

GUIDANCE, ACTIVITIES AND PARTICIPATION: TOWARDS A WORKPLACE PEDAGOGY

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This paper proposes bases for conceptualising a workplace pedagogy. Its central elements include three levels of guided participation at work comprising: (i) everyday participation at work; (ii) guided learning for work; and (iii) guided learning for transfer. Together, these levels of guidance and the sequenced access to workplace activities represent the superstructure of this pedagogy. However, its foundations are located in the access to activities and guidance the workplace affords. The prospects for learning through guided participation are formed by the support and sponsorship afforded by the workplace, and how workers decide to engage with the workplace. Consequently, the bases of a workplace pedagogy cannot be restricted to the intentional and 'unintended' experiences that learners are afforded through guided learning. It also needs to account for how workplaces invite access to activities and guidance, and also how individuals participate in activities and engage with the guidance that workplaces affords. Together, these bases for learning through work edge us closer to a comprehensive workplace pedagogy.

Introduction

There is a pressing need for a workplace pedagogy that focuses on the attributes of workplaces as environments in which to initially learn and develop further individuals' vocational practice. Over the past decade or so, interest in workplaces as learning environments has intensified. Much of this interest is founded in pragmatic concerns associated with the cost of vocational skill development, its relevance to industry sector needs or pertinence to particular enterprise requirements. However, other, and perhaps more legitimate, reasons warrant the development of a workplace pedagogy. Firstly, for large cohorts of workers across a range of industry sectors, the workplace provides the most likely situation to develop vocational knowledge. For these workers, there are either no existing courses or those that are available are inaccessible or inappropriate. Accordingly, the experiences and support workplaces provide are the primary source of initially learning vocational practice as well as its further development. Secondly, the most prized initial vocational preparation programs (e.g. trade apprenticeships, being an articulated clerk, internships of doctors) usually include lengthy workplace experiences. Being accepted in these vocational practices is unlikely unless individuals' preparation includes lengthy periods of workplace practice supervised by more experienced coworkers. Yet, despite the significance attributed to these periods of workplace experience, there is rarely deliberate consideration of or intentional structuring of those experiences other than what is determined by the norms and practices of those workplaces. Thirdly, workplace experiences are prized in educational programs for diverse purposes ranging from understanding the 'world of work', the development of

specific vocational skills or to recontextualise what has been learnt in educational institutions. However, again it is the exception that these experiences are conceptualised as providing particular kinds of learning or are richly integrated with experiences in educational institutions. Fourthly, most of the learning throughout adults' working lives will probably be the activities in workplaces. Therefore a conceptual basis for how life long learning at work should proceed is clearly warranted. So there are legitimate, worthwhile and pressing reasons to identify bases of a workplace pedagogy. The pragmatic interests of governments, industry and enterprises in workplaces, as learning environments, need to be countered by a consideration of practices that aim to develop in workers robust or transferable vocational attributes. These those outcomes which offer the prospect of transfer across situations and circumstances in which the vocation is practiced. These attributes permit individuals to practice widely and optimise the transfer of that practice across situations and to new and different circumstances in which the vocational practice is enacted. Accordingly, an important goal for a workplace pedagogy is to focus on the development of the kinds of outcomes that permit individuals to liberate their practice from the circumstances in which it was initially developed. However, this is likely to be an elusive and hard earned goal.

Accordingly, understanding how individuals can best learn at work is a worthwhile educational and pedagogical project (Boud & Garrick 1999). Everyday work activities have been shown to develop much of the requirements for work practice (Billett 1999). In addition, intentional guided learning strategies have demonstrated the capacity to augment everyday experiences by developing understanding and procedures that are unlikely to be learnt alone, yet which assist the transfer of vocational knowledge (Billett 2000a). Nevertheless, a workplace pedagogy needs to include more than intentional guided learning focussed on the development of vocational practice. There are other, and more foundational concerns associated with learning through work. Opportunities to engage in novel work activities, securing guidance from experienced coworkers, are important. Yet, they are not distributed symmetrically across work forces. However, these are the kinds of contributions that provide rich learning that most likely leads to the development of robust practice. Also, there needs to be acknowledgement of the agency of individuals, how they elect to engage with work activities and the support for learning that the workplace affords. Together, these factors are central to understanding learning for and in the workplace. This paper proposes three bases for a workplace pedagogy, comprising the: (i) intentional and unintentional guided learning that can be accessed as part of everyday work activities; (ii) how workplaces afford opportunities to participate in work activities and access guidance; and (iii) how individuals elect to engage with the work practice. In particular, the relations between the second and third bases are proposed as being the substructure of this pedagogy.

Learning through work

Investigations into how vocational practice is learnt through everyday work activities identified as key contributors to this learning: (i) engagement in everyday work tasks; (ii) direct or close guidance of coworkers; and (iii) indirect guidance provided by the workplace itself and others in the workplace (Billett 1999). In both the cognitive and sociocultural constructivist literatures, learning is held to be the product of engaging in goal-directed activities, (Rogoff 1990, 1995), such as those encountered at work. From this, the kind of goal-directed activities individuals engage in (for instance whether they are routine or non-routine), have consequences for what is learnt at work. Depending on their familiarity to individuals, engagement in workplace activities serves to reinforce, refine or transform individuals' existing ways of understanding and responding to workplace tasks. Also, workplace activities are authentic in terms of the practices required for the

particular settings, thereby likely leading to learning that is highly applicable to that workplace. Also, less direct forms of guidance (e.g. observation of and listening to other workers) provide access to sub-goals and goals for performance through observing and interacting with other workers and the workplace. In these ways, and through access to goal-directed activities and guidance which are shaped by and linked to the performance requirements of particular workplaces, these contributions provide for learning much of the vocational practice as it is constituted in the particular workplace in which these activities occur. However, the same studies also identified shortcomings associated with learning through work. These include: (i) learning that is inappropriate (e.g. dangerous, shoddy, inflexible practices), yet available and reinforced in the workplace; (ii) the contested nature of work practice inhibiting individuals' access to activities and guidance; (iii) difficulties in learning knowledge not readily accessible in the workplace; (iv) difficulties with accessing the appropriate expertise and experiences required to develop vocational knowledge; and (v) the reluctance of workers to participate in learning vocational practice through their workplace experiences (Billett forthcoming). Therefore, despite their significant contributions, everyday work experiences alone may not be able to provide access to and the development of the kinds of learning required to transfer vocational knowledge to other circumstances and situations (see Ericsson & Lehmann 1996).

Guided learning at work

The knowledge required for vocational practice does not emanate from within individual. Instead it is socially constituted and sourced. Consequently, interpsychological processes ---those between the individual and social sources ---- are salient in the development of vocational knowledge, which has historical, cultural and situational sources.

Accordingly, direct guidance by experienced coworkers as well as the indirect support and guidance from workplace artefacts and other workers aids access to and assist in the development of the vocational knowledge. Direct guidance by more experienced coworkers is particularly salient when independent learning through discovery alone is insufficient. Learning alone may be too difficult (e.g. the knowledge is hidden) or inappropriate (e.g. imprudent shortcuts might be learnt) to learn the requirements for vocational practice.

To improve their contributions to accessing and appropriating this knowledge, workplace experiences need to be structured and guided. This should optimise and augment the contributions provided freely through everyday work activities, on the one hand, while finding ways to inhibit the limitations identified above, on the other. Accordingly, a workplace curriculum comprising three levels of guided learning at work is proposed to develop individuals' capacities to perform in the particular workplace and to practice their vocations more widely (see Table 1). These levels are: (i) everyday participation at work; (ii) guided learning for work; and (iii) guided learning for transfer.

Table 1 - A three level model of workplace learning

A. Participation in work activities
Learning through undertaking everyday work activities Sequencing of tasks (from low to highly accountability[peripheral to full participation]) Opportunities to participate, observe and listen Opportunities to access goals required for performance
B. Guided learning at work
Close guidance by experienced workers Use of modeling, coaching and scaffolding Use of techniques to engage workers in learning for themselves

Use of techniques to develop understanding
C. Guided learning for transfer*
Use of questioning, problem-solving and scenario building to extend learners' knowledge to novel situations

* - transferable outcomes will also be developed at the other levels

The first level comprises organising access to work activities of increasing accountability, and access to the direct and indirect guidance that workplaces provide freely through everyday work activities. This level requires the structuring of workplace tasks to provide a pathway of workplace activities of increasing complexity and then guiding and monitoring learners' progress along this pathway. The second level involves the use of direct guidance in the form of intentional learning strategies (e.g. modelling, coaching, questioning, analogies, diagrams) that are directed towards developing the values, procedures and understanding that would not be learnt through experience or discovery alone. Accordingly, these strategies aim to develop specific and more strategic procedures, and make accessible and develop workplace concepts through direct interaction and shared engagement between more and less experienced coworkers in goal-directed activities. Embedded within these procedures and concepts are the values and norms that underpin practice. These dispositions, that have both situational and vocational dimensions such as the appropriateness of precision, hygiene, consultation etc etc, likely require close guidance in order to be developed. Collectively, the development of these three kinds of attributes enhances the prospect for effective workplace performance and the prospect of transfer to other and novel circumstances. When used in workplaces, these strategies have been shown to assist in the development of the attributes required for performance in particular workplaces and those required to transfer individuals' capacities to other situations (e.g. other workplaces) and circumstances (new vocational challenges) (Billett 2000a). The third level of guidance intentionally focuses on extending individuals' knowledge to make it more transferable to other situations and circumstances of the kind just foreshadowed. This development is aimed to be achieved through the use of questioning dialogues and group interactions that incorporate reflective practices. These strategies aim to assist individuals to appraise the scope and limits of existing knowledge and the prospects of its transfer to novel tasks and applying existing knowledge to new circumstances. Although it is anticipated that transferable knowledge will develop from the second level of guidance, the third level presses for an intentional focus on transfer. Importantly, these three levels of guidance are not to be seen as distinct and separable. They are to be enacted synchronously as part of everyday work activities. Together, these levels of guidance with the sequencing of work activities and provision of direct and indirect guidance form a model of a workplace curriculum (Billett forthcoming).

Affordance of the work practice

Nevertheless, what comprises a workplace pedagogy needs to go beyond the provision of the intentional structured learning experiences and guidance. It needs also to account for other factors that influence individuals' learning in the workplace, including how they are able to participate at work [for a more detailed account of coparticipation at work see Billett 2000b in these proceedings]. As proposed in this paper, workplaces afford learning through access to everyday work activities and guidance which mediates both the unintentional (e.g. everyday contributions of work activities) and intentional learning activities (e.g. direct guidance by experienced coworkers). However, this affordance is not distributed equally across the workplace. For instance, workers restricted to routine

work (familiar tasks) may never learn a wider range or diverse applications of their practice, because they are inhibited from participating in the new tasks. Also influencing what is learnt at work is the availability and quality of access to the direct guidance required to make the knowledge that would otherwise not easily be learnt, and the willingness of coworkers to guide this development. Those afforded access and guidance are likely to achieve quite different (better) outcomes than those who are unable to secure this access. These affordances are constituted in workplaces; shaped by workplace hierarchies, work practice, historical development, group affiliations, personal relations, workplace cliques and cultural practices. Beyond judgements of individuals' competence, opportunities for participation are distributed on bases including race (Hull 1997), gender (Tam 1997), worker or employment status (Darrah 1996) and affiliations (Billett 1999). Part-time contractual and home-based workers are often rendered peripheral by their mode of engagement and have difficulty maintaining their currency with the constantly transforming requirements for work practice (Noon & Blyton 1997). Contingent workers (i.e. those who are part-time and contractual) are particularly susceptible to the limited affordance of workplaces. They also may struggle to be kept informed and be granted opportunities to expand their role and access support from full-time employees. For instance, part-time women workers have particular difficulty in maintaining their skills currency and realising career aspirations (Tam 1998).

Concerns about participation are not restricted to contingent workers. Darrah (1996) notes how support and intentional opportunities for learning are directed towards high status workers. Consequently, those whose role is less valued in the workplace or whose status is low, may be overlooked even when they perform demanding and essential work tasks. Demarcations of workplace tasks can also influence participation at work. For example, the industrial affiliations of coal workers determined whom were granted access to workplace practice (Billett 1995). Affiliations among groups of workers also determine access to experiences and guidance. For instance, the impact of personal affiliations, seems to pervade most workplaces. These affiliations determine how information is shared, and with whom, how work is distributed and how individuals' efforts are acknowledged and judged. Indeed, contestation is an enduring feature of work practice. There is likely to be contestation between newcomers' or 'old-timers' (Lave & Wenger 1991), full or part-time workers (Bernhardt 1999); teams with different roles and standing in the workplace (Darrah 1996, Hull 1997); between individuals' personal and vocational goals (Darrah 1997) or among institutionalised arrangements such as those representing workers, supervisors or management (Danford 1998). Opportunities to access activities and guidance are distributed on bases of affiliations, individuals' acceptability, willingness of more experienced workers and the status and bases of employment. In these ways, the invitational qualities for individuals to participate and be afforded guidance in workplaces are far from being benign or equitably distributed.

Certainly, the prospects for the adoption and implementation of the guided approach to workplace learning described above are founded on the invitational qualities or affordance of the workplace. Individuals' opportunities to engage in and the guidance they can access in activities together mediate the inter-psychological processes, upon which learning is premised. Therefore, how workplaces afford these opportunities to workers is central to how and what they learn. Further, to participate fully at work requires engaging with and becoming competent in tasks of increasing accountability (e.g. Lave 1991). Each workplace likely has a particular pathway of activities and goals that are a product of its unique activity system. Although these may not be expressed explicitly, there is usually an understanding in the workplace about the kinds of tasks novices should undertake and those of greater accountability to be undertaken by more expert workers.

Tasks of increasing accountability usually require the deployment of greater skills and a consideration of a wide range of variables. That is, often the complexity of tasks goes hand-in-hand with their accountability. Those individuals able to engage incrementally in increasingly complex activities and have ongoing and frequent access to direct and indirect guidance are probably well placed to develop rich understandings and more strategic procedures.

In sum, how the workplace invites individuals to participate in work practices will likely determine the quality of learning and, in particular, where the knowledge to be learnt requires close or direct interpsychological processes supported by coworkers. However, whether coworkers will structure and assist with the kinds of guided learning outlined in the previous section is influenced by what the enterprise affords in terms of the sponsorship and organisation of this guidance. Rather than being benign, participation in workplace activities and access to guidance is contested and likely to be distributed, premised on affiliations, fear of displacement, status of employment and acceptability of individuals or groups of workers, as well as perceptions of personal competence. In these ways, everyday activities in the workplace mediate individuals' construction of vocational knowledge as it is constituted in the particular workplace. Therefore, these bases need including when formulating a workplace pedagogy.

Engagement with work

Learning new knowledge (i.e. values, understandings and procedures) is effortful and interpretative, not constituted uniformly across individuals. Therefore, how individuals engage in work activities and interpret the consequences of that participation will determine the quality and nature of their learning (i.e. how they construct and organise their knowledge). The concept of engagement also reinforces the reciprocal process of learning socially constituted knowledge. That is because despite the strong contributions provided by the workplace, individuals' participation in and learning from workplace experiences are not wholly determined situationally. Instead, the agency of individuals also influences how they participate in activities and respond to guidance. Rather than being socialisation or enculturation, there is interdependence between individuals and the affordance of social practices (e.g. Valsiner 1992; Lawrence & Valsiner 1994). Individuals' agency --- how they elect to participate in social practice --- is premised on their personal histories or ontogenies (Cole 1998, Scribner 1985) that have result in particular ways of knowing (Billett 1997). Therefore, the bases for this engagement are complex and overlapping. Individuals participate simultaneously in a range of social practices. The effort and attention directed to each practice is unlikely to be uniform with individuals' interests and priorities mediating their participation. Workers engaged in one set of workplace training, may be uninterested in another, if it outside their vocational interest or immediate career path. For instance, underground coal miners may be uninterested in working at an open cut coal mine, which they view as being of lower status than underground work. Furthermore, perceptions of the workplace's affordance reside with the individual. Coal miners perceived safety-training programs as an attempt by the mine site management to delegate the responsibility for mine safety onto the miners (Billett 1995).

Therefore, relations between individuals' interests and the values of the work practice may be a central mediating factor in determining their engagement and hence learning. Individuals might engage effortfully in some components of vocational activities, while participating less effortfully (or even resentfully) in others. Therefore, individuals' engagement and learning is interpretative, critical and reciprocal. This emphasises not only the participatory and identificatory consequences of relatedness, but also the learning outcomes. Therefore, individuals' engagement with work is

coparticipative --- an interaction between how the workplace affords participation and how individuals participate in that social practice. This requires delineating and identifying the attributes of the workplace and how individuals engage in the social practice. This engagement is central to the effortful task of extending knowledge and developing transferable outcomes. Accordingly, how individuals engage with the workplace is a fundamental concern for a workplace pedagogy.

A workplace pedagogy

From what has been discussed above, it is proposed that the reciprocal process of participation in the workplace provides foundations of a workplace pedagogy. These foundations shape the prospects for the kinds of learning provided by everyday workplace activity as well as the prospects for guided learning at work. Three key elements of a workplace pedagogy have been identified in these discussions. The first is the intentional structuring of practice and the provision of guidance to supplement the contributions provided freely and ‘unintentionally’ through engagement in everyday work activities. The second is to acknowledge the consequences of different kinds of workplace affordances. How individuals are permitted to participate in workplace activities, the kind of activities they are able to participate in and support they are afforded are central to the quality of their learning. The invitational quality or affordance of the workplace subsumes the first point. The third element emphasises that how individuals elect to engage in workplace activities and utilise the guidance that is afforded them by the workplace will ultimately determine what they learn. Effortful and full-bodied engagement is required by individuals to develop vocational rather than merely situationally specific knowledge. However, the source of this engagement is located in relations between the workplace’s affordance and individuals’ interest.

However, there remain concerns about the breadth and worth of educational goals arising from learning conducted solely within the vocational practice itself, particularly within just one workplace. Therefore, although guided learning at work may assist the development of robust vocational knowledge, there is a need to consider how broader historically and culturally-derived goals might be addressed through workplace learning. The workplace provides authentic activities that are highly applicable to the circumstances in which they are learnt and which are the initial application of that learning. Accordingly, this can overcome the first barrier of transfer often experienced in the deployment of knowledge learnt in educational institutions to other circumstances. The workplace also provides combinations of new learning and practise of a kind that is quite different from what is commonly experienced in activities in educational institutions. However, there can be no guarantee that what is learnt in one workplace at one point in time will transfer to novel workplace tasks or to other situations and circumstances (e.g. other workplaces, work practice). Moreover, the focus of workplace activities is production or services, therefore the kinds of support needed for guided learning can be difficult to gain. So workplaces provide experiences that are different in kind from those in educational institutions. Yet there are also different threats to their full potential being realised.

The key goal for a workplace pedagogy has been on developing robust vocational knowledge. This has been justified in terms of its utility for individuals and the workplace. Nevertheless, this outcome can be legitimately challenged as still being too narrow. In terms of broader goals for learning, concerns arise that critical insights and goals beyond the vocational practice itself, such as social inclusiveness and strategic concerns for the environment, community and professionalism of practice may not be learnt in workplaces. Consequently, there may be a quite legitimate inclination to persist in labeling workplace learning as technician, despite the emancipatory potential it has for individuals

Finally, considerations of a workplace pedagogy cannot be restricted to the kinds of deliberate guided learning experiences enacted in the workplace. It also has to account for how the richly contested affordance of workplaces influences the quality of and access to learning experiences and opportunities to learn. How individuals elect to act in workplaces determines what they learn from their encounters. Together, these factors edge us closer to developing a clear pedagogy for the workplace.

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