

THEMED ARTICLE

## Interprofessional learning at work: what spatial theory can tell us about workplace learning in an acute care ward

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### Abstract

It is widely recognized that every workplace potentially provides a rich source of learning. Studies focusing on health care contexts have shown that social interaction within and between professions is crucial in enabling professionals to learn through work, address problems and cope with challenges of clinical practice. While hospital environments are beginning to be understood in spatial terms, the links between space and interprofessional learning at work have not been explored. This paper draws on Lefebvre's tri-partite theoretical framework of *perceived*, *conceived* and *lived space* to enrich understandings of interprofessional learning on an acute care ward in an Australian teaching hospital. Qualitative analysis was undertaken using data from observations of Registered Nurses at work and semi-structured interviews linked to observed events. The paper focuses on a ward round, the medical workroom and the Registrar's room, comparing and contrasting the intended (conceived), practiced (perceived) and pedagogically experienced (lived) spatial dimensions. The paper concludes that spatial theory has much to offer understandings of interprofessional learning in work, and the features of work environments and daily practices that produce spaces that enable or constrain learning.

### Keywords

Collective learning, interprofessional learning, interprofessional practice, work-based learning

### History

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### Introduction

Health professionals encounter diverse opportunities for learning associated with clinical work. The nature of this work frequently produces spaces where health practitioners come together. These spaces are action "hot spots" used to discuss and coordinate practice, providing a context for learning that may influence subsequent actions. We draw on spatial theory to enrich understandings of interprofessional learning as an activity embedded in practice.

While spatial theory is not an explicit theory of learning, it enables us to illuminate things not otherwise noticeable to help understand the interface between everyday practice and learning. Our interest lies in how the spaces of a hospital ward are produced and used, and the connections between spaces and learning. Consistent with the Lefebvrian tradition (Lefebvre, 1991), our use of the term space instead of place indicates that we do not just see space as a physical location. This paper provides detailed empirical examples of practices to illustrate how spatial theory can be used to engage questions of workplace learning in a different way. Therefore, findings in relation to the practices are not the object of the paper. The contribution lies in exploring how elements of Lefebvre's (1991) theory can be useful in highlighting aspects of workplace learning not previously accounted for conceptually.

Soja (1996) argued that while historical and social dimensions have received significant attention, the spatial dimensions of many phenomena are often overlooked. This can be seen in the field of workplace learning, where the affordances of work settings as learning environments are understood historically and socially, yet a spatial perspective has not been considered (Fuller & Unwin, 2004). We redress this imbalance through an explicit focus on space, exploring how architectural spaces are reworked into *lived spaces* that may facilitate or constrain opportunities to engage with and learn from other practitioners in shared clinical workspaces. We draw on spatial theory from Lefebvre (1991) in an adaptive way in order to reveal how space is involved in the constitution and performance of workplace learning.

### Background

In reviewing studies that lead to the question of what can spatial theory offer studies of workplace learning, four foci are examined: the social, the spatial, nursing and interprofessional learning.

#### The social dimension in workplace learning

The learning potential of work is widely acknowledged in existing studies showing that the shared nature of the work context and the way work is organized creates opportunities for professionals to meet as work unfolds. The role of social interaction in the workplace with regard to learning is a common theme (Boud & Middleton, 2003; Collin, 2008; Koopmans, Doornbos, & Van Eekelen, 2006). Ellinger and Cseh (2007) identified several factors influencing learning in work, of which the most significant

was the need to seek out expertise from others. The social aspect of workplace learning that occurs through different kinds of interaction and engagement between practitioners is important, as it feeds through the production and consumption of space, both of which are consequential for learning and space.

### Spatial studies

Spatial theories are relevant to issues of learning because they raise questions about where and how knowledge emerges; how learning is negotiated through movements and locations, and how it is integrated in the making of spaces (Fenwick, Edwards, & Sawchuk, 2011). These ideas have been taken up in a growing body of literature seeking to bring theories of space into hospital practice. Several researchers have studied the movements and locations that render visible spatial aspects by “metaphorizing” these as frontstage and backstage hospital spaces (Lewin & Reeves, 2011). Concepts of front and backstage spaces offer a rich lens to understand the different means through which practices take place in public and private spaces within a hospital. Studies investigating the effects of spatial arrangements on collaborative work practices (Mesman, 2012; Tellioglou & Wagner, 2001) have used spatial analyses to gain insight into interprofessional relations, including nurses’ access to and engagement in different spaces. Spatial concepts have been used to examine the shaping of nurse–patient relations (Gilmore, 2005) and the power relations and spatial elements embedded in ward round practices (Liu, Manias, & Gerdtz, 2013). These studies set an important precedent by showing the spatial complexity of hospitals as sites of work.

Iedema, Long, Carroll, Stenglin, and Braithwaite (2005) offer a new perspective where corridor space is produced and consumed as a liminal space in order for professions to co-exist, where the rules, regulations and professional positionings are relaxed, the power structures are in abeyance and specialization between professions are suspended. The corridor transforms into a space where people can work, tolerate contingencies, communicate and make decisions about patient care. Iedema et al. allude to space and work between professions in the hospital setting by focusing on communication, but do not focus on learning. Carthey (2008) reports similar findings about the importance of corridors. The educational significance of this space is highlighted, but questions of interprofessional learning are not addressed.

### Nursing and interprofessional learning

Several studies have addressed questions of nurses’ learning in practice. Skår (2010) highlighted that nurses require time and work experience to find their role and develop relationships with others in order to access knowledge. Similarly, Estabrooks et al. (2005) observed that the main sources of practice knowledge for nurses were social interactions where nurses communicate, form relationships and exchange information between and with each other, other health care professionals, and patients. Many of these exchanges are informal interactions of a spontaneous nature.

As with the literature on work and learning generally, research on nurses’ learning in practice highlights the importance of social interaction (Estabrooks et al., 2005). However, we argue that these interactions do not occur in a spatial void. Furthermore, interprofessional dynamics of nurses’ learning have received little attention; raising questions about the role of space in nursing work. Social interactions among health professionals of different disciplines are a crucial component of clinical practice, as they each search for additional clinical knowledge to resolve problems for their patients. Access to such interactions, and how they are conducive to learning, cannot be taken for granted. A spatial perspective can help to further probe these issues.

### Theoretical framework

Our aim is to reposition space as a central unit of analysis in questions of learning by drawing on Lefebvre’s (1991) tri-partite theorization of space. We draw out points helpful in understanding where space is produced and consumed and, in particular, how clinical spaces become learning spaces. The emphasis lies not only on experience, but also on production and consumption of space through practices. Thus, we offer an alternative way to illuminate aspects of learning between health professions that are perhaps concealed in other accounts.

Lefebvre’s spatial triad revolves around the inter-relationship between three different kinds of space; *perceived space* (spatial practices), *conceived space* (representations of space) and *lived space* (spaces of representation). Lefebvre sees this as an iterative relation between what people do and the way *space* is produced and consumed, therefore, linking this to questions of power (Foucault, 1975). In this way, spatial theory brings an additional generative dimension to understanding workplace learning. Throughout this paper, we shall refer to the Lefebvre’s triad using the terms *perceived*, *conceived* and *lived*.

*Perceived space* is associated with everyday acts connected to occupying a given space that shapes people’s everyday world. It draws attention to what is done both within space, and in the process of producing space. *Conceived space*, however, is created by designers, architects and engineers. It is expressed in plans, abstract representations, codes, images and physical manifestations of their designs. For the purpose of this paper, *conceived space* is operationalized as the intended purpose of particular spaces. *Lived space* is played out in real life situations where the real and imagined spaces come to life materialized through symbols, ideologies and bodies. *Lived space* can be thought of as a thirdspace (Soja, 1996) where practices and symbolic meanings come together in lived experience of appropriated space.

### Methods

The study was carried out in an Australian teaching hospital on an acute care ward to explore how learning among health professionals occurs in clinical practice. For this paper, interactions between nurses, the prime focus of the wider study, and other practitioners were considered. In order to determine if learning has occurred, we draw on Edwards (2005) who defines learning to a change in the way individuals act on and interpret the world. An indication of successful learning is the use of appropriate tools, including other people, objects and concepts to work on problems. We use this premise to expose learning during the discussion of the vignettes.

### Sample

The sampling for the study employed criterion-based (or purposive) sampling (Creswell, 2007). Participants recruited held between two and five years’ post-registration clinical experience in an acute care setting. Registered Nurses who had completed the transition from an undergraduate program of study to the workplace were eligible to participate. Confidentiality and anonymity was guaranteed at the initial meeting and informed consent was obtained from the nurses. Ethical approval was obtained from both the University and the Local Health Network where the research took place.

### Data collection

A focused ethnographic method that applied a practice-oriented approach as suggested by de Laine (1997) was used to collect data through the shadowing and observation of nurses as they

performed routine nursing work, followed by interviews. In this study, ethnography was not defined by continuous extended duration in the field, but deployed targeted approaches appropriate to the phenomenon under investigation and research questions (Marcus, 2007). Nine nurses were shadowed on three separate occasions as they performed everyday work during a morning shift for 5 h at a time (totaling 135 h of observations). Throughout the observations, opportunities were exploited for informal discussion to enrich understandings of what was observed. Resulting descriptive data were used as the basis for one-to-one semi-structured interviews (Kvale, 1996) conducted immediately after each observation period. These were digitally recorded and transcribed verbatim (27 interview hours). Participants were aware that the principal researcher who conducted the observations and interviews had experience as a nurse but had no professional relationships with them other than the research at the time. Although patients were not a focus of the study, they were provided with an information sheet about the study aims and the presence of the researcher on the ward.

### Analysis

The analysis was undertaken using MAXQDA software as the data management tool to enable coding and retrieval and to aid interpretive and analytical work. Treatment of ethnographic field notes and interviews used grounded and theoretically informed approaches, following Srivastava and Hopwood's (2009) framework. This began by identifying parts of the data where we were able to explore the value of spatial theory and its engagement in terms of questions of learning. Data from observations were reviewed to develop themes, followed by further analysis linking corresponding interviews to the observations (Kvale, 1996). Although observational and interview data are different in origin, the focus of interviews on what was observed justified their being treated together in the analysis. In this way, all relevant data having a bearing upon a particular theme or finding was considered.

During observations it was noted that there were specific spaces in the ward where most interactions arose. The first analytical sweep identified seven interaction-intensive spaces. The second step involved characterizing interactions within these as between nurses, or as interprofessional in nature. Data pertaining to the latter are used as the basis for this paper. The third analytical step involved applying Lefebvre's tri-partite framework, identifying elements of data that could be in terms of *perceived*, *conceived* or *lived spaces*.

The final step linked the spatially focused analyses to questions of learning. This followed analytic approaches established in many studies of workplace learning by not focusing on spaces designated as learning spaces, or on interactions whose sole or primary purpose is learning. Rather, the pedagogic nature of an interaction was established according to whether learning was an outcome. This was determined:

(i) through observations of knowledge exchanges resulting from problems in practice, whereby it was possible to trace how problems were overcome and/or changes in the course of action; (ii) instances where participants identify learning outcomes in first-hand accounts of interactions; (iii) using Edwards' (2005) criteria as discussed above. The analysis was sensitive to learning in multiple directions between health professionals, and did not assume learning relations map onto professional hierarchies. This follows common definitions of interprofessional practice (Reeves, 2009) that highlight members of different professions learning with and from each other, without assigning a pedagogic dominance or order of one profession over another.

### Findings

We present findings through three vignettes that draw on field notes and interviews, each serves as an empirical illustration of key points that emerged numerous times in the data analysis. We are using vignettes following Hughes (1998) in which we present these as stories about individuals, situations and structures that make reference to important points in the study. Below we give a brief commentary introducing each vignette, while the following section offers lengthier interpretative discussion of findings, and also how Lefebvre's tri-partite framework may be applied to illuminate these findings.

#### Vignette 1: the ward round

The first vignette focuses on spaces produced through team ward rounds. These occur in physical spaces of corridors and patient bedrooms and become an action hot spot as practitioners come together to discuss issues in clinical practice. The excerpts from field notes and interview transcripts provide a basis for exploring relationships between *perceived*, *conceived* and *lived space* that will be highlighted below:

The Registered Nurse notices the medical team as they walk past the write-up bay station in the ward. There is a big procession of people in the team.

Registered Nurse: I'd like to hear what they have to say  
Doctor: [as she is walking past] you should!

Registered Nurse: the doctors explain things to the patient in a simpler way and then the team just writes in the notes.

There are 12 people around the bed plus the Consultant who is explaining to the patient her paracetamol regime. Afterwards the nurse talks to the doctor about the patient's recent urine sample and recurrent urine frequency and the continued plan of care. Later in the formal interview, the nurse was asked what she thought about the team ward rounds and the reason she wanted to attend.

Registered Nurse: We usually go around with the doctors, you want to hear their opinion about the patients... my role would be more... jotting down the doctors notes and from these conversations I write in the patients' progress notes or plan as [the doctors] don't write the whole conversation, they only write down dotted points, so you kind of go back to your staff and give them feedback saying "OK the doctor wants this because of this"... I then understand that's what might be happening to [the patient] and then I can anticipate what could help with nursing management. I can understand it better as well for myself with the medical terminologies, there's not only the big doctors who speak, they've got a social worker if they've got any social issues or pharmacy they could provide advice about drugs or physiotherapist to provide the right equipment to the patient... All of that team are a large health group present there... I could also explain from a nursing perspective... so [doctors and allied health practitioners] can get a better picture and can understand why and what was happening for the patient as well from nursing.

#### Vignette 2: the medical workroom

This vignette focuses on observations and field notes of a registered nurse who went into the medical workroom to find a doctor whom she thought may still be on the ward, to ask a question about one of her patients. Instead, she encountered another doctor who happened to be there (doctors often sit in the

medical workroom to look up blood results or generate request forms):

As the Registered Nurse walked in, the doctor looked anxious and asked,

Doctor: I have to chart some stem cells. . . Oh how do you want it? How do I chart the stem cells? Can you show me how to chart it and where to chart it, you know, is it like this? Is there a protocol that I should follow?

Registered Nurse: [responded by showing the doctor where to find the protocol on the computer and briefly informed him what the usual prescription regime would be for that particular type of patient

[RN looks up on the computer website]. . . the Cancer Institute of NSW – IVAC cycle B which is a pathway plan for chemotherapy. . . this is where both doctors and nurses follow the planned pathway as these are standard cancer treatments available on the computer. We can access this at each nurse's station on the computer. Here is a folder about the conditions and subsequent chemotherapy regimes, written directly from the Cancer Institute of NSW. [The Registered Nurse then reassured the doctor that this was the usual procedure.]

### Vignette 3: the Registrar's room

The last vignette demonstrates how spaces and *spatial practices* may constrain learning, highlighting the importance of spatial concepts in understanding learning between professions. The vignette presents one instance of what was observed and recorded in field notes as a repeated pattern, backed up by the more generalized account given during the research interview by the nurse:

A Registered Nurse went to the Registrar's room to speak with the Registrar, knocked on the door, waited a few minutes. Finally the door opened just ajar, the nurse stayed outside carefully peeking around the marginally opened door [the registered nurse grabbed the door before it shut and stayed at the edge but did not go any further].

Registered Nurse: this patient has put on a significant amount of fluid, what do you want to do?

Doctor: [peering around the edge of the door] she may need some Lasix [medication that assists with fluid removal via the kidneys]

The Registered Nurse later commented to the researcher during interview:

You can knock on the door and I guess depending on how important it is what you've got to say is going to depend on the type of reaction you're going to get from the people behind the door. . . you wouldn't go there for something silly but its the kinda place they go to. . . I don't know what they do in there really but its definitely where they go. . . I have been in there a couple of times but you always feel like its not appropriate to be in there. . . you feel like you go in and have a quick word and you don't linger around. . . I don't think that there is any specific rule. . . its just a feeling that you get. . . I know that I wouldn't go knocking on the door for something that I could definitely wait until whenever they come out again. . . If I thought that it was important enough – like with the weight that the patient had put on – I would knock on the door. If it was something that could wait a little while then I wouldn't. I don't know how you make that decision. It's just based on how soon do you think something has to be done about a particular thing.

## Discussion

As presented above, the first vignette highlights how the *conceived spaces* of bedrooms and corridors may become *lived* as crucial sites of learning between health professions through their role in providing a setting that facilitates interaction. Carthey (2008) suggests that effective hospital corridor designs are essential for communication and the delivery of quality patient care. The main function of a ward round in terms of spatial practice (*perceived space*) is that the health care team reviews their patient at the bedside. This involves discussion between the patient and the team where bloods or other test results are reviewed, medications are changed and often, this discussion continues as the team moves through the corridors to the next patient.

The bedrooms and corridors are *conceived spaces* that reflect design intentions focused on accommodating and treating patients, and establishing ease of access to those patients. However, the *perceived space* produced through practices is different, as the health care team weaves in and out of patient bedrooms and corridors discussing each patient, their progress during the admission and deciding the next stage of the plan of care. The ward round can be understood as an enacted (*perceived*) *space* that moves through the architectural spaces, shaped by those physical arrangements, but also involving its own distinctive *spatial practices*, such as the arrangement and procession of bodies. The *lived space* is one that brings these social practices and intentions together, and which accounts for the pedagogic significance reported by the nurse in the interview. The *lived space* of the ward round gives the nurse access to forms of explanation offered by other professionals not available in other spaces. These provide a crucial basis for her work in supporting colleagues and managing continuing care.

However, there is more going on in the ward round than this, and we can capture this by understanding it as a *lived space* (Lefebvre, 1991). Here, it is the discussion and questions raised about patient care, the type of patient problems discussed at the time of the round and which specific practitioner participates in the sharing of disciplinary-specific knowledge that supports learning. The nurse likes to attend because the doctors explain complex care in simpler everyday language for the patient, which she can understand more easily. The *conceived spaces* of the patient bedrooms and corridors were not intended for discussion and sharing of disciplinary knowledge. As a rule in these particular locations, disciplines are able to co-exist together through forms of negotiation as demonstrated in this vignette. This builds on prior studies, which have alluded to links between space and cross-professional communication (Iedema et al., 2005). The lived practice of discussion on the round shifts these spaces into a space for learning between professions. Each discipline offers a unique approach in the care of the patient. By engaging in the discussion, each member takes with them new knowledge that can be drawn upon. As Liu, Manias, and Gertz (2013) have argued, it is important to highlight the interprofessional activity occurring via the ward round between disciplines as they engage with the problems of practice enabling learning in multiple directions among both nurses, doctors, pharmacists, physiotherapists and social workers.

In the second vignette, the medical workroom was intended as a workspace being available to all disciplines in the delivery of patient care (*conceived space*). The medical workroom by design fosters engagement with others through the location of materials and artifacts situated in the space. *Spatial practices* linked to those conceptions and artifacts mean that the workroom is a site in which members of different professions come together, often incidentally as part of separate work requirements. From a

*perceived space* or *spatial practice* standpoint, health practitioners generally sit down and write up charts, order tests, write clinical notes and talk to each other and those from other departments about patients in their care. The physical set-up of the room, including its relative seclusion, making quiet work possible and material components that provide access to information and ordering systems, encourages and facilitates such practices. The performance of these actions by different members of staff brings a social dimension into being.

However, in this vignette, the medical workroom was thus produced as a space in which pedagogic support extended from one profession to another. What was actually *lived* was an episode of learning where the doctor was unsure how to prescribe an infusion of stem cells, asking one of the Registered Nurses how to prescribe the infusion and whether there was a protocol or guideline available so he was able to refer to these the next time the same situation arose. The space becomes *lived* as a vital pedagogic space; because the nurse was physically in the workroom space seeking out something else there was an opportunity for the doctor to ask the nurse a question about practice. This finding mirrors results found by Ellinger and Cseh (2007) where employees enabled other's learning through work. The medical workroom as a pedagogic space was not designed into being. The interprofessional learning taking place there reflects its *conceived*, *perceived* and *lived* dimensions, and this analysis highlights that learning spaces can be understood as being enacted, or brought into being through practices, which themselves may be shaped by physical spaces and require professional practices to intersect in ways that bring different professionals together.

In the third vignette, the Registrar's room was initially *conceived* as a doctors-only space where doctors could go to write patient notes, look up results of blood work, order tests and so forth. This profession-specific conception is reinforced materially through the separation of the space by walls and a door. It is also reproduced in *perceived space* through *spatial practices* – the Registrar keeps the door closed, takes time to open it, and even then only does so partially, maintaining the spatial separation and isolation. The Nurse's practices both maintain and challenge this *perceived space*. By avoiding such interactions unless they are necessary, and by knocking and waiting (rather than opening the door and going in), her practices produce the *conceived space* into *perceived* form. However, the ensuing interactions (limited as they may be) produce a new *lived space*, in which the boundaries of the Registrar's room become porous, and learning across professions may take place.

This vignette shows how the learning opportunities attendant with particular *spaces* cannot be taken for granted. The *conceived space* of the Registrar's room is a particular room that is continually produced and reproduced in ways that perpetuate established power relations between doctors and nurses. As Liu et al. (2013) illustrated, the current study demonstrates the significance of power struggles operating within ward practices. Clinicians turn social relations into spatial relations where previous hierarchical relationships produced in the Registrar's room change through the occupancy and closing off which has important implications for learning. The conception and ongoing reinforcement of the Registrar's room as a secluded, medical-only space presents barriers to learning across professions. Ownership of ward space between health professions wanting to retain their own "backstage" areas rather than share them with other disciplines further supports the differences of power and the limitations among other professions (Lewin & Reeves, 2011). These barriers are not only physical but also are enacted through practices of doctors and nurses. However, it was found that the boundary between the room and the corridor could be produced

for interprofessional learning as a *lived space* on occasions when nurses feel a transgression is warranted. Our argument is not that there should be no spaces allocated for primary use by particular members of a health care team. We nonetheless feel it is important to understand how conceptions of space and *spatial practices* can establish separation between professions that may hinder inter-professional interactions, cause blockages in ongoing practice, delay identification of solutions to problems, and curtail opportunities for knowledge-exchange except in the most pressing circumstances. The porosity of the boundary, however, points to the potential of practices, even on an individual and *ad hoc* basis, to produce *lived spaces* of interprofessional learning.

This study explored the potential value of Lefebvre's spatial theory and studies of workplace learning. The findings presented in this paper are illustrative of the perspective derived from Lefebvre's theory and not indicative of practices that might be seen or adopted elsewhere. Previously, researchers have concentrated on movements and locations in the production of spaces in contrast to the circumstances about learning between the professions in hospital spaces. A spatial lens illuminates the interface between everyday practice and learning among practitioners from different disciplines. By using Lefebvre's (1991) tri-partite framework, we are able to move beyond simplistic notions of physical or objective space, which treat space as a container for practices. Instead, a complex scene unravels in which conceptions, practices and the lived experience of space inter-relate, support, and perhaps "bump into" one another.

Through this lens, questions of learning and practice can be brought together, as spaces are understood as enacted, produced through actions and routines in everyday clinical work. The pedagogic nature of interactions between members of different professions has been highlighted, yet the living of spaces as sites of interprofessional learning cannot be taken for granted. This paper shows how learning among professions reflects and relies on physical spaces and practices that come together and are layered in collaboration with colleagues. The spaces of inter-professional learning cannot be marked on a map, because they are fluid and relational, as in the dynamic ward round, and contested, as in the porous boundary of the Registrar's room. Nor is understanding what enables and constrains interprofessional learning a question of identifying spaces or practices where such learning is intended. This analysis shows that to understand what affects learning among health professions as part of working life on a hospital ward, we must focus on spaces as they are produced and lived in practice. Doing this affords a sensitive and nuanced understanding of how physical spaces, and the *spatial practices* of different professions weave together to make interprofessional learning possible, and to support ongoing decisions and actions ensuring quality care.

### Concluding comments

This paper sought to address a gap in knowledge about space and interprofessional learning at work drawing on Lefebvre's (1991) tri-partite theoretical framework of *perceived*, *conceived* and *lived space*. A review of the literature revealed that while researchers have begun to examine spatial and hospital practices, questions of interprofessional learning have not been addressed. An ethnographic approach was used to collect data through the shadowing and observation of nurses as they performed routine nursing work, followed by semi-structured interviews. Three vignettes that focused on a ward round; medical workroom and Registrar's room have been presented, comparing and contrasting the intended, the practiced and pedagogically experienced spatial dimensions. Findings suggest that workplace learning in clinical practice with, from and about two or more health professions is a frequent

transaction that enables practitioners to develop and share disciplinary and practical knowledge. This study highlights that learning spaces can be understood as being enacted, or brought into being through practices, which themselves may be shaped by physical spaces and require professional practices to intersect in ways that bring different professionals together. Failure to pay attention to the spatial aspects of workplace learning in continuing interprofessional education may hinder understanding ways learning occurs at the site of practice and how it might be fostered.

### Declaration of interest

The authors report no declarations of interest. The authors alone are responsible for the writing and content of this paper.

### References

- Boud, D., & Middleton, H. (2003). Learning from others at work: Communities of practice and informal learning. *Journal of Workplace Learning, 15*, 194–202.
- Carthey, J. (2008). Reinterpreting the hospital corridor: “Wasted space” or essential for quality multidisciplinary clinical care? *Health Environments Research and Design Journal, 2*, 17–29.
- Collin, K. (2008). Developmental engineers’ work and learning as shared practice. *International Journal of Lifelong Education, 27*, 379–397.
- Creswell, J.W. (2007). *Qualitative inquiry research design: Choosing among five approaches*. 2nd ed. London: Sage.
- de Laine, M. (1997). *Ethnography: Theory and applications in health research*. London: MacLennan & Petty.
- Edwards, A. (2005). Let’s go beyond community and practice: The many meanings of learning by participating. *The Curriculum Journal, 16*, 49–65.
- Ellinger, A.D., & Cseh, M. (2007). Contextual factors influencing the facilitation of others’ learning through everyday work experiences. *Journal of Workplace Learning, 19*, 435–452.
- Estabrooks, C.A., Rutakumwa, W., O’Leary, K.A., Profetto-McGrath, J., Milner, M., Levers, M.J., & Scott-Findlay, S. (2005). Sources of practice knowledge among nurses. *Qualitative Health Research, 15*, 460–478.
- Foucault, M. (1975). *The birth of the clinic: An archaeology of medical perception*. New York: Vintage Books.
- Fuller, A., & Unwin, L. (2004). Expansive learning environments: Integrating organizational and personal development. In H. Rainbird, A. Fuller, & A. Munro (Eds.), *Workplace learning in context* (pp. 126–144). London: Routledge.
- Fenwick, T., Edwards, R., & Sawchuk, P. (2011). *Emerging approaches to educational research: Tracing the sociomaterial*. London: Routledge.
- Gilmore, J.A. (2005). Hybrid space: Constituting the hospital as a home space for patients. *Nursing Inquiry, 13*, 16–22.
- Hughes, R. (1998). Considering the vignette technique and its application to a study of drug injecting and HIV risk and safer behaviour. *Sociology of Health and Illness, 20*, 381–400.
- Iedema, R., Long, D., Carroll, K., Stenglin, M., & Braithwaite, J. (2005). Corridor work: How liminal space becomes a resource for handling complexities of multidisciplinary health care. *Asia Pacific Researchers Organization Studies: 11th International Colloquium*. 4–7 December, Melbourne, Australia.
- Koopmans, H., Doornbos, A.J., & Van Eekelen, I.M. (2006). Learning in interactive work situations: It takes two to tango: Why not invite both partners to dance? *Human Resource Development Quarterly, 17*, 135–158.
- Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. London: Sage.
- Lefebvre, H. (1991). *The production of space*. Oxford: Blackwell.
- Lewin, S., & Reeves, S. (2011). Enacting team and teamwork: Using Goffman’s theory of impression management to illuminate interprofessional practice in hospital wards. *Social Science & Medicine, 72*, 1595–1602.
- Liu, W., Manias, E., & Gerdtz, M. (2013). Medication communication during hospital ward rounds on medical wards: Power relations and spatial practices. *Health, 17*, 113–134.
- Marcus, G. (2007). How short can fieldwork be? *Social Anthropology, 15*, 353–357.
- Mesman, J. (2012). Moving in with care: About patient safety as a spatial achievement. *Space and Culture, 15*, 31–43.
- Reeves, S. (2009). An overview of continuing interprofessional education. *Journal of Continuing Education in the Health Professions, 29*, 142–146.
- Skår, R. (2010). How nurses experience their work as a learning environment. *Vocations and Learning, 3*, 1–18.
- Soja, E.W. (1996). *Thirdspace: Journeys to Los Angeles and other real and imagined places*. Oxford: Blackwell Publishing.
- Srivastava, P., & Hopwood, N. (2009). A practical iterative framework for qualitative data analysis. *International Journal of Qualitative Methods, 8*, 76–84.
- Tellioglou, H., & Wagner, I. (2001). Work practices surrounding PACS: The politics of space in hospitals. *Computer Supported Cooperative Work, 10*, 163–188.