

Making the Studio Smaller

James Benedict Brown, Umeå University, Sweden

Abstract

The studio is a space apart in the university, an environment unique to creative and design disciplines. As we emerge into the pre-dawn light of the post-COVID era, we should use the insight gained from the pandemic to speculate about the future. This article invites the reader to speculate about the possibility of a smaller design studio in architectural education: one that is smaller in its spatial, temporal, pedagogical and cultural dimensions. What if, instead of demonstrating the plurality of architectural practice through the breadth and diversity of elective studio 'units', we reduce the scope of design courses to create space for others?

Keywords

architecture, architectural education, design studio, pedagogy

Introduction

The studio is a space apart in the university, an environment unique to creative and design disciplines. As we emerge into the pre-dawn light of the post-COVID era, we should use the insight gained from the pandemic to speculate about the future. This article is concerned with the design studio in architectural education, a peculiar inheritance from the nineteenth century *École des Beaux-Arts* and the pre-university era of office-based apprenticeship. After a century and a half teaching architecture in the studio, the COVID years have given us a glimpse of how design disciplines might be taught without it. For decades, design educators have defended studio learning. Rarely have they engaged pedagogically with the possibility of a smaller studio, not only in its spatial dimensions, but also the temporal, pedagogical and cultural. This paper does not speculate for or against the existence of the studio but asks the reader to imagine what might happen if we make the studio - in all dimensions - smaller.

What Do We Mean When We Talk About Studio?

The article adopts an operative methodology that starts from the middle, immediately outwards from the author's own lived experience of the design studio towards literature and data, before resuming with speculation. This requires a willingness to engage in methods that are neither exclusively empirical nor theoretical. It invokes a so-called "structure of feeling" (Vermeulen & Van Den Akker; Williams & Orrom, 1954) that oscillates between the oppositional poles of modern thought and postmodern feeling, so as to better understand the historical, cultural and affective elements of design education. Much of the author's professional upbringing in architectural education - undergraduate studies from 2001, graduate studies from 2006 and teaching since 2012 - has taken place against the backdrop of a growing awareness of the limitations and faults of the design studio: the site *par excellence* for the perpetuation of a hidden curriculum that prejudices certain individuals and groups, inculcating negative behaviours, attitudes and value systems including but not limited to racism, sexism and ableism (Banham, 1997; Brown, 2012; Datta, 2007; Dutton, 1987; Groat & Ahrentzen, 1996; Salama & El-Attar, 2010; Stevens, 2002; Stratigakos, 2016; Webster, 2008).

The most common response to these critiques has been the redoubling of efforts to improve the design studio: more inclusive, more representative, more democratic etc. (Boyer & Mitgang, 1996). These efforts, while important, are akin to rearranging deck chairs on the Titanic, focusing far more on problem symptoms instead of addressing underlying problem causes. Few propose to replace the studio with something altogether different. Society is facing massive problems like the climate emergency, continued structural racial division, political polarisation, and the consequences of the COVID-19 pandemic. In order to recalibrate design curricula around these challenges, we must do more than just improve what we have been doing. Peggy Deamer argues that we must now work to de-centre the studio (Deamer & Levinson, 2020). There is still no architecture school in the world that has reorganized itself or its curriculum to address pressing global issues such as precarious employment, income inequalities, housing shortages, global warming, and the perpetuation of white supremacism. Individual design studio units that take one or more of these problems as their intellectual agenda *du jour* are not enough.

The Design Studio in Literature

It is apposite to review the literature relating to the design studio in architecture. A literature search was conducted of one of the most highly-ranked and highly-cited English-language journals in this field.¹ The search sought every instance of the word 'studio' in the article titles from 1971 to 2021.² Removing duplicates, editorials, prologues, reviews and interviews with practitioners who use the word 'studio' in the name of their practice, the remaining articles were cross-referenced with a Google Scholar citation count to get an impression of the relative influence of these articles. In terms of citations, and therefore influence on the academic discourse of design studio in architectural education, are two texts by Donald Schön: *The architectural studio as an exemplar of education for reflection-in-action* (Schön, 1984) and *Toward a marriage of artistry & applied science in the architectural design studio* (Schön, 1988). They present an attitude "...so often quoted because it supports the status quo, and since that support comes from a distinguished outsider it gives it a special credence" (Till, 2003, p. 167). Both articles are related to Schön's book *The design studio: an exploration of its traditions and potential* (Schön, 1985) and were influenced by the second-hand study of a one-to-one tutorial between a tutor and an architecture student, which became the basis for Schön's argument that design studio education is a demonstration of a kind of mastery-in-action.

A critical reading of design studio pedagogy is presented by the next-most cited single text. Thomas Dutton's 'Design and Studio Pedagogy' (Dutton, 1987) introduces the theoretical framework of the hidden curriculum as a means of analysing the design studio, in which the selection of knowledge and the ways in which social relations are structured to distribute such knowledge are influenced by practices of power in wider society. Dutton's critique highlights

¹ *Journal of Architectural Education* (Print ISSN: 1046-4883 Online ISSN: 1531-314X). Published twice annually by the Association of Collegiate School of Architecture (ACSA) in the United States of America since 1947.

² Using the search string: "[Publication Title: studio] AND [in Journal: Journal of Architectural Education] AND [Publication Date: (01/01/1971 TO 31/12/2021)]"

the role of the design studio in the perpetuation of asymmetrical power relations and proposes instead an alternative transformative pedagogy.

In a similar vein, we find an article by Garry Stevens (Stevens, 1995). It previews the arguments laid out in his later book *The Favored Circle* (Stevens, 2002). Stevens delineates the practices of socialization that lie beneath the apparently professional and vocational training in the design studio, highlighting how it favours certain students from certain backgrounds at the expense of others.

Of significant influence amongst these highly-cited papers on the design studio is also Stefani Ledewitz's article 'Models of design in studio teaching' (Ledewitz, 1985). Written at a time when Donald Schön's theories of reflection-in-action were gaining in popularity, Ledewitz proposes a framework for teaching design that clarifies the common misunderstandings of what happens in studio. Citing Schön, she writes:

"The lack of clarity over the purpose and effectiveness of the design studio reflects its complexity as a teaching/learning setting. It is characterized by multiple and sometimes contradictory goals, implicit theories, and inherent conditions of 'inexpressibility, vagueness, and ambiguity.' It also reflects the heavy pedagogical responsibility the studio carries in architectural education" (Ledewitz, 1985, p.2).

Ledewitz refers a characteristic of the design studio that continues to define it today: the "heavy pedagogical responsibility" it carries: the site of synthesis and syncretisation, the meeting in one place of all of the different strands of the discipline.

These five highly influential texts from just one journal capture a snapshot of the most important pedagogical discourses about the design studio in architectural education. Reading across Schön's problematic³ reading of the design studio, Dutton and Stevens' respective interrogations of its power structures, and Ledewitz's speculation about how we might more lucidly articulate the implicit content of design education, we see that pedagogical interrogations of the design studio have largely focused on demystifying a complex and opaque learning environment. Yet most of these texts are now forty years old. It is not just their age that explains their continued prominence in the academic discourse around architectural education. They are still being cited precisely because they describe matters that remain prescient to educators today.

The model of the design studio in architectural education originates most clearly in the two-hundred-year old *École des Beaux-Arts* in France, the nearly century-old Bauhaus in Germany, and its contemporary the *Vkhutemas* in Russia. The spatial, temporal, pedagogical and cultural touchstones of our studio lie in a world that is very different from the one we inhabit today. Why are we so stuck with something that we're so dissatisfied with? In the fallout from the

³ Helena Webster (Webster, 2008, 69) takes issue that Schön's narrative interpretation of the interaction between teacher and student was, in fact, derived from a second-hand interpretation of another's researcher's transcript (Webster, 2008, 69; after (Schön, 1985, p. 99)). Webster also highlights the epistemological flaws in Schön's argument, namely that he provides no evidence the student has actually learned anything from the apparent demonstration of an individual's mastery in a one-to-one tutorial.

pandemic, we demonstrated our capacity for change. The closure of campuses showed that we are capable of massive structural change. It obliged us not only to change our teaching methodologies, but also to articulate what is so important about our teaching practice. I have proposed elsewhere that the COVID-19 closure of campuses might allow us to better understand the studio through four characteristic dimensions derived from Schön's four learning constructs (Brown, 2020). These four dimensions are:

- the studio as a physical space in the university;
- the studio as a period of time in the calendar;
- the studio as a field of pedagogy;
- the studio as a culture.

If we are to respond to Deamer's call to de-centre the studio, we must do so through all four of these characteristic dimensions.

A Speculation

In the COVID years, we have been forced to imagine a different future, one in which we might never go back to the university campus and the design studio full-time, or in the number, frequency or density we have become accustomed to. In parallel with the pandemic, we have had a glimpse of alternative responses to other major societal problems. Globally, as the climate emergency worsens and popular awareness of the human effect on climate change becomes more informed, the pandemic has given us the chance to consider how it might be possible to work and play with less long-distance travel. In the USA, the breaking point of institutional violence against African American people has made popular the rallying call to defund policing and reallocate resources to education, housing, welfare, and healthcare instead. None of these fights has yet been won, but for the first time in a generation, the possibility of a different future is at least being speculated.

As we plan to return to the university campus and to the design studio, it seems apposite to speculate that there might be a better balance. As interrogations of late capitalism become stronger, what if we stop thinking about expanding or improving what already exists. If we can go back to the studio in the coming months and years, perhaps with new regulations about the capacity and occupational density of such spaces, it seems appropriate to ask what might happen if we make the studio smaller. What follows are four polemical speculations intended to invite the reader - whether they are a student, teacher, or manager - to consider how they might make their own studio smaller. The provocations are written from the point of view of architectural education but may be interpreted for any discipline.

A Smaller Space

Of all four dimensions suggested in this article, the studio is first and foremost a physical space. But that physical space is not a given: virtual design studios have existed in distance learning programmes for decades, not least in architectural education where teachers have recognised that providing students with a digital space to identify themselves can serve to achieve a sense of concretization (Strojan & Mullins, 2002).

The last three decades have witnessed significant growth in participation in higher education worldwide. In architectural education, the consequences have included larger class sizes, fewer

contact hours, and changed student expectations according to increased financial pressure (McLaughlan & Chatterjee, 2020). The studio is already a site of conflict between the competing interests of educators and university management. Many universities, especially those that have marketized (such as in the UK), have been subject to detailed economic analyses of the costs and benefits of providing students with a dedicated learning environment. While the provision of a desk for every student to occupy throughout their studies was commonplace at the turn of the century, many schools of architecture have moved to a hot-desk model (Cai & Khan, 2010). Students are invited to inhabit the studio for only limited periods of time. For teachers defending the costly requirement of a desk in the design studio for every student, one immediate fear in the aftermath of COVID-19 was that online teaching would prove to university managers that we did not need an expensive physical space.

The closure of campuses also prompted students to interrogate what it is about the physical space of the design studio that they value. In a survey of 798 architecture students taken between May and June 2020, 58% reported lower satisfaction with their learning experience following the move online, 79% said the sense of studio community had been negatively affected and only 7% of students preferred online teaching to in-person (Grover & Wright, 2020). The responses from teachers, however, has been more widespread, but amongst architecture educators there is anecdotal evidence that a return to the physical studio cannot come soon enough (Jandrić et al., 2020). Asking if the design studio could be smaller is anathema to many design educators. Yet many teachers continue to promote Richard Buckminster Fuller's credo that we can "do more with less" and Ludwig Mies van der Rohe's dictum that "less is more": by reducing the components of a whole to the absolute minimum we can achieve some kind of clarity.⁴ Rather than interpreting these credos as aesthetic challenges, what if we turn them into pedagogical inspiration? Instead of being imposed upon by bureaucratic imperatives to reduce overheads, what if we seize the opportunity for a smaller physical studio in pursuit of a simpler, cleaner and more efficient space?

Students, teachers and institutions that hot-desk cannot avoid the problem of storage. Students cannot allow their work (or waste) to pile up around them. An awareness of the material volume of architectural production is unavoidable. When making way for someone else or when taking the bus, bicycle or car home, students have to confront the scale of their drawings, models and experiments. Making the studio physically smaller has the potential to provoke an awareness of the mass of material that normative studio pedagogies consume. In 2019, my department (an architecture school with around 250 students and around 40 teachers and staff) produced tens of thousands of kilograms of non-recyclable waste. All of it was sent for incineration, including hundreds of kilos of non-recyclable extruded polystyrene insulation, used to make the formwork for a first-year exercise in plaster casting. In many universities, this habit extends into the sanctioned (or required) use of card-encapsulated foam-board, an equally unrecyclable material. For a discipline that is so implicated in the creation of carbon emissions through the construction and use of buildings, it seems profoundly hypocritical to propagate a design culture founded on the excessive consumption of materials.

This first of four arguments to reduce the size of the studio is not to deny the pedagogical benefits of experimentation through drawing and modelling, especially in beginning design

⁴ Even if van der Rohe famous achieved this aesthetic by designing purely decorative I-beams on countless façades.

courses. If the reader were to conceive of their own studio, how might it be re-shaped in such a way as to confront the contradictions between our pedagogical traditions and our ever more pressing environmental obligations? What if, rather than fighting the marketized-university's demands to increase the quantitative capacity of our teaching spaces, the reader imagines a smaller studio not shaped by managerial calculations but by a pedagogical intention to explore design by doing more with less?



Figure 1. *Stacks of non-recyclable extruded polystyrene insulation, waiting to be used for a model-making exercise in the author's institution.*

A Smaller Amount of Time

The European Credit Transfer System (ECTS) provides a structure for the calculation of academic credit and study time in the European Union (EU) member states. An academic year of full-time study at a higher education institution in the EU carries 60 ECTS credits, which is understood to represent a student workload of 1,500 to 1,800 hours per year, with one credit corresponding to 25-30 hours of study (European Commission, 2015). For want of a better system, the ECTS rule of thumb regarding credits and study hours remains (like the fuel consumption testing of cars) an imperfect but functional mechanism for estimating and comparing the workloads we place on students.

In the United Kingdom, the professional bodies charged with validating architecture degrees require that fifty per cent of credits (and therefore study hours) are delivered through design studio projects. If we assume that an architecture student in the UK studies for 1,800 hours a year, she is expected to spend at least 900 hours studying in the design studio. The studio has a

great potential as syncretic learning space through which other aspects of a curriculum can be synthesized with design, but the consequence of this interpretation of regulatory and professional guidance is not only that a student must spend half their time working on design projects, but also that they must spend half their time working on everything else.

The proportion of time allocated to the act of design in architectural education is, perhaps, a misrepresentation of the realities of professional practice: few architects are lucky enough to spend half of their working hours in the act of designing buildings. And since architects tend to agree that their practice is one of lifelong learning, why do we allocate so many study hours in education to learning to design?⁵ It can of course be argued that fifty per cent is not enough credits for teaching design and that other subjects should be taught in the studio instead of the lecture hall to better integrate them (Gelernter, 1988).

Recalling Deamer's appeal to re-centre architectural education around global societal issues, what might the reader's studio look like if the number of hours we expect student to spend working on design studio projects was deliberately reduced? What if, instead of trying to maximise the number of hours spent learning how to design, the reader was to create curriculum in their own courses that orienting students towards a lifetime of continual learning in practice? What if opening up the curriculum allowed students to either study electives or an expanded architectural curriculum developing their expanded professional competencies in areas such as business, economics, sociology and the environment?

Smaller Pedagogies

Advocates for the status quo in the studio celebrate the broad field of pedagogical method that it accommodates. Alvin Boyarsky's vision at the Architectural Association in London in the 1970s and 1980s as a "well-laid table" (Sunwoo, 2013) of different studio options set the model for postmodern architectural education. Within the larger studio sit smaller units in which teachers take responsibility for interpreting common learning outcomes through their own thematic lens. Boyarsky abandoned the horizontal design curriculum to invite teachers employed on annual contracts to propose vertical studios, aligning the school's operation with the logic of late capitalism. This created a pseudo-marketplace of consumer choice, giving students the opportunity to choose a thematic pathway and giving management the right to dismiss any staff that the market decided unappealing. While more critical architecture educators use the framework of the elective design unit to deliver high quality teaching informed by educational theory and political agenda (including collaborative workshops, peer-to-peer learning, blends of asynchronous and synchronous teaching, flipped classrooms, experiential learning or live projects), in many institutions survives the kind of studio where students endure the banking model of education acquired by the tutor when s/he was a student (Freire, 1987). The expert-novice relationship theorised by Donald Schön perseveres, where in the realm of student feedback the personality of the tutors becomes more important than the thematic focus or intellectual rigour of the studio.

By developing the concept of the studio as consumer-driven marketplace, Alvin Boyarsky ushered in an era of immense plurality. As a consequence, it reinforced the master-apprentice

⁵ An indication of the prolonged learning curve of an architect is *Building Design* magazine's 'Young Architect of the Year Award', which accepts entrants up to the age of 40.

relationship, leading students to choose tutors as if they were choosing a brand of toothpaste according to marketing or word-of-mouth feedback. A programme of elective studio units, when viewed from above, gives the impression of a diverse school with competing worldviews. At ground level, the experience of an individual student who chooses the “wrong” unit will be no different from a bad apprenticeship a hundred and fifty years ago.

If the reader is located in an institution with Boyarskian units, what might replace it? How might pedagogies that are smaller in number but broader in scope serve your curriculum? How might students seek out and find the expertise most appropriate to any given need? How might we re-imagine the original conception of the École des Beaux-Arts architectural atelier, namely an environment founded by students and not by teachers?

Smaller Cultures, but More of Them

If we imagine a studio that is pedagogically smaller, might it also consequently become culturally smaller? Of the three dimensions considered in this article, this is the most abstract and polemical speculation, but it recognises that the architectural design studio has long been known to be a powerful site of cultural reproduction, one in which the individual cultural capital of students can have a critical bearing on their academic success. Garry Stevens writes how:

“One can succeed more easily [in architectural education] if one is already halfway successful. The design studio, by relying so much on the presentation of the self to those who will assess the self, favors those who come to architecture already knowing some of the strategies of the game of culture” (Stevens, 2002).

What if, instead of trying to correct these prejudices, we dramatically reduce the scope of the architecture design studio’s dominant culture? Attempts to address the faults of design studio have tended to focus on increasing its cultural diversity through the appointment and promotion of more women and people of minority ethnic backgrounds, and the inclusion of non-white non-male non-western texts and precedents into curricula. It is not the responsibility of minorities to deconstruct the racism of others (Eddo-Lodge, 2020; Oluo, 2019). Such gestures inevitably place the responsibility of diversifying the culture of studio not on those who have created a monocultural studio in the first place, but on those minorities who are attempting to break into it. It becomes an illegitimate diametric in which minority cultural interests are structurally disadvantaged.

What if the reader conceived of their own design studio in which the predominant design culture is reduced in scope so as to make room for others? How you might the reader imagine their studio in a way that does not place minority and majority cultural characteristics in opposition to one another? How might live projects, fieldwork or even study abroad begin to expose students to cultural otherness?

The Studio in the Marketized University

“A question central to the education debate ... is whether education is still a public good or whether it contributes to the development of society as opposed to the development of individuals ...” (Natale & Doran, 2012, p. 188).

Against these four dimensions of the design studio, we must pay special consideration to the totalizing effects of the marketization of higher education. This affects students through the transfer of the financial burden of education from the state to the individual: graduates leave university with tens, even hundreds, of thousands of pounds of debt which must be repaid through taxation or other means. This financial burden has the effect of extending the reach of one's working life deep into secondary education, where children and teenagers make decisions about their education in order to secure a pathway to an economically profitable role in the workplace.

The marketization of higher education affects teachers as well, and in architectural education it leads to the peculiar reshaping of the design studio. For staff employed on contracts that require research outputs, the research potential of the design studio has begun to be exploited in pursuit of what British academics now often call "REF-able" research.⁶ The research design studio centres on the invocation of analysis rather than design as a method, aiming for not only for speculative designs, but also publication or exhibition of those analyses and designs as a result (Varnelis, 2007). The research studio offers an "imperfect method for integrating architecture's public responsibilities with its intensely private creative processes and products" (Salomon, 2011, p. 33) but "the symbiotic relationship between teaching and research practice often results in student abuse, that is, a practice or custom corrupted by the improper or excessive use and treatment of students." (McClure, 2007, p. 73) McClure continues:

"The ugly practice of engaging students to do personal research while disguising it as 'coursework' devalues students' contributions to the professional environment. When students labor for one's individual agenda, they are working for you. Even if one sees them as apprentices, 'one who is learning by practical experience under skilled workers a trade, art, or calling,' they are working for you" (McClure, 2007, p. 75).

Students and teachers alike are subject to the same mechanisms of economic production. While the research studio can produce critical students, it can also be the site of exploitation in pursuit of academic capital. Academics who are contractually obliged to publish research while also taking on ever-greater teaching loads risk treating the design studio as a means to generate intellectual property, either in the research undertaken by students or the imagery produced as part of their studies.

The consequences of these economic mechanisms go far beyond the student and teacher. Many universities are heavily indebted. Student housing is now an investment vehicle, and just as campuses have stood empty throughout the pandemic, so vacant student apartments are exposing both individual and corporate investors to extreme financial stress. Everyone in the marketized university is subject to the capitalist narrative of limitless growth. While advocates of design studio pedagogy are all too familiar with the need to resist the reduction of teaching resources, to discuss the possibility of a smaller studio is a means to counteract the unsustainable model of perpetual growth in higher education.

⁶ The Research Excellence Framework (REF) is the national mechanism by which the quality of university-produced research is assessed, and by which central research funding is allocated to institutions.

Conclusion

Changing the direction of architectural education is akin to changing the direction of an ocean liner. It is difficult to predict what innovations will shape our profession. It will be ten years before our first-year students can spread their professional wings. Herein lies a fundamental challenge. Architectural education is still adhering to structures that were formed in the eighteenth and nineteenth centuries. Teachers, especially those drawn from practice and denied the pedagogical training opportunities of tenured staff, tend to teach in the same ways that they themselves were taught. Yet we are now facing global crises on an unprecedented scale, in which the construction and operation of buildings produce one third of all carbon emissions. Given the scale of the environmental and societal challenges ahead of us, what if instead of trying to do more with studio, we try to do less? This is not an appeal to weaken or diminish the role of design, but to recognise that becoming masterful at the act of designing buildings is a lifelong endeavour, one that requires an incredible diversity of skills and knowledge. We cannot rely on the Boyarskian marketized model of elective design units to give all our students an equal experience of the breadth of approaches to design.

For students and teachers alike, the closure of campuses brought the design studio into the home. It exposed the absurdities of our pedagogical methods. The material detritus of iterative design courses was moved into the bedroom, kitchen and living room.

We know now that we are capable of a hard reset. In the COVID-19 years, we have demonstrated collectively our ability to adapt quickly and dramatically and to form meaningful and powerful networks that span countries and time zones. There is now a chance to look beyond the questions we have attempted to answer over many years through the design studio. There is a chance to change not only the content of architectural education, but also the method. Such a change would of course require extensive and demanding curricular revisions, such as the reallocation of credits and study hours away from design courses towards other (perhaps completely new) courses. Burning questions are presenting themselves about the future of society; the precarity of employment brought about by globalisation; the inequality of income within and between nations; the chronic shortage of decent, climate-adapted and energy-efficient housing; the acceleration of global warming; and despite all this, the perpetuation of white supremacy in many western nations. Individual design studio units that take one or more of these problems as their intellectual *agenda du jour* are not enough. We need to better prepare our graduates for a future where architects are specialists not only in design, but also in energy, material science, sociology, geography, participatory practices, economics, business management and political activism, to name just a few. These are, incidentally, not courses that we need to invent ourselves: many are available to our students in neighbouring departments or faculties, but they are usually denied to them because of the hegemony of a curriculum that is already packed full.

This short article cannot envision what kind of a multiplicity of architectural educations might emerge in a future in which we not only de-centre but also diminish the scale of the design studio. But it can provoke educators to imagine what might happen in all our institutions if we actively and collectively agreed to make the studio smaller. What would we do with the space that we create? What subjects would we offer our students? What interdisciplinary collaborations could we embed in our programmes? What future pathways to architectural practice might we imagine? The author offers this speculation not as an indictment of design

studio, but as an open invitation for teachers from across the many specialisms of architecture to imagine something different.

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