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Workplace participatory practices: The dualities constituting learning through work

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This chapter advances some conceptual bases for understanding learning through work. Regardless of whether it arises through everyday work activities or through experiences that are intentionally organized and supported by experienced coworkers, learning through work is shaped by workplace participatory practices. There are two contributions to such practices: those that are exercised by the workplace, including the activities and interactions the workplace affords those who work in it; and those which relate to how worker-learners engage with and learn from what is afforded them. As such, these practices comprise a duality between how the workplace affords or invites participation and how individuals elect to take up that invitation and learn through their participation. This duality is characterized by its relational character. What the workplace affords (i.e. activities and interactions) is a product of the historical, cultural and situational factors that shape the activities, goals and interactions of the work practice and its particular workplace manifestation. Yet, how individuals construe and learn through them is, by degree, person-dependant. In this way, learning is conceptualised as arising inter-psychologically through negotiations between personal and workplace practices. Moreover, although different kinds of workplace experiences (e.g. routine or non-routine activities) are likely to have legacies for learning, these will be person-dependent. Therefore, in considering how to improve learning in workplaces and through work, participation needs to be considered from both the personal and workplace perspectives, and the negotiations between them.

Learning through work
Understanding the process of learning through work is becoming increasingly important as occupational requirements now change frequently and will likely do so throughout workers’ lives. Hence, in order to maintain workplace competence, there is a need to know how learning can be most effective throughout working lives. This chapter proposes workplace participatory practices as an explanatory concept for understanding and appraising learning in workplaces and through work. These participatory practices comprise a duality between the opportunities that are afforded individuals when participating in their work activities and interactions, and how individuals elect to engage in and learn through these activities and interactions. The process of learning enacted through this duality is described as occurring inter-psychologically in Vygotskian-inspired socio-cultural theories. That is, intra-psychological outcomes (i.e. changes to individuals’ knowledge or learning) arise inter-psychologically through negotiations between the contributions and agency of both individuals and the social world (e.g. partners, artefacts, symbols and the physical environment). Importantly, the forms of knowledge required to perform paid occupational activities have their origins in history and are sustained and transformed as dynamic cultural practices (Scribner, 1985b) that serve human needs and are manifest in particular ways in each workplace (Billett, 2001a). Therefore, the press and mediation of the social world is expressed through societal need and values, yet is manifested and enacted in particular work settings, and can be sourced through engagement in those settings. The social world provides many and different kinds of opportunities to gain access to and support for learning the occupational and workplace specific concepts and strategic procedures required to work. Therefore, to learn the knowledge for vocational practice usually requires accessing and engaging with it, often supported by observation, imitation and other mediated means of
securing that knowledge. Indeed, much of the ongoing learning about work arises gratuitously through engaging in everyday work activities within workplaces (Billett, 2001a). Yet, this learning process is inter-psychological, not socially or situationally deterministic. Individuals also contribute to the learning process and intra-psychological outcomes through their ways of knowing and capacities through their enactment of the occupational practice. Moreover, the degree by which individuals view what is being afforded them as worthwhile and worthy of the intentional effort required for learning that knowledge will shape how they learn through workplace experiences. In this way, individuals’ construal and construction of what they encounter in workplaces and work activities and how they elect to engage in and learn through work constitutes the other dimension of the duality that comprises workplace participatory practices. Importantly, this dimension helps to explain how individuals themselves mediate learning, and the roles that personal factors such as interest, ways of knowing and preferences shape their learning (Smith, 2005).

However, the exercise of both personal and social agency, and the processes and outcomes of participation in workplaces are likely to be situational and person-dependent in some ways. Moreover, these negotiated inter-psychological processes lead to two kinds of outcomes: individual learning and the remaking and transformation of the occupational practice (Billett, 2006). Consequently, the case made in this chapter goes beyond using the concept of workplace participatory practices to explain individual learning and development. It also suggests how practices that have historical origins, cultural purposes and situational manifestations are themselves subject to being remade and transformed over time. This arises through the enactment of the occupational practice by individuals through work tasks, in particular work settings and at particular moments in time. So the focus here is not to set the personal against the social, but to position them as both being interdependent albeit in negotiated and relational ways.

This case is advanced throughout the chapter by, firstly, attempting to define key concepts and elaborate their dualities. This is followed by some further elaboration of how learning through participation is mediated by both the social practice and individuals’ personal histories. Here, the salience of participatory practices is advanced through a consideration of workplace and personal contributions culminating in a consideration of how we should value what is learnt in workplaces. Finally, the kinds of outcomes that are central to the learning and continuity of occupational practice are discussed. It is proposed that subjectivity, appropriation and extending knowledge are all premised on and arise through negotiations between the personal and the social contributions, rather than being shaped wholly by the social and brute world beyond the individual. These themes of participation, learning and the kinds of learning that arise from learning in the workplace are discussed to inform practices that might support learning through work.

**Key concepts and their dualities**
The key proposition here is that workplace participatory practices provide an explanatory basis for understanding and appraising learning through work, and therefore can inform ways to sustain and improve the efficacy of these learning experiences. However, to advance this case, it is necessary to define some of the key concepts as they are applied here. As noted, workplace participatory practices are premised on a duality between personal and social contributions. This duality is also evident in a number of its key concepts: participation, experience, activities and practice, and agency which will be elaborated in turn in this section.

Although participation and learning are now seen as being consonant with one another (Sfard, 1998), here participation is proposed as having both personal and social dimensions. On the one hand, there is the degree by which individuals are afforded opportunities to participate in work. Affordance here refers to the invitational quality of the workplace: the degree by which individuals are permitted to participate in work activities and interactions, and in what ways. Hence, the usage is slightly different from the Gibsonian conception of visual appeal to the individual (Gibson & Levin, 1975). Importantly, as the invitational qualities shape access to engagement in goal-directed activities, there are particular cognitive consequences arising from what kind of activities individuals engage in and the quality of interactions with others. Both
cognitive and social constructivist theories emphasise learning arising from participation in activities. Even though, as Rogoff and Lave (1984) conclude, activity structures cognition, there is also a personal dimension to the activity and learning nexus. This comprises the degree by which individuals elect to engage with what is afforded them. Participation might range from rebuffing what is afforded them, effortful engagement with it, or even attempts to go beyond or around what is afforded them.

Experience also comprises dualities. On the one hand, there is individuals’ cognitive experience (Valsiner, 2000) comprising their ways of knowing, conceptions, discourses and capacities. These experiences provide bases for how individuals construe and construct what they encounter in the world beyond them. Cognitive experience also shapes and is shaped by personal dispositions such as interest and intentionality that directs the focus, intensity and direction of individuals’ cognition. Yet, there is also the social experience that comprises what the social world projects. This includes socially-derived norms, values, conventions and practices, discourses and social forms such as language, class and the valuing of particular forms of work.

As with other elements of the dualities, there are relations between these experiences. That is, individuals’ cognitive experience arises through a personally-particular set of experiences that constitutes the life history and has a personally-unique set of outcomes (Billett, 2003). In similar ways, the terms ‘practice’ and ‘activities’ also have both personal and social connotations. Occupational practices and activities are generated in the social world, and modified over time as cultural needs change, and they find particular form in particular settings, such as workplaces. These practices and activities can be observed, compared, and, comprise the means through which work is undertaken. On the other hand, there are personal practices which are ways in which individuals enact their socially derived roles and tasks. In doing so, they engage in activities which require the deployment of their cognitive experience.

As with the concepts elaborated above, the concept of agency has both personal and social connotations. Personal agency comprises the active and directed nature of individuals thinking and acting, which may extend to confronting, rebuffing or enthusiastically embracing what the social world suggests. Personal agency is more than an expression of beliefs, as it directs the focus, intention and direction of individuals’ cognition. Then, there is social agency. This comprises the degree by which the social world is able to exercise its suggestion. Some situations such as Foucault’s notions of institutional surveillance and monitoring provide the means by which the social world can powerfully exercise its suggestion. It also does this through language, discourse, societal norms and practices and so on. Yet, the agency of the social world can never be so strong as to secure the unambiguous projection of its suggestion or acceptance (Berger & Luckman, 1967). This is because of both difficulties with both projections and their interpretations by even the most willing of recipients of the suggestions. So the dualities that characterise these concepts serve to underpin workplace participatory practices.

Having briefly defined these concepts, it is important to elaborate the affordances of workplaces and their relationship to these processes of learning and remaking practice, followed by a consideration of individual engagement.

**Workplace participatory practices: affordances**

One of the two key tenets of workplace participatory practices is how the workplace invites or affords individuals to participate in and learn through its activities and interactions. This includes access to the direct guidance of more expert social partners that is central to learning knowledge that cannot be learned (or is difficult to learn) through discovery alone (Billett, 2002). Such guidance can be important, because although much can be learnt through participation in everyday work activities, some forms of work knowledge are not easily accessed or secured because they are hidden from the learner. For instance, in one study, hairdressers remarked that they could observe the process of colouring hair, but had little shared understanding of hair structure and concepts associated with it. This guidance extends to the sequencing of access to activities and the monitoring of performance and progression. It can also extend to the use of intentional guided learning strategies that aim to develop
procedural capacities (e.g. modelling, coaching) as well as those associated with conceptual development (e.g. the use of questioning, diagrams, analogies) (Billett, 2001a). However, regardless of whether the contributions to learning are those that arise through everyday work activity or from intentional efforts such as these, how the workplace affords these opportunities is central to explaining both processes through which learning arises and also the kinds of learning that occur: the processes and outcomes (Billett, 2001b). For instance, individuals’ learning of knowledge that is new to them requires access to novel experiences (Anderson, 1993). Therefore, individuals who are only able to access routine activities and/or are denied support may have more limited learning outcomes than those invited to participate in new activities and then supported directly and enthusiastically by experienced co-workers. For instance, guidance by a more expert partner might be important when encountering something new, in order to assist that understanding. Later, opportunities to practice or engage with this kind of task are required for worker-learners to refine what they know about the task and hone how they go about enacting it. Given the importance of participation, engaging in a range of experiences and being guided by more expert partners, the degree by which these are accessible in the workplace is central to the qualities of learning through work.

However, workplaces are far from benign environments (Darrah, 1996; Hull, 1997), and are often highly contested. Moreover, participation in work activities and guidance afforded individuals is also shaped by workplace hierarchies, group affiliations, personal relations, workplace cliques and cultural practices (Bernhardt, Morris, Hancoock, & Scott, 1998). Consequently, opportunities to engage in experiences that can potentially provide desired learning are often distributed unevenly across the workplace, thereby inhibiting access to and support for learning salient vocational knowledge (Billett, 2001a). Work practices may also seek to limit or regulate access to prized work. This may occur for the pragmatic reason of avoiding the need for everyone to learn to perform prized and well-paid activities. Furthermore, judgements about individuals’ competence or readiness to engage in activities may also be used to determine how they are invited to participate in workplaces. This local constituting of work activities is a product of historical and cultural practices that shape the micro-social processes at the situational level. This includes the local orderings (Engestrom & Middleton, 1996) and localised negotiations (Suchman, 1996) of workplaces. For instance, employers prefer providing opportunities for younger and well-educated employees at the cost of affordances for older workers (Brunello & Medio, 2001; Giraud, 2002). There are also discriminatory practices on the basis of gender, age and race, and between different kinds of workers (Bernhardt et al, 1998). These localised orderings shape opportunities to participate in and access support and guidance are distributed in ways that reflect workplace norms and practices, which will be discriminatory in particular ways. Accordingly, individuals and cohorts of individuals will be advanced quite different workplace affordances depending upon their standing, means of employment, status or degree of inclusion in workplace affiliations or cliques.

There will also be different bases across and within work groupings, premised on local orderings. For instance, in a large manufacturing workplace quite different affordances existed across work areas. In one work area - a consumer advisory centre - there were very close relations between staff founded, in part, on their shared concerns, working on the same shift together and relationships that were formed in collaborative workplace ventures. Although some tensions existed, overall, it was a supportive environment for participating in and learning the skills required for effective work. However, other areas were less invitational. One area was subject to fluctuations in production levels, which threatened workers’ employment. Here, they began to seek opportunities for employment elsewhere in the plant. Another work area had also a full quota of senior (higher paid) positions. So here there were limited prospects for securing higher paid positions. But the construals of affordances can change quickly. At one point, the management cut funds for training and overtime, thereby reinforcing cynicism towards the company’s rhetoric about enhancing productivity through training. In this way, there is another dimension to the contested nature of workplace participatory practices. That is, beyond the contestations that will occur between
old timers and new comers, full and part-time workers, those with different occupational and workplace hierarchical affiliations, there will also be those between the contributions of the immediate social setting and the personal. Yet, as these affordances and bases for engagement change, there will be different bases for negotiations. Because of the dynamic qualities of work practice, workplace tasks, goals, interactions, participants and relations (including affordances) are likely to be changing frequently. For instance, in the food processing workplace described above, the customer service area took over corporate-wide responsibilities for consumer advice. They also acquired new equipment and software, and an expanded team of workers. In the packaging area, the impact of the curtailment of overtime and funds for training did much to transform the workers’ perception of the invitational qualities of the workplace. Like the production workers, they became more cynical about the workplace and its affordances, which became viewed as less invitational. So in different ways, the participatory practices changed, across the work areas. However, not only the participatory practices, but also the requirements for performance can change, as with the consumer call centre. For instance, in studies that examined the work and participatory practices of workers, over six-month and twelve month periods, each work practice and each of the workers experienced considerable changes in their work activities and the requirements for workplace performance. These changes included the transformation of a work practice, a shift in the strategic significance of work and changes to the bases for workplace decision-making. So over the duration of the six-month and twelve month periods, key goals for work requirements changed as did the kinds and forms of the participatory practices. Therefore, and importantly, rather than being a once-off source of knowing, the workplace affordances for individuals’ participation need to be understood as being constantly negotiated in changing circumstances.

Hence, the affordances that comprise one of the two dualities of work participatory practice are likely to be dynamic and included constant negotiation and re-negotiation. However, this highlights the importance of the kinds of experiences and support for learning that individuals require to participate, learn and maintain the currency of their vocational knowledge. Yet, while accepting the salience of workplace affordances, ultimately it is the degree by which individuals construe what they experience as being invitational that shapes their engagement in workplace. This includes how they engage in work activities and how they engage with the guidance from others in the workplace.

**Workplace participatory practices: Individuals’ engagement**

While the contributions of workplaces are important for learning through work and can be gauged in terms of their invitational qualities, the agency of individuals is also essential for engagement in and learning through work. Importantly, this learning can never be a process of socialisation or enculturation determined by historical, cultural and situational factors. This is because individuals actively interpret and construct knowledge from what they experience (Taylor, 1985). Therefore, despite the solid contributions arising from what the workplace affords, including those circumstances when the social press can be exercised quite forcefully, individuals personally mediate their constructions of knowledge (Valsiner, 2000). In particular, individuals’ personal agency shapes how they engage in work practice with consequences for their learning. There are many dimensions to this engagement and subsequent learning. One is to the interest or effort that individuals direct towards learning something. Effortful engagement is probably required for learning something which is complex and demanding to learn, and consequently is directed and sustained by individuals’ interests. Superficial engagement in workplace activities likely leads to shallow or less rich outcomes.

Moreover, the bases for individuals’ engagement in work are likely to be differentiated by personal factors. Firstly, individuals participate simultaneously in a number of social practices. However, the quality of their engagement in these practices is unlikely to be uniform. Individuals’ interests and priorities shape their participation in these practices (Glassman, 2001). Hence, full-bodied participation in one social practice (e.g. the workplace) may be in contrast with participation in another (e.g. the school tuck shop roster). Secondly,
individuals’ engagement with what is to be learnt is likely influenced by their values and beliefs. Workers of South Vietnamese heritage rejected team work in an American manufacturing plant, for instance, claiming that this kind of work organisation reflected the communism they had fled from earlier (Darrah, 1996). Similarly, coal miners and aged care workers engaged in practices in ways that reflected a gendered identity (Somerville & Bernoth, 2001). For instance, underground coal miners viewed open cut coal mining as an inferior form of coalmining. Such values are developed through participation in underground coal mining, where dangerous and potentially life-threatening working practices are a daily reality. Thus, their evaluation of open cut coal mining led to the formation of a particular kind of coal-mining identity. This permitted them to accept workplace injury and accidents as an inevitable consequence of their participation in their work practice. Similarly, Hodges (1998) rejected the approach to teaching children which she encountered in a university teacher education course because it clashed with her views on how children should be treated. So more than her values being subject to the social practice, her agency and subjectivity served to reject what was being afforded her.

Hence, individuals’ engagement at work can be premised in their personal histories or ontogenies (Scribner, 1985b), resulting in particular ways of understanding and engaging with the social world and is shaped by their subjectivities that arise through social experience. It is these subjectivities that determine what for them is invitational. These subjectivities are personally-social in at least two ways. Firstly, they arise from societal conceptions of masculinity or femininity or to the requirements of particular vocational practice. Secondly, individuals’ subjectivities are likely to be the unique outcome arising from their personal histories or ontogenies, through engagement in different ways in social practices throughout our lives. Consequently, the discussion here is about dualities between the personal and the social experience, not as dualisms that separate the individual and social. Instead, the individual here is seen as being a social product that arises through a socially derived personal history (i.e. ontogeny) that is shaped in personally particular ways across a life history (i.e. ontogenetic development). Or as Harre (1995) proposes the individual is born a potential person and the personal is generated through interactions with the social world. So, individuals, their subjectivity, sense of engaging with the world and so on represent personally-social geneses of cognition that may be unique in some ways. It is this social person that encounters, make sense of, responds to and enacts their occupational practice in particular circumstances and at a particular moment in time. In many ways, individuals’ agency arises through and shapes how they work and learn ontogenetically.

Relations between affordances and engagement
It follows from the above, that the process and outcomes of learning through workplace experiences can be explained as comprising a negotiated and relational interdependence between social practice and individuals’ agency, and the physical environment. Valsiner (1994) describes this process of learning as the co-construction of knowledge: the reciprocal act of knowledge construction through which both the object and the subject are transformed. Learning is not the acceptance of knowledge from an external source. Instead, individuals are active and discerning in how they deploy their cognitive experience and processes, making judgements about what they encounter and how they respond to what they experience. Therefore, engagement at work is relationally constituted between the affordance of the work practice and how individuals elect to engage in the work practice. In describing the relations between the social and cognitive experience, Valsiner (1994) refers to the degree of ‘relatedness’ between the individuals’ values and the norms of the social practice, as a consideration of what kinds of interactions and learning that will likely arise through these interactions. When considering the qualities of learning that are products of these reciprocal inter-psychological processes, Wertsch (1998) proposes distinguishing between the intra-psychological attributes described as ‘mastery’ (i.e. knowledge constructed without commitment or enthusiasm) and ‘appropriation’, in which the learner constructs knowledge (i.e. ‘taking it as their own’) (Luria, 1976). So there is no situationally-determined or uniform
outcome to inter-psychological processes. These are negotiated relationally between individuals’ subjectivities and the social experiences of workplaces.

This dualistic and relational basis for learning underscores the point that what a social practice (albeit an educational institution or a workplace) affords individuals can only ever be an intention or invitation. Because learners ultimately shape how and what they construct from the situation, the degree by which it is afforded can be viewed as being invitational only and not a given. Figure 1 depicts these dualistic workplace participatory practices. On the left-hand side is the evolving social practice of the workplace, and on the right hand side is the evolving personal history of the individual: their ontogeny. Changes in work practice are brought about by historical factors (e.g. changes in tools and technologies), cultural (e.g. needs for particular products or services) and situational factors (e.g. the goals, practices and participants in the workplace).

Fig. 1 Affordances and engagement in learning through work

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<td>(evolving vocational and work practice)</td>
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The conceptual significance of this duality, referred to here as workplace participatory practices, is in its illumination of the relations between the social world and the mind. These arise between the trajectories of the transforming workplace and individuals’ evolving ontogenetic development, including their subjectivities, as they engage in work activities. It also proposes that to understand relations between social practice and individuals’ thinking and acting requires delineating and identifying the invitational qualities of the workplace, from both social practice and also personal perspectives and, then, how individual work-learners elect to engage in that social practice. So there are important methodological imperatives here. That is, understanding learning requires a consideration of both the affordances and the basis of engagement, but in addition, and, most importantly, the negotiations that occur between these dualities.

These kinds of conceptual issues contribute to important current deliberations within human cognition. For instance, having proposed that there are relations between the mind and society, it is important to understand further these relationships. Central to these are the origin and sourcing of knowledge that has historical and cultural geneses, yet is required to be taken up by each generation and be purposeful for the social and cultural purposes for which it is being enacted (Rogoff, 2003; Scribner, 1985). It is also important to understand more fully the degree of social embeddedness of knowledge – the degree by which learning is embedded in and to its source and, therefore, the relationship between individuals’ thinking and social
practice (e.g. Cobb, 1998) as well as the consequences of those relations (e.g. Billett, 2006). Therefore, elaborating: (a) the affordance of social practice, and (b) how individuals’ engagement influences knowing and (c) the negotiated and relations between (a) and (b) stands to provide explanations about how individuals’ knowing (thinking, acting and learning) progresses. Central to these concerns are the kinds of learning or intra-psychological outcomes that arise through participation in social practices and socially-derived activities, such as those in workplaces. Illustrating the kind of contributions that might arise, the next section briefly discusses how these relationships inform conceptions of shared understanding (inter-subjectivity). As well, the kinds of learning that occur through participation in work are briefly discussed.

Inter-subjectivity, appropriation and extending knowledge

Within sociocultural constructivism, a key goal for learning in social practices is inter-subjectivity (i.e. shared understanding between learners and more experienced counterparts). The concern here is that historically derived, culturally purposeful and situationally-pertinent knowledge needs to be learnt, and in a common way, by those who are to practice that knowledge. Shared understanding is seen as a basis for having a common focus of attention and some shared presuppositions that form the ground for communication and working towards shared goals (Rogoff, 1990). Newman, Griffin and Cole (1989) propose that because humans construct meaning idiosyncratically, the key purpose of communication is to develop shared understanding. They argue that if humans developed understandings in a uniform way, there would be no need to communicate. However, we do not construct meaning in consistent ways and, therefore, there is a need to work towards achieving inter-subjectivity because it is central to the conduct of everyday human activity and human interaction in processes such as living and working. In terms of learning an occupational practice that is historically and culturally constituted, inter-subjectivity is seen as means of achieving shared understanding and a capacity to perform vocational practices through interactions with experienced co-workers and accessing an understanding of workplace requirements. This is a purposeful goal for learning in workplaces and in the development of much of the vocational competence and expertise required for work performance. Yet, given the discussions above, it is overly ambitious to consider that inter-subjectivity will necessarily arise from individuals’ construction of knowledge in a socially rich milieu.

Moreover, such an approach to learning and, indeed, to inter-subjectivity, can be seen as being largely reproductive. That is, it merely reproduces what is already known. Yet, as noted above, Wertsch’s concepts of mastery and appropriation (1998) as well as empirical work (Billett, 2003) indicate that even when faced with a strong social pressure to conform or where there is ample opportunity for a form of participation that will not be wholly or uncritically inter-subjective. This is because of the centrality of the reflexive quality of their perspectives or subjectivities. Indeed, it may be necessary to use intentional guided learning strategies to achieve the level of inter-subjectivity required for effective work practice (e.g. safe work practices). This is because much of what is required to be learnt (e.g. understanding and procedures) cannot be learnt alone through engagement, trial and error, observation and imitation. Also, individuals’ subjectivities may direct learning in inappropriate ways (e.g. wishing to identify with peers might lead to a rejection of concepts and practices that are important for effective practice). So the concept of appropriation, as defined by Wertsch (1998) and others, should be treated problematically. Appropriation is seen as desirable in so far as individuals making that new learning ‘their own’ do so because they agree with and understand it. Yet, such a conception of learning outcomes is also problematic. For instance, workers might appropriate bad or dangerous practices, because they seem to be efficient, saving them time or effort. There could be deleterious implications for such learning for the individual or the workplace. Therefore, intentional close guidance by more expert partners might be required to assist the development of the individual’s procedures and concepts required for shared practice. However, beyond this consideration there is also a need to consider the development of novel solutions to problems not yet encountered.
Consequently, there is an imperative now to consider approaches to learning and goals for participation in workplaces that extend knowledge and attempt to be generative of occupational practice that is robust enough to transfer elsewhere. In the study of the manufacturing plant, strategies of questioning dialogues and group discussion were used to intentionally extend learning arising from workplace activities and interactions (experiences). Yet, at best, the findings only provided tentative evidence of these approaches’ efficacy. However, the findings again emphasizes the key role that the workplace’s affordances play in assisting and supporting the development of these kinds of attributes: the frequency of strategy usage was highest in the work area that had the most invitational qualities, as an objective and observable measure (e.g. support, sharing, common concerns, opportunities to engage and discuss). In all, this suggests the importance of considering critically the dual, negotiated and relational nature of intra-psychological processes and the kinds of intra-psychological outcomes (i.e. learning and the remaking of work practices) that arise through these processes.

Practice considerations
Consideration of workplace participatory practices informs how learning through work might be enhanced. The centrality and significance of the relationship between the social practice and the socially-derived person has been advanced and discussed above. Consequently, effective participation and learning through work is shaped by more than workplace factors, since cultural, social and personal factors shape the process of engagement in learning. Whether referring to the construal of affordances (the workplace’s invitational qualities), the kinds of interactions that occur or the learning processes and outcomes that arise, the dualistic, interdependent yet negotiated relations between individuals as workers and the social practice that comprises work settings remain a preeminent consideration. Having a workplace culture and environment that is inclusive in terms of the distribution of activities and interactions, may assist making it an environment that invites worker to participate and learn. These affordances can be enacted for distinct kinds of purposes. For example, given the standing of different occupations, it is important that work that is not inherently deemed high status be intentionally given appropriate and legitimate status in the workplace, in order to bolster worker engagement. This is not a case of seeking to exploit, but to acknowledge the worth of employment, particularly those not subject to a societal fillip. So a culture of practice that acts to encourage participation and is tolerant of learning through practice (e.g. the occasional mistake) is likely to be helpful, as is one that affords opportunities for sharing experiences of different kinds of work. Also, support for the development of capacities, is most welcome. For instance, the guidance provided by more expert workers to assist learning not best derived through discovery alone will be helpful. Hence, the quality of affordances provided by others (e.g. experts and other workers) to participate and learn through work is important. The development and enactment of a workplace curriculum and the use of guided learning strategies to assist in the ordered development of these skills will be helpful. Yet, these affordances need to extend to accommodating personal trajectories and capacities. Workers have distinct premises for engaging in work and learning. What constitutes routine or novel tasks will be person-dependent. What for one individual will be a routine experience, for another will be quite novel. Moreover, the need of individuals to meeting their needs and as exercised through their engagement, direction, intentions is central to their engagement. Significantly, issues of attachment to an occupation seem to arise through engagement and securing a sense of worth through achievement in the occupation, not just because the occupation enjoys high societal esteem. Consequently, opportunities to engage and support to enjoy achievements and find worth in work are likely to be key bases for development.

In sum, then, a tentative way of illuminating the relations that underpin participation in and learning through work has been advanced as workplace participatory practices. This perspective may be useful to understand individuals’ learning throughout working lives. Understanding these relations in terms of reciprocal participatory practices is central to understanding learning through work, yet also extends to learning more generally.
References


