

**Studio through studio: A diffractive reading of the educational design studio**

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# Studio Through Studio: a diffractive reading of the educational design studio

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This article aims to unsettle familiar notions of the educational design studio by examining how it is different from the professional studio. Both settings share similar routines, practices, and physical features, however, I argue their operations differ in critical ways. By bringing attention to these differences, I hope to open up new perspectives on how learning happens in educational studios and make a case for further material and spatial accounts of learning. I will draw on empirical accounts of professional studios from the book *Studio Studies*. Wilkie and Farias identify the studio as a socio-logically significant yet overlooked setting for understanding how creativity happens. They implore researchers to take materials, spaces, and routines seriously to enrich our understanding of what takes place in studios. Through a close reading of *Studio Studies*, I identify five critical aspects of the professional studio: 1) the outside; 2) gathering; 3) material intimacy; 4) boundary-making practices and; 5) making. Taking each aspect in turn, I examine how they do or do not appear in accounts of contemporary educational studios. The intention is to provide new frames for studying the educational studio and develop enriched accounts of how learning happens in the studio.

Keywords: studio; socio-material; design education

## INTRODUCTION

My general aim in this paper is to enrich accounts and open up new lines of enquiry about how learning happens in the particular setting of the educational design studio. I developed this paper in response to reading the book *Studio Studies* (Wilkie & Farias 2016), which argues for a new research programme focused on studios. The authors point to the oversight that while the products, messages, environments, and services that surround and sustain



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our lives are frequently the subject of social and cultural studies, the studio itself, the very place in which these world-shaping things are conceived, remains largely overlooked. The authors and contributors set out to develop conceptual repertoires for understanding what the studio does, how the studio works, and how the studio shapes our everyday lives through its interactions with other sites.

Two aspects of *Studio Studies* stood out: first, it takes a particular theoretical and methodological approach to understanding the studio – socio-materiality – which says we need to understand the dynamic inter-relations between people, materials, routines, and space to understand the setting; second, it focuses exclusively on empirical accounts of professional studios. On reading these empirical accounts, I became interested in how they might apply to the educational design studio.

These observations drive the three aims of this paper. One, show the benefits of paying attention to both things and people in the educational design studio by making a case for using socio-material approach. Two, use the conceptual repertoires and insights of *Studio Studies* – generated through empirical accounts of professional studios – as a lens to look and read the educational design studio differently. As Law (2009) would have it, to place these objects against each other in order to explore the tensions and fluidities that emerge with the intention to unsettle my insider notions of what an educational studio does. Rather than comparing professional and educational studios this action is more akin to superimposing the professional studio over the educational studio to draw attention to the differences between these settings. Three, try to open up new questions and avenues for research into educational design studios.

## CONTEXT

### *The Educational Studio*

Before I turn directly to these three aims, I will discuss the broad approaches to researching the educational design studio in the literature. The studio remains a central research preoccupation in art and design education (de la Harpe and Peterson 2008). Many of these studies focus on the interactions between tutors and students, often in the form of conversations and run the gamut from one-to-one desk crits to the more formal moments of large group critiques. This tradition is epitomised by Schon 1983; Webster 2007; Logan 2008; Shreeve, Simms and Trowler 2010; Belluigi 2016). The sheer volume suggests that researchers believe these interactions are critical to how students learn to design. One consequence of the focus on interactions has been to frame tutors as the primary shapers of students' experiences (Mewburn, 2012).

Other studies, although less numerous, have shifted the focus from individual tutor-student interactions toward the social dimension of learning. These studies typically draw on social learning theories to account for how students learn to design in the presence of one another

and through formal and informal interactions with peers and tutors (Ashton and Durling 2000; Gray 2013). In these types of accounts, there is a shift from learning as an individual cognitive activity (Schon 1983) toward a socially distributed activity (Wenger 1998); learning design is the product of an individuals' membership within a group or community.

However, in both approaches outlined above, the studio remains largely absent as a setting. The focus is on people and discourses. Indeed, a systematic literature review of educational research papers purporting to address the design and architecture studio identified 38 papers out of 574 that addressed the broader setting or role of material spaces in their discussions (Corazzo 2019). In many of these studies, the studio setting is a backdrop to where the real action of learning is – the individual minds, conversations or social learning groups. This backgrounding creates a dichotomy; on the one hand, studio-based learning focuses on the activities in the studio and argues for the studio as a unique place of learning, yet on the other, it struggles to show how space and materials matter in educational processes. The literature shows that educators frequently bemoan the lack of studio space (Shreeve et al. 2010, Marshalsey 2015) or go to great lengths to secure space (Logan 2008; Boling et al. 2016).

### *Realist Perspectives on Creative Spaces*

While I note that educators are protective of studio environments yet struggle to articulate the dynamic interactions between people, things, and space (Corazzo 2019), some studies have addressed the spatial qualities of studios. Thoring, Desmet, and Badke-Schaub (2018) developed a typology of creative spaces and identified five different space types: collaboration space for group work, presenting spaces to share present and consume knowledge, making space of experimentation and personal space for heads down and intermission spaces, these connect different creative space but also enable flow and break out. What is notable about this typology is its broader assumptions around the relations between the material space of the studio and people. Here, creative spaces are assumed to have “an inherent ‘affordance’ (Norman, 1999) that suggests the kind of activity for which the space is mainly intended, which is enforced through its configuration (e.g. the room layout and furniture).” (Thoring et al. 2018: 64) In this view, space has an essence and can be designed as open, flexible and innovative suggesting patterns of space and material entities work to enable or constrain particular human activities and echoing the much-cited Churchill phrase ‘We shape our buildings; thereafter they shape us’. There is utility in aspects of research that aims to demonstrate the built environment’s impact on learning; however, the ontological assumptions that underpin the work is problematic.

### *The problems with Realist Perspectives on Creative Spaces*

The ontological assumptions on which this kinds of work exists are often referred to as realist perspectives on space. Socio-material scholars argue realist perspectives on space are problematic because they operates in a predominantly singular direction: space influences

practices and in turn implies a causality between space and practice that is difficult to prove (Mulcahy, Cleveland & Aberton 2015). So, while purporting to account for the role of space in learning, realist perspectives can only do this by actually separating teaching and learning practices from physical spaces (Mulcahy, Cleveland & Aberton 2015). This separation, in turn, frames the relations between space and learning as instrumental, predictable, causal and stable. By making the built environment the focus, it becomes an entity – a collaborative or messy space – and shifts our attention away from the relations between space and humans. According to numerous scholars, talking about space in this way sustains an unrealistic and ineffectual paradigm for thinking about space and learning (McGregor 2004; Mulcahy 2006; Cleveland & Aberton 2015; Acton 2017; Bligh 2019). I add that such descriptions of creative spaces can obscure the vibrant and lived experiences of how education unfolds in the studio. Wilkie and Farias (2016) refer to the idea of ‘studio life’ because it: “designates a vitality: a generative capacity that inheres in the human-material arrangement and circulations taking places in studios” (Wilkie and Farias 2015: 7). Just focusing on spatial qualities denies this vitality.

So, how might we get towards the social and material together, and towards a way of thinking about space, materials, activities and people simultaneously? In this next section, I will describe an approach by drawing directly on the theoretical approaches used to generate empirical accounts of professional studios in *Studio Studies* and socio-material studies of schools.

### *Socio-material*

A realist perspective assumes the idea of space as a container for social activity, and it can be usefully contrasted with a relational perspective which conceptualises the social and the material dimensions of a setting as mutually co-constituting (Orlikowski 2007). In a relational perspective, the social and material dimensions of the setting or set of practices are not considered separate entities; rather, they are joined or “constitutively entangled” (Orlikowski 2007) to form the socio-material. Here, the material and the social are “inseparable and interlocked, dynamically informing and influencing each other” (Boys 2011: 50–51). In a relational perspective, the focus is on the relations between the social and the material, rather than being on the social as an entity or the material as an entity. From a socio-material perspective, space is not “viewed as a container within which the world proceeds... space is seen as a co-product of those proceedings” (Thrift 2003: 96). Critically, such an approach does two things: first, it flattens the hierarchies between humans and non-humans – humans are not placed above materials; instead, humans are among materials (Sorenson 2009); second, it describes the social and material as entangled and co-constituting (Orlikowski 2007). In the case of studio settings, it can be helpful to think of space as a verb rather than a noun: “as something we do (a matter of encounter), rather than something we have (a new learning environment, a finished design)”. (Mulcahy, Cleveland & Aberton 2015: 590).

Having outlined the theoretical and ontological turn that is required to begin to take in a whole setting, I want to finish this section by focusing on the book that forms the key lens through which we will begin to look at educational design studios with. In *Studio Studies*, the authors take a socio-material approach by drawing directly on the traditions and methodologies of Laboratory Studies (Knorr-Cetina 1995, Latour 1987). Laboratory Studies introduced the notion that to study the production of scientific knowledge, researchers should study the laboratory setting itself: 'where equal attention is paid to all the activities undertaken by scientists and lab technicians, whether routine informal talk, strategic career decision or fact making efforts. All such practices are considered part of knowledge-making processes' (Wilkie and Farias 2016: p.5). Laboratory Studies helped to show how scientific knowledge is not the result of individual cognition or individuals for that matter, but rather the product of distributed cognition – of practices that involved groups of people, routines, materials and technologies.

Wilkie and Farias (2016) draw on the insights that knowledge-making results from distributed practices across an entire setting and propose we think of creativity as a distributed activity. Like distributed cognition, distributed creativity does not see creation as something possessed or performed by an individual or even solely reducible to people; instead, creativity operates as part of routine activities, varying actors, spaces and materials that make up the studio.

A socio-material perspective, when brought to the studio, offers several benefits: 1) it prevents a research perspective that disembodies and decontextualizes actors, it no longer takes spatial and material features for granted, nor does it separate socio and material by regarding the latter as a distinct entity which can enable or constrain specific actions. Moreover, perhaps it might provide a way to move past the muted understandings of how the studio setting as whole works. I will shortly turn to the critical insights identified in *Studio Studies* and discuss the implication for educational studios. However, before I do this, it is important to talk about the method

## **Method – a diffractive reading**

I don't provide any empirical accounts of the educational studio setting in this paper. Instead, I will be using *Studio Studies* to re-read or re-frame aspects of the educational design studio, which is a little unorthodox and perhaps methodologically risky. So, why rely on one book? I selected *Studio Studies* because it contains empirical accounts in a socio-material mode of professional studios and therefore steps around the realist position because it does not address the educational design studio it provides a generative opportunity to use these insights as thought experiments about the educational studio and open up new views and questions.

So if I am to bring critical insights from *Studio Studies* as frames to read the educational studio, I also need to answer the question what educational design studio am I reading? All studios or some, and if so, which ones? I will draw on two ethnographic studies I have made of

a design studio (Corazzo 2019; Corazzo and Gharib 2021). This means my method – insights gleaned from one book that is applied to two existing ethnographic studies is risky, but I want the reader to persevere. My contribution is conceptual – taking the research in one field and showing how theoretical frames and these insights open up new lines of research in another. To read the educational studio through socio-material empirical accounts of the professional studio. The intention is to draw attention to new dimensions of the educational design studio so that further empirical accounts can be created.

What does it mean to read the studio through the studio? I use *Studio Studies* to identify five critical insights about what the studio does, and I will superimpose them over the design education studio. Diffraction is to place differing readings, theories or settings in conversation with one another. In simple terms, a diffractive reading is a method of overlaying different theories or activities. The term diffraction draws from classical physics and describes how a single wave passes through an aperture and changes the wave pattern – it becomes diffracted. Drawing on this, Barad (2003) introduces the idea of diffraction as related but different from the act of reflection. While reflection looks for similarities, diffraction overlaps and looks to show how differences get made and how they get hidden. Finding and respecting differences are attempts to move away from “the traditional modern Western philosophical approach in which difference is seen as to-be-captured, to-be-assimilated, and, eventually, to-be-wholly-eradicated” (Geerts and van der Tuin, 2016). By taking each critical feature of the professional studio, defining it, then using each feature as an aperture (see Figure 1) – to change the pattern – I intend to look at the educational studio differently, not because it should be more like a professional studio but to see what difference these differences might make (Barad 2007).

## 5 Critical Features of the Studio

I will now focus on identifying and discussing five critical features of the professional studio discussed in *Studio Studies* (Wilkie and Farias 2016), and taking each feature one by one; I will describe and then apply it to the educational design studio while paying particular attention to where and why differences emerge.

### *1. The relationship to the outside*

“Studios are, by definition, not the place in which inventions are validated, evaluated and valorised: homes, galleries, museums, cars, cinemas and offices are just some obvious examples of the sites where the cultural artefacts conceived and shaped in studios are exhibited, installed, appropriated, experienced, transformed, discarded.”  
(Wilkie and Farias 2016:11)



*Figure 2 Educational Studio with work laid for assessment. [X Caption].*

While the studio is a setting for the creation of cultural artefacts, it is definitively not the place where these creations are validated. Validation happens in other spaces – galleries, supermarkets, cities, and media (Wilkie and Farias 2016). See fig 3. Ultimately anything made in a professional studio finds its actual validation outside of the studio. No amount of user testing or prototyping can fully predict how things will be received and used. Even the most rigorous testing can result in commercial or critical failure, a point made by socio-material scholars:

‘Designers thus define actors with specific tastes, competences, motives, aspirations, political prejudices, and the rest...To be sure, it may be that no actors will come forward to play the roles envisaged by the designer. Or users may define quite different roles of their own.’ (Akrich 1992, 207).

As Akrich attests, designers cannot fully control how the artefacts conceived and tested in the studio attach, circulate and are experienced outside the studio. Moreover, outside the studio, these artefacts are validated and valorised. The professional studio makes the separation between creative production and the reception and consumption of this production clear. One key consequence of this separation is that professional studios are largely private spaces, withdrawn from the eyes of their audiences and validators.



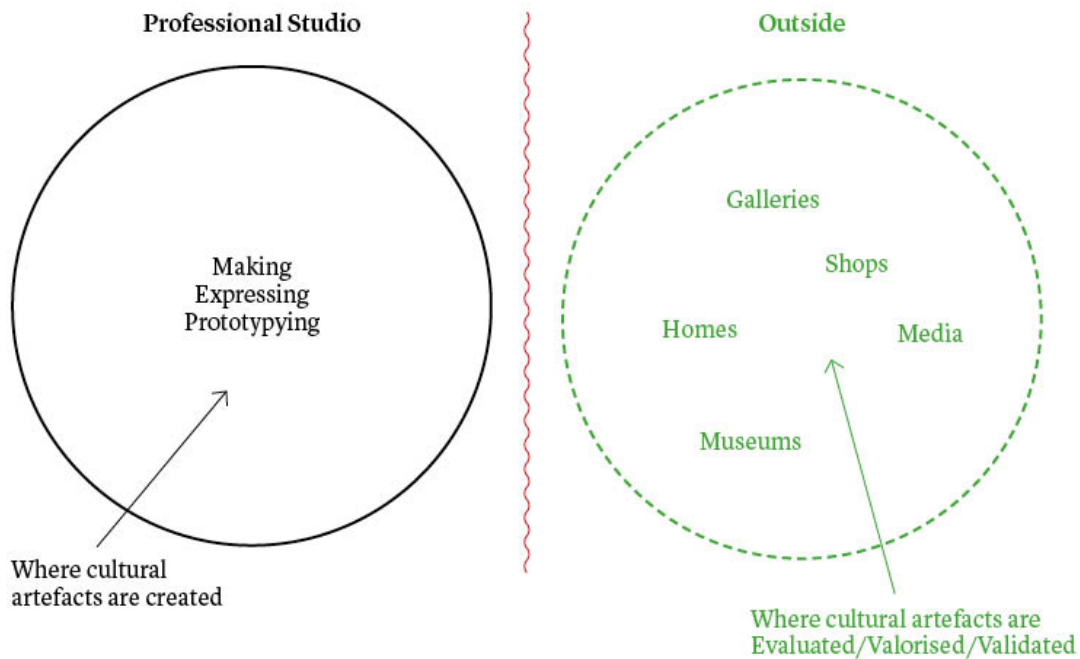
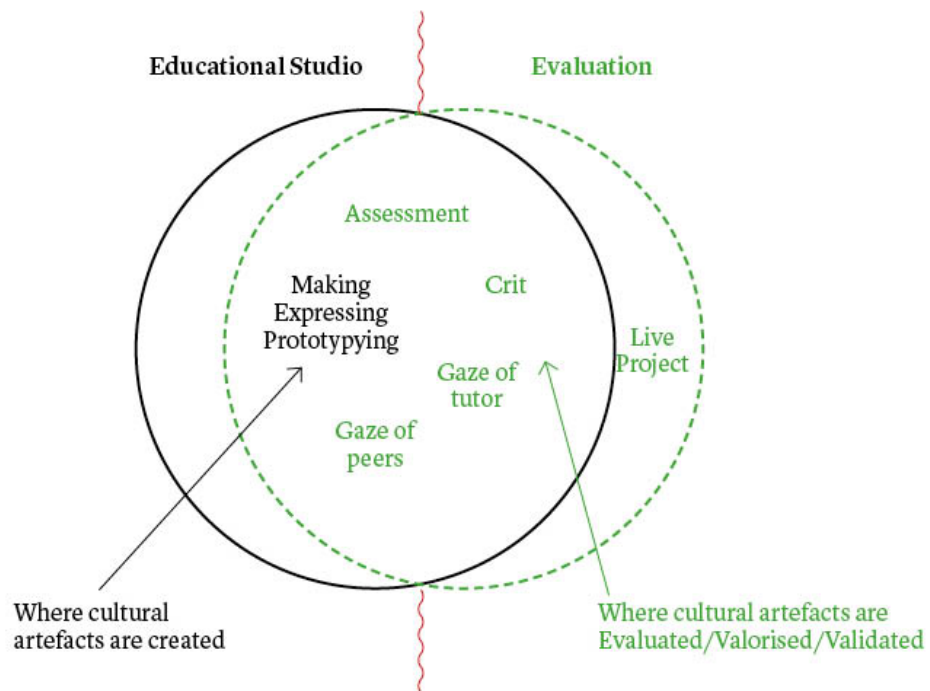


Figure 3: The Professional Studio as a site for the creation of cultural artefacts and separated from sites where these artefacts are validated.

The artefacts created in the educational studios are similar to those made in professional studios, for example, communication systems, products, architectural propositions, performances, artworks or services. However, a notable difference emerges if we apply the insight that studios are not the settings where the artefacts are validated to the educational studio. In contrast, the educational studio is the setting where artefacts are created and evaluated, it is both a site of creation and validation, and the validation comes in the form of assessment. Students do work, and that work is validated in the same context and often by tutors supporting the creation of the work (see Figure 4). What is more, there is a double evaluation going on. Design is enacted through representations such as drawings, prototypes, models, and diagrams in the educational studio. These representations serve a dual purpose: first, they make ideas visible and open to scrutiny; second, they also indicate a students' design knowledge. This means there is a double judgement; sharing the ideas enables others to judge and suggest improvements while simultaneously making the student's developing design knowledge visible (Brandt et al., 2013) to tutors and peers. The difference draws attention to the important, if obvious, observation that educational design studios don't engender this same separation between creation and validation, indeed these two significant moments are conflated into the same space.



*Figure 4: The Educational Studio as a site for the creation and evaluation of cultural artefacts.*

## *2. The act of gathering*

“If there is anything that characterizes most architectural spaces called studios, it is that they are full of stuff: materials, tools, sketches, models, works – old and new, well maintained and deteriorated, etc. the studio is not only an experimental space, but also, and crucially, a repository.” Farias (2015: 204)



Figure 5 A table of prototypes

In professional studios, gathering fulfils two functions, the studio is a ‘reservoir’ (Hennion 2016) to gather things like materials, supplies, images, found objects, and books, and the studio is an archive for remembering; the studio stores previous ideas, artefacts, experiments and failures. Here gathering is a form of ‘material memory’ (Farias 2016: 204). The emphasis on gathering underscores the essential role of materials in creative knowledge processes.

When we apply this to educational studios, another difference emerges. Gathering is a challenging activity for many design students operating in shared studios. It is not unusual to see new paper stocks hidden behind radiators, ready to be used later. Books may be carefully hidden underneath seemingly discarded materials, and shopping bags are balanced on window ledges full of gathered materials.

It is also interesting to reflect on gathering as a memory. We know the gathering of exemplar artefacts in studios (Brandt et al. 2013) is a regular practice, used directly in teaching or on walls to cultivate a design gaze Nottingham (2017). This suggests that ‘material memory’ is focused on exemplars rather than experiments and failures in contemporary educational studios.

### 3. Material Intimacy

“it is possible to think the studio as a space of ‘material intimacy’ ... a space in which an intensive and comprehensive engagement with non-human entities as complex things

cannot be reduced to some of its qualities, properties or figurations takes site. The studio appears thus as a site in which one lives with objects and materials, and where tinkering and invention result from long term engagement with them".  
(Wilkie and Farias 2016:11)



*Figure 6 Making in an educational studio*

Professional studios are generally withdrawn from the audience's eye. They are private spaces, but more so, they are intimate spaces (Wilkie and Farias 2016). This intimacy enables individuals and things to engage with one another over time. It complicates the entanglements between people and materials in the creative process and by emphasizing the importance of these entanglements prompts use to ask what a reading of material intimacy in educational studio could throw up? Researchers have argued that the requirement for work in progress to be left out in the studio's so it can be returned to – 'material manifest' – supports designing, learning, encourages thinking through-making and has a vital role to play in the accompanying discourse that coalesces around material objects (Radzikowska, Ruecker and Roberts-Smith 2019). We have discussed how simply gathering and storing materials can be harder. Educational studios are not private spaces and finding space for material intimacy may require the use of the studio at less sociable times. In educational settings finding these spaces becomes a skill "[t]he negotiation of space is itself an education in creativity, a skill to become practised in. Students are to behave as 'intelligent nomads'" (Spencer 2016:137).

#### 4. Boundary-Making Practices

“One could also point to practices of boundary-making orientated at protecting artistic practices from unwanted exposure, premature critique or distracting stimuli”  
(Farias 2015: 204)



Figure 7 Boards used to create private spaces (boundaries)

Studios tend to be shielded from the public. Levels of privacy are required to focus activities, but also because the visual nature of practices means others can witness creative activities. This exposure, or the threat of exposure, during a creative act, feels potentially fraught and may attract unwanted or premature critique. Farias identifies the importance of ‘boundary-making practices’ in professional studios. Traditionally, this might be the studio itself, although his study of a site-specific artist showed how these boundary-making practices were exercised as the artist made work on the road seeking locations away from others to shield aspects of the creative process. When we think about contemporary open plan educational studios, through the lens of boundary making practices, what might we see? A study (Corazzo 2019) observed the re-use of large boards (see Figure 7) that had been part of a temporary exhibition in the studio. After the exhibition ended, students readily adopted the boards to form semi-enclosed spaces in an otherwise open plan studio. However, the tutors in this study were unhappy about how these boards interrupted their sightlines through the studio. It disrupted a studio practice of ‘seeing and being seen’ (Corazzo 2019). The tutors

took down the boards but reached an unspoken compromise. Tutors largely confined themselves to a particular section of the studio (on a set of sofas) and rarely travelled into the rest of the room. I describe this as an alternative form of boundary-making practice achieved through bodies and space rather than walls or boards.

## *5 The act of making*

“Rather than understanding studio processes as the practical expression of an individual’s creativity... [we]... view creation as a situated process wherein new cultural forms are made, without assuming an a priori distinction between supposedly creative acts and routine activity, or between creative actors as opposed to assistants, equipment and tools”

(Wilkie & Farias, 2015:2)



*Figure 10 A group discussion amongst final year students, the masks were submitted as part of a small group crit and worn in this photo for fun.*

The primary function of the professional studio remains the creative production of artefacts, and while educational studios also produce cultural artefacts, they produce something else alongside creativity and learning – they aim to produce designers or artists (Orr and Shree 201X; Corazzo, Harrington and Shaw, 2017). Furthermore, this points toward a remarkable difference between professional and educational studios. While a professional studio could be said to maintain designers’ identities through practice, the educational studio’s primary aim is to make disciplinary identities, and we might argue, the production of ‘cultural artefacts’ comes second this.

Becoming a designer is not a ‘solitary, individual undertaking. It always takes place within a design milieu” (Nelson and Stolterman 2012, p.224). This milieu includes the cohort. The de-

sign milieu encompasses more than people too. Knowledge is fabricated through daily interactions between people and things (Burr, 1995). Nespor's (1995) study of undergraduate physics and management students observed how students were 'connected to disciplinary trajectories' through the use of specific buildings. In Nespor's analysis, the bunker-like physics building isolated physics students, and the glass-fronted management building and lounge spaces encouraged management students to perform corporate cultures.

The idea of distributed creativity (Wilkie and Farias 2016) breaks with mainstream notions of creativity as an individual cognitive act to include the role of things, routines and others in creative activities. Likewise, might we extend this notion of distributed creativity and say that the production of disciplinary identities is also distributed?

## Discussion

In this paper, I set out to achieve three things: 1) describe the benefits of using a socio-material approach to research the educational design studio; 2) use the conceptual repertoires and insights of *Studio Studies* as a lens to look at and read the educational design studio differently; 3) to open up new questions and avenues for research into educational design studios. In many ways, this process has been one of noticing differences between professional and educational studios. These differences might not have been apparent when approaching the studio through existing frames. These differences have also helped to speculate on what a socio-material approach to the design studio might offer. By way of discussion, I offer a series of questions and potential avenues for researching the educational design studio:

### *Thinking about how Creativity and Evaluation overlap*

There is a need to pay closer attention to how the educational studio and its interconnections with the outside. To ask what does it mean for students to navigate settings where creation and evaluation overlap? What kinds of practices are formed as these overlap? What practices can we observe, no matter how ad-hoc, where creativity and evaluation are kept apart?

### *Thinking about Boundaries*

By paying attention to boundary-making practices and the discrete, material and subtle ways in which temporary separations between creating and critiquing are maintained could enrich accounts of learning in the studio.

### *Gathering*

Drawing attention to 'gathering practices' in the contemporary educational studio. What is the impact on knowledge-making processes in design education when gathering is limited? What should we make of students' considerable energies and efforts to find alternative ways to store and gather? For example, suppose gathering is an essential function of the professional studio. We can ask – what happens if we move gathering – and its associated practices of sorting, hiding, carrying materials around – to the centre of our attention and research? What might this tell us about belonging or making?

### *Distributed Identities*

If, as discussed previously, we can frame the primary purpose of the design studio as about making identities, what would an approach that takes the concept of distributed creativity – that pays attention to routine, everyday, material processes – and applies this to researching how designerly identities are shaped and formed through studio education? To an idea of distributed identities?

## **Conclusion**

This article has sought to unsettle perspectives on the educational studio by drawing specifically on a series of observations made about professional studios in the book *Studio Studies*. By examining how the practices of the educational studio differ from the professional studio, the aim has been to illuminate points of difference and disjuncture and establish fertile points of inquiry for future questions about the studio. Highlighting and discussing five areas of difference: the outside, making artefacts and identities, gathering, material intimacy, and boundary-making practices. I have noted how the primary aim of the educational studio is making/producing disciplinary identities, and the production of ‘cultural artefacts’ (products) comes second. More broadly, the educational studio’s relations to the ‘outside’ are complicated. Opportunities for material intimacy are reduced, as is the space to gather what is needed. Furthermore, the boundary-making practices of the professional studio – warding off premature critique – are much messier in an educational studio because so much more is on show. These disjuncture’s present future avenues for empirical and socio-materially focused studies of the educational design studio.

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