

Work, Lifelong Learning and Cooperative Education: Supporting and Guiding Ontogenetic Development

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Abstract

This paper elaborates some conceptual foundations for considering the role of workplace experiences in lifelong learning. Premised on a view of lifelong learning as ontogenetic development (i.e., individuals' development across their lifespan), and emphasizing the key role of inter-psychological processes (i.e., those negotiated between the individual and social world), the paper proposes a means to understand the processes of learning arising through workplace experiences and its implications for co-operative education. Using case studies of individuals' learning throughout working life and school students' engagement in paid work, the interdependent basis of this development is elaborated. That is, on the one hand, how workplaces and educational institutions afford opportunities for participation and learning, and on the other how individuals elect to engage with what is afforded them. Some speculations are then provided about particular learning outcomes arising from workplace experiences of these kinds. Following this, the implications are advanced for the integration of experiences in workplaces and educational institutions, such as in cooperative education. In conclusion, the significance of individuals' experiencing of cooperative education across both workplaces and educational institutions is emphasized, as is the importance of pedagogic practices to realize the potential of both kinds of learning experiences and, importantly the augmentation of those experiences through their integration.

Work and Lifelong Learning

Cooperative education is all about attempting to integrate learning experiences within educational institutions with settings outside, such as workplaces, with the aim of the developing capacities in participating students to be effective in settings outside of educational institutions. In this way, it seeks to develop robust knowledge able to be applied in settings other than those in which the knowledge is generated (i.e., the particular workplace or educational institution). As such, this purpose is central to an implicit goal of education: to assist individuals be effective in their lives outside of educational programs and institutions. In achieving this goal, cooperative education does not necessarily privilege the contributions of educational settings over those in workplaces, although most of its advocates and practitioners likely work within educational institutions. Instead, it values the distinct contributions of both settings, but mostly it values their effective integration. In this way, much attention is given to how best to integrate and build upon the distinct experiences provided in both settings, and these includes ambitious, but potentially perilous, attempts to co-ordinate and manage experiences across both settings. All this is most worthy work and reflects concerns about the kinds of contributions provided by each of these settings.

In this way, cooperative education continues a tradition of considering curriculum, educational provisions and pedagogy in terms of place or setting, yet importantly places the learner in a central role (e.g., Furco, 1996) while other conceptions and traditions tend to privilege the educational setting and institution. Curriculum, for instance, is often seen as something which is 'intended' and 'enacted' in a particular educational setting. Hence, the focus is on the kind of experiences that are provided to students and learners for and by the school (Marsh & Willis, 1995). Many curriculum and regulatory frameworks similarly focus on the content and provisions in educational institutions (e.g., the capacities of teachers). However, from such perspectives there may be less emphasis on the 'experienced curriculum', what sense students made of what is intended and enacted. Similarly, educational institutions and workplaces are referred to respectively in terms of their formalisms. Those that occur in educational institutions are usually authorized and validated, legitimated if you like, by the existence of a written syllabus, trained teachers and institutional apparatus of education. Conversely, workplaces albeit erroneously and imprecisely are often termed 'informal' learning environments, because the attributes that legitimize practices with an educational

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institutions are seemingly absent (i.e., no syllabus, teachers, deliberate instructional practices). Yet, regardless of the merits of these kinds of arguments, a focus on the quality of educational provisions premised on the kinds of locations (i.e., formal or informal) denies the important contributions of individuals to educational provisions (Billett, 2002, 2006a). That is, by focusing on the institutional qualities alone (i.e., formal or informal), there is a denial of important role that individuals as learners play in these learning settings. Ultimately, curriculum can only really be valued in terms of what learners' experience and construe and construct from it.

Similarly, pedagogic practices are usually considered in terms of teacherly qualities, instructional strategies or design and the like. When personal contributions are considered it is usually in terms of learning style or preference and how these might best fit the available instructional strategies. This then leads to the complicated task of simultaneously catering to the array of individual learning preferences. Less often is the idea of personal pedagogic practices raised. That is to understand and privilege the key role of individuals' agentic and constructive learning processes in conceptions of pedagogy: as being about learning rather than teaching. The exception here, is of course, the current lifelong learning agendas in which governments and employers are seeking to marshal individuals' learning to secure social and economic goals (Field, 2000) through emphasizing adults' need to maintain competence throughout their working life. Yet, this is paralleled by the growing imperative in countries with western style economies for individuals to 'help themselves' as governments seeks to 'enable' individuals, rather than provide for them (Edwards, 2003). Yet, beyond these important pragmatic goals there is little discussion about individuals' agency and pedagogic practice.

The point here is that conceptions and considerations of curriculum, educational arrangements and pedagogy tend to privilege the settings and places that afford experiences for individuals and, in doing so, render posterior the important role of individuals in the process of learning: that is, making meaning, construing and constructing knowledge from what they experience. This privileging also reflects strong emphasis within theories of learning on the contributions of institutional practices and settings to learning (e.g., communities of practice, activity systems, situated cognition etc.). The agency of the individual does not feature strongly in any of these conceptions, except perhaps as an actor who is ensnared within a particular set of situated social practices, or as but one of many elements of a situated learning experience. Agency in these theorizes is ascribed to the setting and the social practice, not the individuals who act within them. Of course, the contributions of these settings are important and, in many instances, indispensable. In particular, in the learning of vocational practice, provide important contributions to individuals' learning through their affordances (i.e., their invitations to participate – access and support) and potential to access the particular knowledge that can be located within them. Yet, a focus primarily upon settings fails to provide the complete picture of learning or the potential of educational institutions and practices. Even social theorists who emphasize the significance and centrality of social structures are cautious about claims that the contributions of physical and social settings themselves can be understood without consideration of the individuals who engage with them. For instance, (Berger & Luckman, 1966) suggest that even for those willingly engaging with the suggestion of the social there will be variations in how they conceive the universe. These variations are held here as being the product of personal histories and agency and the complex of factors that mediate individuals' learning. Indeed, humans are perhaps distinct in possessing capacities for reflective self-evaluation (Taylor, 1985) and exercise of reflexivity (McLaren, 1997) that free us from some forms of subjugation. While both Valsiner (1994) and Bhaskar (1998), acknowledge the ubiquity of social influence, they also emphasize the relatedness between individuals' interests and goals, and those comprising the social suggestion. This shapes how individuals engage in inter-psychological processes – those between the social world and themselves. Indeed, the cultural psychologist Valsiner (1998) proposes that "most of human development takes place through active ignoring and neutralization of most of the social suggestions to which the person is subjected in everyday life" (p. 393). This is essential to buffer individuals' personalities from the demands of the social suggestions comprising the immediate experience. He continues:

Hence, what is usually viewed as socialisation efforts (by social institutions or parents) is necessarily counteracted by the active recipients of such efforts who can neutralise or ignore a large number of such episodes, aside from single particularly dramatic ones. (Valsiner, 1998, p. 393)

Educational provisions, including cooperative education, can be seen as fundamentally being about – offering individuals an invitation to change. There can be no certainty that invitation will be accepted, or accepted in the way that the intended and enacted curriculum proposes. Hence, to understand educational

processes it is helpful to employ key theoretical devices to understand, on the one hand, the affordances – invitational qualities of education institutions and workplaces – for those who participate in them, and also, on the other hand, how individuals elect to engage with what is afforded them. However, this necessitates a focus on how individuals’ engage with what is afforded them in workplace and educational settings. Importantly, in efforts to integrate the experiences of these two settings, it is necessary to understand how individuals make sense of what they encounter. Again, this is not to deny important contributions of the experiences afforded by workplaces and educational institutions within cooperative education, but to bring centre stage the important contributions, perspectives and ways of engaging that comprises individual’s participation and contributions to their learning. Also, this is not to suggest or impose a highly individualized phenomenological perspective that denies contributions of institutional (social) and brute facts, but to acknowledge the dual contributions of place and the personal, but to give emphasize the role that individuals play in negotiating with the social and brute world in their thinking and acting, and, hence, learning. The central argument is that learning through engagement with the social world in settings such as educational institutions and workplaces comprises a duality of affordances and engagement. Without understanding and accounting for how individuals engage with what is afford them, concepts of curriculum, educational provisions and pedagogy for cooperative education will remain incomplete. In seeking to integrate the contributions of educational institutions and workplaces, it is necessary to account for the particular imperatives of both of these settings (i.e., their intentions and enactments) as well as how individuals’ personal histories or ontogeneses shape how they make sense of these experiences. These are elaborated here using studies of learning through work and school students’ learning about working life through reflecting on their paid part-time work experiences.

In advancing this case, this paper is structured as follows. Firstly, the conceptual basis for considering individual development across the life course – ontogenetic development – is described and elaborated, as are the processes of learning that sustain it. Here also, a consideration of both personal and social contributions learning is discussed, as are other relationships between the two. These are proposed as a relational interdependence (Billett, 2006c), and the centrality of personal agency and intentionality in individuals learning is drawn out in these discussions. Following this, two case studies of how individuals’ negotiate their learning are presented. These are a case study of the learning practices of small-business followed by a case study which encourages students to reflect on their paid part-time work in order to understand working life beyond school. While both address issues of affordances and engagement in learning, the second also offers a way of thinking about integrating workplace experiences into the curriculum within educational institutions. This is then followed by a consideration of the integration of learning experiences from the perspective of a learner, more than the institutional facts that constitute the workplace and educational institutional setting. Finally, an attempt is made to advance implications for cooperative education.

Ontogenetic Development as Lifelong Learning

There is a growing consensus across theories of learning that the contributions to and processes of learning are not reserved for particular settings, such as educational institutions. Post-behaviorism, there has become an acceptance of learning as an active and constructive process in which individuals play in agentic role. Towards the end of the 19th century Baldwin (1894) identified that individuals were selective and discriminating in how they make sense of what they experienced, one basis for that active engagement with the social world was to expect uncertainty rather than uniformity when engaging with the social world. This active and constructive approach to learning was also captured in the developmental theories of Piaget (1968) through processes of accommodation and assimilation in which individuals, respectively, construct new learning and new categories of knowledge from they encounters around them and also reinforced and refined what they learnt through other kinds of experiences. Importantly, these processes are part of everyday thinking and acting. They are not reserved for intentional learning interludes, such as those offered by educational institutions. Instead, according to cognitive theories, individuals’ sense making are directed agentially to secure equilibrium (Piaget, 1968) or viability from what they encounter (von Glasersfeld, 1987). From these views, individuals are constantly seeking to understand novel aspects of what they experience and also reinforce what they know through subsequent experiences in order to maintain their equilibrium. The point here is that it is individuals are seeking to makes sense of what they experience, both agentially and on the basis of what they have previously experienced. Here, Valsiner and van der Veer’s (2000) concept of premediate experiences – those that came earlier and from which they have learnt – stands

as being more than prior knowledge, it is fundamental to how we, as humans, engage in the process of making sense of the world we encounter, in both its brute and social forms. The importance of individuals' gaze as making sense of the world and the role of the kinds of discourses that we have access to make sense of what we experience (Billett, in press).

Social constructivists (e.g., Rogoff, 1995) and anthropologists (Lave, 1993; Pelissier, 1991) also emphasize this ongoing process of making sense and learning, through participating in activities and interactions, although emphasizing strong social links and legacies through these processes. Such theorists also point to the moment by moment process of learning that occur through individuals engaging in the social world and with social practices. In particular, Scribner (1985) and later Rogoff (1990) referred to the process of moment-by-moment learning or microgenetic development that occurs as individuals engaging conscious thinking and acting, and secure legacies arising from that learning. Importantly, this microgenetic development is shaped through engagement with the kinds of goal directed activities and contributions of social practice and situational factors in which that learning occurs. However, importantly this process is not about socialization – the uncritical appropriation of knowledge encountered socially. Instead, the evidence suggests that individuals construct their own versions in making sense of what they experience and that construction is reshaped by not just the immediate circumstances but also by the individuals prior or pre-mEDIATE experiences (Billett, 2003). In this way, the ongoing process of thinking, acting, and learning reshaped through intersection between what the social circumstances affords and how the individual comes to construe and construct that affordance premised on their existing 'cognitive experience' (Valsiner, 2000).

In this way, the ongoing process of learning can be seen as a negotiation between the social and cognitive experience, yet guided by the individuals' prior experience. Importantly, this suggests that rather than each circumstance or situation being some distinct process of negotiation that, individuals and immediate experience mediates what is experienced. Yet, through these negotiations individuals' cognitive experience is transformed by these negotiations leading to particular and potentially idiosyncratic ways of making sense of the world. Hence, the personal construal and what shapes it play an important role in their cognition and learning. Central to these is the focus and intensity of individuals' engagement and learning (Billett et al., 2005b). Individuals are selective about what activities they engaging and degree of effort they apply to those activities. Goodnow (1990) noted that humans not only solve problems, they also decide what problems are worth solving. So, the same circumstances may elicit quite different responses from individuals depending upon their backgrounds interests or what the circumstance offers to them. Echoing here are Baldwin's comments from over 100 years ago about the selectivity of individual cognition.

This selectivity and negotiation in individuals' construction of knowledge is central to contemporary theorizing within the social cultural project. In particular, Vygotskian inspired theories of learning suggests that, because much of what is learnt is derived in the social world, that individuals engage in inter-psychological processes – those between individual and social world, which then lead to intra-psychological outcomes as permanent or semipermanent legacies of those processes. Central to these processes are the relations between the personal and social contributions to learning, which necessarily feature the agency of the social world (i.e., the social suggestion or press, gift of the social) and the intentionality of the personal. The social suggestion or press can offer its gift through a battery of social suggestion such as in Bourdieu's (1991) concept of habitus in ways that have greater or lesser potency depending upon the institutional arrangements. Conversely, individuals will deploy their agency with particular intents and degree of effort (Billett et al., 2005a). Yet, the key mediating factors, except in the most forceful kinds of experiences, is the intentionality of individuals and how and where they direct their construals and constructions of what they encounter. For instance, in one study a group of coal miners were offered additional safety training by mine management (Billett, 2001). However, these workers rejected that training because they believed this to be an attempt by management to transfer the responsibility for a safe working environment from management to these workers.

All this is simply to suggest that individuals' participation in educational arrangements and their taking up of the invitation to change is premised as much on their agency, concepts and ways of engaging with the world as the settings in which they engage. Therefore, when considering educational provision such as cooperative education, it is necessary to understand the premises from which individuals engage in and what they learn through these experiences. To illustrate and elaborate these conceptions, I would briefly like to discuss some case studies of learning through work.

Case Study One: Workplace Learning

From a series of studies of workers' learning through and for work in a range of industry sectors (e.g., mining, second processing, transport, retail, administration, hairdressing, hospitality, food production), it is possible to identify a set of factors contributing to how individuals learn through everyday work activities. Key contributions to this learning appear to include: (i) Individuals' engagement in the goal-directed activities within the workplace; (ii) the kinds of direct guidance they get from other workers; and (iii) the indirect guidance they secure from participating in work and interacting with others and the workplace (Billett, 2001). The potency of each of these contributions is in some ways premised on the affordances of the workplace and individuals' engagements in those activities (Table 1). This table depicts the relational bases of these contributions through a consideration of how these contributions are afforded and engaged. For instance, the degree by which individuals are invited to engage in particular kinds of activities and interactions and are either supported in or inhibited from participating in activities that are prized or lead to securing valued knowledge, does much to shape their access to work-related knowledge. Yet, in addition, and conversely, how individuals elect to engage in workplace activities, the focus of their intentional engagement and the degree of effort they deploy in undertaking these tasks will have also have particular legacies in terms of what they learn through their participation in work activities. So, the particular interests and imperatives of both the workplace and individual workers will, in different ways and by different degree, shape the learning that arises through participation.

The second of these three kinds of contributions – direct guidance – is very much premised on the willingness and competence of others to provide direct guidance to less experienced workers. However, there is again the factor of how individuals elect to engage with the guidance being afforded them. This includes the degree by which individuals engaged with the more experts or experience co-worker will impact upon how and what they learn, including the perceptions of the competence of the more experienced partner. In one study (Billett, 2000), one worker refused to engage with his workplace appointed mentor, claiming that he knew more about his work practices than his mentor. Consistently, this worker then reported through a series of interviews and responses to critical incidents, that much of his learning as a workplace of the product of his own agency. Regardless of the truth of this worker's assertion, the point is that even when direct work guidance is available, individuals will make judgments about the pertinence, credibility and utility of that guidance and also the consequences for their sense of self in such engagement. Rightly or wrongly, they may either accept or reject that guidance on the basis of their appraisal of its worth. So, even where there is direct guidance by a more experienced or expert co-worker, individuals still plays a significant role in engaging with and mediating that guidance.

The third of these key contributions – indirect guidance – is very much premised on the individual engaging with the physical and social contributions of the workplace, observing and listening, utilizing models, clues and cues about work performance that are available in the workplace. Their availability is not always objective or equally accessible. Individuals may or may not be able to engage in the discourse of the workplace, and will utilize in different ways what is observable within the workplace given differences in their understandings of what they are observing. In considering the potential of this kind of indirect guidance, it should be noted that many anthropological studies of learning emphasize that much of learning of cultural practices, such as work, are a product of individuals' active mediation and learning of what they encounter and experience, rather than being taught (Lave, 1993; Pelissier, 1991; Rogoff & Lave, 1984,). The point here is that much of what will shape the kinds of quality of the learning experiences in workplaces is a product of individual's engagement, intentionality and construction of what they experience in the workplace, on the one hand, and the affordances of the workplace on the other. So both instances of institutional facts and individual engagement are deployed relationally in this learning.

Moreover, this same program of research into work-related learning also identified a series of limitations or weaknesses in learning through everyday work place activities. This list includes: (i) learning knowledge that is inappropriate; (ii) difficulties in accessing activities and guidance; (iii) understanding goals for workplace performance; (iv) reluctance of experts to provide guidance; (v) developing and understanding about work-related practices and principles; and (vi) employees reluctance to participate effortfully and learn richly through their workplace experiences (Billett, 2001). Most of these factors can be identified as being limitations which are a product of workplace practices and mores (Table 2). Table 2 depicts the potential affordances and engagement associated with these factors. That is, they represent a set of affordances which can lead to inappropriate or unsatisfactory learning outcomes. Only one of these factors is wholly premised on the actions of individual as a learner – the reluctance of workers to participate. Yet, this can be mediated

TABLE 1
Affordances and engagement in work related learning

Source	<u>Affordances</u> The degree by which the workplace affords opportunities to:	<u>Engagement</u> How individuals exercise their intentions, agency and construal when engaging:
Everyday activities	participate in activities from which the knowledge required for work performance can be learnt	in the activities they can access in the workplace
Indirect guidance	access the social and physical contributions from which the performance for work requirements; and	with the social and physical environment of the workplace, and
Direct guidance	direct guidance that can provide access to knowledge that would not be learnt by discover alone	with more experienced counterparts

TABLE 2
The potential limitations of learning through everyday activities

Potential limitations of learning through everyday work activities	<u>Affordance</u> The degree by which the workplace:	<u>Engagement</u> How individuals exercise their intentions, agency and construal when:
learning that is inappropriate	provides modeling, particular perspectives etc	being reflective in what they are learning
access to activities and guidance	enacts discriminatory or restricted access to activities and interactions	maximizing existing and create new opportunities for learning
understanding the goals for work performance	offers restricted opportunities to understand workplace goals	individuals engage with seeking out those goals
reluctance of experts to provide guidance	provides insufficient access to expert guidance	engaging with more experienced workers
absence of expert guidance	cannot provide access to expert guidance	considering a novel task
developing understanding	makes accessible purposes and premises for work activities, and	actively seeking to understanding, and
the reluctance of workers to participate	offers experiences that are relevant to individuals.	evaluating their interests.

by workplace factors. However, each of these also comprises a component of individuals' engagement in and construal and construction of what they experience in the workplace. For instance, workplace learners may elect to learn dangerous shortcuts, exclusive work practices, or critically evaluate these practices and construct their knowledge and practice in a different way. Similarly, individuals may have difficulty accessing activities and interactions of the kind that they desire to secure prized workplace knowledge.

Yet, in different ways individuals will elect to exercise their agency in securing this knowledge. Certainly, some individuals' engagement in work-related learning will be inhibited because of their standing and status, in situations where others are afforded engagement. In one workplace, volunteer fire fighters were not able to access some of the expertise and practices employed by professional fire fighters (Lloyd, 2004). However, on becoming employed as paid fire fighters they were invited to learn these practices. Similarly, the agency of workplace participants can drive interest in securing knowledge which, is beyond their current employment status (Billett, 2001). The task of understanding workplace goals often requires access to the knowledge and the assistance of more experienced workers to access that knowledge. Yet, it is the agency of individuals in thinking about, seeking out and formulating understanding of the goals which is central to their need to understand to what ends their labor is directed. The point is that individuals will exercise different kinds of intentionality and in particular ways in seeking to resolve any ontological in securities associated with their work. For some workers, not knowing to what purposes their work is directed will be less important than to others. So, again in the agency of individual and the affordance of the

workplace come together in the task of understanding workplace goals. Similarly, engaging with experts to understand principles and practices will play out in different ways depending upon the combination of opportunities (i.e., affordances) and the degree of agency and skills of the individual in securing the knowledge. Consequently, it is likely that for individuals to overcome the limitations of segmented work practices, contested workplaces and the difficulties of learning knowledge which is not made explicit, this will likely require individuals to be agentic in their learning. That is, there will always be institutional, affiliate and situational factors that will either support or militate against an individual getting access to workplace activities, experts as well as factors that will make it difficult to understand the goals that were performance.

Therefore, it is likely to be important for individuals to be agentic in their engagement in and learning through work. While not recommending individuals engage in the equivalent of the epistemological escapades of Robinson Crusoe (Tobias, 1994) – that is, learning experiences without access to social interaction and guidance – being agentic seems essential, particularly for workers who are disadvantaged in some way. There can be workers who are seen to be conducting work of low standing (Darrah, 1997) and who are denied support, those who are disabled (Church, 2004) and need to find ways of learning without drawing too much attention to themselves the least they be seen as workplace liabilities and older workers who are likely to be disadvantaged in securing workplace support which will more likely be distributed younger employees (Billett & Smith, 2003). That is, these workers may have to exercise additional and particular kinds of agency to overcome the limitations of their workplace affordances that are being exercise on cultural grounds.

Least the requirements for being more agentic in learning through work seems to be unreasonable burden, it is worthwhile considering experiences of how small business operators learn. In a study which examined how small business operators learnt to implement the goods and services tax in Australia (Billett et al., 2003), it was found that the agency and intentionality of small business operator was particularly important not only in how they decided to engage in task of learning (with whom they would collaborate, often very selectively), but also in making decisions about what they believed was important for them to learn. So both goals for learning how to implement this mandated requirements and also the process by which they learnt these requirements were largely shaped by the small-business operators' interests and intentionality. For instance, those in professional practice (e.g., optometrist, veterinarian) elected to engage in learning only about the scope and extent of their compliance requirements. They were more interested in their professional practice and were able to delegate this task to somebody else. However, others have specific needs to understand this taxation regime, including an avoidance of dependence upon accountants and financial advisers or, the careful planning of entrepreneurial activities. Cases of inept and ineffective learning experiences by small business operators often seem to arise from wrong focus or a lack of appropriate agency. The simple point here is that it is the role individuals elect to play in these work-related learning experiences, including being selective about what social sources they access that might best provide helpful advice and information, that is central to the process and outcomes of learning experiences.

Although the focus of the analysis above has been on workplace experiences, it would be possible to develop similar lists for educational institutions as having particular sets of strengths and weaknesses as learning environments, and also the relational bases for their contributions. For instance, it might be argued that much of the intentional goal directed activities are directed towards the imperatives of schools as institutions, rather than students' learning. Certainly the imperatives to meet governmental goals and curriculum intents could be seen as limiting the prospect of developing adaptable knowledge through meeting the needs of students' readiness and experiences.

Again, it is necessary to emphasize the proposition being advanced here is not to deny the important contributions of others in the workplace or the educational institution, nor is it to encourage wholly individual over collective efforts at learning. Instead, it is an attempt to emphasize the key role that individuals' cognitive experience play in their learning and on what bases their agency and intentionality will be exercised in that process of learning. The focus of its engagement, its direction and strength is central to the processes and outcomes that comprise their learning experiences. For educational provisions, such as cooperative education, this suggests a greater consideration of personal epistemologies, educational provisions that explicitly acknowledge and accommodate the place of the individual within these arrangements and the 'experienced' curriculum as being a key consideration for both the 'intended' and 'enacted' curricula.

Integration of Experiences in Workplace and Educational Institutions

Key imperatives for cooperative education are finding ways to integrate the contributions to learning within education institutions with those in other settings, such as the kinds in which learners will ultimately deploy and practice what they have learnt. Therefore, and building upon the premises outlined in the previous sections, it is worthwhile considering how that integration might best occur. In this way, there is a concern for curriculum and pedagogic practices to be focused on guiding and enriching the experiences of learners across these settings.

As a starting point, it seems likely that it will be those within educational institutions and systems (e.g., teachers, academics) that will need to lead the process of integrating the contributions of workplace and educational institutions. This is because much of the wherewithal, interest and imperatives resides within educational institutions. Also, it is likely that educational institutions will need to deploy their greater understanding of pedagogy and curriculum in order to richly integrate the two sets of experiences. Also, on balance, given the key role for supporting learning, such as in cooperative education and the concerns about the applicability of what is learnt in educational institutions to workplace settings, it is also perhaps most in the interests of educational institutions to take leadership in supporting the integration of the two sets of contributions. They are perhaps best placed to assist workplaces development of learning curriculum, guided learning strategies and critical reflection on practice. However, it is the rich sets of workplace experiences that need to be engaged with within the educational institution. In the following section, some suggestions are provided about this integration.

Achieving Different Goal for Learning Through Integrating Experiences

One way forward is to see that the experiences in workplaces stand as being authentic instances of workplace practices, with their various strengths and weaknesses, and degrees of consonance with the objectives of educational program. Yet, the goals of rich learning can take different forms. It might be about identifying and promoting adaptable knowledge through workplace experiences. The idea that you can teach students transferable knowledge which they are able to apply willy-nilly across different situations has been shown to be quite fanciful. Although much interest continues in generic or core competencies, these can be understood in terms of particular workplace performance requirements (Billett, 2001), not as some generally applicable competence which is sometimes held as goal for cooperative education (Stern et al., 1995). Therefore, if you are attempting to understand the broad applicability of a particular set of vocational practice (e.g., nursing, hairdressing, automotive work), it would be necessary to understand something of the diversity of practice requirements in order to develop the kinds of knowledge which is able to address not only practice elsewhere, but emerging practice requirements within the existing workplace. It follows then that developing these understandings could be undertaken by garnering and sharing students' experience in different kinds of workplaces where those skills and skill requirements are manifested and practised in particular ways. In Australia, for instance apprentices spend approximately 85% of their indenture in the workplace and 15% of their time in technical colleges. A useful pedagogy practice would be to engage apprentices in discussing the requirements for work performance in their particular workplaces and then use this as a basis for sharing and critiquing these experiences. In particular, the attempt might be undertaken to draw out canonical principles and practice which apply across particular kinds of work regardless of setting. So classroom activities within the educational institution might be used to assist apprentices share their experiences of how servicing of vehicles, procedures for hairdressing, approaches for preparing and serving food are enacted in their respective workplaces. These then could be drawn out and reflected upon to understand the particular circumstances and requirements for those kinds of performances. This then can be used to assist apprentices and students understand the relationship between different kinds of performance conditions and performance requirements, and understand something of a variation of these for their own discipline. To use another example, if trainee nurses' experiences in different kinds of hospital wards could be drawn together to identify what constitutes the canonical principles and priorities of nursing practice and these might be applicable to different kind of circumstances in which nurses will find themselves engaged. So a curriculum goal of developing adaptable knowledge through integrating workplace experiences might comprise a means to develop robust understandings about vocational practice.

Pedagogic and curriculum imperatives might also be exercised through particular kinds of integration. For instance, if the goal for rich learning is to engage students in critically appraising the

experiences they have encountered in their workplace experiences. Hence, the goal for the experiences within education institutions is to draw upon those experiences and engage students in developing not only critical perspectives on what they have experienced, but also the capacities to engage in focused and insightful analyses of their practice experiences. As noted earlier, there are many weaknesses associated with learning through work, therefore, the individuals learn through their workplace experiences men are always be appropriate or helpful. Inappropriate learning could include danger shortcuts, bad habits and inappropriate attitudes towards other workers. So the concern here is to draw upon the experiences of students and to enrich those experiences and extend learning by inviting the students to change their views and practices in particular way through an educational intervention. This of course, requires capacities and skills on the part of teachers that are able to respect, draw upon, and guide the extension of students' pre-mEDIATE experiences.

In the case study discussed below, the possibilities and problems with achieving this kind of process and its educational outcomes are discussed using school students' experiences in their the paid part-time employment to critically appraise work, working life and pathways beyond schooling.

Case Study Two: School Students' Learning

This study was motivated from a concern that school students' school-organized work placements lacked authenticity, were too short in duration and weakly engaged these students, thereby denying opportunities to understand the world of work. The aim here was to integrate workplace experiences and school-based activities. It was proposed that: (i) As the majority of the senior school students engaged in paid part-time employment; (ii) these represented more authentic instances of workplace and work life experiences; (iii) usually continuing over far longer periods of time than students' participation in work placements; and (iv) where engaged with in proportionally equal numbers between male and female students in both metropolitan and non-metropolitan settings, that these experiences offer an untapped but important educational resource within Australian schools (Billett, 2006b). Such a view is consistent with cooperative education and is shared by cooperative education scholarship (Furco, 1996; Ricks, 1996; Stern et al., 1995). The project involved groups of year 11 and 12 students in five Australian schools, which had extensive vocational education programs. Hence, it was assumed that teachers in the schools would understand the world of work and value its contributions to their students' education and be able to facilitate students' reflection on work, working life and post-school options.

The procedures adopted for this project were as follows. The students were engaged by their teachers in a series of four sessions in school, each of about one hour's duration. The first engaged the students in responding to a series of questions about the activities and interactions that comprise their paid part-time work. The concern here was for students to describe and elaborate their working life experiences through responding to a series of questions about their paid work, its conduct, how work activities and rewards were distributed and in what ways it met their needs. The second session involved students sharing their experiences with peers, including those who were not currently engaged in paid part-time work. The focus here was to appraise constructively, but critically, work and working life from the perspective of those who engage in authentic work life experiences. The third session engaged students in discussions about how their experiences within their paid part-time work would inform post-school pathways and their decisions about school to work transitions. The fourth evaluated the previous three sessions. So, fundamentally this process was about drawing upon students' experience of the paid part-time work experiences to secure important educational goals about school-to-work transitions through reflecting critically and constructively on those experiences. All of these goals are clearly consonant with cooperative education practices (Van Gyn, 1996).

However, securing these goals was not straightforward. Firstly, although it was anticipated that some school students might struggle to engage positively and constructively in reflecting upon their paid part-time work experiences, this problem was exacerbated by some of the teachers' value positions and pedagogy practices. Whereas some teachers were able to engage students in useful discussions, and intervene to draw out helpful insights (e.g. about working with others, learning through work), to use that expression – facilitate the students critical reflection, this was not always the case. Some teachers lacked sympathy for and competence with a process which legitimated learning experiences outside of school. Moreover, some seemed uncomfortable with pedagogic processes which made the students the sources of knowledge to be shared and reflect upon. Of course, not all students were cooperative or benign. However, the competence of

teachers to engage students in critical and constructive reflection and also to assist valuing the contributions of learning outside schools emerged as a key factor in the effective integration of workplace and school-based learning experiences.

Findings worth sharing here include those about the capacity of reflecting on students experience to: (i) understand the world of work; (ii) what students learnt through reflecting upon work; (iii) the educational value of reflecting upon paid work; and (iv) the role of institutional practices and teachers in integrating these experiences.

Firstly, pressing students to reflect upon that paid part-time work, overall, permitted students to identify crucial features of work and working life. This included them making distinctions between the conditions, status and roles of part-time workers as opposed to full-time workers; differences in the rewards for and the kinds of work that are undertaken by different categories of workers (e.g., those with higher or lower levels of qualifications and skills); the different kinds of discretion that are available to different categories of workers; distinctions in their prospects for advancement and career progression across categories of workers; and the different kinds of requirements for workplace performance expected across workplaces (e.g., service workers having to deal with rude customers). It seemed that through describing their experiences of paid work, the students were able to identify and all too readily critically appraise many of the features of their work and working life. These insights tended to be developed over time through periods of engagement in work that were significantly longer than those available through work placements. Secondly, the student-workers reported that the workplace provided an effective experience to learn about the world of work and consider post-school options.

The students' responses to what they had learnt through reflecting on their paid work included: learning about working life; learning about different kinds of work and what was common and different among them; learning about the kinds of work they didn't want to upon leaving school; learning about preferred kinds of work; considering about whether their preferred work options were actually what they want to do; and developing an awareness that they needed to understand what actually constitutes the work that resulted from the tertiary and higher education courses into which they would be making significant personal and financial commitments over the next few years. Often, but not always, the students' responses demonstrated insights about approaches to work and post-school options. In all, the students were able to identify the educational worth of reflecting upon their paid part-time work experiences, even if that appreciation was often not explicit.

So, thirdly, the students reported that this process was helpful and appreciated most when students were able to debate and discuss these matters. Their preference was not to write their ideas down, but to discuss. Certainly, feedback from the teacher suggested that discussions were often rich, informed and engaging, and the task of writing down their insights did not always reflect this richness. So, this suggests that the method for engaging the students in reflecting upon their paid part-time work might need to be considered in terms of what goals are being expected. Certainly, some struggled to articulate their ideas positively in writing. Yet, even those who resented writing about their paid part-time experiences did nevertheless largely appreciate the opportunity to reflect upon the work.

Finally, an important finding was that, beyond the readiness and characteristics of the students, that the teacher's capacity to provide effective classroom based experiences stood out as an important determinant in the management of student reflections upon their paid part-time work experiences. Standing out among teachers' qualities were those associated with: (i) their capacity to adapt and utilize effectively processes that net the readiness and characteristics of students; (ii) their capacity to facilitate student learning by drawing upon their learning rather than teaching them; (iii) managing the students engagement in reflection; (iv) and appreciating the likely contribution of the workplace experiences to be able to provide a rich experience for students. Overall, it seemed that the degree by which the experiences of paid work were able to be maximized and addressed constructively in the classroom was identified as being, in part, a product of the understanding of working life by teachers and their capacity to facilitate this process in the classroom. In some ways, alarmingly, there was evidence of the closed culture of schooling which seem to de-value the contributions and sources outside of the school. This may well be a product of institutional facts such as the culture and practices of the school. Nevertheless, it suggests that the personal and cultural factors that stand to shape the process and perceived worth of integrating experiences within and outside the school from students' perspective.

This case is presented as an instance where the experiences across to different kinds of settings are utilized to secure potentially rich learning outcomes for students, as in cooperative education. Curiously, the best outcomes in this project were that from the school which has a very limited tradition of vocational

education. Essentially, the quality of the outcomes were realized through engaged students and the effective management of their learning experiences, not the school's claims to be interested in workplace oriented learning goals and experiences.

Implications for Cooperative Education

In sum, it has been proposed that the contributions of workplaces and educational institutions have particular strengths and weaknesses whose potential is mediated by the degree by which they are afforded and individuals elect to engage with these affordances. So, one consideration is to draw upon and integrate both sets of contributions in ways which meet particular educational purposes. However, it is important to emphasize the mediating role that individual's construal and construction of what they experience plays in realizing the full potential of such integrative efforts. This was particularly evident in the second case study. Much of what is advanced here is consistent with and, perhaps, offers nothing particularly new to cooperative education. Indeed, to its credit the cooperative education movement has long valued the contribution of students' experiences in both workplace and education settings and has been concerned to integrate the two. Moreover, the emphasis on the students' perspective has always been strong. Nevertheless, it has been proposed that consideration of curriculum needs to be on the experienced curriculum and a consideration of the kinds of experiences that are provided for and made sense of by students. This leads to the task for teachers do find out how best to engage an extent the prior experiences of students in classroom settings. Also, in considering the integration of learning experiences, the educational purpose (e.g., specific knowledge development, general learning outcomes) importantly need bring to the forefront in those efforts to provide and integrate those experiences. Each of these kinds of goals will have particular kinds of processes that are most likely to achieve their purposes. Moreover, the concept of pedagogy that is employed need to include personal epistemologies, the agency and intentions of learners and the kinds of pedagogic practices that can best engage, exercise and extend the learners' conceptions. This includes difficult and potentially perilous decision about the degree by which individual discovery needs to be tempered by facilitative or mediating processes and even teacherly interventions. In conclusion, it suggests that moves to richly integrate particular kinds of learning experiences will need to account for their diverse contributions, but importantly how individuals make sense of and integrate these different contributions.

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