

Learning at sites of practice

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Abstract

In architectural technology studies, in the past the office was seen as the primary site for practice-based learning in the curriculum, supplementing on-campus studio learning. More recently another form of practice learning, namely community building projects, has been introduced. The authors were interested in the affordances offered for practice-based learning at these different sites, both in architecture and more generally in university studies associated with problem- and project-based open learning environments. Thus, the authors analysed students' experiences at each site through Ingold (2000) and Lave's (2012) lens of skilled practice, a sociomaterial approach to practice learning. Though both sites afforded professional learning, it was found that community projects did so most strongly. This was ascribed to the purposefulness of such projects and to the affordances of care and responsibility offered by them.

Keywords: professional learning, practice-based learning, sociomaterial approaches, experiential and community-based learning

INTRODUCTION

Open and distance learning (ODL) encompasses the philosophy that learning can happen beyond the confines of the classroom and can, at least in part, involve choice and volition on the part of students as to what is learnt, when and in what way (Davis 1996; WGDEOL 2002). As such, learning through practice in workplaces and communities can be described as a form of open learning but the degree of student agency varies depending on the affordances offered by particular work environments.

The research in this article was conducted within an undergraduate professional university curriculum at different sites of practice-based learning, namely: campus-based studio projects; community-based projects; and traditional office

work. The latter two forms of learning were conducted primarily outside the university at sites of practice themselves. The research responds to the focus of this issue of *Progressio* by questioning the roles and forms of traditional teaching and learning methodologies. It looks at different sites of practice for learning appropriate to a rapidly changing higher education landscape.

As researchers we were interested in what sorts of learning were afforded by these different sites and how this learning related to students' development in their professional field of study. This sort of comparative approach to practice-based learning in university curricula has not been much reported on in the literature.

In researching practices at different sites in the curriculum we have also adopted an overall sociomaterial approach. The specific approach used, however, differs from the other practice theories in that we have turned to Ingold's (2000) concept of 'skilled practice'. In short, being skilled is not only a technical ability of individuals which they bring to bear on a task, but is also embodied in the tools they use and substrates they act on, not only individually but also with and through the skill and needs of others. In addition skilled practice is always intentional and purposeful. Ingold's concept of skilled practice is particularly focussed on craft rather than professional practice. However, we have chosen to use this concept because, as suggested by Lave (2012), skilled practice can provide a set of questions which can be used to analyse learning through any form of practice. Furthermore, architectural practice is essentially about human-physical interaction and consideration of the welfare of people and the environment, and involves both the use of routine and creative skills (Salingaros 2006). Ingold's (2000) concept of skilled practice thus seems particularly suitable as an analytical tool to examine architectural practice. As far as is known, this sort of analytic approach has not been extensively applied to practice-based learning more generally, nor to compare learning at different sites of practice within the university curriculum.

Context of the study

The focus of the study was on architectural technology students in their second and third years of a three-year undergraduate programme in architecture at a university of technology. However, the aim of the research was to make more general points about problem-, project and practice-based learning as well.

The focus of the architecture programme is the studio where theory is applied in project work through the formulation of design solutions in response to set spatial design challenges. For at least the past 50 years the university-based studio has been considered the main site of practice in architectural education, which is possibly something of an anomaly when compared to other professional fields

(Bakarman 2005). It replaced the former apprenticeship model where the novice eventually became a master through mentoring and coaching by the workplace 'master' (Webster 2005).

In the studio, students work mainly individually. Proposals are communicated and presented by means of drawings, sketches and models. Although these projects often draw on real-life contexts and situations, they are simulated and frequently divorced from real-life application and not executed in the built form. The only space where 'real' application of theory occurs is in the second 'sandwich' year that involves ten months of work experience in an architectural office which is supervised by an approved registered professional. Here students are mostly involved in design and construction documentation (draughting) work.

However, the role of the studio as the main site of practice is being challenged. Osborne et al (2011) highlights the increasing difficulty of higher education institutions (HEIs) to sustain a vibrant studio culture amidst growing student numbers, exceeding diversity in the student cohort including a growth in non-traditional students and diminishing resources. In response to the broader social, economic and ideological pressures of globalisation questions on the role and responsibility of architect in the broader community, the tension between social responsibility and individual development (Wang 2013, 66) and other issues related to the changing nature of the architectural profession, emerge.

Thus, experiments with live projects, drawing reference from design-build and community service learning projects, started in university-based architectural education in the 1950s. However, it was not until the 1990s that real projects in communities started to appear as sites of practice in architectural education (Yoon 2009). In the period that the current study was carried out students were also for the first time involved in a community service project within their second year. Apart from responding to the more general trends in architectural education, this project was also inspired by two main changes to the more immediate architectural practice environment. Firstly, work practice was conducted almost exclusively in the drawing office at some distance from where building work was actually done. Students were thus not encountering the sorts of complex practical problems which inevitably flow from engagement in work. Secondly, the locus of employment opportunities for graduating students was no longer restricted to office work in companies, in which the predominant form of practice was ensuring that designs met municipal regulations. More and more opportunities were opening up for both entrepreneurial design-build and developmental work in communities. Such changes in workplace roles have also been noted internationally in other professional fields (Beck 2000; Billett 2010, 5).

The study was directed at the different sites of practice within the curriculum, including on-campus studio learning, rather than at the more theoretical aspects of

university learning and their relationships to practice. The study aimed to address qualitatively the different forms of learning afforded through these different sites and their contributions to the development of ‘skilled practice’ (Ingold 2000; Lave 2012).

LEARNING AND PRACTICE

In this section we attempt to provide more detail as to what is meant by skilled practice by situating this approach within other sociomaterial theories of learning, namely activity theory (AT) and Schatzki’s (2010) practice theory (PT), as well as the work of other practice learning theorists, such as Billet (2009, 2010) and Eraut (2004).

Schwandt (2005) posits two main models for PT. In model 1, practices are described through relatively fixed key competencies to which workers must aspire. The competencies are themselves underpinned by relatively fixed bodies of scientific knowledge that are applied to well-defined problem situations. Model 2, on the other hand, involves workers in purposefully and cooperatively redefining problems and developing new ways of doing through interaction with one another and with material objects in the workplace. Though there are always elements of model 1 in model 2, the latter is the preferred model for a growing emphasis on learning and professional practice in the ‘practice turn’.

AT is a theory of practice-based learning that focuses on the individual constructing an identity through learning with and as part of the community, but also on the instability and development within the community which includes both social and material elements. It also, importantly, focuses on the interaction of social practices and material objects in the community. AT provides for a heuristic framework that allows researchers to ask questions about learning and to see relationships between these questions that perhaps other theories of learning do not do so clearly (Russel 2002). In particular it alerts researchers as to where resources, divisions of labour, cultural norms and rules within communities serve to constrain how people can work with and towards the object of the activity (Engestrom 1987). It is often through these constraints that new forms of practice may develop; AT is also a theory of learning and change in practice.

In AT, there is always an object within the system; the object provides the focal point for the system as a whole. Whether or not the object is actually attained and in what manner, depends on the interactions and developments in the activity system. As Engestrom (2008) explains, the object is both partially delineated and partially emergent, its final shape being dependant on the interactions of the components of the system as a whole.

Schatzki's (2010; Everts, Lahr-Kurten and Watson 2011) PT draws attention to the 'meshing' of practice (actually what a person does and says, including individual motivation and routine tasks) and materiality of the context in which it is enacted. Practice consists of 'doings and sayings' organised according to four main elements which, when put together, differentiate one practice from another. Practical understanding refers to knowing how to do a job, for example, drawing, detailing in architectural design and recognising when others are doing this appropriately. Rules refer to the main principles that are typically followed in practice and 'teleoaffective structures' refer to a sense of what an individual should be doing in the field and feelings about this (e.g. an orientation that design involves improving others' lives). These properties may in turn articulate with wider understandings of the world, for example, the concept of sustainable development.

Context includes others and how an individual is positioned towards them, as well as artefacts and other organisms and how these are arranged in space and time (Everts et al 2011). Context can either enable or disable engagement in practice and likewise elements of practice can influence positioning with others; the sorts of spaces in which activities are carried; and over what typical time periods. The point made by Schatzki (2010) is that although there is an identifiable and distinctive nature to a particular social practice (e.g. a type of professional practice), elements may inter-weave in different ways at different times and thus the practice is only partly stable.

These are only some elements of Engeström's and Schatzki's extensive theses on practice in order to signal the move from social theories of practices to more sociomaterial, embodied approaches to practice and practice learning. Whereas both theoretical positions indicate what elements are involved in practice, Lave (2012) and Ingold's (2000) approaches rather describe a set of desirable characteristics of skilled practice.

SKILLED PRACTICE AND OTHER PRACTICE THEORIES

Ingold (2000) describes the first property of skilled practice as a system in which an individual performs the practice. Thus, whether or not an actor can act in a skilled manner depends on the total system of relations in which he/she is embedded, including other skilled people, the nature of the materials and the availability of tools to perform activities. The systematic nature of practice is also perhaps most evident through its description as an activity system in which individuals and group actions are either enabled or constrained by structures, including roles, and cultures (rules and norms of practice) of the system. Similar elements can be found in PT, for example, the rules and principles of practice

and arrangements which position actors within an organisation (Schatzki 2010). Billet's (2009, 835) term 'affordance' – the extent to which practice sites and their sociomaterial elements allow learning and development – further supports the systematic nature of skilled practice.

Secondly, skilled practice is always intentional and purposeful towards some sort of desirable outcome. In AT terms, the object of the activity system refers to what is of interest, what is being worked on or what provides the focal point for the whole activity system (Engestrom 2008). Practice learning theorists, such as Eraut (2004), believe that more social accounts of learning frequently underplay the role of the individual in favour of the collective. In sociomaterial terms, however, intentionality is not something a person sets out to do but is formed and guided by the nature of the practice, including others, and the material conditions within which the person works. Being skilful emerges from the interaction of the practitioner with the object of his/her work, rather than only as an *a priori* ability (Ingold 2000). But there is still the sense of individual purpose in that individuals are driven to achieve something, even if this cannot be achieved without the social nexus of practice (Blackler 2009, 29). As Billet (2009, 830) suggests, intentionality in practice is both 'personally purposeful and socially aligned'; actors need to purposefully respond to affordances for learning and development offered by sites of practice.

Thirdly, skill involves not just the application of technique to the material world, but the awareness and flexibility to respond to subtle changes. In Ingold's (2000, 353) terms, skill lies in repetitive forms of practice that mesh or weave the person and their environment but in a way that is responsive to changes in the material they are working on; it involves the qualities of care, dexterity and judgement. Being skilled is thus potentially generative in that repetitive procedures and algorithms can be adapted to new circumstances. In professional PT, such repetitive actions exist as well. For example, Nerland and Jensen (2010, 91) describe the work of computer engineers as consisting largely of using codified algorithms to solve technical problems. However, there are always subtle changes between problems and the engineers have to skilfully 'cherry-pick' and combine (or weave) elements of algorithms, often in new ways; they 'watch and feel as they work' (Ingold 2000, 353). For novices, then, part of the development of skilled practice involves exposure to such contexts, which cannot be overtly handed-down from more experienced others.

Fourthly, skill involves care and consideration. In Ingold's thesis on practice, the concept of care is primarily concerned with care in making objects within the field of practice. The concept can be extended, in particular in professional practice (though there is no reason why this should not apply to all skilled practice), to take in care and consideration of those who will be affected by

practice (Billet 2009; Fenwick et al 2012; Schwandt 2005). Likewise, in AT, there is always attention to contradictory elements within social practices and developments flowing from them which may improve people's lives (Engestrom 2008; Stetsenko 2010).

RESEARCH METHODS

The data was gathered primarily using group interviews conducted with the same cohort of students. In community service learning, four groups of four students, randomly selected, were interviewed on site for approximately one and a half hours each. As the students had already spent time in office practice prior to community work, information about learning at each of these sites was elicited. Once the students had returned to university and completed studio practice, they were again interviewed about their learning experiences here, and how it compared to learning at the other sites.

In keeping with a sociomaterial approach, we were interested in the whole experience of students, including their material and structural environments. It was thus useful to look at the whole environment of practice and more general questions such as 'how did you experience the workplace?' were useful but needed to be backed up by more focussed questioning. We found that using questions based loosely on the different components in Engestrom's (1987) activity system allowed us to gain information on the different material, structural and interpersonal aspects of work. Thus, for example, questions concerning students' relative degree of autonomy and roles they and others played in practice flowed from activity systems analytic nodes of the rules and roles of different practices. In addition, it was possible to gain some understanding of how these different aspects both afforded and constrained learning at the different sites.

Once the data had been gathered in this way it was clumped according to the different elements of skilled practice, drawing on the work of Ingold (2000). Thus, the following questions were asked:

- To what extent did the practice involve co-operative work as part of the whole system?
- To what extent could students exercise their own intentionality and was there a sense of purposefulness in the work?
- To what extent were students using knowledge and skill to adapt/change practices?
To what extent was this permissible?
- To what extent were students focussed with care and consideration on the outcomes of their practices towards the lives of others?

The elements, initially, of activity systems and, secondly, expert practice provided pre-existing categories through which the data could be organised and subsequently interpreted. This is different from more grounded approaches in which categories emerge largely through reiterative reading of the data (Cousins 2009), though the two represent the two ends of a continuum rather than two opposing positions on data analysis. While both have their advantages, the *a priori* categorisation can result in the downplaying of certain data. Thus, for example, we gathered some data on the unsuitability of certain CAD programmes used in the curriculum to current work practices. Though this was useful information in itself, it was not used further for the analysis.

ANALYSIS OF THE RESULTS OF THE STUDENT INTERVIEWS

In this section, we compare the students' experiences of the different sites of practice in order to identify the characteristics of skilled practice.

Office work

In the office students need to complete a range of tasks recorded on log sheets signed off by the employer supervisor and the students' office work is monitored by an academic, through visits and electronically, for example via the students blogging. Most of the work is restricted to the office, involving drawing/detailing of building plans. Often the action involves ensuring that drawings comply with council regulations. As drawing precedes the actual action of building, there is room and some time for review at the design phase. Thus, students may go through cycles of design and review and can accordingly effect changes to construction drawings.

At work students are very much apprentices to the more skilled employer. Students do not have much control over what they do but are generally given a specific task. The tasks can be quite repetitive, sometimes dealing with just one function, for example working on a ceiling design or 'internal elevations', over and over. There appears to be a lack of agency and intentionality (Billet 2009) in the work they are given to do.

I am doing what they need me to do and that is slightly repetitive, for example when I have been working for months on internal elevations and that becomes my main task it is a bit frustrating ... You are just sitting there and people tell you what to draw.

However, at work the aim is to get the project done as best possible and all team members are focused on this outcome, and students understand themselves as being part of the team. Thus, employers help students not because they are

necessarily interested in their education, but because there is a work task that needs to be completed:

They are working on things and they have to get the job done; at the end of the day they are on your side.

Even so the sense of belonging may also be somewhat ambivalent. Work may initially be bewildering with students not feeling part of the office as a whole. They feel they do not like to 'nag' other staff with problems which perhaps accentuates a sense of difference and 'outsideness' from the full-time staff.

Although students work as part of a design team, they do not generally go to the site but remain working in the office. They also do not usually deal with clients and interpret their needs; they are usually told what to do by supervisors. As such they can feel cut off from sites of practice; when they do something in the office they are not certain 'if or how it will work'.

The whole year I have been in front of a computer just drawing or on a drawing board ... it is like a disconnection between building and the client

In general, office work is structured and formal as compared to community service project work. One interesting example given by one student is of designing stairs in an office environment. Here there is a structured and formulaic approach involving relations between the step dimensions and its elevation, which have been learnt at university and can be seen in other workplace drawings. These are then used in documenting the design.

Now that you know how a staircase works you get the scale of it in your head ... the way you design the stairs in the office would be much different (from work in the community) because now you can just get that scale get the and how it looks, things like that.

Community project work

The community service learning project involves the whole second year class spending two weeks on site at a primary school in a rural village. Their task is to build an outdoor classroom and landscape the area around it so that children can learn outside in a convivial environment during the hot summers; as such students work with the whole environment and see the project as involving comprehensive design implementation, physical work and making adjustments where needed.

Although office work and community service learning projects are both experiential in the sense that students are actually 'doing work', or putting into practice what they have learnt elsewhere (e.g. in class), the two sites make different demands on students' abilities.

On site the job is more immediate and has to be constructed and there are consequences for the project as a whole and for the client. Unlike at the office work, where the student is a more junior partner, s/he is regularly confronted by the client in the community service project and has to respond to this.

On site [in the community] things have to be correct and you have a time limit to do these things and you can't just start back again. At the office you have more freedom of making mistakes ... you can start over and you will always have your employer guiding you.

In community project work, on the other hand, the connection to the university is less clear. There seem to be more options as to what to do, the problems encountered are more open ended and there is less evidence of more structured or formal planning. The student appears to be using more 'rule-of thumb' than planned approaches in community projects, which can be more closely aligned to 'real' practice:

There was what we didn't even plan in the steps ... the wall wasn't straight. The wall we were building against it wasn't straight. So we were setting the stairs out according to the wall and it was a bit slanted and then we just saw it was going a bit skew so we tried to set it a bit more up, if you know what I mean ... You know so we just worked over that mistake and just made it look a bit better, tried to re-work that.

Students are responsible to the community they are serving and feel a sense of pride of doing a job well and of feeling their work has value and is appreciated. This is not always the case in the office where their individual achievements may not be recognised. Students are also much more in control of the work they are doing than is the case in the office, and can take initiative. They have to think for themselves as there is less overt instruction than in other sites of practice. There is a shift in the locus of responsibility to the students, and a realization of the potential consequences of their actions.

In the workplace you are regarded as a student ... here you make that special bond, there is somebody at the end of the drawings.

Project work exposes students more to judgment and decision making (reflection in action) than is the case in the office where work is much more formal and structured. Students often have to try a method out, for example fitting stairs in place, within the context of the whole structure. Students work with 'snags' and use 'trial and error' methods to find out what works best; they learn through experience. Such decision making is generally distributed as students problem-solve with their peers. In addition, students on projects must interact with a whole range of professionals who contribute to the project, for example professional architects, landscapers and suppliers, as well as with the 'clients' (teachers and

schoolchildren), which is not necessarily the case in the office and definitely not the case in the university studio.

Principles learnt in the office and at university can now be applied and, importantly, adjusted to suit the needs of the site of practice. The community project site is thus, according to students, a potent learning space.

Studio third year, following on from office and community work

The studio does not stand alone but is part of the larger evaluative and teaching system of the university, including the classroom where theory is taught. The role of the staff member is to work as a critic/evaluator of their work. They are not like (most) office work supervisors who are interested in getting the job done as best as possible so always support the student and further explain how to do things correctly. Rather, the staff member picks on what the student has done wrong or inadequately in their opinion, and stretches the student to recognise this and to find a way of improving – but they will not tell the student how to improve; this is something the student should discover and develop. Students are encouraged to make mistakes as this is a way of learning.

I assumed they were just mean! One told me that they are not mean but they are supposed to be critical. I thought they had given up on us, that they did it on purpose.

And:

I would prefer to go to the employer as the lecturers are more likely to throw you off tangent but the employer is more likely to say ‘do it this way’ then ‘thank you very much’ (when you get it right).

Sometimes, what the lecturer wants seems more like their own particular favourite area than about what the student is doing, or students will even get different feedback depending on the lecturer on duty at that time; thus, what they must achieve can sometimes be confusing.

Different lecturers have different ideas ... one day they say this is OK then the next day they say it doesn’t work.

And:

In crits some like it and others do not, we are trying to please all of you. It would be nice if we had standard criteria.

Lecturers are something like a client at work in that they come in and out but are not around while the students are developing their work, even though they come into the students’ working space – not a separate consultation space. But they act as a quite different type of client. The students at work may be in a relatively powerful position of knowing environmental and other rules, and what works

with a particular design, which is not typically known by the client. In the studio, on the other hand, the situation is reversed and the student is left trying to make a professional guess as to what the lecturer wants them to do.

The way in which students are evaluated is also quite different in the studio. What counts is to discover where something is wrong through interaction with the lecturer, and to come up with a solution, whereas at work what matters is to develop a solution cooperatively as part of a team (the same applies for community work).

DISCUSSION AND CONCLUSION

Office work is systematic (the first variable of skilled practice) in that students are part of a team and responsible with others in achieving work purposes. People in the team are there to help one another in order to achieve the object of the activity. But, at the same time, students may only be given a small part of the whole project to be done in detail (e.g. just the windows) and do not then necessarily engage with the complete design project. Furthermore, the production part of the office where students are mostly working is quite removed from the actual building site where plans are enacted so students do not often get a whole picture of the work they are doing.

In terms of the second variable of skilled practice – intentionality and purposefulness – there is a workgroup purpose of which the student is part. However, the student is more often told what to do and how to do it; there is not much intentionality or overt agency on the part of the student. This may relate to students' perception that they are not always fully part of the 'team', but rather they are told what to do and how to do it. Students perceive themselves (and are perceived as) relatively inexperienced compared to the qualified architectural staff. The office is, after all, an opportunity to learn from others within a structured workplace.

Students, from their own accounts, are involved mostly with repetitive work and would presumably become quite skilled at, for example, preparing construction documentation (or at least specific elements of these). The office is quite structured, which is good for learning techniques, but less so for adaptation and change, which is the third component of skilled practice. In terms of the fourth component of care and consideration of those who will ultimately benefit from the practice, office work seems quite removed as compared to community project work.

Community project work scores highest on most parameters of skilled practice. This we believe relates to the realness, purposefulness, wholeness and complexity of the project work involving engagement with other differently skilled students,

more skilled practitioners (such as architects) and with clients/users and suppliers. The work students do is purposeful towards fulfilling a real need. Such practices thus also entail care and consideration of the users of their work. Furthermore, in the community design-build project, the students are expert participants in the eyes of the schoolchildren and teachers (the clients/users), even though their work is monitored continually by architectural academic staff. In effect they rise from students to nascent professionals, or peripheral participants (Lave and Wenger 1991).

Another difference between office and community project work relates to variable three of skilled practice, awareness and flexibility to respond to change. This is illustrated in the comparison of stairs design drawings produced in the office and the design and construction of the stairs on site. The former is quite constrained and rule bound, whereas the latter necessitates adaptation and change of known procedure in the light of material problems encountered; this is surely what Ingold (2000, 291) means by qualities of ‘care, judgement and dexterity’.

Our greatest difficulty lies in interpreting studio project work as developing skilled practice. One major problem seems to be in the practice system in which the staff plays an apparent oppositional rather than supportive role, which is quite unlike the other two practice sites which are orientated to cooperative work in order to get a job done. Furthermore, the intentions of students and their sense of purpose seem less tied to engaging in some form of goal-directed practice than to understanding what the staff require of them.

Office work is vital in that it allows students to hone their skills through repetitive action within a systematic, purposeful and structured environment. Where it may fall short is in allowing students to understand the full systems of relations of architectural practice, and to experience themselves as intentional and adaptive ‘experts’ within the practice field. As pointed out earlier, it is not just the opportunity to experience hands-on design and building that matters, but also the opportunity to intentionally and considerably change people’s lives. One recommendation flowing from this observation is that the relative time devoted to office and community practice could in future be more evenly balanced out, with greater emphasis being placed on community practice. This recommendation is not just ‘pie-in-the-sky’ but has in fact already been partially implemented in the faculty.

Studio project work undoubtedly serves a purpose, for example, engaging students in theoretically defending a particular design, but when analysed through a PT lens, it is hard to justify it as a practice at all. The most telling reason, perhaps, is that in studio project work the practice-based skills of problem solving and designing are constructed within the social relations of the university rather than ‘constituted within the matrix of social relations’ of work (Ingold

2000, 289). One obvious improvement, then, might be to integrate studio project work with community service work more closely, thus affording students the opportunity to engage in something more akin to ‘skilled practice’, as well as giving more emphasis to community service work.

In conclusion, analysing practices through a skilled practice lens has provided a useful means to compare learning at the different sites. Thus, we agree with Lave’s (2012, 164) contention that a skilled practice approach potentially offers ‘... an agenda for inquiry into processes and practices of learning’. What is perhaps surprising is the significant role played by community service work in developing skilled practice, as this would typically be expected to develop in more traditional work settings. As Stanton, Giles and Cruz (1999) suggest, community work may just be another form of work-based learning and one which has been identified as, perhaps, affording students greater opportunities to practise their skill as developing professionals.

As discussed, community learning projects have the potential to involve students in decision making and exercising agency and thus can be closely aligned to the open learning tradition. Office work, on the other hand, because of its more structured and hierarchical nature, may be less able to provide affordances for open learning.

Though we focused on architecture as a site of study, future research could examine the affordances offered by different forms of practice learning in the development of skilled practice in other fields. As was done here, such research could inform curriculum changes towards greater focus on new, perhaps richer and more appropriate forms of practice learning, for example, community-based learning.

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