Expanding our understanding regarding residents' participation in the workplace

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Expanding our understanding regarding residents' participation in the workplace

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Learners' active participation in clinical contexts is a crucial aspect of workplace learning. According to Billett,[1] such participation arises from learners' engagement with workplace opportunities. Billett used the term 'affordances' to highlight the fact that such situations could be both enabling or restricting in terms of learners' participation. As a result, engagement in workplace affordances is complex and unpredictable.[2] So much so, that learners that share the same training could end up having completely different learning trajectories, as the experiences they accumulate could vary both in quality and quantity.[3]

Disentangling the factors that influence resident engagement in learning affordances at the workplace is paramount to help maximise the benefits of learners' exposure to clinical environments. We already know from the literature that clinical supervisors regulate to a great extent the types of opportunities that are presented to learners.[4] Such regulation is influenced by how much they trust their students,[5] and how competent clinical supervisors gauge their learners to be.[6] We also know that building a strong relationship between learner and supervisor is crucial for optimising residents' participation in clinical practice.[7]

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In this issue of *Medical Education*, Bannister et al.[8] expand this line of research by exploring the factors that influence how residents engage in opportunities to practise technical skills in a paediatric emergency department. The authors demonstrated that the opportunities to practise technical skills were influenced by factors in three categories: learners', teachers' and environmental factors. Concerning the latter, they described the role of other workplace actors in residents' engagement, highlighting the importance of other team members in accepting and approving residents' participation. For example, the authors described how nurses influenced residents' decisions to attempt a technical procedure, to the extent that they could withhold the opportunity from residents that seem incompetent or unmotivated. Concerning learners' factors influencing opportunities to practise technical skills, the authors described how some residents were uninterested in practising some skills and decided to decline specific opportunities, which seems counterintuitive at first glance because people tend to assume that learners are always eager and willing to learn. We would like to discuss these two issues in depth in the following paragraphs.

First, workplace learning literature seems to be skewed in exploring how learning arises from how students and residents interact with clinical supervisors,[9] overlooking the importance of other actors, such as nurses or physical therapists, who also have a role in students' learning. Workplace learning goes beyond practising authentic tasks; it involves engaging in a community with a myriad of different actors who hold particular practices and repertoires, which are the primary source of creating or withholding affordances for the learner.[10] By foregrounding the role of other actors in how residents attempt clinical skills at the workplace, Bannister et al. contribute to an interesting, yet under explored, chapter in the workplace learning literature. Looking at the broader picture will enable understanding and optimising learning in real clinical contexts. Expanding this research agenda includes exploring how residents interact with other so-called non-physician actors, how such relationships influence their learning and what is learned from them.

Workplace learning literature seems to be skewed in exploring how learning arises from how students and residents interact with clinical supervisors

Second, Bannister et al. uncovered a crucial aspect of residents' agency in workplace learning. Not all learners are eager to latch onto all learning opportunities that are presented to them. Workplace-learning literature seems to assume that all learners are interested in an inbound trajectory towards full participation when entering a learning community, overlooking other types of participation that include remaining in the periphery of the community.[11] Some residents that rotate in settings within their discipline have already decided what type of future practice they want to pursue, and make choices accordingly. As Bannister et al. described it, some residents were not interested in attempting clinical skills that are of interest to an emergency paediatrician, simply because they do not see practising in the emergency department in their future. Further, there are residents that are interested in learning just partial elements of a community of practice body of knowledge. In fact, postgraduate curricula include clinical rotations in settings outside residents' primary discipline; for example, anaesthesiology residents rotate in some internal medicine settings to strengthen their knowledge and skills in perioperative assessment and management of complex patients. Going into a foreign context does not mean that a resident is interested in learning all aspects of those communities, just the elements that seem appropriate for their learning trajectory. How residents decide what to learn and what not, exploring if the resident could make that choice and how practice should be shaped to match such expectations are questions that need further research, especially in residents rotating in foreign settings.

Workplace-learning literature seems to assume that all learners are interested in an inbound trajectory towards full participation when entering a learning community

In summary, residents' engagement in workplace learning opportunities is a complex process, as demonstrated by Bannister et al., a process that still needs to be further elucidated. Regarding the environment, the literature is skewed towards the supervisor–learner relationship, missing the role of other actors. Concerning

the learner, it always seems to assume they will engage in all types of opportunities, overlooking their agency. Mending such gaps includes determining the role of all the members of the community of clinical practice and moving beyond the traditional student–supervisor dyad focus. It also entails understanding the role of the type of resident participation (peripheral versus central) within a community and how that role shapes his or her engagement with that community. Bannister et al. have now started this important discussion, broaching exciting new avenues that will help us expand our understanding of workplace learning.

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Grappling with troublesome knowledge

Luke Y C Chen & Gary Poole

"As the cool stream gushed over one hand she spelled into the other the word water, first slowly, then rapidly. . . Suddenly I felt a misty consciousness as of something forgotten – a thrill of returning thought; and somehow the mystery of language was revealed to me. I knew then that "w-a-t-e-r" meant the wonderful cool something that was flowing over my hand.[1]"

In this well-known 'aha moment', 7-year-old Helen Keller, blind and deaf, connects the sensation of liquid flowing over her skin with the spelling of the word w-a-t-e-r on her other hand.[1] Her teacher, Anne Sullivan, had spent months finger-spelling with her, but although Helen had quickly learned to mimic the tracing of words like d-o-l-l, she did not understand the meaning of those letters or their link with the toy in her grasp. The cognitive breakthrough of linking words to the objects and ideas they represent transformed her life; she was able to integrate her sensory experiences with new ways of comprehending and interacting with the world around her.

Although 'aha moments' in health professions education are

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