes of contracting, expanding and diversifying the actors within the studio.

2.2 Contracting

Our studios contracted during the pandemic: physical isolation and social distancing requirements undoubtedly changed the studios’ dynamics. We were accustomed to in-person experiences with movement, music, casual conversations, even food. Being masked in the studio, ‘social-distancing’, and remote learning made it challenging to maintain a sense of connection. We strained to hear people talking through their masks. We could no longer look over learners’ shoulders as they worked. It was difficult to get to know classmates virtually. Casual conversations and interactions now required much more intentionality and flexibility from both the instructor and learners.

Recording virtual sessions, while providing accessibility to those unable to attend due to illness or differences in learning needs, led to an expectation of recordings being routinely provided. This has adversely affected attendance, in-class participation and level of attention. Bandwidth limitations resulted in some students turning off their cameras. Others stay off-camera for privacy reasons. Not seeing each other leads to an atmosphere of anonymity that face-to-face classrooms do not allow, and faculty do not know if the students are even present or listening.

2.3 Expanding

At the same time, the pandemic expanded the studio. Platforms that allow for virtual connection enable the studio to welcome many people who were unable to join before. Our community has become global: visiting scholars, artists, designers, or learners join discussions and critiques in real-time from anywhere. The participation of many voices—the public impacted by the focus issue, guest lecturers from other schools, community residents, representatives from industry—enriches learner outcomes and decenters the instructor. We

hope the post-pandemic design studio will continue to include a greater diversity of voices, and continue to decenter a dominant instructor voice.

Peer-to-peer communication also exploded during the pandemic for students who felt highly motivated to create community even though it was virtual. Learners asked faculty to promote these opportunities, which we did, making explicit that these groups were learner-managed.

2.4 Diversifying

Unexpectedly, the pandemic diversified our studios. Pre-pandemic, students with disabilities could only receive accommodations by petitioning the institution. Online delivery methods used during the pandemic have increased access and equity for these learners. Where mobility was an issue, learners could now attend virtual studios. Learners with hearing disabilities gained greater access via captioned video conferencing calls and the ease with which sign language translators could also join instruction.

The impact of the pandemic on communities of color and the racial unrest of summer 2020 in the U.S., sparked by the murders of George Floyd, Breonna Taylor and Ahmaud Arbery created a heightened awareness of racial and social inequity to be reckoned with at all levels of society (Altman, 2020), including the public university and subsequently the design studio. This unrest created a greater awareness of the need to decenter the default of whiteness in the design studio. This meant that themes of equity, racial and social justice were brought into design assignments, more focus was given to inclusion in terms of the experience of students of color, as well as a more concerted attempt to highlight the work of designers of color. Technology-mediated participation in the studio, as mentioned in the section above, made it possible for diverse groups to participate more easily and with less demand on their time.

3. What content is in the design studio?

The influence of the Bauhaus and other early European design studio education continues to drive design curriculum around the world (Ferreira et al., 2016). While many design programs still structure coursework around a base of formal and material experiences (Broadfoot & Bennett, 2003), this route—overlooking the ultimate human impacts from the design process—will not lead us into fully responsible design practice.

What will get us there is de-emphasizing the creation of artifacts for an invented demand, focusing on identifying needs, and originating projects and acting with other people to create change. While Prakash rightly notes that service-learning in design can lead to potential positive influence on “responsible commerce and citizenry,” the next step is to move beyond the formal skill set considered sufficient in the past (Prakash, 2011) and develop skills such as “empathic awareness, learning how to leverage assets in other people, negotiation skills, outreach and engagement, collecting community feedback, cultural and community exchange” (Girardy & van Kampen, 2021).

“Design education is inherently and deeply emergent and constructivist: it is dependent on circumstances and contexts that change what we do as designers as well as *how* we do things” (Jones & Lotz, 2021). The pandemic, as a global and present reality, accelerated our development of projects that centered learners’ lived-experiences and empowered them to be content experts and research leaders. For example, we have introduced assignments that challenge students to address the pandemic through social innovation, public service campaigns, and speculative design solutions.

We are working to shift learners from external to internal agency. Increased self-awareness is a positive move away from the instructor-centric or “banking model” (Freire, 1994) of education. Akin to the ways in which Finlay advocates for reflexive subjectivity as an asset in research, engaged design practice involves positionality and reflexivity (Finlay, 1998). We encourage students “to reflect on the values, attitudes and assumptions they have carefully to negotiate power relations and methods during the design process” (Schiffer, 2020). We endeavor to make it possible for learners to bring their entire selves into the studio by moving away from the power dynamics of the master apprentice model (Gray, 2013) and by creating assignments that allow for lived-experience to inform outcomes (van Kampen, 2021).

The design studio can respond quickly and nimbly to the social and political context, as we have seen design educators and researchers also respond rapidly to expand the design history canon as traditionally taught in the U.S. (which has excluded most women, most people of color, and most designers outside the U.S. and Europe). Expanded design histories include participatory virtual collections like *The People’s Graphic Design Archive* (Mungia, 2021) and courses like *Black Design in America* (Griffith, 2021) and *Latinx Design in America* (Polymode, 2021), offered by Polymode, a graphic design studio in California and North Carolina, USA, led by Silas Munro and Brian Johnson and anthologies like *The Black Experience in Design* (Berry et al., 2022).

This research, in turn, influences the design studio and collaborative projects. For example, in Strube’s Graphic Design Theory course, learners use the design process to understand, define, and communicate the needs of specific groups within social and cultural systems, including race or gender in/equality, healthcare or education reform, housing or food in/security; and climate or ecological change. Supportive work in sociology, political science, communication, psychology, women, gender/sexuality studies, and the history of BIPOC communities is more important than the art history courses still required in many design programs.

Other ways in which we have intentionally created safer spaces for learners to bring their whole selves into studio include using pronouns in screen names, foregrounding positionality as part of our projects, building, over time, an atmosphere in which students can share moments of vulnerability and discomfort, fostering greater student agency and creating classes that are focused on justice and equity. Moments that shape personal responsibility and ethos can be transformative.

4. When and where does the design studio happen?

Design studio participation is a phenomenon in which time and place are inextricably tied by a matter of consciousness. Education expert Patrick M. Jenlink describes this consciousness as a form of conversation that enables our species to transcend existing systems through communicative and emancipatory actions. As such, design conversation relies on discourses that are democratizing and authentically participatory. Design conversation creates social spaces within which participants' voices are valued, listened to, and have an influence on the conceptions and actions necessary for designing a new system (Jenlink, 2008).

4.1 When does the studio happen?

The studio is a unique space for conscious physical or intellectual participation. Thus, studio happens when learners participate. Off- or on-line, studio happens when consciousness drives material inquiry (Radzikowska et al., 2019) or a 'journey of discovery' (Jones & Lloyd, 2013) aimed at personal development. While this personal development is a constant of the studio, it may change from project to project or even from phase to phase. Learners may continually define their material needs or their experiential direction. However, the studio remains constant in providing access to material and conceptual knowledge.

4.2 Material access

Studios provide material access. At our institutions, many learners come from economically or academically disadvantaged contexts. Simply being enrolled in higher education is a successful accomplishment. Yet, this enrollment creates new needs, and for most, their economic situation does not improve in the short-term. Course fees and institutional infrastructure provide access to physical materials that range from paper and X-acto knives, to hardware, software, or network connectivity to 3-D and Risograph printers, laser cutters, or VR headsets. The design studio provides centralized access that helps mitigate economic differences between students.

4.3 Research support

Material access meets one set of needs that arise with participation. By also providing a space for research, the studio expands to provide a touchpoint for learners' intellectual participation.

For example, in a project entitled *The Kids Are Alright with Voting: A Case Study in Using Mobile Devices as Ethnographic Research Tools*, learners sought to understand why the American youth (ages 18–29) are the least engaged voting bloc in the U.S. Learners performed collective interviews and pooled data to understand peer motivations. Learners then collectively identified areas of opportunity from the shared data. Finally, learners individually proposed solutions to their chosen opportunity (Strube, 2020). It is important to understand that learners could not complete this task individually; it required collective conversations. As design problems become more complex, the studio can provide a space

for learners to consciously participate in these vital conversations. This is powerful because it demonstrates how they can use design strategies, systems, or products to create conditions for change.

4.4 Collective expertise

Designers have become increasingly ‘T’ shaped, with strengths in two dimensions—general task or content knowledge across the horizontal axis, and deep technical skill or specific knowledge along the vertical axis. IDEO’s Tim Brown, who leveraged the term coined by McKinsey & Company, explains how this is also reflective of professional practice: “A creative organization is constantly on the lookout for people with the capacity and—just as important—the disposition for collaboration across disciplines. ... In an interdisciplinary team there is collective ownership of ideas and everybody takes responsibility for them” (Brown, 2009).

In the studio learners gain experience in the generation of collective expertise and maximize this knowledge to explore and execute solutions. This primary function of the studio endures: it remains a space where learners can ‘talk it out’, whether through formal critique, technical troubleshooting or strategic workshopping.

4.5 Where does the studio happen?

While art and design studio education have existed for thousands of years (Gongkai & Qing, 2018) and virtual studios have existed for many years (Jones et al., 2021) the pandemic interrupted the in-person studio experience that our learners were largely accustomed to. This caused a rapid change in priorities and provoked new questions and phenomena (Gray, 2021, Noel, 2021, Delen et al., 2021).

Ordinarily, the physical studio comprises multiple mini-environments: individual, collaborative, social and technological. It supports the pleasure and emotional needs of learners with regard to aesthetics, acoustics, collaboration, faculty interaction, sociability, and stewardship (Scupelli & Hanington, 2014). Our challenge during the first two years of the pandemic was how to translate the in-person experience online. As Jones (2021) noted, comparing the in-person and virtual studio is not an easy matter. Nor is translating the in-person experience to the virtual environment.

Experiential learning in the pre-pandemic in-person studios, including the ones we taught, requires studio pedagogy, social dynamics, and ideals and expectations (Groat & Ahrentzen, 1996). It encompasses hard skills through project-based learning and engaging physical materials, and soft skills through participatory research, iterative thinking, and active engagement with others.

Virtual learning fell short in developing soft skills. Other educators who have noted this phenomenon include Corazzo and Gharib (2021), whose ethnographic study of the design studio pre- and during the pandemic promotes the virtues of an informal studio. They assert

that social interaction is a necessary part of the design process and that distance settings, lacking the informality of the physical studio, hindered these functions.

In Fall 2021, many educators and learners returned to the design studio. We had finally become comfortable in the virtual studio, but now had to navigate the benefits and downsides of a changed in-person setting and a new hybrid space.

4.6 Online

Virtual studios lowered or eliminated some barriers to participation and were asynchronous or synchronous depending on content. Virtual participation, however, required that participants had sufficient bandwidth and technology to execute many activities. The virtual studio space facilitated:

- **Technology-centered actions:** including reading, writing, coding, photo-editing, formal (digital) exploration, presentations, group digital whiteboards, etc.
- **Participation of guests and speakers:** Interaction with global experts was facilitated and recorded synchronously, then shared asynchronously with those unable to attend.
- **Individual guidance and discussions:** One-on-one discussions, student advising, or directive discussions happened at the convenience of the instructor and learner.
- **Personal or collective reflections:** Learners reflected individually and collectively and could react to these reflections through learning management systems and digital whiteboards.

4.7 Hybrid (combination of online and in-person)

Resuming in-person activities led to more hybrid learning spaces. Combining online and in-person activities was messy and at times unsatisfactory, but we found that hybridity facilitated:

- **External partner communication:** Community members, guests or speakers could easily join synchronously or asynchronously.
- **Access for at-risk groups:** The pandemic facilitated remote access to previously excluded groups including people with disabilities and students who work, are parenting, or are caregivers. Hybridity continued to provide access to these groups, as well as the immunocompromised.

4.8 Alternative spaces

Throughout the pandemic, we longed for alternative spaces. Difficult to create virtually, these are vital if learners are to thrive. The alternative design studio spaces we yearned for include:

- **The community-led studio:** in which questions are driven by community members at every stage—editing the question, co-designing research processes, generating design ideas, and providing feedback.
- **The institution-based design studio:** co-creation with community businesses, organizations, or movements to simulate professional design practice. Co-creation often requires relational investment from educators to establish credible institutional investment and output.
- **Co-working spaces, design charrettes, hackathons:** spaces that bring together researchers, designers, content experts, community members, and learners (Costanza-Chock, 2020). Whether organized as a design sprint or a long-term relationship, these activities activate expertise and exchange knowledge in an equitable manner.

5. Where do we go from here: Why and how does the design studio matter?

From its inception, the essence of studio education was the creation of an exploratory space in which to learn to use tools, to make and play and try things out, to iterate, and reiterate. Parallel to these practical attributes, and essential to contemporary practice, learners collaborate, gain soft skills, and begin to trust the design process. The studio structure remains relevant even as the focus of design education is passionately debated and the practices designers engage in continue to emerge.

5.1 Discussion

Corrazzo and Gharib's (2021) ethnographic study of the pre-pandemic physical studio and the pandemic virtual studio, reflected on the dichotomy of formal and informal design pedagogy. The informality of a physical studio, of dialogue, debate, banter, just-in-time peer critiques, and creative leadership was constrained or missing in distance settings. They define the functions of the informal studio as the social studio (collaborative and safe), the comparative studio (peer observation), the organizational studio (project management), the processual studio (creating in other spaces) and the performative studio (identifying as designers).

This resonates with our experiences teaching and learning during the COVID-19 pandemic. Through the lens of knowledge, values and ambiguity (Orr & Shreeve, 2017) and our own lived experiences, we position the contemporary design studio as a construct embodying change, empathy and agency, resilience, accessibility, trust, and iteration. What we have

collectively articulated in this paper is essentially an extension of these informal studio learning functions and in some cases, validation. These are its features:

The change maker studio

Design educators are facilitators, mediators, co-creators, learners and leaders within ever-changing contexts which include the pandemic, which has contracted, expanded and diversified design studio participants.

The empathetic studio

By valuing lived experiences to inform outcomes, learner agency has been included in studio learning. The empathetic studio identifies needs, engages in community-led practice, and is responsive to current contexts.

The resilient studio

Design projects require that learners engage processes deliberately. These include research, collective conversation, collaboration, participation, debate, making, and the development of design deliverables through equitable material access. Just-in-time adaptability makes it possible to pivot across virtual, social and physical design studios.

The accessible studio:

Virtual, physical and social spaces are enabled by the capacity of conversation to create social spaces, give voice, and promote inclusion—in any context.

The trusted studio

Studio-based education holds immense potential for integrated learning in a safe ecological framework. A sense of collaboration and trust lead to design conversations that are democratizing and authentically participative. When working with collaborators inside and outside the studio, reflection on process, lived experiences, and outcomes help refine the voice and delivery of various perspectives and projects.

The iterative studio

Studio demands we explore ideas through prototyping. Donald Schön describes graphic designers as applying both tacit and explicit knowledge in their work. He defines design as “making”, as opposed to problem-solving, suggesting that “designing triggers awareness of new criteria for design” and “problem-solving triggers problem setting” (Schön, 1988 p.182). Following through and giving an idea a workout regardless of outcome, creates knowledge. Learners produce work that is deeper when they are engaged in a design process.

6. Closing

Almost two years since the pandemic started, the authors have returned to the physical studio, experiencing the exhilaration (and sometimes the anxiety) of in-person learning with and without masks. The need for tactility and human connection was undiminished. The pandemic may come to exemplify what design is for: coming to grips with what doesn't work and trying to improve matters from within the studio outward. Everything enfolded into the studio structure continues to evolve.

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