The Routledge International Handbook of Learning

Peter Jarvis, Mary Watts

Learning at the site of work

Publication details
Stephen Billett
Published online on: 15 Dec 2011

How to cite :- Stephen Billett. 15 Dec 2011, Learning at the site of work from: The Routledge International Handbook of Learning Routledge
Accessed on: 22 Nov 2023

PLEASE SCROLL DOWN FOR DOCUMENT

Full terms and conditions of use: https://www.routledgehandbooks.com/legal-notices/terms

This Document PDF may be used for research, teaching and private study purposes. Any substantial or systematic reproductions, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The publisher shall not be liable for an loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.
Learning at the site of work

Stephen Billett

This chapter elaborates and discusses learning at the site of work. That is, it explains how learning arises through work activities and interactions, including those in workplaces. It does so because there are key personal and societal goals that arise from understanding the workplace as a site in which learning occurs. It is proposed here that, in many ways, the process and outcomes of learning through and for work are no different than those that occur in and arise from other kinds of settings. However, the way that learning is mediated at the site of work is likely to be distinct in some ways from that in other kinds of settings, because the activities and interactions that constitute key mediating contributions to that learning are likely to be peculiar to paid employment, the particular occupation and the qualities of the particular workplace setting. Consequently, the mediations and contributions of sites of work are likely to be qualitatively different in some ways than those of other kinds of settings, including the particular pedagogic and curriculum qualities of those settings.

Learning at the site of work

Learning at the site of work has and continues to be central to both individual and societal development. Therefore, despite often being seen as less important, legitimate or worthy sites than educational institutions, these sites warrant careful theorisation and clear explanations because of the important roles they play. Indeed, across human history, the vast majority of the learning required for work has been that which has arisen at the site of work, perhaps most typically within family (Billett, 2010). It is only in relatively recent times that the preparation for most occupations has come to occur within educational institutions, and even then only often in conjunction with experiences in work sites. Before that, and across human history, not only in European countries, but long before then in ancient Mesopotamia and China, the capacities required for the vast majority of skilful occupations were learnt at the site of work: where the occupations are enacted. From its origins in ancient Greece, where all artisans and artists learned their skills within family practices (Lodge, 1947), within European traditions the site of work was a key and the likely sole source of occupational learning until the middle and the end of the nineteenth century (Greinhart, 2002). Only then were educational institutions established specifically for the development of occupational skills and other desired associated learning outcomes. Beyond managing the supply of skilled workers, often these institutions were established for a range of societal purposes, including engaging young men in educational provisions who might otherwise become a problem for the state (Greinhart, 2002; Troger, 2002). Yet, even
today the institutionalised arrangements for the development of the trades and professions still include extensive periods of work experience, with some deliberately emphasising this experience. For instance, in most countries that have an apprenticeship system, the vast majority of the period of apprentices’ indenture is spent in the workplace, usually of the order of 80% or more of that time. Equally, the major professions of medicine, law and accountancy all require extensive periods of practice as part of the occupational preparation. So, in both the trades and professions the value of learning at the site of work has remained strong, despite the growing provision of education programmes supporting occupational skills in colleges and universities. Indeed, this valuing of experiences in the sites of practice has persisted to the extent that, now, in many countries with advanced industrial economies there is a growing trend to include experience in work settings as part of higher education provisions associated with developing specific occupations (Department of Innovation, Universities and Skills, 2008; Universities Australia, 2008). Much of this current interest in learning at the site of work has come about because of concerns about the prospects for preparing practitioners remotely from the sites in which they work. As discussed below, the realisations that situational factors contribute to individuals’ learning (Brown, Collins and Duguid, 1989; Raizen, 1991) has hastened and in some ways legitimated work experience as effective sites of learning.

Also, and importantly, beyond the initial development of occupational skills, the sites of work are likely to be the principal sites where workers of all kinds continue to develop their occupational capacities across their working lives, including transferring from one occupation field to another. Here, these sites play a crucial role in personal and societal development. The requirements for effective workplace performance constantly change as new needs, processes and goals arise, let alone changes in the technologies and processes used to secure these changes (Billett, 2006c). Yet, it is the site of work, its goals, activities and interactions, that likely provides key premises for the learning individuals, secure throughout their working lives, to meet these changing requirements. As discussed below, individuals’ development occurs across the life course through ongoing moment-by-moment or micro-genetic development that contributes incrementally to their ontogenetic life course development (Rogoff, 1990; Scribner, 1985b), and workplaces are key sites for work-related learning across the working life (Fenwick, 1998; Hodkinson and Bloomer, 2002; Hodkinson and Hodkinson, 2004).

Furthermore, beyond individual development, learning through work sites is central to societal development. That is, as individuals engage with, learn through and develop further capacities in worksites, they are also engaging in the process of remaking and transforming occupational practices in response to specific needs, at particular times and in particular situations. This co-occurrence between individual learning and the remaking of cultural practices, such as those required for paid occupations, highlights the genius of the interdependence between human and cultural development (Rogoff, 1990; Scribner, 1984). Through these processes, not only are individuals’ learning and developing across their life course progressed (Scribner, 1985b), but they are also engaging in the process of remaking and transforming cultural practices (i.e. occupations) that themselves have arisen historically and been remade through meeting cultural requirements and needs. In this way, in responding to new challenges, continuity and change in occupations is advanced through sites of work. Consequently, because of the imperatives of initial and ongoing individual development and the remaking and transformation of cultural practices, it is important to elaborate how learning at the site of work occurs and can be theorised and also how these might be similar or different to other sites of learning (e.g. educational institutions).

It is proposed here that the process and outcomes of learning at the site of work are, in many ways, no different than those that occur in other sites (e.g. home, educational institutions), because human learning arises through personally and socially mediated processes, regardless of setting. Yet, how learning is mediated at the site of work is likely to be distinct in some ways from other kinds of sites, because the activities and interactions that constitute key mediating contributions are distinct, and have particular cultural, situational and personal premises. That is, this learning is likely to be peculiar to paid employment, the particular occupation and the qualities of the specific workplace setting. Consequently, the mediations and
contributions of sites of work are likely to be qualitatively different than those of other kinds of settings, including the particular pedagogic and curriculum qualities of those settings.

In making this case, this chapter commences by discussing processes of learning and development arising across human lives, micro-genetically, as a process of construals and constructions that is personal, yet socially mediated and shaped, albeit in individually particular ways. This learning arises through human activity and interactions that are social to their core, yet personally experienced and progressed. Here, the concept of ontogeny (i.e. development across the personal life course) is positioned centrally as a socio-personal process. The personal dimension comprises unique socially shaped and derived ways of knowing, domains of knowledge, interests and intentionalities. The social dimension comprises those contributions arising through the particular situated activities and interactions that they afford and that individuals encounter, the socio-genetic contributions of culture (i.e. the occupation) and situation (i.e. work site). Together, and in relation to each other, these social and personal dimensions are central to human learning and development. However, the personal domains and intentionalities associated with work are likely to have particular potency within individuals that in turn shapes how they engage with and learn in and remake the activities and interactions that they encounter. The standing of the occupation, the positioning of the worker, the availability of activities and interactions, are central to the mediations available in workplace settings and the kinds of culturally derived knowledge (i.e. occupational knowledge) that will be able to be accessed in work sites. Consequently, it is proposed that they are both common underlying processes and outcomes regardless of site, but also particular personal and social factors that are a product of the workplace being a site of learning.

In making this case, the sections below elaborate both the common and particular qualities of workplaces as sites of learning.

**Personal and social premises for the construal and construction of knowledge**

It seems reasonable to claim that the underlying processes and outcomes of learning at the site of work are generally no different than for those at other sites. Across constructivist accounts that favour either a more personally based or more socially premised orientation of knowledge construction (i.e. learning), there is consensus that the human process of meaning making is engaged in and directed by cognating individuals (Greeno, 1997). Hence, regardless of the setting, humans have the key role in construing and constructing what they experience, even where the social suggestion is strong. Usually, the debate within mainstream constructivist accounts is over the degree by which the social world shapes or, as some claim, determines what is learnt (Ratner, 2000). Yet, many key theoreticians whose orientation emphasises the social and cultural contributions refer to the relations between the suggestion of the social world and individuals’ taking up of it. That is, even in accounts that privilege the social contribution, there is a key role for the individual. Some of these accounts even suggest that humans are able to ignore or resist the social suggestion and, in some circumstances, would often simply be unaware and unaffected by the contribution of the particular social setting. For instance, the cultural psychologist Valsiner (1998: 393) proposes that:

> most of human development takes place through active ignoring and neutralisation of most of social suggestions to which the person is subjected in everyday life.

Moreover, and similarly, the sociologists of knowledge (Berger and Luckman, 1966: 124) suggest that:

> socialisation is never completely successful. Some individuals inhabit the transmitted universe more definitely than others. Even among the more or less accredited inhabitants, there will be idiosyncratic variations in the way they concede the universe.
Learning at the site of work

These statements are not used here to claim that the suggestions and contributions from the social world can be easily or necessarily wished away, as they can be potent and penetrating (Searle, 1995). However, it seems that very few accounts deny the capacity of individuals to negotiate with what the social world suggests. Hence, the person, rather than the social and physical site, might represent the principal platform for explaining learning within and across sites. However, this is not to present the individual as being an asocial cognitive entity. Quite the opposite is the case, because the person and the personal are the product of the particular set of experiences; they have had to acknowledge that individual cognition or cognitive experience is shaped reciprocally and continuously through participation in different and diverse instances of social practice throughout their life histories or ontogenies (Billett, 1998). Or, as Valsiner (1998: 2) proposes, that the individual “simultaneously maintains his or her autonomy relative to the given social context, and has become the way he or she is through the history of such relations.”

Therefore, perhaps a useful way of understanding how the contributions to both the personal and social contributions to ongoing learning and remaking practice come together in terms of ongoing development is through the concept of ontogenies or individuals’ development across a life history (Scribner, 1985b). Each individual has a personally unique developmental history that arises from the moment-by-moment learning or micro-genetic development that grows from the particular combination of activities and interactions in which they engage. Through these engagements, individuals actively and continuously participate in engaging in tasks and resolving outcomes that have a cognitive legacy for them in either new learning (i.e. extending what and how they know) or refining what they know. As these activities and interactions are likely to be socially derived, the legacies arising micro-genetically have social bases. However, as these activities are construed and constructed in personally distinct ways, the social genesis is not uniform; the legacy is personally mediated and particular in some ways. This process of personally shaped micro-genetic development contributes to individuals’ ontogenetic development, as is well explained in the cognitive literature through references to individuals’ engaging in routine problem solving when they have experienced it before, and non-routine problem solving when the experiences are new, and this leads to the development of new knowledge (Anderson, 1993). The ongoing engagement in experiences that are familiar provides opportunities for rehearsal and the honing, refining and reinforcement of what is already known, whereas the development of new knowledge and ways of organising that knowledge can arise from experiences that are new to the individual. However, these experiences are not wholly subject to what is provided by the site of learning; they are person-dependent by degree. What for one individual is a routine experience, for another is a novel one. Recently, an experienced resident in a US hospital advised me that, whereas many of his emergency room activities are repetitious, tedious and not particularly interesting, for the medical students he mentors, these experiences are novel to the degree of being overwhelming. Similarly, student nurses who have had extensive clinical experience as an enrolled nurse report having very distinct premises from their university nursing studies than those students who come straight from school (Newton, Kelly, Kremser, Jolly and Billett, 2009). Yet, even within these two cohorts of nurses there were identified differences in these students’ formative experiences and also how they went about engaging with the task of completing a degree and becoming a nurse. All of these differences emphasise the personal basis for knowledge construction, which goes beyond distinctions between experts and novices, and emphasises the centrality of personal development histories and how they shape individuals’ construal and construction of what they experience in particular settings.

All of the above also reinforces the importance of viewing the everyday process of thinking and acting, regardless of where it occurs, as comprising a process of ongoing micro-genetic development that contributes to individuals’ ontogenetic development (Rogoff and Lave, 1984). That ontogeny contributes to and shapes individuals’ domains of knowledge, their ways of knowing and their interests, which are central to what drives the intentionality that individuals exercise when engaging with experiences that are either familiar or novel, albeit in the workplace or elsewhere. In capturing the central role of this personal process of construal and construction, Valsiner (2000) refers to individuals’ earlier experiences as being pre-mediate
(i.e. arising earlier and informing the process of construal and construction) and to how individuals engage with experience in the current moment as immediate. In all, he refers to this personal process of construal and construction of knowledge as being shaped by the individuals’ ‘cognitive experience’: how they know and engage with the social and brute world beyond them. Here the term ‘cognitive’ is not intended to refer to a highly individual and internal process of thinking and acting, but rather one that is sourced in the social world and necessarily engages with that world, albeit one negotiated between the intentionalities of individual and the press and suggestion of the social world.

A way of understanding the relationship between the personal and social contributions within ontogenetic development is to position them as dualities to both accommodate the contributions of the personal and the social and reconcile these tensions. Billett (2006b) proposes that the process of everyday learning, regardless of its site can be explained as a duality. On the one hand, there are the affordances – the degree by which the setting is suggestive, supportive, informing and engaging – which are invitational to individuals to participate and learn. On the other hand is how individuals elect to engage with what they are afforded. The interaction between affordances and engagement comprises a relational interdependence between the social and personal. By emphasising dualities, rather than dualisms, learning is positioned as an active process exercised continually by individuals, yet, it occurs in ways that are relational in terms of personal bases for construing and constructing knowledge, on the one hand, and in diverse ways in which workplace settings exercise their affordances. Yet, beyond these relational negotiations, there is an interdependence between the social and personal contributions, as each depends on the other. Individuals need the social world to secure the knowledge they need to learn, and the social world needs individuals to enact, remake and transform the knowledge it requires for its continuity and development. However, individuals secure the continuity of the social setting, occupation and cultural practice by engaging in, remaking and transforming that practice at particular points in time, in particular situations and in response to specific problems that they are addressing. For instance, work is conducted in workplaces that have particular practices and meet the requirements of particular clientele, whose needs and responses to those needs are not consistent and also change over time. Hence, there is interdependence between the social and personal imperatives that comprise the negotiations between what individuals know and come to experience when learning at the site of work, for instance.

The propositions above apply to individuals’ learning and participation, regardless of setting. That is, they are premises and processes that are not constrained by or premised upon by particular kinds of settings. Certainly, in situations of relative social isolation, for instance, there is likely to be a greater emphasis on the active meaning making of the individual, and less on the close guidance afforded by sites that have more-experienced others (e.g. parents, co-workers, teachers, peers, etc.). Yet, these kinds of processes likely play out in all kinds of settings. However, there are particular emphases, premises and circumstances in work as a site for learning that are both particular in character and also offer more detailed accounts of these learning processes. Perhaps most central here are the kinds of intentionalities and interests that individuals exercise, and the associations between paid work and personal identity, on the one hand, and the particular qualities of work tasks and interactions as premises for learning occupational knowledge on the other. These are discussed in the following section.

Explaining learning in the workplace and through work

As proposed above, whilst the underling processes and outcomes of learning are likely to have common qualities across the range of sites, there are likely to be particular characteristics and qualities of sites. That is, the mediating contributions of sites of work are distinct and have particular cultural, situational and personal premises. Here, the focus is on work as a site for learning. It is proposed that the distinctiveness of work as a site of learning reflects the duality outlined above. First, the requirements of historically derived, culturally sanctioned and bound concepts of paid employment comprise goal-directed activities and engagement of
Learning at the site of work

particular kinds, in the form of the particular occupation (its norms and practices) and specific sets of situational factors (i.e. affordances and engagements) that comprise the site of work. Second, there are the personal bases for learning, which likely include issues associated with identity formation and need for employment to be sustained for material requirements (e.g. food, shelter, interests) and the need to care for others (e.g. family). These two dualistic elements are now discussed together in elaborating the particular qualities of work as a site of learning.

Learning at the site of work usually refers to the processes of learning through and for engaging in paid employment. This view emphasises the particular contributions to individuals’ learning provided and secured through engaging in work activities and interactions within workplaces or work practices. These contributions are often held to be of a different kind than those accessed through participating in educational institutions (Marsick and Watkins, 1990). A particular quality associated with experiences at the site of work is that they are held to be authentic instances of the occupational practices that need to be learnt. Hence, these experiences provide access to knowledge that is more readily applicable to the target occupational practice of which it is an instance than the knowledge accessed in educational settings, because the latter are less perceptibly aligned with the occupational practice. Moreover, there are contextually rich clues, cues and other situated contributions that assist this learning (Billett, 2001). Noteworthy, is that the term, workplace learning, also emphasises learning, rather than teaching or training, thereby positioning it as a process more focussed on individuals’ learning and the direct and indirect guidance for that learning found at the site of learning, rather than the teaching experienced in educational settings.

Conceptions associated with not only what the workplace affords individuals, but also how individuals engage are also important in advancing conceptions of curriculum, pedagogy and epistemology for the workplace. As noted, what has been found is that, in workplace learning environments, much of the emphasis of the learning process is on how individuals engage with the activities and interactions that they encounter. Consequently, key bases for learning at the site of work have been identified as: i) engaging in work-authentic work activities; ii) indirect guidance provided through observing and listening to others; iii) direct guidance of more expert co-workers; and iv) the opportunities to engage in practice (i.e. rehearsal) (Billett, 2001). As such, these affordances are in some ways distinct from other kinds of sites. The authenticity of experience is helpful for engendering legacies that are applicable to the occupational practice. For instance, the processes of observation and listening are well reported as powerful means by which learning through imitation and refinement proceeds within the anthropological accounts (Lave, 1988; Pelissier, 1991; Scribner, 1985a), and the opportunities for direct guidance by experts assist in joint problem solving that are held to directly support the development of socially derived knowledge that might not be learnt by discovery alone (Cole, 1985). The opportunity to repeat activities, to refine and hone procedural capacities and to make conceptual links are also qualities of learning at the site of work, which may not be available in other sites. Beyond what is afforded, it is noteworthy that, of the four contributions listed above, three are largely premised on the individuals’ efforts. That is how they engage with work tasks and interactions: they observe and listen and then practice. Even the way they engage in joint problem-solving activities with more experienced counterparts and what legacies arise from this will likely be premised on their agency and intentionality.

Beyond these affordances are those that structure and organise learning experiences at the site of work. For instance, in her classical study of tailoring apprentices, Lave (1990) indicates that, although the learning curriculum comprised a sequenced set of activities in which the apprentices engaged, most of their learning occurred through progressing through a set of activities without the direct guidance of more expert partners. Essentially, the sequencing of the activities, whilst being aligned to the imperatives of production, also had potent pedagogic qualities. That is, the sequencing of the apprentices’ activities provided a pathway of experiences that built their understandings for the requirements for performance, made accessible the procedures to make garments and provided opportunities for these procedural capacities to be developed in a way that tolerated naive performances and errors early in the learning pathway. These same qualities of
the workplace curriculum have been identified in learning trajectories in other kinds of occupational practices (Billett, 2006a). Therefore, although concepts of curriculum and pedagogy in educational settings are largely premised upon what individuals other than the learners do (with the exception of the ‘experienced’ curriculum), what the learners do is central to conceptions of curriculum and pedagogy within workplace settings. Hence, given the importance of the agency of the learner, considerations of personal epistemologies seem to fit well within explanations about learning at the site of work.

In consideration of ongoing learning throughout and across working lives, the importance of such personal epistemologies has become accentuated. For instance, many sites of work are relatively socially isolated and workers are required to develop their knowledge further in the absence of more expert counterparts. It has been found in such situations that workers have to exercise greater agency in securing the knowledge required for understanding and undertaking new tasks (Billett, Ehrich and Hernon-Tinning, 2003). Here, the example was small business operators learning how to administer a goods and service tax, but also in their management of other forms of new learning (Fenwick, 2002). Similar findings are also advanced in fields such as teaching (Hodkinson and Bloomer, 2002; Hodkinson and Hodkinson, 2004). In all, it is proposed that learning is distinctly mediated at the site in some ways that are distinct from other kinds of sites, because the activities and interactions that constitute key mediating contributions are distinct, and have particular cultural, situational and personal premises. Moreover, the importance of individuals’ engagement in the sites of work for purposes of identify formation and perpetuation also means that the personal intentionalities are likely to be engaged in an effortful way in at least parts of working lives.

**Wider contributions of learning at the site of work**

In concluding, it is noteworthy that the explanatory contributions of work as a site of learning have informed an understanding of learning more generally. Indeed, many of the advances within theoretical positions in anthropology, socio-cultural constructivism and educational sciences have arisen from considerations of workplaces as sites for learning. For instance, over the last two decades, the development of instructional concepts that have purchase beyond the sites of work, (e.g. cognitive apprenticeships, distributed cognition, communities of practice, activity systems) have all been founded in enquiries into learning at the site of work. These contributions have done much to emphasise that, beyond direct teaching, there are a range of sources that shape individuals’ learning outcomes arising from their participation in physical and social settings. From anthropology came accounts of the importance of being able to participate in and observe these practices and engage with artefacts, norms and forms (Lave, 1977; Pelissier, 1991; Scribner, 1985a); from Russian-inspired psychological movements have come the importance of being guided by expert partners (i.e. Zone of Proximal Development) and individuals’ learning through appropriating socially derived practices, as with appropriation (Lave and Wenger, 1991; Rogoff, 1995). More recently has come the idea that some workplaces are inherently more generative of learning that is expansive or restricted (Fuller and Unwin, 2004). Hence, the contributions of these physical and social sites of learning are at the forefront of many of the discussions about providing and mediating access to the knowledge required for work activities.

However, as emphasised above, beyond the particular qualities and characteristics of work sites, is the need to account for the active engagement of learners in the process of constructing knowledge. More than merely engaging in a social setting and being socialised by that experience, individuals are selective in how and what they engage with and through what their learning is mediated. That is, the learning that comprises and arises through everyday cognition, through engaging in goal-directed activities from which there are particular cognitive legacies (i.e. kinds of learning), is something undertaken by individuals. Theoretical explanations acknowledging the agency of the learner emphasise the importance of individuals’ active engagement and learning through participation in practice. These accounts suggest that it is necessary to consider how individuals construe and construct what they experience in workplaces or any other
settings. Indeed, when the contributions of learning at the site of work are considered, much of it is dependent upon the learners’ actions. So, beyond what is afforded them in the social and physical setting of the workplace, they ultimately elect how and what they engage with and what kind of learning arises for them. Importantly, this is not an argument for individual determinism, but merely to emphasise that, whether humans think and act alone or in collaboration with others in work or other kinds of sites, they bring their uniquely socially shaped ways of knowing, personal domains of knowledge and intentionalities to the processes of their work, learning and engaging in the remaking of cultural practices such as occupations.

References

Stephen Billett


