Towards A New Understanding of Workplace Learning:
The Context of Singapore

HELEN BOUND & PETER RUSHBROOK (EDS.)

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Edited by
Helen Bound & Peter Rushbrook (EDS.)

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Towards A New Understanding of Workplace Learning

1 - PROBLEMATISING WORKPLACE LEARNING

Helen Bound
Institute for Adult Learning
Singapore

Peter Rushbrook
Royal Melbourne Institute of Technology University
Australia

Internationally, understanding of workplace learning has evolved considerably from the early days of implementing Competency Based Training (CBT) in apprenticeships and other arrangements using a behaviourist lens to describe narrowly defined sets of tasks, isolated from context, separating knowledge from practice and largely ignoring the embodiment of learning. Understanding of workplace learning now uses and requires different lenses, theoretical stances and epistemologies; it is the socio-cultural and practice lenses that inform many of the contributions in this book. The book seeks to bring together some of the latest thinking and theorising about workplace learning, and in many chapters, uses Singaporean examples to illustrate these understandings in practice.

Essentially our argument is that learning through, for and at work is mediated by the context of the work, the workplace and the socio-cultural, political and economic circumstances of the industry, market segment, national policies and discourses, just as learning at, for and through work is mediated by the individual worker's identity, exercising of agency, and engagement in the affordances of work. This entwinement of learning at, through, and for work, context, and individual engagement is the focus of this book.

The term "workplace learning" constitutes three major concepts; work, place/space, and learning. In the following section, we focus on learning and how the way we understand learning mediates possibilities for workplace

learning. Context relates to all three concepts of work, place/space and learning. These concepts, as we conceptualise them, are explained in the following sections on "Workplace learning" and "What we mean by context".

The genesis of this book began with a Workplace Learning Roundtable of international researchers in the field of work and learning organised and funded by the Centre for Work and Learning (CWL), Institute for Adult Learning (IAL), Singapore. Our theme was the mediation of context in workplace learning. Those attending the Roundtable contributed papers that have been re-worked to constitute some of the chapters in this book. Since the Roundtable, CWL and local researchers have continued to develop their theoretical perspectives of work and learning, working with data that tell stories of the learning of Singaporeans from diverse cultural backgrounds and circumstances. It is this growing body of work that enables the contributing authors in this book to add to the Asia-Europe dialogue on work and learning.

WORKPLACE LEARNING

The long legacy of behaviourist approaches to CBT mentioned above stretches its tentacles to more recent times. This is evident, for example, in the following definition from the International Labour Organisation (ILO). This draft paper defines workplace learning as competencies, knowledge and/or skills learnt in the workplace.

> The acquisition of knowledge or skills by formal or informal means that occurs in the workplace (rather than knowledge or skills acquisition outside the workplace - for example in classrooms). It includes both formal on-the-job training and informal workplace learning. (2009, p.4)

This definition uses the term "acquisition", suggesting a transmission approach is required in order for people to learn, yet it also refers to informal learning. Note the term "on-the-job training" is also considered as a subset of workplace learning that tends to be highly structured and often based on the use of checklists. Metaphors portray much about the stance on learning. Sfard (1998), for example, describes the acquisition metaphor of learning as similar to the banking metaphor used by Freire (1972) that is suggestive of a blank slate requiring front end loading of knowledge. The problematic of this understanding is that it assumes we do not make our own sense of the

world in which we live and our experiences; it assumes that learning is highly individualised and located in the mind. It also assumes that knowledge is static, rather than dynamic, co-constructed and created. The participation metaphor of learning (Sfard, 1998) is perhaps more appropriate to use when considering workplace learning. It assumes you are a "part" of activity; that you are engaged in and participating with others; and that learning is social, embedded and embodied. Moreover, the idea of engaging in activity appreciates that activity does not take place isolated from context.

However even the participation metaphor has its limits when thinking about workplace learning. Relationships between people, space, tools, in short, the socio-materiality of the workplace are critical in considering what we mean by workplace learning. Evans, Guile and Harris (2011) for example, succinctly summarise the criticality of relationships when they write, "Workplace learning is about the relationships between the human and social processes of learning and working" (p.150). Workplace learning can be understood as a productive part of everyday work embedded in the culture, structures, relationships and processes not only of the place or places of work, but the social, cultural, political and economic circumstances of the work and the workplace. For example, cultural norms and dominant discourses about learning evident in language such as "acquisition of knowledge" are part of Singaporean institutional and national ways of being. Such understandings are played out in policy and regulations governing funding and quality assurance processes that are entwined into everyday practices of all those involved in learning at, through, and for work. In short, context is embedded in the relations of work and learning. Workplace learning then is more than what is implied in the participation metaphor; it is this and about the relations between people, artefacts of the immediate circumstances of work as well as the circumstances of the organisation and the socio-political, cultural, and economic circumstances of industry and nation.

WHAT WE MEAN BY CONTEXT

Context is so often thought of and labelled in ways that depict it as "other", as that which is external. Such labelling sets up an external and internal binary: internal to the organisation, external to the organisation; internal to individual agency, judgement and decision making, and external to the individual. Other ways in which context is often considered is in layers:

the individual, team, organisation, industry, government; or, as micro-, meso- and macro-layered environments. Such labelling and conceptualisation potentially place emphasis on the layers as separate from actual activity rather than the relations between them. We argue, as do many of the authors in this volume, that it is studies of the relations of work, learning and affordances of the context of the work that have the greatest potential for enhancing our understandings of learning at, through, and for work.

The notion of mediation positions those doing the learning through, at, and for work not as pawns of the context in which they work, but as potentially active agents in the production and reproduction of the social, cultural, economic, and political relations of work. Historically, the concept of mediation comes from the work of Vygotsky in the 1920s, who argued that human action is mediated by culturally meaningful tools and signs. Vygotsky suggests that the mediation of human action through signs and tools enables the human being to control him- or her- self from the outside, to regulate our interactions with the world (Vygotsky in Engeström, 1999, p.29). Lekortsky (1984) explains Vygotsky's concept of mediation as "human beings create stimuli that determine their own reactions and are used as means for mastering their own behaviour" (p.66). This is not to ignore the reality that having limited power and access to resources across a lifetime and/or within a given context, time and place, severely limit opportunities for engagement and contribution to reshaping the work, leaving space only for the reproduction of what exists or forms of passive or outright resistance (Coopey, 1995).

So if context is entwined in learning as indicated in the introductory paragraphs, how do we understand this amorphous term, "context"? Context is multi-faceted. It is not, we argue, simply the situated context of specific workplaces or spaces. The socio-political, economic and cultural norms, policies, discourses of a nation, of an industry sector, of an occupation are entwined variously in every day working practices. Billett (this volume) provides the example of the oft-made cultural assumption that older workers have difficulty learning Information Technology (IT) and so are potentially denied opportunities to undertake work that involves IT capacities. As a "non-welfare" state, Singapore values full-time work as it ensures Central Provident Fund (CPF) contributions that provide the citizen with sustainable finance for housing, medical insurance, education and retirement. That is; part-time and non-permanent work are not the norm;

non-permanent work is rarely valued institutionally. Such nationally-shared narratives or social imageries mediate the choices of individuals and govern the work of, for example, career facilitators and social support agencies.

Practice-based theoretical approaches focus on the practices of the work deepening our understanding of the social relations of the work, but often in a more situated understanding of context. Cultural historical activity theory, while noting the primary and other forms of tension and contradiction within the activity tend to focus more on the specific interactions relating to the intervention being addressed. It seems that drawing attention back to their naming of tensions and contradictions that perhaps have their roots in wider socio-economic and political contexts beyond these interactions is limited. In 2006, Evans et al (2006) integrate "macro-level analysis with the characteristics of the learning environment which expands the more normal context for workplace-learning theorizing, which is the workplace itself" (p.10). In 2009, Felstead, Fuller, Jewson and Unwin (2009) introduced their working as learning framework which "highlights the relationship between employee's position in the productive system and the ways in which their knowledge is developed, privileged and managed" (p,198), while also acknowledging individual agency in accessing affordances for learning. That is, the Framework combines concepts of productive systems, discretionary power, work organisation and learning environments. These two books herald not only a growing interest in the mediation of context in workplace learning, but a deeper examination of what constitutes 'context'. In this volume we add to and deepen this understanding of context beyond layers, and metaphors of Russian dolls (Felstead et.al., 2009) to explore the mediation of economic, socio-cultural and political relations of work and learning.

WHY A FOCUS ON CONTEXT IN WORKPLACE LEARNING?

As Singapore moves in a new strategic direction in workforce development, it is timely that we take a closer look at understandings of workplace learning. As Evans (this volume) writes, "policy and practice in workforce development in Asia can be said to have reached a crossroads" For Singapore, the crossroads marks recognition that "standardising tendencies" (Evans, this volume) in the implementation, design and pedagogies of national competence frameworks act as a brake on creativity and innovation. The workforce development policy directions towards "workplace-based learning" (Shanmugaratnam, 2014)

is a markedly new direction. The policy context then provides affordances for workplace learning, but the policy context is not the only consideration; affordances are also created by other aspects of context from national cultural discourses to the culture of the work setting and the organisation and design of work, and indeed, the nature of the work. Movement forward in implementing "workplace-based learning" is unlikely to be smooth as educational institutions here in Singapore learn to value doing work, authentic learning experiences and assessment reflective of the practices of work and employers, and institutional ecosystems and individuals also learn to value learning at, through, and for work. It is timely to produce a work on workplace learning and context situated in Singapore.

LOCATING THE CONTEXT: SINGAPORE

While this book assumes that the presented research, and its implicit and explicit theorisations have international resonance, we caution that the arguments advanced are located with the specific context of Singapore. This may or may not skew the assumption that the theoretical conclusions and evidence outlined carry an easy "transfer" rather than a complex re-contextualisation in novel settings (Evans, this volume). We believe, therefore, that an understanding of the construction of a distinct Singaporean national "social imaginary" and the manner in which subsequent policy initiatives are disbursed and enacted across the social, economic, political and administrative landscape will inform a discursive rather than applied approach to the examples presented (Tan, this volume).

Central to the idea of a social imaginary is its deceptively simple conceptualisation as a set of "common understandings that make every day practices possible" (Appadurai & Taylor, in Rizvi, 2006, p.196). In Singapore, these are the nationally shared narratives that unconsciously and consciously inform daily and long-term social and political practice through establishing often subtle "rules of engagement". The dominant Singaporean social imaginary is the survival narrative of the "Singapore Story". Framed by founding Prime Minister Lee Kuan Yew (Lee, 1999), the Singapore Story is a pragmatic rendition of Singapore's "can do" reputation embedded deeply in the national psyche. It holds that the country was founded in difficult times and, through a heroic struggle against almost insurmountable odds, was able to drag itself from Third World to First within the short space of fifty years (Lee, 1999).

Pivotal to the success of this journey was the combination of strong political will and the contribution of the country's only national resource, its people. Economic and social transformation, the Story continues, can never be taken for granted because of potential threats posed by voluntary exposure to the global free-market economy and geographic location within a sometimes politically volatile region. The survival narrative tends to be represented in educational and economic policies that consider people as collective human capital resources contributing to ongoing national growth and prosperity (Tan, 2011). This is reflected, as we shall see, in specific initiatives related to lifelong and workplace learning.

The Singapore Story, with its emphasis on pragmatism, national survival and human capital has led to receptiveness to international social imaginaries, including neo-liberalism and public management as practical strategies for its embedding in public, economic and civic life. These international narratives have theoretical rationales that incorporate assumptions relating to improved public sector management structures, including practices consistent with private enterprise and presuming increased effectiveness and efficiency (Fusarelli & Johnson, 2004; Rizvi, 2006). Singapore, though, has selectively implemented these globalising strategies, producing a "Singapore paradox" (Amaldas, 2009, p.985) of economic radicalism approximating global imperatives and a nationally grown moral conservatism within a totalising government framework. Though rejecting the idea of the Welfare State, the government's essentially post-colonial Confucian collective ethos (Chen, 2010; Xiong, 2011; Lee, 2009; Kam & Gopintham, 1999) nevertheless offers a range of education and training initiatives for individuals that both encourage and subsidise pre-employment and post-employment learning for and in the workplace (Kam & Gopintham, 1999; Tan & Gopintham, 2000; Kong, 2011; Lai & Lee, this volume; Rushbrook, this volume). These programs are often embedded in the "adult learning" Continuing Education & Training (CET) sector, which closely approximates vocational education and training sectors in other parts of the world (Bound, Lim & Rushbrook, 2014).

The national survivalist narrative is ably represented in the CET sector's conflation of lifelong and workplace learning. At a 1998 Singapore May Day rally speech, then Prime Minister Goh Chok Tong outlined a vision for lifelong learning that cemented the hard-won lessons of the small and young nation's recent past, yet also offered a hard but realisable road to the future:

Looking beyond the immediate future we must focus on lifelong learning and employability in the long term. Our future prosperity will be built on a knowledge-based economy ... The future economy will be driven by information technology, knowledge and global competition. The types of jobs change, and change rapidly. This means that workers must have broad basic skills and the capacity to learn new skills. Only then will they have employable skills throughout their working lives. So we must have Thinking workers and a Learning Workforce. (Kumar, 2006,p.501)

The CET sector subsequently embraced this pragmatic and human capital focused philosophy, eschewing Western liberal readings of lifelong learning as a path for individual fulfilment and active citizenship (Delores, 1996).

In 2014, at the official opening of Singapore's Lifelong Learning institute, Deputy Prime Minister and Minister for Finance Tharman Shanmugaratnam reiterated these themes and with the hindsight of more than a decade of the CET's sector's success in creating a raft of adult education graduates, including skilled "rank and file", middle management workers and adult educators, he forecast a bright and innovative future for Singapore's trained workforce:

In our next wave of development, we will build a first-rate system of continuing education and training: learning throughout life. It will intertwine education and the world of work in ways that strengthen and enrich both. It will make the workplace a major site of learning. It will enable every Singaporean to maximise his or her potential, from young and through life. It will build an advanced economy and ensure us of a fair society. (Point 6)

Hinting strongly at a nexus of institutional and workplace learning, Shanmugaratnam also announced the formation of a tripartite SkillsFuture Council and a new CET Masterplan to oversee and strategically inform the next vocational skills development "wave". The strategy will also include changing employment practices to challenge "the way in which companies develop and recognise skills" (Shanmugaratnam, 2014, Points 20-39).

So this is the Singaporean perspective on why the editors consider this book to be timely. The power of the Singapore Story and its survivalist narrative cannot be underestimated as a policy influence on successfully driving change.

In addition, the literature on workplace learning has reached a maturity where there is now greater alignment between theories of learning and workplace learning (some of which require reading between the lines, so to speak). Context is more or less explicit in these bodies of literature, largely from socio-cultural, socio-materialist and practice-based lenses. As indicated above, we take this opportunity to be more explicit in the book about what the editors and authors mean by context and the affordances for learning it creates.

THE CHAPTERS

The book includes twelve chapters: this introduction and a final critical summary and conclusion prepared by the editors, plus ten studies written by researchers addressing the outlined themes. The authors offer a range of interpretations of socio-culturally informed workplace practice, emphasising the diversity and fluidity of the discourse and the variability of researching rich, idiosyncratic and highly contextualised work sites. The first four studies take a strong theoretical stance and in many ways build critically on the themes outlined in the introduction. The final six studies provide a more nuanced understanding of these themes through detailed studies informed by workplace learning practices.

Karen Evans examines distinctions between conceptions of "workbased learning" and "workplace learning", suggesting the former includes prescribed institutional education and training for work provided through programs of study and "on-the-job" training, and the latter, the informal but richer learning experiences at and through work that often go unrecognised. She argues that there is merit in capturing both types of learning within a reimagined socio-ecological framework that recognises the complexity of the contextual interplay of workbased and workplace learning experiences. This intersection of the formal, informal and contextual, she continues, can be interrogated and accounted for theoretically through the lenses of the development of individual expertise and competence, consideration of cultural and workplace power relations, and examination of the practices and micro-interactions of workplace activity. She concludes that this bringing together of theoretical perspectives will lead to new and innovative approaches to learning at, for, and through work.

Anneli Eteläpelto explores the construction of professional workplace identity through agentic action within the changing socio-cultural spaces of the workplace. Work identity is considered to be constituted by subjects' conceptions of themselves as professional workplace actors – conceptions based on the subject's individual life-history and work experiences. Work identity includes subjects' work-related commitments, ideals, interests, beliefs and values, ethical standards, and moral obligations. It also includes future prospects: individuals also have goals, aspirations, and notions of the kind of employees they desire to become. Work identities are negotiated interdependently at the intersection of the individual and the social. Agentic identity construction, she continues, is informed through consideration of three influencing frameworks. First, there is the framework of the professional subject which includes ideas of self, professional knowledge and competencies, and associated work history and experience. Second, there are the context-based sociocultural conditions of the workplace including material circumstances, physical artefacts, power relations, work cultures, and related dominant discourses. Third, and through interplay of the first two factors, is professional agency, which is practised when professional subjects and/or communities exert influence, make choices, and take stances in ways that affect their work and identities. This sense of agentic professional identity supported at the individual and collective levels, Eteläpelto concludes, is essential for the promotion of effective workplace learning and practice.

Stephen Billett makes critical use of his recent study on older Singaporean workers to examine the place of individual effortfulness and intentionality in shaping the construing and construction of knowledge drawn from engagement with opportunities provided for learning in workplace settings. He argues that without this willingness, the provision of workplace affordances to learn, including formal and informal activities and interactions, will have little transformative effect. The chapter elaborates the role individuals can play in mediating their learning and management of learning in workplace settings through reflection on the contribution of physical and social settings, both internal and external to the situated workplace. Principally among these are "institutional facts", or the social world's norms and practices, and how they shape and influence perceptions of workplace capability. He presents

the example of older workers and societal attitudes to their perceived levels of declining technical competency and physical and mental capacity to suggest that this does not auger well for their acceptance at appropriate levels of employment unless this "fact" is revised and realigned with the actual demonstrated capabilities of the age group. The use of contextual and practice-based pedagogies and structured workplace learning activities to demonstrate palpably the abilities of older workers may be one way to contribute to a shift in contemporary attitudes.

Yew-Jin Lee presents a fascinating chapter exploring the contextual relationships between formal and informal knowledge and learning, and the productive possibilities of linking innovative practice-based curriculum with the workplace. His focus begins with school-based science education and recent curriculum innovations exploring the types of knowledge and skills that should be learned (selection issues), and how these should be delivered (order and pace). From here, he examines the recent "rapprochement" between formal and informal learning in science curriculum, arguing against the separation of the canonical theoretical curriculum from more tacit ways of knowing science through the practical approaches often associated with workplace vocational learning, suggesting the dichotomy is unhelpful at either the school or the workplace. Through a science curriculum that melds the theoretical (context-independent knowledge) and the practical (context-sensitive knowledge) in the manner of Aristotle's "phronesis" (action-oriented knowledge that is sensitive to context and considerations of use), Yew-Jin Lee offers a number of questions and conceptual opportunities for educators and learners to explore learning for and at the workplace.

Renee Tan offers in her research and reflections, a radical methodology that extracts deep, nuanced and layered understandings from the examination and analysis of imagined workplace learning landscapes. Using a narrative inquiry approach mediated through creative fictionalisation, or telling "a story that is based on 'real' events to produce a version of the 'truth'", she presents four Singaporean case studies exploring the intricacies and impact of globalisation on individual and collective workplace practices within an all-embracing national social imaginary. The workers depicted occupy highly contextualised geographic places that in their materiality and opportunities afforded for meaningful learning experiences portray the myriad tensions, conflicts and opportunities confronting contemporary Singaporean workers.

The discursive analysis of issues arising from these fictionalised narratives forms the core of the chapter. Drawing from Raewyn Connell, she concludes with insights pointing to a tension between Singapore's intellectual location in the individualised Western "north" and its socio-cultural location in the collectivist Asian "south". She calls for the creative exploration of these tensions to maximise future workplace learning opportunities.

Soon Joo Gog challenges the potential for wide impact of Singapore's current SkillsFuture agenda, arguing that low-skilled workers under current "institutional logic" arrangements may miss out on well-publicised opportunities to encourage their making informed choices for training and career advancements, participate in a training system that responds to evolving worker needs, have employers recognise the connections between workplace skills mastery and career progression, and foster a culture of lifelong learning. Using the example of the security sector, she suggests that a wider institutional logic privileging the awarding of private sector corporate contracts to the lowest bidder perpetuates a low-skills equilibrium for the majority of workers. Under existing arrangements, contract bids emphasise the use of low-skilled workers and their progressive substitution by technology to increase efficiencies at worksites (for example, residential and industrial complexes) rather than making more effective workforce use through multi-skilling and encouraging a nationally beneficial high-skills equilibrium. This, she claims, is an industry cultural logic that goes beyond simple management choices about training possibilities. Training policy makers, she suggests, should address these wider sectoral logic assumptions in order to facilitate a more comprehensive national adoption of workplace learning and related vocational education options.

Sahara Sadik assesses and analyses the capability development and self-management skills of Singaporean non-permanent workers in a policy climate and work environment that assumes ongoing employment and "in-house" professional development. Drawing from interview data gathered in the adult education, technical theatre, film, and television industries, she isolates a category of "purposeful" non-permanent workers, or those defined as having a strong sense of identity and the skills, confidence, and motivation to navigate competently the precarity of continuously seeking work from one project or short-term contract to the next, and carefully teases out the challenges they face in forging a career. Using the metaphor of "vortex pathways",

she presents four individual case studies that demonstrate the fluidity and skill required to navigate the sometimes difficult terrain. At the core of the vortex is a strong and affirming craft identity, shared by all respondents, around which all other shaping considerations flow, or unpredictably whirl. Vortex pathways often include non-workplace eddies and spaces – for example, social networks – that may contribute to career maintenance and further learning opportunities. Vortexes are dynamic and sometimes erratic. They occasionally break down, leading to crises of individual confidence. But for their volatile nature, they demonstrate a capacity for agency and the desired ability to resituate and adapt, or recontextualise, knowledge and skills to new circumstances.

Annie Karmel articulates a strong case for using the idea of "shape-shifting" to account for the capacity of non-permanent or "freelance" adult educators to adapt their identities and skill-sets flexibly to new workplace circumstances. The more successful workers are in managing this process reflexively, the more adept they are in finding continuous but ever-changing employment assignments. Central to the shape-shifting process is individual agency and an ability to make use of workplace affordances, those contextual circumstances enabling the development of capabilities leading to personal growth and increased employment satisfaction. At a deeper level, she argues, agential action involves the skill of "reading" the environment through experience, interaction and reflection as well as being aware of the "entwinedness" of workplace contexts shaping learning through knowing that what is to be learned is that which is valued by the workplace.

Peter Rushbrook describes and analyses the process undertaken by people preparing for entry as professional educators into Singapore's CET sector. A focus of the chapter is the Diploma of Adult and Continuing Education (DACE) program offered at the IAL, which facilitates the knowledge and skills required for effective performance as a CET educator. In addition to developing capabilities for work, the program encourages graduates to continue their learning at and through work. Program participants, most of whom were already experienced CET practitioners, were interviewed to ascertain how they self-assessed their transition from "novice" to "expert" educators. The interview data suggests that DACE learners brought with them a reflective and iterative "embodied understanding" of workplace learning practice that further enhanced the quality of their DACE course participation experience. The data also suggests

that this reflective process challenges traditional theoretical models used to map an understanding of the "novice to expert" professional development process, the most notable being the seminal Dreyfus and Dreyfus approach. Through an embodied understanding lens, the transition from learner to expert practitioner is shown to be non-linear and complex, calling for a revision of traditional understandings of workplace capability development.

Poi Shan Lai and **Wee Chee Lee** outline the evolution of a three stepped and innovative program designed to introduce authentic workplace learning to small-to-medium enterprises (SMEs), an area that has traditionally enjoyed little recognised training. The program rollout began with a small Learning for Performance (LFP) project that explored the possibilities of linking a CET provider (the IAL) with enterprises to develop workplace learning possibilities. IAL trained and appointed workplace learning facilitators (WoLFs) to a small sample of organisations and experienced encouraging success. Next, the It's All About Bottomline (IAAB) project extended the work of the LFP The key objective of IAAB, using WoLFs and key enterprise personnel, was to design and implement workplace learning solutions for enterprises, particularly those related to the effective distribution of shared and jointly created knowledge. Following measured success of the program and encouraged by a national SkillsFuture initiative (2014) that promoted the development of contextualised and just-in-time capabilities in the workplace, the LFP and IAAB led to the Learning@Work Boot Camp initiative. This current initiative seeks out partner enterprises to encourage the harnessing of workplace learning as a strategic lever to enhance business outcomes and provide a workplace learning certification program that develops workplace learning facilitation capabilities among enterprise-based learning and development practitioners. The initiative is considered a blueprint for a future of Singaporean workplaces that makes "work the learning and learning the work."

CONCLUSION

The chapter has provided an introduction to workplace learning within a Singaporean, and perhaps, Asian context. Though we suggest that the outcomes of the theoretical perspectives and workplace learning evidence presented may resonate within similar circumstances in the wider global arena, we caution that the specificities of Singapore's national politics, underpinned by its "survival narrative", may lead to different interpretations and trajectories

within other countries and learning sites. Our problematising of workplace learning within a socio-cultural perspective, too, must be considered through this localised perspective or discursive lens. It is within this spirit of theoretical and evidential diversity that we present the following chapters.

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2 - DEVELOPING THE CREATIVE POTENTIAL OF THE WORKFORCE: RETHINKING THE PART THAT WORK-BASED LEARNING CAN PLAY

Karen Evans
UCL Institute of Education
United Kingdom

Policy and practice in workforce development in Asia can be said to have reached a crossroads. National competence frameworks have played an important part in standardising provision and making access to certification available across the workforce, which is why they have been taken up in so many societies globally. But a point is inevitably reached at which standardising tendencies begin to act as a brake on innovation and creative potential. The limits of competence frameworks are now as widely acknowledged as their benefits, with attention increasingly turning, at a global level, towards a better understanding of the processes of learning that take place in, for and through the workplaces of real life. The long term aim of developing the creative potential of the whole workforce was signalled in the 2010 Budget Speech, with the Prime Minister's announcement that 'third level of productivity improvement comes from raising the skills and creative potential of every worker. We will progressively build up a first-class system for Continuing Education and Training (CET) over the next decade' (Shanmugaratnam, 2010, p.11).

The search for ways to achieve these aims requires rethinking and expansion of the contribution of work-based learning, beyond current conceptions.

This discussion focuses on the two fundamental human processes of working and learning and how their complex interrelationships are mediated by context. I have shown, in Evans et al (2011) how the process of defining and scoping the overlapping fields of "work-based learning" and "workplace

learning" brings tensions into view. These tensions are apparent in the Singaporean context, given the under-appreciation of the learning that is embedded in work activity and the social relations of the workplace (see Bound; Billett in this issue); the present intentions to change classroom-based programme delivery for workforce skills into work-based modes and the need to keep the potential interplay between classroom-based and workplace-based learning in view in moving these issues forward. I propose therefore to draw on expanded conceptions of work-based learning (WBL), to develop linkages between workplace-based learning perspectives and those that equate work-based learning with a particular class of work-focused, provider-led programmes. In this approach, I define WBL as:

- LEARNING AT WORK, FOR WORK AND THROUGH WORK

- ….THAT EXPANDS HUMAN CAPACITIES THROUGH PURPOSEFUL ACTIVITY

- ….WHERE THE PURPOSES DERIVE FROM THE CONTEXTS OF EMPLOYMENT

Theories and perspectives cluster in ways that are of particular significance to an inclusive understanding of how context mediates learning in, for and through the workplace. An exploration of these processes, I argue, leads to an appreciation of the diversity of purposes that derive from the contexts of employment; an expanded understanding of the scope and nature of work-based learning, and insights into ways in which knowledge is recontextualised as people and practices move and change in work, education and community settings. Finally, I argue for a social-ecological approach that allows the relationships between work and learning to be explored through the dynamics of different scales of activity: societal, organisational and personal.

WORKING TO LEARN AND LEARNING TO WORK – COMPETING PERSPECTIVES

Competing versions of work-based and workplace learning need deeper exploration if the field is to become more strongly positioned as well as better defined. For example, there is a marked divergence between the provider-led

conceptions of WBL and the concepts associated with 'workplace learning'. Workplace perspectives emphasise the social, cultural and political dynamics of workplaces and bring into focus the work practices that other lenses often miss, but they can produce 'tunnel visions' of a different kind.

Perspectives that are workplace-oriented distance themselves from versions of work-based learning that are conceived as provider-led workforce development programs since such conceptions often disconnect the use of work as a resource for learning from the political realities and social relations of the workplace as experienced by employees. The forms of competency-based training currently in use in Singapore are also challenged as overlooking the complex, contextualised interdependencies of the work competences they seek to accredit, and for their assumptions about 'transfer' of outcomes of learning, from the classroom to the work context (Bound, this volume; Willmott & Karmel, 2011).

The use of socio-cultural lenses does reveal how learning at work is embedded in production processes and social relations. But situated analyses of work and learning often fail to make connections between the organised and planned (often termed 'formal') types of programs that incorporate elements of work-based learning and the workplace learning that is embedded in 'everyday work'; between the workplace and wider life–work relationships and the careers of workers as they move in and between communities of social practice. When the analytic lenses of the social organisation of learning focus exclusively on the workplace, the learning individual is either out of focus or beyond the range of view.

Can approaches which use theoretical concepts for analysing the constitution of practice connect with those that focus on the challenges, problems and opportunities that arise for people in their places of work? How can better understandings of the mediating effects of the frameworks that govern the employer-employee relationships feed into these analyses? Both of these questions are significant for the analysis of the Singaporean context, where mediating factors are likely to include cultural expectations (such as the strong striving for educational achievement and 'filial piety') and differential entitlements at different levels of the workforce as well as between residents and non-residents. Answering these questions and setting a research agenda requires a dialogic approach, drawing on several theoretical domains.

MAPPING THE THEORETICAL DOMAINS: CONNECTION AND OVERLAP

Mapping the ways in which three significant theoretical domains intersect potentially offers a framework for exploring how context mediates learning in, for and through the workplace.

Figure 1. Examples of intersecting theoretical domains

Domain 1, focusing on the development of expertise and individual competence, is rooted in theoretical perspectives on behaviour and cognition. While approaches range from those that equate behaviour with performance, to those that emphasise underlying generative capabilities (Norris, 1991), robust lines of research inquiry pay attention to sources of variation in processes and contexts. Eraut (2007) explains how different types of cognition are linked to the social situation and how particular work contexts and their social relations trigger information processing and problem solving. While Eraut's models derive mainly from studies of professionals and graduate employees in fields such as accountancy, engineering and nursing, his analyses of the interplay between confidence, challenge and support — "if there is neither a challenge nor sufficient support to encourage a person to seek out or respond to a challenge, then confidence declines and with it the motivation to learn" (Eraut, 2004, p.269) — have salience for workers of all skills levels.

Domain 2, focusing on power relations, raises fundamental questions about the politics of learning and work that shape policy discourses and pervade the contemporary workplace. Here, significant lines of research inquiry are rooted in versions of critical theory. They show how realities of the employment relationship are manifested in the intensification of work; differential access to informal learning opportunities and career progression; 'learning poor' as opposed to 'learning rich' environments; power relations between managers and workers and the extent to which employee 'voice' is heard or unheard. Edwards (2003) pays attention to the conflict inherent in the wage relationship, revealing the contradictions that occur because managements have to pursue the conflicting objectives of control and releasing creativity. The industrial relations aspects of workplace learning are explored by Sawchuk (2001), Rainbird, Fuller, and Munro (2004), and Forrester (2005) who focus on the impact of employee representation and collective bargaining processes on the quality of work-life, support for learning, paid education leave and the systematic linkages between continuing education and the workplace.

Domain 3, focusing on practice and micro-interaction in workplace activities, provides detailed insights into naturally occurring processes — what actually happens in everyday workplace interactions — and how social practices both reflect and shape culture and work organisation. Leading theoretical perspectives are offered by Lave (1991) and by Luff et al (2000). The latter, for example, undertake micro-interaction studies that are rooted in the theoretical traditions of socio-linguistics and semiotics, using forms of discourse and conversation analysis that shed light on the ways in which practice is reproduced, renewed and innovated (see also Stubbe, 2003). Without focusing on learning per se, Luff et al bring insights into the 'situated' nature of learning that complement those yielded by Lave's social anthropological perspective.

The three domains overlap in ways that produce some key points of connection. At the *intersections between practice/mediation and expertise*, Gherardi's studies are influential in showing how the "texture" of work organisations is continuously created and recreated through the complex   interplay of historical, cultural, material, structural and normative factors. Gherardi and Nicolini (2006), whilst analysing texture, also focus on 'ways of knowing', 'knowing in practice' and the knowledge forms (procedural, declarative, implicit,

reactive) that are central to Eraut's research. At the *intersection of power relations and expertise/competence*, numerous researchers have shown how the labour market has progressively been redefined in a rationale of competences which becomes an instrument for 'cultural control' of workplace learning (Moore, 1987; Solomon, 2001). Strong lines of research rooted in this perspective are exemplified by Livingstone's explorations of social regularities in patterns of workplace participation, outcomes, learning and skills. Livingstone (2006) has argued that inadequate skills utilisation in workplaces is the issue to which public policy should be attending, a stance also confirmed by Felstead, Fuller, Jewson, and Unwin (2009), Evans and Waite (2010) and, in Singapore, by Sung (2009). At the intersection of 'situated' theories of practice and critical theories of power relations in workplace learning, Engeström and Kerosuo (2007) draw attention to the workplace dynamics of power and control through detailed, practice-focused analyses of organisational change processes. These analyses underpin the distinctive 'change laboratory' approach, differing from micro-interaction and situated cognition perspectives in their focus on boundary crossings and multiple mediations between 'subject' and 'object' within divisions of labour, community and workplace rules.

The significance of these domain intersections becomes apparent, for example, in investigating the roles of technology in the workplace with respect to learning. As a Singaporean workplace researcher has observed, the computer with which emails and messages are sent and received, in processes that might be of interest to researchers of power relations (domain 2), might be the same one used to access software or information to support the development of a particular competence (domain 1). The ways in which these two purposes are managed, alongside the many others present in the workplace, would perhaps be of interest to researchers from domain 3.[1] These intersections thus not only enable us to see what each domain can contribute as part of a dialogic approach; they also provide new points of entry for researchers and developers.

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[1] This observation was made by Richard Sandford, Research Fellow at the Institute for Adult Learning (IAL) Research Division, Singapore, Centre for Evaluation and Innovation Research.

At the intersection of all three domains, Illeris's models (2011) and the perspectives developed by Evans et al. (2006) and Evans, Waite and Kersh (2011) show how learning at work is enmeshed in the dynamics of technical-organisational, social-cultural and individual factors. Illeris's model starts with the learning individual, revealing organisational and societal tensions and also spaces for action. By contrast, Evans et al. start with the workplace as a site in which production of goods and services is the driving purpose, not learning per se. We show how research struggles to pay due heed to all of these scales of activity. Much of the work on the socio-cultural factors involved in communities of practice focuses on the immediate work setting or group, and is not situated in an understanding of the dynamics of wider institutional and regulatory context. Evans et al. by contrast, focus on the interdependencies of activities and actors and how these interdependencies are mediated by the employment relationship, work environments and the dispositions of the workers themselves.

DIMENSIONS OF VARIATION IN THE CONTEXTS OF EMPLOYMENT

Learning has to be understood as integral to work practices, yet it is fundamentally affected by employee entitlements, employer obligations and regulatory frameworks. These vary significantly within and between societies. In Singapore, centralised coordination plays a strong role within the framework of the advanced developmental state and employers are obliged to contribute to training levies designed to create incentives to upgrade skills levels of jobs and resident workers. Central co-ordination is 'flexed' to respond to the cultural and ethnic diversity of Singapore. Employer interests, for example, are represented through institutional structures in which Chinese, Malay and Indian businesses represented through separate Chambers of Commerce. Within organisations, the work environment affects how far learning opportunities such as off-the-job instruction can be a positive trigger for learning in the work role and work team and vice versa. The resources the work environment can offer vary between micro-businesses, SMEs and large companies, and according to the organisation of work. These considerations are significant for Singaporean workforce development. Competence assessments meet one need by providing the recognition that workers and employers seek, but in mechanistic forms, these frameworks, implemented through classroom-based delivery, can have perverse consequences. Workers may be unable to put their

competences to work in "real-life" work contexts and the competences, drawn up centrally and 'rolled out', become easily disconnected from what employers regard as up-to-date or 'state of the art' for their sector. Both of these problems were identified by trainers in informal consultations in large Singaporean companies[2]. In Singapore the low-status associations of these forms of competence development also threaten to reinforce the existing divisions between higher knowledge development and training for the 'rank and file'. Moreover, short-term timeframes and narrow views of learning, dominated by measurable changes in performance, are unlikely to do much to enhance learning environments and can stifle innovation (Rainbird et al., 2004). The drive to promote continuing education and training for professionals, managers and executives (PMEs) in Singapore brings these issues to centre stage, as professionals seek opportunities for immersion in rich learning environments and the development of expertise through the iterative exploration of theory and practice (Oates, 2004, p.61). Can a rethought concept of work-based learning reach beyond the preoccupations of education and training professionals who use 'programmes' and 'standards' to embrace the dynamics of learning in contemporary workplaces? To what extent can an integrative approach to work-based learning forge new connections between Pre-employment Training (PET) and CET and incorporate PMEs within an inclusive framework of CET provision?

"PREPARING WORKERS FOR THE FUTURE": TOWARDS AN INCLUSIVE APPROACH

Work-based learning is 'for' people in work, at all levels of the workforce and at different life and career stages. A lifelong learning perspective in Singapore emphasises 'adding value to the careers of Singaporeans' (Workforce Development Agency [WDA], 2010, p.6). According to whether the worker is a 'learner' preparing for work, a new entrant to work, an older worker or an experienced worker developing supervisory or managerial responsibilities, learning takes place very differently depending on the specific context, on the status and role of the practitioners and their prior

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[2] Undertaken as part of a programme of company visits organised through IAL, Singapore.

work and learning experience. Different types of employee-learners require different arrangements in the workplace and in the educational support provided beyond the workplace, to maximise learning. Work-based learning may start with shop floor activities that focus on 'health and safety' perhaps; or overcoming a technical problem, using subject-based, procedural, and personal forms of knowledge and working collaboratively.

The impetus for learning may come from Trades Union membership or membership of professional bodies or from sectoral developments. For example, each employment sector in Singapore has its own history of policy and qualification development, its own culture of skills, practice recognition and improvement, all of which mediate learning in, for and through the workplace. It may be that workplace learning is the only option because the rate of change is so rapid and the number requiring training is so small that it is not feasible to use traditional classroom approaches to training and development (Malone, 2005, p.69) Specific work-based learning activities such as projects, cases or problems can take their impetus from the job, the wider environment of work or the knowledge-base. In the Singapore post-training element of CET programmes, these learning activities often start with a work challenge or problem that has to be solved. Alternatively, they might be triggered by the need to share knowledge and experience with others as part of participatory management strategies. As Billett (this volume) observes, the simple step of involving older workers in focused workplace discussions is a work-based learning development that many more Singapore workplaces could implement without significant cost or upheaval. Finding ways of responding to unforeseen occurrences or new circumstances often engages groups and teams in in-company or intra-organisational work-based learning, while professional networks often respond to challenges by forms of co-operation that operate far beyond organisational boundaries.

In these ways, work-based learning can take place individually and collectively in the workplace and beyond. Expanded work-based learning derives its purposes from the highly differentiated contexts of employment that people experience. These contexts include self-employment, contract-based employment and indeed unpaid employment in voluntary or community work. The purposes of an expanded work-based learning extend beyond the development of competence for performance to occupational standards,

to embrace enculturation; innovation and renewal; the development of wider capabilities in preparation for future roles; vocational and professional identity development, and the pursuit of ethics, equity and social justice.

Each of these purposes, which are all represented in Singapore's CET Masterplan (WDA 2010, updated 2014), can be understood from the perspectives of employee and professional body interests as well as those of the employer, and from the perspective of national employment needs and the wider society.

KNOWLEDGE RECONTEXTUALISATION IN WORK-BASED LEARNING

Although all of the above purposes are implied or explicit in Singaporean workforce development strategies, programmes have focused most heavily on competence development, using mainly classroom-based delivery of competence packages. I have already argued that this approach to competence development will become increasingly problematic as PMEs developments are pursued, as experiences elsewhere have shown. As competence-based approaches extend to the higher levels of qualifications frameworks (as they have in the UK), the conceptions of learning processes and outcomes are progressively broadened and connected to wider educational content, through accompanying 'knowledge-based' qualifications; development of personal learning and critical thinking and well as problem-based learning.

The Singaporean framework for certificating competence is now established. WDA plans[3] to the limitations that the dominant class-room delivery mode has exposed. To avoid throwing the baby out with the bathwater, one way forward is to develop broader conceptions of work-based learning that envisage a creative interplay between classroom-based and workplace-based activities. How could employers, employee representatives and professional bodies become more directly involved in developing an expanded framework whose aims would be to enhance processes and outcomes for all and create the spaces for creative potential to be realised?

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[3] Skills Future strategic plan, WDA 2014

A first step involves greater recognition of what workplace-based learning involves, beyond current conceptions of 'on-the-job training (OJT)'. Further to the broad purposes discussed above, there are at least six types of workplace-based learning that arise naturally as people work collaboratively on tasks: seeking out and observing those who are 'knowledgeable' about the task or activity; peer support; focused workplace discussions; practising without supervision, searching out new information, ideas and solutions; mentoring and coaching (Taylor & Evans, 2009). Learning that results from combinations of activities such as observation and focused workplace discussion depends on worker motivation, workplace relationships and the affordances of the wider environment. This interplay can offer rich learning engagements, for example where 'doors are opened' to opportunities to expand and share knowledge and skills in supportive workgroups. Conversely, unintended negative influences on learning may occur, for example where the interdependencies of the workplace are undermined by lack of trust (Billett, 2006). International case comparison (Taylor & Evans, 2009) has shown the importance of interplay between workplace-based learning and classroom-based instruction. Triggers for further learning may arise from a company ethos of quality performance or safety; or from participatory management and collaborative working to solve specific problems. Workplace learning is often stimulated by a need for challenge or variety in the everyday work routine while participating in the more formal workplace programmes, courses and workshops can ignite the desire to do things differently back on the shop floor. Creative potential is developed, where the wider context is supportive. These findings elucidate what is already known in the practices of high performance companies whose workforce development programmes aim beyond the competences workers need to adapt to immediate workplace needs; they are explicitly designed to develop knowledgeable employees with a global appreciation of the company (Fowkes, 2012).

Processes of knowledge recontextualisation lie at the heart of work-based learning, as knowledge is put to work in different environments (Evans et al 2010, 2011). Developing a productive interplay between classroom-based and workplace-based learning focuses attention on how people put knowledge to work, combining and using different forms of knowledge (propositional, personal, procedural) as they move between sites of learning and practice.

Learners' motivations are not limited to their immediate job, and often relate to environments and resources beyond work. Employees on workplace literacy courses, for example, frequently identify 'curiosity'; desire to make up for missed earlier educational opportunities; wanting specific help to widen career aims; desire to help children with school work; self-improvement and personal development, as motivations for participation (Evans & Waite, 2009). As a Singapore adult learning specialist has observed, the principle of knowledge recontextualisation as people move between different spatial contexts can lead in interesting directions:

> Consider someone who is moving into a new managerial position, having never previously managed colleagues, while also taking on coaching duties at their child's weekend sports practice: as they learn what is necessary to do each role effectively, their experiences in each will inform the other, and it is possible to imagine this person taking on a new identity as "responsible and in-charge" that draws equally on experiences in each context.[4]

While many forms of work-based learning, in my expanded definition, have their starting points in the workplaces of everyday life, intellectual and experiential resources from outside the workplace can be drawn on to deepen and expand workers' development as knowledgeable practitioners.

TOWARDS A SOCIAL ECOLOGICAL APPROACH

Three scales of activity have been identified as significant in mediating learning in and through work: the socio-political and organisational scale (including the regulatory frameworks that govern the wage relationship); the immediate workplace environment; and, at the scale of activity of the individual worker, their dispositions to learn (Evans et al, 2006). One of the pitfalls in identifying these three scales of activity is the tendency to use them as fixed levels of analysis. Instead, it is more appropriate to keep the three scales and their interdependencies in view, as one does in 'zooming in and out' in internet maps.

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[4] Comment provided anonymously by adult learning specialist, IAL Singapore.

The usefulness of the social ecology metaphor is that it provides, at the meta-theoretical level, a way of keeping in view the interrelatedness of the mediators of learning. Every contextual factor and every person contributing or influenced is part of a complex ecology, or system of social relations and relationships that sustains the system through a set of interdependencies. Wider social structures and social institutions can be fundamental in enabling or impeding effective learning in workplaces. In Singapore, the wider context includes the machinery of centralised state coordination and the social structuring of business systems as well as changes in the legal frameworks that govern employees' rights (e.g. the re-employment act relating to the rights of residents over 62 years of age[5]). A new dynamic has potentially been generated by the long-term policy aims of developing the 'creative potential of every worker', forging better connections between PET and CET. In social-ecological terms, a set of new variables and therefore new interdependencies enter the system. The development of CET for professional and managerial roles will almost certainly have to reach beyond existing competence frameworks to support the high-level creative and collaborative capacities that define professionalism. If creative potential is sought at every level of the workforce (Shanmugarantum, 2010), this policy aim of the CET Masterplan is unlikely to be served by competence frameworks and workforce practices that focus narrowly on adaptation and compliance. The policy aim implies movement beyond threshold, minimum competences towards recognition of the range of processes by which workers become knowledgeable. This recognition, in turn, focuses attention on new pedagogies and knowledge recontextualisation processes that are played out in and through workplace practices, applying as much to experienced employees recontextualising knowledge gained from prior experience as it does to new entrants recontextualising knowledge from PET programs or indeed from activities beyond work altogether.

The learning environment in the organisation can expand or restrict learning (see Fuller & Unwin 2004). For most employers, workers' learning is not a high priority. First-order decisions concern markets and competitive strategy. These in turn affect second-order strategies concerning work organisation and job design. In this context, workplace learning is likely to be a third-order strategy (Hodkinson & Rainbird, 2006). Senior managers who exert influence

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[5] See http://www.mom.gov.sg/employment-practices/employment-rights-conditions/ reemployment/ Pages/default.aspx.

over the culture of an organisation and its approach to supporting workplace learning face challenges in creating the conditions in which workers at all levels of the workforce can take advantage of learning opportunities. Entitlements to learning can be established in law; enhanced through collective bargaining, incentives and the interventions of enlightened managers, trade unionists, trainers, and co-workers. Their take-up often depends on building worker confidence through active workplace participation. A social-ecological view reminds us that these approaches are mediated by longstanding cultural expectations and cultural practices at work, shaped by attitudes to authority, cultural norms such as filial piety, as well as the wide range of regulatory regimes and disciplinary codes found in the business sector.

CONCLUSION

Exploring the intersections of different perspectives on work and learning can expand our understandings of how context mediates workplace learning. A social-ecological approach that brings interdependencies into view aids not only research but also policy making as wider implications, transformative possibilities and unintended consequences come into focus.

An understanding of the interdependencies inherent in work and learning requires appreciation of the distinctive social processes involved (Sung, 2006). Wider socio-political considerations of, for example, the maintenance of social cohesion within Singaporean society are also part of the social-ecological dynamic, as cultural expectations and practices in sectors and workplaces are likely to be highly differentiated and segmented.

Workforce policy development in Singapore has relied heavily on importing specific innovations from the West. But, as Luke (2011) has argued, Singapore's successes in fields such as science and mathematics education have not relied on importing innovations or policy borrowing, but on "structural iso-morphism where state, family and corporation are linked together … but not without empirical complexity, internal contestation and debate" (p.374). Competence frameworks, as imported, thrive on perceived needs for standardisation in order to provide the certification that people need and demand within the socio-political context of Singapore; yet the benefits of standardisation may begin to be outweighed by the limitations these approaches impose on what can be done and created.

There are often major disjunctions between globalised policy assumptions about large-scale competence requirements and employees' (often larger and richer) capacities to develop their existing competencies and knowledge. Disjunction is exacerbated through adoption of narrowly defined skills agendas and vague assumptions about the needs of a post-industrial, 'knowledge economy'. The adoption of minimum competence frameworks often fails to take account of individuals' capacities to use and build on their existing knowledge in all its forms and the support needed to 'put knowledge to work' in meeting actual demands of the workplace. Generating productive interplay between classroom-based and workplace-based learning can help to create the environments for employees in lower grade jobs as well as higher professional roles to expand their capabilities. Furthermore, workplace learning can support participation in employee-driven, 'bottom-up' development as workers engage with others to vary, and eventually to change, work practices, as Scandinavian experiences have shown (Høyrup, 2010). Companies that enrich job content in jobs at all levels are likely to find employees working to expand their capacities accordingly. However, those who send employees on narrow competence-based courses only to return them to a job and work environment that provides little support for further learning in and through the actual demands of work, are likely to see the benefits of their investment eroded over time. In Singapore, the new dynamic created by policies for professional and managerial occupations, the shift towards increasing workplace-based learning and intentions to forge better connections between PET and CET are likely to force a rethinking of competence frameworks. New pedagogic strategies will be needed to support the development of workers as knowledgeable practitioners at all levels of the workforce.

Ultimately whether the interplay of classroom-based and workplace-based learning can be mutually enlarging, or mutually constraining, depends crucially on the strategic interplay of workforce development policies and the wider organisational and societal terrains created for worker development. Both have to be attuned to the principle of learning for long-term transformation rather than compliant adaptation, if 'raising the creative potential of every worker' is to become more than a slogan.

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3 - THE ROLE OF WORK IDENTITY AND AGENCY IN WORKPLACE LEARNING

Anneli Eteläpelto
University of Jyväskylä
Finland

WHY IDENTITY AND AGENCY ARE RELEVANT TO WORKPLACE LEARNING

Recent trends within working life — both in the West and the East —have increased the need for workplace learning. Today's global market economy is intensely competitive, requiring companies to improve their productivity. In part, this is accomplished by promoting workforce learning and creativity with a view to develop new products and more efficient work practices. This is the case also in Singapore (Bound & Rushbrook, this volume). Global competition further implies that companies will pursue cheaper labour costs. As a consequence, even highly skilled employees may lose their jobs in countries with expensive labour costs. Employees are increasingly obliged to find a new job or to enter into the labour market as contingent workers, i.e. persons who actively construct their careers and work identities as private entrepreneurs. In a parallel development, public sector organisations dealing with education, health care, and social services now operate in regimes strongly dominated by financial considerations. They are continuously required to cut back and to improve productivity through more efficient work practices and new managerial models.

All these trends involve a need for individual employees, work communities, and work organisations to be flexible and creative if they are to survive these developments and find productive ways forward. For individual workers, this will require continuous work-related learning and the renegotiation of work identities within their workplaces (e.g. Chappell, Scheeres & Solomon, 2007). For work organisations this will mean challenges in terms of continuously reshaping work practices, introducing creative and collaborative ways of

acting, crossing traditional professional boundaries, and adopting new inter-professional ways of working. Furthermore, narrow ways of measuring productivity have produced conflicts between productivity indicators and subjects' professional commitments, ethics, and ideals – aspects that comprise the core of employees' work identities. If these ways of understanding work performance are accompanied by a higher workload and a reduced sense of meaningfulness at work (Green, 2007), it can be expected to lead to troubled identities and to create serious constraints on workplace learning.

So far, research on workplace learning has produced considerable empirical evidence on how work identities and their renegotiation are intertwined with workplace learning (Billett, Fenwick & Somerville, 2006; Billett, Harteis & Eteläpelto, 2008; Brown, Kirpal & Rauner, 2007). There have also been indications of the extent to which the renegotiation of work identities is necessary for reforms in work practices and organisations (e.g. Kira, 2013; Vähäsantanen & Eteläpelto, 2011). If work identities do not change, the anticipated gains from organisational reforms will not be realised. Moreover, employees may find themselves unable to adopt new practices or to act in creative ways, due to the difficulty or impossibility of changing work identities. It is thus widely agreed that work identities and their renegotiation are necessary elements in workplace learning.

Since both learning and the renegotiation of work identities are active and constructive processes, subjects and work communities need to practise active influence (exercise agency) for these processes to take place. Furthermore, such agency is needed if people are to suggest new and creative ways of working, or to exert influence on work practices. The constant changes that take place in work organisations make it all the more necessary to exercise professional agency. All in all, it seems that agency in general, and professional agency in particular, is needed for workplace learning, renegotiation of work identities, and the transformation of work practices.

This chapter elaborates workplace learning from two complementary perspectives, namely work identity and agency. Starting with the conceptualisation of identity and agency, the chapter illustrates how professional identity and agency are intertwined with workplace learning at the individual and social levels.

The focus on a relationship between workplace learning, work identities, and agency is bound up with the view that workplace learning is not to be seen solely as a matter of acquiring knowledge and professional competencies, or updating skills (see Bound & Rushbrook, this volume; Eteläpelto, Vähäsantanen, Hökkä, & Paloniemi, 2013). We see workplace learning as a dual process in which identity is negotiated and work practices are developed, with both aspects taking place as embedded in the socio-cultural and material conditions of the workplace. Taking these notions of workplace learning as a starting point, we suggest that work practices should be developed in such a way that they promote learning at multiple levels, encompassing the work organisation, the work community, and individual employees.

In the following sections, we seek to clarify the concept of work identity and to specify how we understand its relationship with the socio-cultural and material conditions of the workplace.

WORK IDENTITY IN THE WORKPLACE CONTEXT

Work identity has been generally understood as the individual's self-conception as a working subject. It thus encompasses the relationships between individual subjects and their work, and involves what is seen as important at work, including the subject's commitments, affiliations, ethical standards, and identifications at work (Beijaard, Meijer & Verloop, 2004; Billett, 2007; Eteläpelto et al., 2013, 2014). Slightly different meanings are connected to the concepts of occupational, vocational, professional, and work identities, although all of these refer to subjects' sense of self in relation to multiple aspects of their work.

So far, the concept of identity has also been understood differently within different theoretical frameworks. Billett (2006) has suggested a distinction between four historical traditions which have a fairly distinct understanding of identity and the related concept of self. The early humanist tradition saw the individual self as autonomous and as separated from social structures. Within this framework, learning was seen as the free and spontaneous expression of the self and of

self-actualisation (e.g. Rogers). In contrast with this, the role of the social, material, and cultural context for individual identity was seen quite differently within a second approach representing structuralist theories (as seen in Marxist theory and in the early writings of Foucault). These theories placed an emphasis on material conditions and social structures, with identities being seen as subjugated to these structures. Individuals were thus seen as "placeholders" within the social and material structures in question. The third tradition represents a (late) modernity conception of an enterprising self. The self is seen as the property of reflective, entrepreneurial individuals – persons who maintain their identity and sense of self within structures, but who are nevertheless able to transform these structures. The fourth conception of identity has been put forward within the post-structural tradition. The post-structural self is seen as individually selective and as negotiating actively and relationally within social conditions. Thus the post-structural self is seen as practising agency through avoiding strong social suggestions, while creating a social position which is consistent with individual subjectivity and identity (Billett, 2006). The post-structural conception thus suggests that individuals practise fairly strong agency in renegotiating their identities, and in influencing social practices.

In recent discussion of work identity, the ingredients of all four historical layers have been present. However, different emphases may be placed on the roles of contexts and agency, and thus on how strongly social and material conditions are seen as determining the nature of individual identities, and of employees' sense of self. In our understanding of work identities, we have adopted the basic foundations of the socio-cultural approach, emphasising the important role played by social and material conditions and by the workplace context. However, consistent with notions of the post-structural and enterprising self, we hold that individuals are not mere placeholders within structures. We argue that in fact, they always practise some degree of agency in negotiating their identity positions, and further, in transforming the practices of their work communities (Eteläpelto et al., 2013, 2014). Furthermore, we assume that although human actions have a social genesis, they also emerge from subjects' personal histories (see also Bound & Rushbrook, this volume). Thus, out of different kinds of individual engagements, individuals learn different things. Human action and learning are, in this way, linked ontogenetically to individuals'

subjectivities and identities. In terms of the study of human learning in social practices, including those of the workplace, this implies a need to consider subjects' sense of their self in terms of their interests, goals, commitments, and ethical standards – all this in addition to the goals and continuities of social practice, including the possibility of an active role in its remaking.

Informed by these notions, we understand work identity to be constituted by subjects' conceptions of themselves as professional actors – conceptions based on the subject's individual life-history and work experiences. Work identity includes subjects' work-related commitments, ideals, interests, beliefs and values, ethical standards, and moral obligations. It also includes future prospects: individuals have goals, aspirations, and notions of the kind of employees they desire to become. Work identities are negotiated interdependently within the local socio-cultural and material context of the workplace (Beijaard et al., 2004; Eteläpelto, Vähäsantanen, & Hökkä, 2015).

Empirical studies based on ethnographic observations (e.g. Paloniemi & Collin, 2010) have shown that in work identity negotiations, socio-cultural and material conditions provide necessary resources, but can also act as constraints – or even insuperable obstacles – that impede workplace learning, work identity renegotiation, or the development of work practices. If we are seeking to find pedagogical tools or practical solutions that will contribute to workplace learning and work identity renegotiation in authentic work contexts, we need to understand the main resources and obstacles affecting these. For example, in a hospital operating room, located in a hierarchically organised hospital context, workplace learning and identity negotiations will be greatly influenced by material conditions, technical tools, inter-professional relations, and official power relations between nurses and surgeons (e.g. Collin, Paloniemi & Mecklin, 2010). In contrast, the work identities of teachers are strongly influenced by their personal beliefs and commitments, and by their individual orientations, competencies, and work histories (Hökkä & Eteläpelto, 2014; Vähäsantanen & Eteläpelto, 2011). In any case, it is widely agreed that professional identities are negotiated at the intersection of the individual and the social. The following sub-sections will consider how work identities are constructed and negotiated, and how they are connected with the contextual constraints and resources of work organizations.

WORK IDENTITIES ARE NEGOTIATED AT THE INTERSECTION OF THE INDIVIDUAL AND THE SOCIAL

Although individual aspects have been increasingly emphasised with regard to work identity negotiations, it should be noted that there are differences between historically formed local contexts, especially between eastern and western cultures (see Bound & Rushbrook, this volume), as well as between occupational fields in terms of the social determination of work identities. In a comprehensive study over five occupational fields covering seven European countries, Kirpal, Brown and Dif (2007) showed that there were significant differences between different countries, but also between occupational fields in the social determination of professional identities. For example, in the metal industry and in health care, professional identities were found to exhibit fairly strong social determination. By contrast, in other fields such as information technology and the travel industry, there has been less social determination, and traditional occupational identities have tended to be decomposed. This implies that the findings on the nature of professional identity construction and renegotiation cannot easily be generalised from one culture and occupational field to another.

The complexity of identity negotiations and their individual nature is further evidenced by findings on individual differences in professional identities within the same profession and the same social context. Indeed, there is considerable empirical evidence indicating that subjects' professional identities can be quite different within the same work context. Vähäsantanen, Hökkä, Eteläpelto, Rasku-Puttonen, and Littleton (2008) found four types of teacher identity among Finnish vocational teachers and Finnish teacher educators (with each group working in the same organisation). The authors made a distinction between teacher identities representing (i) an educational orientation, (ii) a subject-matter orientation, (iii) a network orientation, and (iv) a research and development orientation. This illustrates how the nature of teachers' professional identities can vary among individual teachers, rather than being similar among all teachers within the same organisation. From this, it would appear that social settings, norms, structures, and cultures do not alone determine or shape how teachers see themselves as professionals. It further implies that employees with different priorities tend to focus on different objects of workplace learning within their work. All in all, observations of this kind suggest that the process is, at least in part, person-dependent.

However, work identity negotiations constantly occur within the socio-cultural and material conditions of the workplaces in question. Both individual and social aspects can thus act as resources for identity negotiations, and hence, for workplace learning. Within a workplace, the construction and negotiation of a work-related identity is an on-going process, one that is influenced by the various work tasks, domain ideals, work communities, and situations that come up in people's lives as a whole. Differences in individual resources are often based on individuals' prior work experience and consequent differences in their competencies and status-positions in the work community. To sum up, the negotiation of work identity is complexly intertwined with both the workplace context and individual resources. Figure 1 illustrates the contextual and individual factors that are most important for influencing work identity negotiations, and shows how the negotiation takes place at the intersection of the individual and the social. The figure demonstrates that if we are to understand negotiation phenomena, we need to recognise that negotiations concerning work identities occur against a backdrop of a social and cultural context involving work practices, work cultures, discourses, and material conditions. The negotiations will be conducted in relation to other members of the community on the one hand, and in relation to one's individual resources on the other.
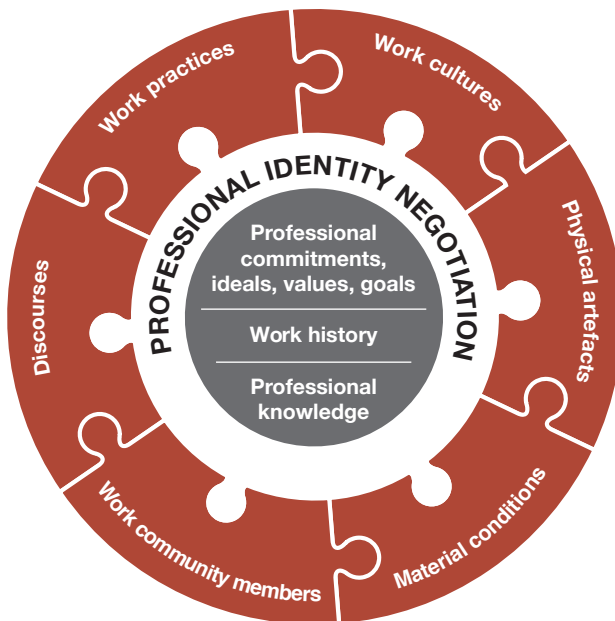
Figure 1. Contextual and individual factors influencing work identity negotiations

In discussing identity negotiations and the shaping of work practices, this chapter has already provided some hints and references concerning the importance of agency within these processes. However, to understand the functions of agency and its influences on professional learning, we need a wider conceptualisation of agency.

THE EXERCISE OF PROFESSIONAL AGENCY IS NEEDED FOR WORKPLACE LEARNING

The concept of agency has a multidisciplinary background, having its roots in the social sciences. Within educational practice, the concept of agency has long been established, even if it has not always been explicitly stated in connection with the development of educational and learning practices. Ever since the Enlightenment, the idea that education can and should help people to develop their capacities for agentic and autonomous action has formed an important tradition in Western societies (e.g. Ecclestone, 2007). In recent decades, the importance of agency has been emphasised in theories of adult learning. Paolo Freire discussed collective agency extensively, looking at it in terms of social (em)powerment through community-based improvements in human living conditions (see more Eteläpelto et al., 2013).

In theories of learning, the learner's active and agentic role in the construction of knowledge has been at the forefront of constructivist theories of learning. Individuals practise agency while they construct knowledge, and they use metacognitive and reflective processes that operate via self-control and self-management in their learning and problem-solving. In recent socio-cultural theories of learning and development, learning has further been seen not merely as the individual's active construction and generation of knowledge, but also as social participation involving the construction of identities in socio-culturally determined knowledge communities (Lave & Wenger, 1991; Sfard, 1998). Over the last decade, the concept of agency has gained even more currency in the education and learning sciences (Billett, 2008; Ecclestone, 2007; Edwards, 2005; Toom, Pietarinen, & Pyhältö, 2015), and especially within discussions on workplace learning (Billett, 2006; Fenwick, 2006; Harteis & Goller, 2014; Paloniemi & Collin, 2012; Vähäsantanen & Eteläpelto, 2011). Recently, within discussions of adult and life-long learning,

individual agency has received increasing emphasis, with learning seen as taking place through work (Biesta & Tedder, 2007; Billett, 2006; Evans, 2007; Harteis & Goller, 2014; Paloniemi & Collin, 2010; Tynjälä, 2008).

Agency in general, and professional agency in particular, has very positive connotations for innovation and creativity (Sawyer, 2007), and further for motivation, well-being, and even happiness. Agency is also seen as connected to subjects' autonomy and self-fulfilment, acting as a force for change and for resistance to structural power (Fenwick & Somerville, 2006). Indeed, in its most active and positive forms, manifestations of professional agency can be seen as subjects' creative initiatives for developing existing work practices (Littleton, Taylor, & Eteläpelto, 2012; Paloniemi & Collin, 2012; Sawyer, 2012). However, professional agency can also manifest itself in apparently less progressive and positive ways, such as taking a critical stance, or entering into a struggle against reforms suggested from outside (Fenwick & Somerville, 2006). Furthermore, professional agency can manifest itself as individual-level action or else as practised within and emerging from a collective enterprise; hence it can involve participation and collaboration within the work community (Collin et al., 2010; Paloniemi & Collin, 2012; Eteläpelto & Lahti, 2008) or within the entire work organisation (Eteläpelto, Vähäsantanen, & Hökkä, 2015; Sawyer, 2007).

Within workplaces, people need professional agency in the construction of their work identities and in the development of their work practices. We understand professional agency as being exercised in particular when professional subjects and/or communities exert influence, make choices, and take stances on their work and/or professional identities (Eteläpelto et al., 2013). Such an understanding is consonant with the theorising of agency within post-structural and socio-cultural traditions, and more specifically within approaches that do not neglect subjects' individual identities. Furthermore, individual identities can be seen as analytically separate, but mutually constitutive and closely interdependent with the socio-cultural and material context of the workplace. Agency can be manifested, for example, as suggestions for new or more productive work practices, inter-professional work strategies, or the reshaping of one's own work roles and identities (see more Eteläpelto et al., 2013, 2014, 2015) (Figure 2).
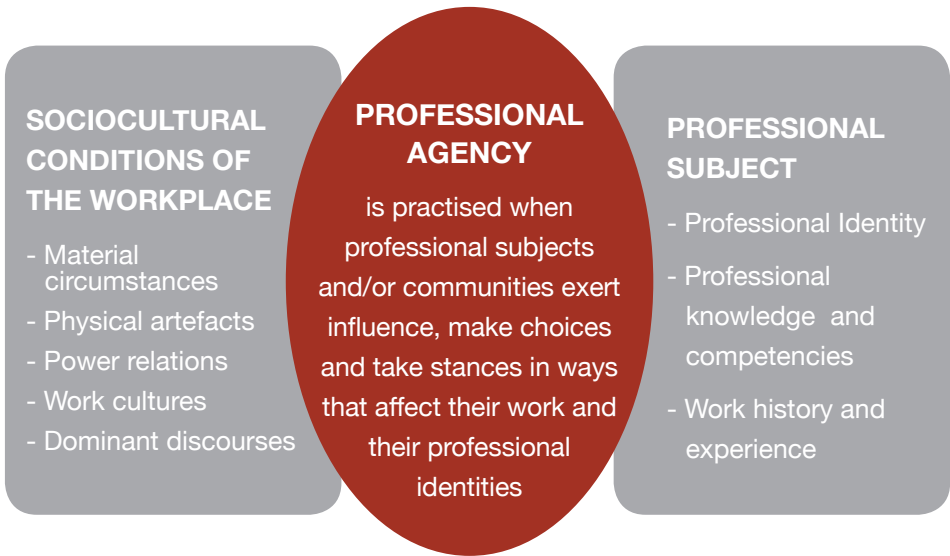
Figure 2. An understanding of professional agency as related to sociocultural conditions and the professional subject

THE EXERCISE OF PROFESSIONAL AGENCY AMID CHANGING WORK PRACTICES

Workplace learning often takes place in the context of a developing and reforming work practices. Hence, we need to ask what kind of agency is exercised in connection with such changes which often include boundary-crossing across organisational and professional boundaries (van der Heijden, Geldens, Beijaard, & Popeijus, 2015). In a study of vocational teachers who were obliged to cross traditional professional boundaries, moving beyond the schooling organisation to outside workplaces, Vähäsantanen, Saarinen and Eteläpelto (2009) found that the teachers demonstrated agency in a variety of strategies of working and acting. Five different forms of agency were identified: (i) restricted agency, (ii) extensive agency, (iii) multifaceted balancing agency, (iv) situationally diverse agency, and (v) relationally emergent agency. The teachers' activities varied from actively working, questioning other professionals' traditional ways of working, and initiating suggestions for the improvement of work practices, to being passive and uncritical actors in collaboration with other professionals. All this shows that the exercise of agency can vary over time and situations, and that agency can be exercised more vigorously by some individuals than others (see also Biesta, Priestley &

Robinson, 2015). The variation in the exercise of agency appeared to be linked especially to the teachers' work identities, to their professional competencies, and to their relations with other professionals. Another study on novice teachers' practice of agency in the Finnish schooling contexts (Eteläpelto et al., 2015) demonstrated that novice teachers had a strong sense of agency in pedagogical and didactical domain. Instead, their professional agency was very weak in the social management of the classroom.

In the studies referred to above, the practice of agency was addressed mostly at the individual level. However, work-related agency is a multilevel phenomenon manifested also at the collective level. In the domain of education, Hökkä (2012) showed that strong individual agency created powerful obstacles to collaboration and boundary-crossing between groups, and thus to organisational learning. Strong individual agency can thus be used to protect individual ways of working, but this in turn hinders collaboration between individual employees and professional communities, and can thus impede organisational development. Hökkä and Eteläpelto (2014) conclude that to enhance both individual workplace learning and organisational learning, a new kind of agency – more collective in nature – will be needed. As a practical conclusion, this implies that if we wish to increase workplace learning through promoting agency, agency should be promoted at multiple levels, i.e. at the level of individual identity construction, but also at the levels of the work organisation and the work community. Many studies have emphasised the importance of individual-level agency in working life, and especially in reform contexts. However, there is insufficient understanding of the kind of intervention programs that would function at multiple levels of local practices (e.g. Hökkä & Vähäsantanen, 2014; Kalliola & Mahlakaarto, 2011).

CONCLUSIONS ON WORK IDENTITY AND AGENCY IN WORKPLACE LEARNING

This chapter has presented some of the ways in which the negotiation of work identities and the practice of professional agency are of importance for workplace learning. Nevertheless, we are currently only beginning to understand the multiple functions of these phenomena for workplace learning. Although we now have some empirical evidence for how work

identities and agency are related to workplace learning, much remains to be discovered. In particular we lack developmental studies on practice-based interventions (operating at multiple levels) which would focus on the role of work identity and the exercise of agency in workplace learning. In addition, we need a more elaborated understanding on the role of emotions in workplace learning.

Since the negotiation of work identities is closely intertwined with the socio-cultural and material conditions of the workplace, this would imply that one should investigate work identities from the perspective of how they are constructed and negotiated within workplaces and work organisations in different cultural contexts, such as in multicultural Singaporean workplaces, what are the critical resources and constraints bound up with the socio-cultural and material conditions of the workplace, and how these influence identity negotiations and the exercise of agency. Such critical aspects may involve material circumstances, such as spaces and places for negotiation, physical artefacts (including technical tools for communication), formal and informal power relations, work cultures, hegemonic discourses, and the subject positions created by these.

So far, an analysis of the various constraints and resources has shown how, for example, certain managerial structures, hegemonic discourses, and power relations can support the practice of professional agency at individual, work community, and organisational levels. Conversely, these same contextual aspects may act as obstacles for workplace learning and for reforming work organisations.

The findings mentioned above have further implications for understanding and investigating professional agency. They suggest, in the first place, that professional agency should be analysed concurrently as both an individual and a collective phenomenon – bearing in mind here that strong individual agency does not guarantee that work practices will be transformed, or that work organisations will be developed as learning communities i.e. entities functioning within the realm of collective agency. Furthermore, there is the need to promote work agency at multiple levels, addressing also the couplings between these levels. Consistent with this conclusion, Hökkä and Vähäsantanen (2014) have put forward the notion of agency-centred coupling. In suggesting this, they emphasise that the focus in workplace

learning should be more on people, collaboration, and relationships, rather than on structures or centrally determined standards. As a consequence, the priority should be given (i) to communication, collaboration, and interaction between individual actors within different levels of the organisation and (ii) to shared meaning construction within and beyond organisational boundaries. As part of such a multilevel promotion of agency, individual professionals should also be able to influence the decisions concerning their work with regard to community and organisational issues, and to negotiate the conditions and contents of their own core work. The promotion of agency, including participation in organisational decision-making, will be important in terms of the renegotiation of work identity, and further in terms of commitment and goals at work. For these goals to be attained, professional agency must be supported at the individual and collective level. All in all, we would argue that to enhance workplace learning, it will be necessary to support agentic learning practices both at the individual and the collective level.

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4 - POSITIONING PERSONAL MEDIATION AS BEING CENTRAL TO WORKPLACE LEARNING

Stephen Billett
Griffith University
Australia

MEDIATION AND LEARNING IN THE CIRCUMSTANCES OF WORK

This chapter proposes that considerations of learning in the workplace need to go beyond accounting for the kind of activities provided by and engaged with in those settings. Certainly, the kinds of activities and interactions individuals are permitted to engage in are important, and those associated with the development of rich learning (i.e. deeper understanding, strategic procedures and nuanced professional values), need to be made broadly available and accessible. These experiences can be promoted through the organisation of work premised upon a "learning curriculum" (Billett, 2011b) and the use of pedagogies (i.e. means of supporting learning) that can be enacted through work activities. Such contributions to Singaporean workers' learning through work are important and essential elements of an effective system to support workers' learning across lengthening working lives, and as work requirements constantly change. However, more than these affordances, it is important to consider and promote how workers personally mediate what they experience and through this, how and what they learn in and through their work. That is, how they come to construe and construct knowledge from what they experience in work settings, as premised upon what they already know, can do and value. The consonance between what is known and what needs to be known, learner readiness, and their intentionality are also essential components of rich learning. *No amount of affordances in the form of workplace activities and interactions can secure rich learning outcomes unless individuals engage effortfully and intentionally with those experiences.* Beyond providing activities and interactions through

which individuals are expected to learn, opportunities for finding ways of aligning individuals' intentionalities and goals with what needs to be learnt, and supporting their efforts to sustain their employability are essential. For workplaces to be effective learning environments, it is necessary to find ways of affording opportunities for learning for all employees, and to also promote the ways in which workers mediate how they work and learn.

The contributions that individuals make to their learning and development in and through their work activities are often either overlooked or downplayed in accounts of learning in workplaces, and the policy and practice considerations of that learning. As with schooling, most attention is given to what is provided or afforded by workplaces in terms of work activities and interactions with others, and particularly, more experienced co-workers. Whilst these contributions are important, ultimately it is how what is afforded is engaged with by workers that shape how and what is learnt.

This chapter elaborates the role individuals play in mediating their learning in workplace settings. It is proposed that individuals' mediation of the contributions of physical and social settings is central to their learning and development generally, and the circumstances of work are certainly no exception. These contributions are seen to comprise institutional facts (Searle, 1995) – what emanates from the social world's norms, forms and practices and how these are suggested and projected – shaping the kinds of activities and interactions afforded individuals within workplaces that likely have mediating effects upon what they experience and learn (Billett, 2009). Principally, the kinds of activities and interactions that individuals are permitted to engage in workplaces will be central to what they learn. Those individuals permitted to engage in non-routine activities and address novel problems, and who are granted high levels of discretion in their work, are more likely to generate higher orders of procedural knowledge, deeper understandings and nuanced values than those constrained to a work pattern of largely routine activities (Billett, 2001a). Yet, the kinds of workplace activities likely to generate rich knowledge are asymmetrically distributed with factors of age, level of education, employment status and occupation being key determinants for access (Australian Bureau of Statistics, 2013). In this way, the reach of institutional facts extends beyond what is experienced through the immediacy of workplace interactions and activities, and extends to how these opportunities are afforded individuals in workplace settings. Included here are also cultural-historical and societal factors.

In Singapore, for instance, these factors are both exemplified by, and seemingly play significant roles in individuals' processes of learning through work, how they elect to engage with what is afforded them and the degree by which they are supported and sustained in their work-related learning efforts. For instance, a study of older workers' learning indicated that both institutional arrangements and societal sentiments influenced the kinds of opportunities afforded to Singaporean workers aged over 40 (Billett, 2011a). These included the remnants of age-related pay, and views that older workers were less confident with technology than younger workers, including the scheme (i.e. the Re-employment Act) that prompts employers to assess the competence of workers on their 62nd birthday and make judgements about the continuity of their employment or redeployment. This research also found that older Singaporean workers were continuing to learn new practices and negotiate changing work circumstances effectively. Moreover, many of these workers were resentful because they believed that their full capacities were not being utilised, based on biases about age. Older workers valued their experience and expertise, but this was often not reciprocated by their employers, supervisors and managers. Hence, this experiencing of societal sentiments about age shaped how they responded to and learnt through workplace experiences. It is these kinds of institutional facts that are discussed here in terms of their potential in shaping learning through what is afforded Singaporean workers and an elaboration of how they engage with what is afforded them. Whether seeking to understand and promote the learning of older Singaporeans, young people doing their national service, workers transitioning from one occupation to another, and all the everyday learning individuals engage in, it is necessary to go beyond considering just the mediating role of institutional facts that comprise sets of societal and situational norms, practices and invitations as some seem to do (Engestrom, 1999).

Instead, there is also a need to account for how individuals mediate what they experience and how they construe that experience and then elect to construct knowledge (i.e. learn) from those experiences. Accounts of learning through work have been primarily based on affordances of the social and physical world (i.e. institutional and brute facts). Affordances, as advanced here, are the degree by which individuals are invited and supported to participate in activities in terms of what they are able to access, and engage with. Beyond that, there is a need to accommodate more fully the processes through which individuals' thinking and acting, and, therefore, learning are mediated by their

intentionalities, subjectivities as well as cognitive, sensory and neural processes. In short, a consideration of inter-psychological processes (i.e. those between the person and the social and brute world) that constitute many contemporary accounts of such learning needs to be extended, to include intra-psychological contributions. Rather than these explanations being primarily premised upon what occurs "beyond the skin", there is a need to account more fully for what occurs "under the skin", so to speak. This does not promote a return to highly cognised individualistic accounts of thinking, acting and learning as some might claim (Ratner, 2000). Instead, it embraces intra-psychological facts not only as an outcome of inter-psychological processes, but also as part of those processes of human learning, albeit in the circumstances of work.

Such considerations can advise how experiences in Singaporean workplaces might be ordered, how what is learnt might be acknowledged and recognised, and inform the educational frameworks that can most helpfully be deployed in securing the goals proposed for Singapore's Continuing Education and Training (CET) system, through permanent residents' learning in the circumstances of their work. In advancing this case, the discussion is structured in the following ways. Considerations of how institutional facts likely mediate learning experiences in Singaporean workplaces are advanced first. Next, the intra-psychological mediation comprising the processes that shape individuals' construal and construction of what is experienced are discussed. Thirdly, some considerations and implications for developing the education and training system in Singapore through workplace-based learning experiences are discussed.

INSTITUTIONAL FACTS MEDIATING WORKPLACE LEARNING: CULTURAL-HISTORICAL, SOCIETAL AND SITUATIONAL

As foreshadowed above, a range of institutional facts (i.e. those that are a product of human institutions) (Searle, 1995) shape the standing of, access to and support for learning through the circumstances of work in Singapore. These factors, although merged together and experienced as the social suggestion by individuals in the form of workplace activities and interactions, comprise norms, practices and privileging that can be identified as sets of cultural-historical, societal and situational factors. Cultural-historical factors do much to situate individuals and mediate their learning, such as the need

for and standing of specific occupations, how that need changes and is manifested in a particular workplace setting and at a particular point in time. That is, it shapes the kind of work undertaken, the kinds of problems being addressed and the kinds of solutions to those problems. For instance, a legacy of significant investment in education in Singapore over the past three decades has left a distinction between the levels of educational attainments of residents aged over and under 40. Whereas the latter are relatively well-educated with over 90% having post-school levels of educational achievement, the situation for the former is almost inverse with only 10% having more than school level levels of achievement (Ministry of Manpower, 2008). Consequently, many residents aged over 40 are perhaps most in need of continuing education and training, yet have low bases of educational achievement, and success within post-school education, often extending to levels of literacy. That is, in some ways they are less ready to engage in institutionally-based educational programs. Yet, increasingly, occupations comprising current and emerging labour market requirements in Singapore are those perceived to or requiring high levels of general and occupational specific education. Globally, in countries like Singapore with advanced industrial economies, the percentage of low skilled jobs is diminishing and technical, paraprofessional and professional forms of work are increasing (Billett, 2006).

This trend, however, plays out in particular ways for the Singaporean population. Many occupations classified as low-skill and routine are performed by non-residents. Hence, residents' employment options are increasingly becoming concentrated in occupations that require higher levels of tertiary education and, much of it, specifically focused on particular occupations. Indeed, this is a stated intent of Singapore government policy (Economic Strategies Committee, 2010) which has as its first and key major objective to enhance the skills and levels of employability of all Singaporeans. In addition, cultural sentiments such as filial piety still have some purchase in Singapore, and although these are promoted by societal sentiments, they are contested by labour market realities. Indeed, preferences for younger and highly educated young people are increasingly being exercised, despite efforts to mitigate the costs of employing older Singaporeans (e.g. reduced CPF payments, Re-employment Act) (MSRD, 2007). There are significant practical implications here for workplace learning, in terms of how access to and support for initial and ongoing learning is enacted to meet the adult population's capacities and

needs, particularly those over 45. This includes issues associated with the standing of occupations (i.e. what constitutes acceptable and worthwhile work), in which these experiences are provided and the importance of securing certification of workplace learnt knowledge and the standing of qualifications arising through anything other than prestigious educational institutions.

Institutional (i.e. societal) factors such as these also shape the opportunities for learning for work and across working life that have now become a national priority as the need grows to expand and strengthen the existing occupational base, and engage all Singaporean residents in a process of ongoing work life learning (Economic Strategies Committee, 2010). Yet these factors, on the one hand, distribute unevenly opportunities for learning and, on the other, exert significant societal press upon individuals to learn and contribute to their workplace's viability and secure national economic and social goals. The need for a longer working life and provisions such as the Re-employment process at 62 project a strong societal sentiment about the need for continuous upskilling of individuals' occupational capacities. Yet, the organisation of the post compulsory education provisions in Singapore (i.e. universities and polytechnics, the Institute of Technical Education or ITE) offer highly institutionally-based provisions and are largely concerned with initial and pre-employment educational provisions. However, some polytechnics offer a series of Diplomas whose taught components are offered at night and whose duration is only a fraction of that required for a similar award taken by school leavers who attend full-time over a two-year period. Nevertheless, there is a risk that these provisions will largely remain far from invitational for or open to adults with lower levels of educational achievement and limited ability to study in diploma level courses. It is a long step for somebody who left school at age 16, to now participate in courses offered through polytechnics or the ITE 15 or 25 years later. The demands placed upon working adults, including family responsibilities, the time to travel between home and work, and the relatively long working day in Singapore suggest that accessible provisions of learning support are required, and the institutions utilising and accommodating workplace learning experiences, including the recognition and certification of workplace learnt knowledge are certainly required.

Also, given societal emphases on educational achievement, personal and national investment in education, and concerns about the status of awarding institutions, the standing of knowledge learnt through work will likely remain lowly. In the 1970s, for probably very good reasons, Singapore rejected the apprenticeship approach to initial skill development. Elsewhere, apprenticeships provide a foundation for accepting the circumstances of work as being legitimate sites for learning. Instead, in Singapore, initial occupational preparation is largely undertaken within universities, polytechnics and the ITE. Consequently, there is not a strong tradition and acceptance of workplaces as learning environments as there are in countries which emphasise apprenticeship systems based primarily within work. Indeed, given a strong focus on academic merit and educational achievement, the status of educational institutions and those engaging in them have become a key national societal sentiment. Many institutional facts and practices are unlikely to be supportive of learning through work, such as practices perceived as being low standing, non-legitimate and not worthy of certification. Moreover, Singaporean employer sentiments and, therefore, likely the opportunities for support for learning in workplaces are premised upon a dogged persistence of privileging youth over age and, educational achievement over work experience (Billett, 2010b).

It is these institutional facts that comprise the social norms, forms and practices shaping the circumstances where Singaporean residents work, and seek to maintain their employability and sustain it through their lengthening working life. Yet, it is within these workplaces where opportunities for learning across and for working life are potentially very strong. Like those elsewhere, workplaces in Singapore are engaged constantly with new activities, products, services and goals. Yet, Singaporean workers, when asked, refer to achieving new goals and workplace outcomes as part of the everyday work activities (Billett, 2010b). The ability to engage with and successfully complete new work tasks not only indicates a requirement for ongoing learning, but overwhelmingly indicates that, firstly, the ability to achieve these outcomes is often, and perhaps mostly realisable through the ongoing learning across working life, and through the activities and interactions that comprise these workers' normal working lives (Tynjala, 2008). Secondly, it demonstrates that the kinds of capacities required to not only learn but innovate at work are evident in the workforce. Learning through work is both achieved and shaped

by activities and interactions individuals encounter and engage in as part of their working lives (Billett, 2001a; Eraut, 2004; Fuller & Unwin, 2003; Lave, 1990, 1993). Rogoff and Lave's (1984) maxim of "activity structuring cognition", is instructive here as it suggests that the kinds of goal-directed activities individuals engage in shapes that learning. The kinds of activities and interactions individuals are afforded (i.e. invited to participate in) will be central to their experiences and learning, not the least being the knowledge to which they are granted access (Billett, 2001b; Marchand, 2008). Engaging in activities that are novel to individuals likely extends what they know, can do and value. Moreover, even the everyday opportunities provided through participation in seemingly routine activities importantly assist, reinforce, refine and hone the capacities required for effective employability (Anderson, 1993; Anderson, 1982). Given the constant changes occurring in Singaporean workplaces, these everyday opportunities to practice and learn play an essential role in maintaining and developing further effective workers' capacities for sustaining that employability across their working lives. So, the kinds of goal-directed activities and interactions that comprise everyday working activities that are afforded Singaporean workers have particular cognitive legacies (i.e. learning), albeit of different kinds (Tynjala, 2008). Activities that are novel for individuals will likely be generative of new learning, whereas an activity or task already known presents an opportunity for honing and refinement of what is known or refinement of what can be done (i.e. further learning). Opportunities to engage in seemingly routine work are particularly helpful for understanding more fully and, in more nuanced ways, the kinds of goals required for performance at work, in building the conceptual links and associations central to effective performance at work, and opportunities to hone specific procedures (Anderson, 1993; Anderson, 1982; Sun, Merrill, & Peterson, 2001). It is the associations comprising effective propositions and causal links among contingent factors that constitutes depth of knowledge within a domain that is generative of effective occupational performance (Groen & Patel, 1988). These expert-like attributes are developed over time through opportunities to engage in a reasonably large number of activities and through experiencing some diversity with those activities. Hence, everyday workplace experiences mediate both new learning and provide experiences that enrich or otherwise extend what individuals know, can do and value, and these experiences can, potentially, be directed towards what is required for effective occupational practice. Consequently, whilst the pedagogic worth of new experiences are potent, the contributions to and legacies

arising from engagement in routine work activities is substantial, particularly when they afford experiences frequently enough and of diverse scope to generate rich conceptual associations and honed procedural capacities.

However, and as hinted at above, there are also limitations to learning through work (Billett, 1995, 2001a, 2010a; Eraut, 2004, 2007; Tynjala, 2008) . Many of these limitations are associated with either the kind of access that workers are afforded to engage in new activities and opportunities to rehearse through practice, or the specific qualities or outcomes of those experiences. That is, there are a set of institutional factors associated with workers gaining access to the kinds of experiences that they need to learn effectively. At the same time, there are also sets of personally found limitations such as the alignment between what they know, can do and value, and what is being suggested to them through workplace experiences. If there is a gap between their knowledge and the requirements for work and the learning of those requirements, then capacities to engage effectively are compromised. These are issues associated with individuals' readiness to learn. That is, having the understandings, capacities and dispositions make ready the person's engagement with the kinds of experiences from which they need to learn. Moreover, there are likely to be particular kinds of knowledge that are more effectively learnt outside of the circumstances of practice and within it, as well as dangers with learning that are piecemeal and ill-advised that can arise through practice. Indeed, although much conceptual knowledge is learnt through practice (thereby contesting the premise that such knowledge, i.e. theory, is only learnt in educational institutions). However, some forms of this knowledge that are opaque to such an extent, associations so new and or understandings that particular strategies are required to make them explicit. These strategies include interaction with more informed partners, either in workplaces or outside of them, are therefore required (e.g. modelling, coaching, questioning etc.).

Yet, as noted, opportunities to access this support are distributed asymmetrically (Barley & Orr, 1997; Darrah, 1996). For instance, assumptions or societal sentiments that older workers are inherently incompetent with electronic technology may restrict them from being afforded opportunities to engage in work reliant upon information technology and support to learn that work. Yet, the evidence suggests that older workers are able to engage with new technologies effectively, albeit the gap between what they know

and what they are required to learn may present particular kinds of barriers. However, this is as much about readiness to learn as it is about particular characteristics of older workers. As work and learning co-occur, workplace curriculum and pedagogic support in the kinds of activities (e.g. novel or routine), the degree by which individuals can engage in these, and the nature of workplace interactions, by whom and for what purposes, will shape much of the learning required for work. We should not be surprised by these claims. Across human history, learning through practice has and remains the central source of both individuals' learning, and the remaking and transformation of the occupations that serve nations' social and economic goals (Billett, 2010a).

Yet, for these learning experiences to be rich and effective in contemporary and changing times, requires consideration of how opportunities and invitations to learn are distributed across work forces and for what purposes. Moreover, these opportunities and invitations likely need to be situated within the enactment of work. Certainly, it seems that opportunities for engaging in educational experiences outside of workplaces are limited and restricted to some categories of workers. It is very unlikely that the vast majority of low skilled workers will be able to secure the kinds of support required from their employers to develop their workplace capacities anywhere other than in and through their everyday work activities. These are not the kind of workers who will be sent off to training programs and given extensive support, and they may not be the kind of workers whose pattern of development will readily accommodate such interventions. Hence, consideration needs to be given to those processes that have long served humans across the life course in the development of occupational capacities, as anthropological and historical accounts inform. These include what might be described now as practice curriculums and pedagogies.

Conceptions of practice (e.g. workplace) curriculums and pedagogies are premised upon the circumstances of work. The concept of a practice curriculum is aligned closely with the original meaning of the word curriculum – the path to follow along, the course to progress. That is, what are the sequence of activities individuals need to engage in to learn progressively and incrementally the kinds of capacities required for effective performance within their workplace (Billett, 2011b; Lave, 1990). The use of explicit pedagogical strategies (e.g. guided learning) and procedures (e.g. modelling, coaching, mentoring etc.) can provide

access to and mediates knowledge which may not be learnt through discovery alone (Billett, 2000). Moreover, if particular forms of knowledge are unavailable or inaccessible in the workplace (e.g. because the process is new, and nobody has expertise) or because that knowledge requires particular circumstances for it to be learnt (e.g. sophisticated simulations, making accessible highly opaque knowledge) then specific pedagogical interventions outside the circumstances of practice may be required to mediate that learning. It is these kinds of practices that could be enacted in Singaporean workplaces with relatively low resource implications and, potentially, high levels of benefits. For instance, mature age Singaporean workers have proposed that they be permitted to engage in interactions which might be described as dialogue forums in their workplaces to assist others and develop further what they know, can do and can value (Billett, 2010b), which could occur as part of everyday work. The process here is the sharing of knowledge rather than anybody being positioned as the teacher or the pupil.

However, beyond a consideration of what is afforded or affordable in workplace settings, are the bases by which individuals construe and construct such affordances, how they elect to engage with what is afforded them and the cognitive processes mediating this learning intra-psychologically or beneath the skin so to speak.

PERSONAL FACTS: PROCESSES OF CONSTRUAL AND CONSTRUCTION SHAPING INDIVIDUALS' LEARNING AND DEVELOPMENT

Learning is something that people do, not workplaces or other social institutions. In essence, learning is change in what individuals know, can do and/or value. It requires human consciousness, sensory capacities, as well as some foundation of knowledge through which to experience, and which is the subject to being changed either incrementally or transformed by what we experience. As has been discussed above, when individuals engage in goal-directed activities, different kinds of learning arise. Moreover, humans are agents of change in culture, societal practices and specific activities such as work. That is, as individuals engage in socially-derived activities, they are remaking and transforming themselves at particular times, towards particular goals and as directed towards particular objectives. These institutions are

transformed through emerging cultural requirements, historical movements such as technology or even fads and fashions, and the particular manifestation of these factors in workplace settings. Yet, both learning and the remaking of occupational practices are enacted, mediated and realised by individuals as they construe, construct and enact their everyday practices albeit through work or other kinds of socially derived activities. So, whether referring to change within an individual (i.e. learning or ontogenetic development) or the remaking and transformation of societies' norms and practices, such as in workplaces, it is individuals' construal, construction and subsequent enactment that secure these changes. Previously, these concerns have often been addressed in terms of subjectivities (Fenwick, 2002; Somerville, 2006) and intentionalities (Malle, Moses, & Baldwin, 2001), however, they are also mediated by human processes of perception and action: intra-psychological processes.

So, it is proposed that individuals mediate their learning as exercised through their intentionalities (Malle et al., 2001) as ordered by their subjectivities (Eteläpelto & Saarinen, 2006; Somerville, 2006) and interests (Boekaerts & Boscolo, 2002), as well as their cognitive capacities/processes, plus the level of energy they direct to exercise intentionality (Billett, 2009). Also, individuals' capacities and experiences (i.e. what they know, can do and value) likely also collude in shaping how what is experienced is mediated through processes that might be described as construal and construction (Valsiner, 2000). Yet, these acts of construction are premised on fundamental processes of human cognition: perception and action (Barsalou, 2008; Glenberg, 1997). Much consideration of individuals' engagement with what is afforded them within the workplace learning literature has focused on subjectivities and intentionalities (including this author's): that is how personal agency plays out against, with, and through the social suggestion (i.e. the projection of institutional facts). This emphasis is important, as it extends to active ignoring and exclusion of that social suggestion (Glenberg, Schroeder, & Robertson, 1998). Indeed, even cultural psychologists refer to the importance of ignoring and rebuffing the social suggestion (Valsiner, 1998).

Both forms of mediation are clearly essential bases for understanding learning through work. For instance, in interviews and surveys, Singaporean workers emphasised their personal responsibilities as learners. Frequently mentioned by those of Chinese heritage or by inference, was the importance of their responsibility to remaining employable (Billett, 2010b). That is, fundamentally

it was primarily their responsibility to engage in activities that would sustain the workplace competence and resist being made redundant. At one level it was a societal sentiment, yet at another, it was enacted in ways which reflected personal priorities and intentions. Yet, this manifested itself quite differently depending upon learners' circumstances. In responding to a question about what would cause Singaporean workers to leave the workforce early was a strong line of argument about how individuals were treated in the workplace, the kinds of responsibilities they had outside of work (i.e. for family) and the degree by which they were in a position to relinquish work roles. Moreover, some workers who had left the workforce elected to return in search of engagements and activities which they deem to be more worthwhile than just leisurely pursuits. "How many games of golf can I play" said one informant. Such personal sentiments, albeit culturally-shaped, are central to the kinds and quality of learning that occurs (Somerville, 2006). However, no amount of personal agency and effort in engagement can secure knowledge that is inaccessible or where underdeveloped capacities and a lack of means of accessing such knowledge exist.

The particular domains of knowledge individuals have constructed, their organisation, the richness of its associations and the honing of its skilful manifestations are central to what constitutes individuals' cognitive experience (Valsiner & van der Veer, 2000) and subsequently what they learn from and through their daily experience. Of course, not all workplace experiences are beneficial or easily aligned to the requirements of new workplace activities. Yet, the kinds of prior (i.e. pre-mediate) experiences individuals have had and the legacies of those experiences in terms of what individuals have learnt through them will also mediate their learning in the immediate circumstance of this learning (Valsiner, 2000). These kinds of attributes are referred to within cognitive accounts as being the kinds of schemata or cognitive structures individuals' possess (Neisser, 1976) and can use, which change through their application and whose qualities distinguish between experts and novices (Ericsson & Lehmann, 1996). Seemingly, the combination of domain-specific (e.g. occupational) knowledge and a repertoire of experiences generate richly contextually mediated representations that constitute and permit the effective and targeted exercise of capacities that permit effective performance at work, including, importantly, workers' ability to engage in productive encounters with new tasks and novel situations at work and across working lives.

However, beyond subjectivities and such dispositions, there is also the perceptual and processing attributes that mediate individuals' knowing and learning. Whereas much of the consideration of learning in the circumstances of work has focused on how individuals mediate what is experienced beyond the skin (i.e. extra-personally), there is also need to account for how human cognition and, therefore, learning, are mediated intra-psychologically. Advances in understanding about such intra-psychological activities are particularly helpful for explaining what workers have long reported about the efficacy of authentic experiences. Humans' cognitive processing of experiences (i.e. perceptions and action) are both multimodal and multisensory and act as simulations (Barsalou, 2009). These simulations represent and can be recalled on the bases of individuals multi-sensory experiences.

Hence, in contrast to early accounts within cognitive psychology that human processing of experience was amodal and computer-like in its function (Pollock, Chandler, & Sweller, 2002), rich sensory experiences shape how we represent experience in memory (Barsalou, 2008). Moreover, it is evident that these representations or simulations are informed and enacted upon by higher orders of cognition, founded on and informed by individuals' previous experience (Barsalou, 2008). That is, previous experience fills in the gaps and works to close uncertainties, inconsistencies and lack of viability in what is experienced. This is, of course, what constructivists have long proposed (Piaget & Inhelder, 1973). However, that such a process is informed by a multimodal and sensory representation aligns well and likely explains what workers have long reported about the efficacy of learning through practice (i.e. just doing it, observing and listening) (Billett, 2001a), and how this informs not only performance in immediate circumstances, but, subsequently, when they engage with a related kind of work activity. Indeed, this very process (i.e. generation of multimodal simulations) may well frustrate the adaption of knowledge from circumstances which project quite different sensory and multimodal inputs, to those in which what is learnt needs to be applied (e.g. the transfer of knowledge from educational to practice settings).

In sum, beyond the mediation of the circumstances of work, is the intra-psychological processes shaped by individuals' subjectivities and intentionalities and mediated by intra-psychological processes of human cognition, in person-dependent ways. So, more than considering workplaces

as settings in which to learn, it is also important to emphasise and privilege in considerations of support the facts that workers themselves individually construe and construct knowledge at work through both inter and intra-psychological processes.

IMPLICATIONS OF WORKPLACE LEARNING'S CONTRIBUTION TO THE PROVISION OF CET

The contributions of and implications for provisions of learning in the circumstance of work in Singapore here are both complex and contradictory. Workers will continue to learn through their work and in those circumstances across working lives (Billett, 2010b). As elsewhere, and across human history, this process stands as the most central and enduring way in which occupational knowledge is learnt, sustained and remade (Billett, 2010a). Yet, there is clearly much that could be done to improve the quality of learning in Singaporean workplaces. Principally, there is a need for a focus on learning, rather than teaching, and seeing workplaces as legitimate learning environments that, nevertheless, can benefit from adequate support. This support could arise from the organisation of work premised upon enactment of practice-based curriculum and practice-based pedagogies in these workplaces that can be enacted as part of everyday work activities and interactions. The former comprises, albeit in different ways, organising a pathway of activities in which novices or worker-learners progress from activities where error cost is low through to more demanding activities as their capacities increase. These pathways likely already exist in many Singaporean workplaces. However, these processes can be improved through the use of deliberate experiences that provide access to goals and purposes for the work activities as well as the collective efforts of the workplace. There are the practice-based pedagogies such as guided learning strategies (e.g. modelling, coaching, provision of practice, questioning, use of analogies etc.) (Billett, 2000) which may require the development of skills within the workplace to be effectively enacted, or the dialogue forums such workers have suggested (Billett, 2010b). Then, there are the pedagogically-rich activities that ordinarily occur (e.g. handovers, development work) in workplaces, yet require opportunities for worker-learners to engage in and learn from. These curriculum and pedagogies practices are those that can be readily enacted in Singaporean workplaces to improve the quality of learning experiences, including developing particular kinds of knowledge and overcoming the limitations of learning through practice.

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Yet, beyond these practices, there is a need for and means of acknowledging, and certifying that learning and elevating the standing of learning through work and through certification. Without these accompaniments, it is likely enterprise engagement, individuals' participation and the efficacy of learning through work will not be increased, nor enacted effortfully. Moreover, it would be extremely unhelpful, for certification and acknowledgement to be aligned with a competency-based training framework that is narrow, behaviouristic and pre-specified. This would merely entrench and reinforce the lowly standing of this kind of learning and any accreditation that arises from it, and create a greater distance between the kinds of acknowledgement and certification that is granted through the Singaporean tertiary education sector (universities, polytechnics and the ITE).

In all, there is significant potential for the ongoing occupational development required to sustain personal employability and secure economic and social outcomes that can be realised largely through workplace experiences, albeit enriched by workplace pedagogic activities and the enactment of a practice-based curriculum. What is necessary is that the institutional facts in terms of societal sentiments, workplace support and structuring, opportunities to participate are well aligned with these goals, and aligned in ways that permit individuals to exercise their interests and intentionalities in their learning across working life, and that support in the workplace can be used to sustain both these goals and the viability of the workplace itself.

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[i] Elaborated accounts of the strengths and limitations of workplaces as learning environments has been synthesised in several publications based on the progressive findings from a series of studies of learning through work across a range of industries and occupations (Billett, 1997, 2001, 2011)

5 - THEORY AND PRACTICE DIALECTICS IN THE WORKPLACE

Yew-Jin Lee
*National Institute of Education,
Nanyang Technological University
Singapore*

This paper begins with an excursion first into science education; specifically, at the nexus of informal learning environments in science and what we term as official school science, which is a set of (textbook) knowledge and skills that has great commonalities as well as authority all around the world. Although this side trip might seem odd when trying to achieve a better sense of workplace learning and Continuing Education and Training (CET), I argue that these recent discussions in science do mirror and rehearse many of the problems in the former. These shared issues include hard questions about what kinds of knowledge and skills should be learnt (i.e. selection issues), how these are to be delivered (the sequencing and pacing etc.), and where best should adults embark on post-compulsory learning in the occupations (location questions). As a former science teacher and current teacher-educator, articulating the two aforementioned domains in science education, which hitherto have not been on speaking terms with each other, promises to be very fruitful although I will also draw on ideas informed by the sociology of knowledge from Michael Young and others. From this latter body of research, we benefit from a rich source of theoretical concepts that adds nuance and subtlety to the overarching claim – the recent rapprochement of formal and informal learning in science learning might similarly suggest a realistic program of research and curriculum for work, a way forward into tapping into the strengths/peculiarities of formal education and workplace learning. My argument thus unfolds as follows, I consider: (1) new understandings of informal learning in science and how these intersect and complement canonical school science; (2) the value of powerful knowledge in the school curriculum and its uneasy relationship with practicalt/tacit knowledge more

commonly found in the vocations; and (3) how both formal and informal ways of knowing ought to be respected for what they are and wherever they occur without setting up artificial dichotomies or showing dogmatism about their proper venues/contexts. Above all, I want to argue for more opportunities for the interplay of so-called formal and informal ways of knowing, to allow them to articulate with each other in numerous and diverse ways and thereby generate novel, productive knowledge. It is clear that I revisit wicked problems here and do not presume to have significantly solved questions that have long occupied wiser minds, but these thoughts are offered as catalysts for further critique and conversation as we ponder how contexts mediate workplace learning in Singapore.

LEARNING IN INFORMAL SCIENCE LEARNING ENVIRONMENTS

In 2009, a monograph on the huge potential of informal science learning environments was published by the National Academies Press, which is the publishing outlet for leading national institutions in science, technology and engineering in America. *Learning Science in Informal Environments* (henceforth LSIE) was a conceptual milestone in that it reported how schools and informal environments can together serve the larger goals of scientific literacy in society albeit in complementary ways (Bell, Lewenstein, Shouse, & Feder, 2009). This development is interesting because schools as the venue for formal education and certifying institution par excellence have long enjoyed a privileged position among politicians as well as the general public. Rather than privileging one at the expense of the other such as reflected in the ongoing debates over the irrelevancy of much of formal education that serve the interests of an elite in science or by celebrating the depth of understanding although in rather domain-specific or ad hoc ways by individuals in non-school settings, LSIE suggested a generative way forward. Six strands for thinking about the development of expertise were proposed as common placeholders to organise and assess science learning across both formal and informal contexts. These strands "reflect the field's commitment to participation – in fact, they describe what participants do cognitively, socially, developmentally, and emotionally in these settings" (LSIE, p. 4). In fact, they overlap a great deal with the traditional textbook-based goals of science educators in schools such as the learning of content, process skills, and attitudes and dispositions towards the subject (see Figure 1).

Strand	Learners will	Emphasis on
1	Experience excitement, interest, and motivation to learn about phenomena in the natural and physical world	Developing interest in science
2	Come to generate, understand, remember, and use concepts, explanations, arguments, models, and facts related to science	Understanding scientific knowledge
3	Manipulate, test, explore, predict, question, observe, and make sense of the natural and physical world	Engaging in scientific reasoning
4	Reflect on science as a way of knowing; on processes, concepts, and institutions of science; and on their own process of learning about phenomena	Reflecting on science
5	Participate in scientific activities and learning practices with others, using scientific language and tools	Engaging in scientific practices
6	Think about themselves as science learners and develop an identity as someone who knows about, uses, and sometimes contributes to science	Identifying with the scientific enterprise

Figure 1. Six strands in the new science learning framework that show various science-specific capabilities, which can be supported by both informal learning environments and schools. Adapted from Bellet al. (2009).

What was exciting to me was that this framework eschewed a short-sighted focus either on the purely academic associated with school knowledge or ad hoc, subjective learning goals found in informal learning environments; instead, its authors recognised that *all* science learning is an amalgam of content, process, and affect that we call science *practices*. Compared to how the narrow goals and means to arrive at learning outcomes in this subject have been typically conceived, LSIE is a radical departure in thought for most science educators. Being knowledgeable according to this understanding of practice was learning how to speak, talk, write, and act as a valued and active member of a certain community. In turn, one's identity and identification depended upon one's knowledge and actions that were played out moment by moment within that community, which I will explain can be found in formal sites of learning such as schools and informal learning environments, including workplaces. Location now, as LSIE concurs, assumes lesser importance for learning as there are many opportunities for boundary-crossing whether the latter are acknowledged to occur or not.

Although these strands in LSIE have not been "systematically applied and analyzed" (Bell, Lewenstein, Shouse, & Feder, 2009, p. 43), they are supported by enough evidence that report how learning in informal environments is often lifelong, life-wide, and life-deep across multiple venues that can also invigorate school science, and overall science literacy for everyone. My own design-based research with an after-school elementary science program with Dr Jennifer Yeo (NIE, NTU) has data showing that if given a mix of teacher scaffolding and epistemic agency (the freedom and opportunity to inquire deeply, based on one's interest) to pursue natural history questions of personal interest, young children are able to generate complex levels of biological understanding that range far beyond that of their peers (Lee & Yeo, 2010; Yeo & Lee, 2010). Removed in our weekly intervention was the typical focus on the mastery of isolated facts in science; in its place, learners made meaningful connections between evolving ideas like professional scientists, attempted to collect what they considered to be proper evidence, deliberated their quality, and engaged in scientific reasoning about theories and models. As we shall soon see, many of these activities offer desirable opportunities for deep learning, and share much in common with what we regard as the process of learning to be an expert in the workplace.

In the LSIE, being an expert, and being recognised by others as one, therefore brings together ontology (strand 1), epistemology (strands 2, 3 and 4), and practice in the sociocultural sense of an intertwining of the material and social (strands 5 and 6). In this nondualist view of learning, there is a mutual transformation of persons and their social world/contexts (Packer & Goicoechea, 2000). If this view of gaining competency holds water, then the LSIE framework enables the exploration of how formal schooling and workplaces as analogs of informal learning environments can also be mutually supportive if we replace the word "science" with whatever occupational/professional field or object that is being engaged or perused. These strands can become conceptual bridges and thinking heuristics to link the formal and the informal that is the crux of this paper. Despite the fact that what people do every day at work is often not immediately acknowledged as learning, and all too frequently, learning embraces the most dreary and stultifying qualities during formal educational contexts, learning in the sense of practices do occur. One consequence of this broadening of learning opportunities in different contexts obliges a stronger integration between

the work of educators and workplace trainers. Figure 1 therefore offers some potential ideas for productive curriculum development, pedagogical principles and learning experiences in workplaces with regard to:

• Developing an interest in that knowledge
• Understanding the criteria and standards for knowledge
• Engaging in reasoning and problem-solving about that knowledge
• Reflecting in increasingly deeper ways on knowledge
• Engaging actively in and contributing to knowledge communities
• Identifying and being identified with particular knowledge practices

Of course, the correspondences presented above to help us think about workplace learning prospects will never be perfect; informal learning environments have unique features and goals, and learning processes usually have voluntary, non-standardised, and relatively unstructured characteristics. Workplaces in late modernity are also driven by production concerns in paid employment that are extremely diverse with regard to learning opportunities. Alienation, organisational dis-identification and a lack of meaning often afflict modern workplaces just as workers can also experience stasis at the level of sensual enjoyment and superficial mastery – there are numerous personal meanings of work (Budd, 2011). At other times, learning is often a byproduct of activity, not its prime motive (Cole & Distributed Literacy Consortium, 2006). Nonetheless, these strands assist us in understanding as well as highlighting the fruitful interplay of formal and informal locations of knowing. Context will, of course, mediate this trajectory of growth; schools traditionally favor the theoretical although LSIE as a part review and part open challenge for further investigation offers hope that these so-called boundaries will become more permeable (i.e. the Bernsteinian idea of framing/separation) and less contested by its stakeholders. However, institutions do have histories that resist change, and this is where recent ideas by Young and other social realists explain what they think ideally ought to be learned in post-compulsory education and in workplaces.

POWERFUL KNOWLEDGE AND ITS UNEASY RELATIONS WITH PRACTICAL KNOWLEDGE

Michael Young (2007) and colleagues are strange allies in this paper for they are unwavering in their calls for the strict separation of teaching powerful knowledge in schools that is lifeblood for the intellectual (re)production of human society, and the contextualised/practical/everyday knowledge that accrues during participation in the lifeworld (e.g. primarily work for adults, home for children). Upholding the latter as a blueprint for continuing education and training/vocational education and training (CET/VET), as has been the recent experience in the Western world, was judged by them to be a disaster for the individual and society. It was believed that the knowledge obtained in the course of everyday experience is unable to interrogate nor extend itself precisely because it is based on localised experience or through acquiring specific, particular skills. These severe limitations of time and place in the application of knowledge stand in contrast to transferable, theoretical knowledge that is commonly acquired during training in the academic disciplines (Wheelahan, 2010). Formal institutions such as schools do an excellent job by teaching knowledge that is abstract, one that rises beyond the individual's typical range of experiences and thus offers the possibility for a more equitable distribution of capital (i.e. powerful knowledge) in society even if not always realised by everyone everywhere. In this agenda of knowledge differentiation – the differences between school and local knowledge and specialist domains and so forth – it is understood that focusing on the learning gained from workplaces is inadequate as these locations just value and teach the practical (i.e. "context-dependent") rather than the abstract (i.e. "context-independent") (Young, 2009).

According to this new theory of knowledge that is increasingly heard over the last two decades, many of the reasons for educational disadvantage arise from the unequal distribution of high status powerful knowledge such as that from the academic subjects. It is said that those that have receive more, and vice versa, in a perverse fulfillment of biblical wisdom. Tensions also exist between schools as a conservative force in cultural transmission and the millennial pressures to adopt rapid change from the world of work where flexibility and responsiveness are cherished values. Such subtle drifts in the curricular emphases from knowing things to knowing how to do things have been observed in Australia, for example, which Yates and Collins (2010) describe as due to cultural factors and politically-motivated policies in the system.

While these ideas have gained a large audience, this vision of how to bring knowledge back into schools and the curriculum has not gone unchallenged (Hammersley, 2011). For instance, in the context of learning geography, concepts, ideas and research are reported to be intimately bound up with a learner's geographical life. Young people come to the subject with their own ideas and knowledge that can be beneficially incorporated for a fuller meaning of what it means to do geography (Firth, 2011). I agree with Catling and Martin (2011) that in the end, it is the juxtaposition of people's and subjects' powerful knowledges that is necessary for either type of knowledge to be adequate, if not take a co-authoritative stance. Recall that I have earlier described how formal and informal venues for learning can offer complementary ways to achieve overall expertise in a domain. I now explain how these opportunities for learning can be developed, regardless of location, in the next section.

RESPECT AND PROVISION FOR FORMAL/INFORMAL WAYS OF KNOWING

Given the earlier LSIE framework that tries to identify as well as create the conditions for valued capabilities (in science) in schools and/or in informal environments, so too adopting a unbridgeable dichotomy between knowledge and experience seems erroneous – both are needed as they depend on each other contrary to a strict interpretation of Michael Young's oeuvre. While many ethnographic studies have shown how some learners have scorned school-based knowledge (e.g. Darrah, 1996; Livingstone & Sawchuk, 2004), or the problems that arise when scientists fail to appreciate tacit knowledge in their research (Collins, 2001), others have reported how technical knowledge is a valuable resource in everyday functioning at work (e.g. Harper, 1987; Orr, 1996). Calling it an unnecessary division between mind and brain (as a shorthand script for the formal/informal distinction), Mike Rose is emphatic that once the "cognitive features of an entire field of study [in vocational education] are muted, there will be intellectual and social consequences for the students involved" (p. 177-178). A recent book by an expert woodworker who changed vocation to be a full-time teacher in the craft similarly described how this career move had allowed him to interpolate practical know-how with technical representations in a way that was most satisfying (Korn, 2015). Many other examples such as these

could be multiplied. Figure 2 from Dowling (1999, cited in Muller, 2006) lists how these two broad conceptualisations of knowing have long been pervasive themes for philosophers although this separation is perhaps a little simplistic, bordering on ideology rather than on actual evidence. As Muller (2006)puts it, we "treat the terms of the distinction as delineating differences of activity or practice, rather than differences of symbolic organisation, casting the discussion in knower rather than knowledge terms" (p. 12). Nonetheless, one can readily trace these distinctions between different kinds of knowledge from the intellectual virtues from Aristotle to Marx, Dewey, Heidegger, Habermas, and contemporary interpreters such as Bent Flyvbjerg. Michael Young himself builds his own dualistic-like models based on Durkheim, Vygotsky, and above all, Bernstein. Even though Aristotle's phronesis (action-oriented knowledge that is sensitive to context and considerations of use) is very biased towards practical understanding, phronesis has to grow through the knowledge of universals (from episteme that abstract scientific knowing exemplifies so well) thereby underscoring its inherently dialectical nature (Aristotle, 2009, 1141b).

Originating Author	Abstract Context-independent	Concrete Context-dependent
Bourdieu	Theoretical logic	Practical logic
Foucault	Programs	Technologies
Freud	Edo	Id
Levi-Strauss	Science	Bricolage
Levy-Bruhl	Modern thinking	Primitive thinking
Lotman	Rule-governed	Exemplary texts
Luria	Abstract thinking	Situational thinking
Piaget	Science/effective thought	Technique/sensori-motor
Sohn-Rethel	Intellectual	Manual
Vygotsky	Conceptual thinking	Complex thinking
Walkerdine	Formal reasoning	Practical reasoning

Figure 2. Different forms of knowledge continua adapted from Dowling (1999).

At this point, I reiterate that it is not so much the context that is important although that defines the chief kinds of learning that one tends to experience (i.e. more formal or practical in nature) but more the *opportunities that each context affords for both kinds of knowing*, a point made by a number of researchers (see Tynjälä, 2008). Recall too that plans to forge new partnerships and ways of working between schools and workplaces are urgently required even if these have been recognised only recently.

Based on my earlier work in Lee and Roth (2005), one possible way of helping people learn and develop on the job (not in school) was through what we called the dialectic of understanding and explaining that was borrowed from the hermeneutical philosopher Paul Ricoeur. During this ethnographic study of high-school educated workers in a salmon hatchery, we observed that expertise developed from a cross between tacit/practical (understanding) and scientific/theoretical (explaining) knowledge over the years. For workers whom I observed like Jack, his fundamental knowledge in the workplace grew as he did seemingly repetitious work activities; understanding developed because every act such as feeding fish was similar but non-identical as its predecessor, thereby leading to a refined, more efficient way of doing things. At the same time, by conducting various scientific experiments on fish physiology, Jack slowly improved in his conceptual, explicit, and abstract knowledge of fish biology that could not have been picked up simply via his everyday implicit experience on the job. Whether he could have picked up that kind of knowledge through reading books is moot – he often took a very dim stance towards school-based knowledge (Lee & Roth, 2006) – but we are certain that he could not have achieved this high level of expertise relying on just one kind of knowledge. Through this leapfrog metaphor, the practical and the theoretical interacted, resulting in learning, change, and transformation among the hatchery workers, and in the workplace too (Lee & Roth, 2007). In the course of his daily work and interactions with roving scientists employed by his organisation to assist the hatcheries in technical issues, Jack experienced, in a deep sense, the ways of engaging in knowledge of fish culture as a field (i.e. developing, understanding, reasoning work).

In the case of Erin who was Jack's junior colleague, this dialectic of understanding and explaining occurred in a similar way as she manipulated fish weights and lengths using Excel™ spreadsheets and graphs to calculate

a mathematical index of fish health (Roth & Lee, 2006). Yet, her impressive command of statistics and representations in relation to whether a batch of fish were in optimum condition were ontologically grounded on lived experiences in the workplace as she "did" fish culture for years. Although Jack was indeed her professional mentor, Jack denied any contributions towards her exhibited expertise here; he was the longtime Luddite and self-confessed failure in mathematics. There therefore exists an interesting dialectical relationship as mentioned: an embodied understanding stage arising from sustained engagement with and understanding of the physical variables in the routine of being with her fish day after day plus a coexisting analytic component whereby abstract (mathematical) representations are explained and manipulated. The latter then increased her prior understandings of the phenomenon, engendering another cycle of scientific scrutiny concerning her work. Compared to the dearth of empirical studies that can demonstrate how vocational "students develop a knowledge of the field, or on hypothesis testing and problem solving, or on the interplay of thought and action" (Rose, p. 177), it was Jack and Erin's good fortune to have accomplished all these activities on the job, as colleagues in the same workplace. This kind of powerful learning, we believe, can occur in occupations which seemly offer very restricted opportunities for learning, and it is a message of hope when we read more and more reports about the skills-job gap that is believed to be spreading worldwide.

We recognise that schools cannot be totally like informal learning environments and workplaces, nor should we expect that workplaces behave exactly like schools because workplaces cherish knowing-how over knowing-why (Tynjälä, 2008). But, they both can provide opportunities for this dialectic of understanding and explaining although each context has certain advantages or affordances in terms of historical provisioning and knowledge structures. Thus, for Singapore as in other parts of the world, e.g., in South Africa (Gamble, 2006), questions about what knowledge is of most worth, where to obtain it, who provides it, who "recontextualises" knowledge in Young's (2008, p. 15) words, and in what manner are germane without downplaying my earlier contention that the dialectic is key for specifying what goes into curriculum and pedagogy. An extended quotation by Michael Young (2008), who references Lev Vygotsky's dialectical understanding of these forms of knowledge, is informative in this regard.

The difficult educational roads from the informal to the formal and back always have to be travelled if learners are to learn and knowledge is to progress. The problem I have with dualisms such as Bernstein's is that while they are unquestionably suggestive, they can focus too much on the distinctiveness of knowledge categories and not enough on their embeddedness in each other. If they were not to some extent embedded, we would never be able to escape from the everyday and think conceptually. Likewise, we might acquire "theoretical" concepts but never be able to use them. On the other hand, the combination of embeddedness and separateness poses extremely difficult questions for both educational research and policy. (p. 193)

According to Young (2004), Bernstein's distinction between horizontal (i.e. understanding) and vertical (i.e. explaining) knowledge structures tends to be interpreted rather strictly although Bernstein preferred to think of each of them as though they were like Russian dolls as they encompassed elements of the other within them. In reality, the introduction of one kind/combination of knowledge structure into the curriculum of the other does not guarantee success nor a more equitable access to power for learners, which implies the need for careful implementation and monitoring of programs. In other words, boundary crossings are truly dangerous exercises with threats to both learner and teacher identities apart from the sheer difficulty of the pedagogic tasks involved (Barnett, 2006). Nonetheless, if these kinds of forays and experiments into the potentials of informal learning environments are already being seriously considered by science educators who are well-known for extreme conservatism and resistance to new ideas, this interplay of knowledge should likely be a more palatable, if not exhilarating, prospect for workplace researchers who, as a rule, embrace interdisciplinary perspectives. In Singapore, we now have a smorgasbord of certification courses as well as ad hoc training in hard and soft skills whose uptake depend on individual volition and awareness. How these all can add value to an individual or how they count as meaningful learning have not been well-theorised although the prevailing assumption seems to be that more is better, a philosophy that aligns well with the entrenched human capital development stance of the government. Based on the interplay of understanding and explaining that has been suggested here as a useful guiding frame, we also need to research how context-independent knowledge interacts with the context-sensitive nature of workplace expertise among adults in Singapore.

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6 - STORIES FROM SINGAPORE'S WORKPLACES: A NARRATIVE INQUIRY APPROACH

Renée Tan
Singapore Workforce Development Agency
Singapore

INTRODUCTION

Workplaces could be viewed as the base on which Singapore's economy rests, but they are by no means a common base immediately recognisable by everyone. This non-uniformity goes beyond sector or industry differences, and beyond just viewing each organisation as functioning within a different worksite, and thus, workplace. Instead, a workplace could be seen as

> a *locale* or setting where everyday-life activities take place. Here the location is not just the mere address but the where of social life and environmental transformation, … and whose structuring of social interaction helps forge values, attitudes and behaviours. (Agnew, 2011, p. 317)

With this definition in mind, this chapter aims to provide the context for and the landscape of workplace learning in Singapore today by making visible the less obvious nuances in workplaces, including the power patterns and effects of globalisation within the workplaces via the persuasive and powerful means of stories. I look at how workplaces in Singapore, overlaid with globalisation's impact and the position of Singapore's economy in the world today, are multi-faceted and nuanced sites, differing amongst themselves in complicated ways. Narrative inquiry allows me to present and examine a series of creative fictionalisation pieces functioning as the vehicle with which I put forward my case that understanding the different workplaces in Singapore today is very important for us to effectively learn how to learn in them.

UNDERSTANDING SINGAPORE'S WORKPLACES TODAY

The term "workplace" seems innocuous enough – just a place where people work in, but is it really so? A workplace may conjure an image of a physical office or work site, depending on the line of work one is in, but alongside this image will be a myriad of other associated images, of people and emotions, positive or otherwise. Meaning thus hinges on the term "place", and

> by definition, everything happens somewhere. Typically, the definition adopted has been the view of place as a location on a surface where things "just happen" rather than the more holistic view of places as the geographical context for the mediation of physical, social and economic processes. (Agnew, 2011, pp. 317)

Today, even the "geographical context" is challenged, as "virtual" workplaces are a reality given the Internet and electronic commerce. This conforms to "space and place theory", which argues that the notion of place has grown to have "totemic resonance" (Massey, 2005, p. 5), whereas space has room for the imaginative to be realised. A workplace therefore, is more than just a site where work unfolds, but becomes the setting for a community to thrive, with its potential for the processes which Agnew spells out above. Workplaces are thus important sites for close study, since better understanding of them could determine how successfully we may undertake formal workplace learning within these sites.

We should note as well that Singapore's economy is helmed, surprisingly, by Small and Medium enterprises (SMEs) which make up 99% of Singapore's economy, employ 70% of the workforce, and contribute half of the Gross Domestic Product (GDP) (SPRING Singapore, 2015). If we regard each enterprise as an individual workplace, then the wide spread and diversity of workplaces suggest the scale of understanding and consideration we would need to have to properly work with these workplaces. Multinational Corporations (MNCs) and the public sector would employ the other 30% of the workforce, hence also making them a significant enough presence in terms of workplaces. If we were coming in to workplace learning from a policy-driven angle, this variety of workplaces would complicate attempts

to formally "implement" workplace learning through an integrated, all-encompassing approach, whilst acknowledging that it may be impossible to cater to and individually regard each unique enterprise.

There is also a need to focus on the workforce generating the activity in these workplaces. One major factor contesting our understanding of workplaces in Singapore today would be the effects of globalisation, which David Held defines as "a process (or set of processes) which embodies a transformation in the spatial organization of social relations and transactions ... generating transcontinental or interregional flows and networks of activity, interaction, and the exercise of power." (Held, 2007, p. 16)

The "flow" and "interaction" from our open economy has resulted in a workforce with a current foreign share of employment standing at 33.3% at the end of 2014 (Ministry of Manpower, 2015). Add to this the notion that another feature of globalisation is that "place is being lost to an increasingly homogeneous and alienating sameness [of] 'placelessness'" (Relph, 2008, p. 32). What results, is the tendency to regard workplaces as an amorphous whole. The workforce mix in them however, presents a contextual variety which may disrupt our initial take on these workplaces. Because this is a recent phenomenon, many are still grappling with the workforce mix, and the need to navigate this new landscape, plus the economic challenges of a difficult and competitive business landscape, add more layers of complexity to our understanding of Singapore's workplaces.

NARRATIVE INQUIRY AND CREATIVE FICTIONALISATION

Narrative inquiry, through creative fictionalisation, offers a powerful and evocative means to make visible the multiple layers of complexity and difference that mark workplaces. "Stories are social artifacts – telling us as much about society and culture as they do about a person or a group" (Riessman, 2008, p. 105). I am thus able to re-present different workplaces operating under dissimilar conditions and capture in this simple series of narratives, the diverse landscape of Singapore's workplaces. Because I am bringing to awareness that it is problematic to view workplaces without understanding their inherent intricacies, I am capitalising on creative fictionalisation's power to "tell a story that is based on 'real' events to produce a version of the 'truth'" (Trahar & Yu, 2015, pp. xvii-xviii).

In order to do this well enough to exploit the potential impact of the stories, the stories would do well to conform to Clandinin and Connelly (2000)'s research framework for Narrative Inquiry, with its "*three-dimensional narrative inquiry space* and the 'directions' this framework allows our inquiries to travel – *inward, outward, backward, forward and situated within place."* (p. 49). With this in mind, I present a series of four narratives from the different perspectives of four characters situated in these workplaces. The stories came together after numerous narrative interviews and through personal observation, and both the characters and workplaces may be shaped from material gleaned from a single interview and interviewee, or from a composite of various interviews and interview subjects. These stories are thus authentic representations of actual experiences, and I captured these four to give me as broad a sweep and as whole and undiminished a picture as possible, in rendering the diversity of Singapore's workplaces. I admit that despite my best attempts, these four stories are but a tiny slice of the immense variety in Singapore's workplaces. I start with a man who has had to change his line of work, and thus, his workplace, as a result of retrenchment, and capture his observations of the workplace he had to leave behind. This is followed by the intern making her workplace debut in perhaps the most "global" workplace of this series. Next, the "new citizen" establishing himself in a Singaporean workplace and unable (or unwilling) to pin down what he really thinks is bothering him about his workplace, and finally, the owners of a small enterprise facing the challenge of trying to maintain a viable business whilst realising that they are part of a networked chain of enterprises who need to rely on each other in order to succeed. I have deliberately left the main characters nameless in order to better establish an "everyman" quality to these narratives, whilst allowing the unique features and qualities of each situation and character to hold their own.

STORIES FROM SINGAPORE'S WORKPLACES

Story 1

He was now a taxi-driver, something he had not imagined being just three years ago, but then he had been retrenched…

He used to hold a good job at one of the companies offering port services, and had thought that he would always be working there. He was skilled, and had worked with them for more than ten years – his last position had been supervisory. At the point of retrenchment, he had been an Operations Manager in shipping and logistics.

That day, the batch of them who had more or less come in together all those years ago had been called into Human Resources. There were seven of them, all locals, and their letters had been handed to them without ceremony. They had been hoping to be spared, although they had known that a few batches had already gone through this before them. It was a combination of factors – the company had not been doing very badly, but it was certainly not handling the tonnage it used to haul in its heyday. There were more machines now and less use for humans. They had noticed that the new staff they were supervising were younger, and most of all, they were of so many nationalities now. The joke was that the company, and indeed the whole port where they worked, had become a gathering of sorts, just like a mini United Nations.

And they had also noticed, making snide comments as they spoke about it to each other, how each nationality was congregating on different job roles, so that if they wanted to, they could almost demarcate the roles along territorial lines! He saw how those from Myanmar had gone into Logistics, the Filipinos had filled all the spaces in the documentation department, the mainland Chinese were monopolising all the trailer transport support system jobs, and the Indians and Bangladeshis were almost exclusively at the manual repair and maintenance areas. It would have been amusing if only it wasn't also so galling…

From their office window then in Tanjong Pagar, they had watched in fascination as these nationalities came in droves to apply for their work passes downstairs. There were just too many of them, but it was no use thinking of it. The job was no longer his, and now, he had to grit his teeth and drive the taxi. He had applied for so many jobs after that letter, but no luck. He had even tried a Security job as an alternative, but the salary was too low, and how could he compete with his Malaysian supervisor who had been willing to work twenty-four hour shifts if asked to? That was not something he could do. The taxi had to be it for now. It was not ideal, but until something better came along, it would have to do.

Story 2

Interning at one of the world's most recognised names in technology and media was truly a dream come true for her. Four floors of an iconic building downtown - it was such a thrill walking in and feeling that she had a reason to be there. The first day of internship, she had stood in front of the building and looked up as far as she could see, marvelling that at the angle her eyes were focused, there seemed to be no end to that huge glass, steel and concrete tower.

She was determined to shine at this internship stint. It would be six months long, with exposure to different departments and aspects of the business. The competition looked formidable though, as this was one of the most desired places to work in on earth, and the internship cohort was also "international", since there were so many of them from many parts of the world. She was local, one of a group of five, and already she felt that even the locals outclassed her – they seemed so self-assured! Two Caucasian young men, lounging with the senior staff at the other side of the room looked so much at ease she suspected they were on their second internship stint, and true enough, they were. This meant they were practically guaranteed a full-time position with the organisation, unless they did something really wrong this time round. All she felt was envy.

She so wanted to be like them – a second stint was usually an overseas posting, and thereafter, with the full-time job offer, opportunities for further postings to the different global offices would open up. In those first few days, she was struck by how many new people she met, and how different each person was – it seemed such a cliché, but the accents she heard each time she attended a meeting were different, and she found herself having long, insightful conversations with people from all over the world. She was currently working in a team with an American, a Peruvian and a Nigerian, and they were different from her, and yet, the same. They were all young and ambitious, so excited at the opportunities this stint was giving each of them and so determined to make it. Even their boss, a Canadian man who had been with the company for two years but in the industry and a rival firm for much longer, was someone she wanted to emulate. He had worked in most of the major cities around the world and had garnered so much experience in the field. What she was learning at university seemed superficial – this was

the real world! And yet, when she spoke to her university mates working on their internships in other local organisations, she knew her experience was a unique one. Their work days were much more structured, and their supervisors seemed intent on keeping track of their work every step of the way, not fully entrusting them to do all of it. Here, they were tasked with projects as a team and then left most of the time to handle it as best they could, with their boss popping by to ask how it was going. When told of certain difficulties, he would point out a few possible directions to them and push them to explore further, and she found it a very refreshing and liberating approach. Her team mates, all of whom had studied in the United States, were more comfortable with the approach from the start, but she had adapted quickly in her eagerness to be on par with, and possibly even better, than them.

She was really enjoying it, the casual way everyone spoke to each other during meetings and along the corridors, the clusters of seats that everyone could plug into and work from, the fact that no one bothered whether you were at the cafeteria or anywhere else so long as you were logged on and responding to all you were meant to. It was a different experience from what she had been anticipating, and if this was what work could be like, then she wanted it like this always – the pace, the atmosphere, the challenges and the competition to get the next exciting posting. She was truly taking her first steps to fulfil her dream of seeing the world, and it started here, in the office set-up that looked so unconventional, with people from countries she did not know very much about. She would do all she could to ace the internship, get a second stint and then the full-time position. She was meant to work like this.

Story 3

He had been here for eight years, a medium-sized firm dealing in machinery parts which they both manufactured and sold. He was friendly with his colleagues and bosses, but made sure he did not get too familiar with them. He could see that they were not entirely comfortable with him.

He had converted from his employment pass to a full-time position just a while back on local terms, and this had coincided with his gaining Permanent Resident status. He was now waiting to take up citizenship, which had just

been offered to him. It was a good place to live and work in, and while there was a lot he would miss in India, he knew that this was now home. His wife too, had come over permanently after the initial year apart, when she had only been allowed to stay for 30 days at a time on her visitor pass. They had been newly married then, but now had a toddler and a baby in arms, so yes, life here had been good.

He had also been promoted twice in the eight years, and was earning well, but still, he did not feel he was in the "inner circle", which was where he would put Dave, his local colleague in the same position as he was. He did not quite understand it, since he was meeting the sales targets as efficiently as Dave, but he still did not feel he was quite there. He could not place his finger on what exactly it was, and would not commit to it being because he was more of an outsider, but he could not help feeling it was so. Yet, when his children had been born, his colleagues had all been very kind, giving them gifts and helping his wife to handle the first week after the baby's birth with "confinement" tips and actual demonstrations on how to handle the baby. He would not thus say that they regarded him differently, but he could not help feeling that they did not regard him as quite the same either.

And he wondered if it was partly because whatever he did, he could not be exactly the same as them. It had taken him quite a while to adjust to their work styles here, and to understand what exactly it was his bosses expected of him. Also, he had had a few difficulties managing the other Team Leads, as he sometimes felt that they did not readily share leads with his team. He had found Catherine particularly difficult to handle, and remembered with some wry amusement when his supervisor had taken him to the food court nearby for lunch, and had earnestly tried to "coach" him on how he could ask Catherine for specific leads, all during a crowded lunch hour with strangers intent on their food and sharing their table! He had been somewhat insulted that his supervisor had thought it was his fault for not asking correctly for the leads, when he had felt very strongly, and had positioned it as such, that Catherine had been the one reluctant to release the leads to his team. Now he simply took the approach of asking her for the leads directly and in front of an audience, preferably his boss, or her boss, so she would have no means of turning him down, and would have to send him the required information whether she liked it or not. He didn't think he would have encountered such a problem in India – what did she hope to gain from being difficult anyway?

But Singapore was home now, and he had toyed with the idea of leaving the firm and getting a new job. Perhaps he would do so when the children were a little older and his wife needed him less. He could then entertain the thought of a job which entailed some measure of travelling, for he knew that regional sales was how he could earn more and be more successful. An idea he had put forward to his CEO had been turned down, which had been to expand into India. His CEO had hesitated, saying the risk was too great, since the company did not understand the business landscape there. He had offered to be the link, but had not been able to convince the CEO. Still, this looked like where he would be for a few years yet

Story 4

They had just won the "Small Enterprise of the Year" award and were on a high – it was a fantastic feeling! Watching her husband go up on stage to receive the award made her swell with pride, especially when she considered how difficult it had been in the beginning.

They had barely been in their first jobs when they decided to pool all their savings into creating the interior decoration firm. Her parents had helped out with a loan as well, when they needed to pay a rental deposit for their very first showroom and office. It had been a tiny place, but they only needed a base to showcase their ideas, and then would rely on their suppliers when their clients wanted to actually decorate their premises based on the plans they had drawn up. They had offered a friend of his parents a large discount to be their first client, doing up a bachelor "soho" flat in a contemporary casual style. The plan and the resulting re-decoration had drawn rave reviews from interior decoration magazines, and soon, the orders were coming in steadily. Her husband had been elated – he had felt so stifled in the architectural firm he had been working at, and could now work on what he believed would work, rather than what his boss wanted him to work on. Their clients could of course be demanding at times, but so far, they had been able to convince most of their clients to steer closer alongside them.

They now had four staff helping them out – two of them were project managers coordinating the different contractors and suppliers at the renovation stage, one of them a sales manager bringing in the clients and finally, an administrative and finance manager stationed at the office. These days, both

her husband and her concentrated on the clients and the plan-drawing, and on handling cost quotations and material sourcing. They also made sure they travelled widely to keep up with decoration and furnishing trends, so that their designs would remain fresh and innovative. Bit by bit, after twelve years, there was finally some recognition.

But even her husband, who had all along been the positive one, had noted that it was much more difficult doing business nowadays, especially in a business like theirs, where they actually relied on a long chain of people and companies to help them see each project through. Their suppliers' problems often became theirs as well, as a lack of workers in the company which specialised in panelling and wall coverings for example, would mean that a design which emphasised wall texture could be compromised. It was not easy to say that they could look for another supplier or contractor, as this was actually regarded as a type of specialist skill, especially those working in niche material types. Labour for this was often sourced from Malaysia or China, and was also getting difficult to source as younger people did not generally take on jobs like this anymore. It was worrying to have to take on the limitations of the suppliers and contractors they had to work with in order to achieve the transformation of their designs to reality, and this situation was getting more and more frequent in more of the companies they were working with. Materials were also getting more expensive, and all this was driving cost to astronomical levels, making renovation of a new home or office out of the reach of many.

So the award was gratifying, but they were under no illusions that this would help them very much in their business. To succeed in their line, they needed to rely on word of mouth reports that they were an outfit with reliable and credible service, able to come up with distinctive designs, and who were affordable while offering quality. It was a tough position to maintain all of the time, although they had managed thus far. Their administrative and finance manager was advocating a new way of doing business with their suppliers, on a sort of profit-sharing basis, to maintain priority in the queue for their services when needed. She was skeptical but aware that under today's conditions, they would have to look into every idea which seemed even plausibly viable. In the meantime though, they would bask in the glow of the award and reap whatever benefits they could from it.

LEARNING TO NAVIGATE SINGAPORE'S WORKPLACES

The "fictionalisation" of the four workplaces above was handled with a light hand, with a melding of fact and fiction through place, names and details of business types left intact for example. There was also a strong use of "third-person" voice across the four stories, all part of the move to "authenticate" the texts, and thus position and encourage the reader to delve deep into the scenes that are unfolding in the narratives. This strengthens the "making visible" of the subtleties governing Singapore's workplaces, as readers are brought through a variety of workplace types, from large, renowned "global" businesses (Stories 1 and 2) to the struggling family business in Story 4; each showcasing a range of worker emotions from the cynical disillusionment of the retrenched man in Story 1, the perky idealism of the young girl in Story 2, the wary self-doubt and repressed resentment of Story 3's middle manager, then to the weary stoicism of the struggling, though recognised, couple in Story 4. Another disjunction captured is the ironic perception of their "outsider" status, with the new citizen in Story 3 contemplating his position vis-à-vis his local colleagues, whilst the former Shipping Operations manager from Story 1 is scornful of his being made the outsider on what used to be strongly his turf when, as implied, it was a more local and thus, more even playing field. The important factor is for us to recognise that the characters portrayed here would personify the agents for and recipients of workplace learning, and the disparate types, environments, tones and tenor of each workplace would be where formal workplace learning and the policies governing the nation-wide focus on it would take place.

The understanding I was building from the narratives is centered on what we need to see as essential to aid in the understanding of how we can navigate this context of Singapore's workplaces. For a start, workplaces are unequal sites as "people and place are intimately integrated and … locked into relations of power" (Yeoh and Kong, 1999, p. 134). The "power" I refer to here is not so much that associated purely with status, size and position but a more Foucauldian, wide-ranging definition of power not just being exclusively localised in government or state apparatus or structures, but that which is exercised throughout the social body, so that it permeates all levels, right down to the micro elements of society (O'Farrell, 2005, pp. 33-77). The stories presented here bring the omnipresent interplay of power up to the surface,

suggesting that workplace learning will be dogged by issues of unequal access to the benefits, types and quality of learning, with certain groups, organisations or individual types being privileged over others. Comparing the workplaces in Stories 2 and 3 would illustrate the point – Story 2's intern is able to glean as much learning as possible in order to make her mark by absorbing how to adapt to the new ways of working, even though she is now at the lowest point of the organisational hierarchy as a first-time intern. The workplace she is in is able to provide her with the freedom to draw her own conclusions and make her own way through the stint, which she contrasts with her university mates' experiences of working in more structured environments. The local workplace featured in Story 3 though, comes across less positively in the light of their being able to offer their worker the same level of flexibility to accommodate his working style, instead subtly trying to assert power and "discipline" (using Foucault's term) and demanding conformity towards an accepted mode of working. This notion of power difference in each workplace will thus manifest in a workplace learning context as well, affecting each worker's access to what they are meant to learn, and how they may do so. Making visible this less discernible notion of workplaces unconsciously having a "position" in the hierarchy of power would help us sharpen our focus on how we may better apply workplace learning.

To navigate these workplaces more successfully as well, we need to return to both Held and Relph's definitions of how globalisation will have a strong effect on workplaces, and hence problematise our take on workplace learning and its success across Singapore's workplaces. The "transcontinental or interregional … activity" which Held talks about has resulted in the workplaces, characters and situations characterised in the four stories, and shaped the power patterns discussed above to a great extent as well. At the same time, Relph's observation on "sameness" and "placelessness" has as much effect, but it is useful to note that "placelessness has limits", and that "the transnational spaces of globalised corporations have a place-ness about them; and they also have to touch down in ordinary space" (Connell, 2007, p. 208). What this means in the stories may be seen in Story 1, when the "movement" of globalisation is figuratively represented in the jobs demarcated along national and racial lines, and the local character's lack of control over this wave of movement is detected in his frustrated helplessness as the story unfolds. Story 2's wide-eyed intern takes on the new culture

faced in her organisation almost effortlessly, as she is so eager to tap on the perceived benefits of what she assesses to be her best opportunity to take on the "global" promise of success within her grasp. "Ordinary space" though, could refer to the new citizen negotiating that space of his workplace and finding that power is not quite in his hands, even though he has made the literal "global" move. His adaptation to the workplace culture appears imposed and he feels his skills are rendered second-best despite his best efforts. Story 4 hints at a power and globalisation situation outside of the couple's control, as they wrestle with the problem of the effects of a globalised economy on their business, with the difficulties faced in ensuring their international suppliers cooperate to keep their business thriving. The broad span of the four stories would therefore serve as a small indication of the unequal and irregular gridlines multiplied across the landscape of Singapore's workplaces, and disrupt the reading of workplaces as a single master context for workplace learning to take place.

CONCLUSION

I set out to pin down four examples of real workplaces and characters through capitalising on the accessibility of simple stories to magnify and make obvious the unequal terrain of Singapore's workplaces today. The effort would give us a way in to study what is usually taken for granted as the units of production of Singapore's economy, which is largely regarded worldwide as being very successful and part of the economic "north" (Connell, 2007). However, the workplaces have shown themselves to be unequal units, some exhibiting power patterns within that leave workers wrestling with power situations marked by qualities more frequently associated with that of the "south" (Connell, 2007), which will present multiple issues of unequal access and benefits when policies on workplace learning are rolled out. To study Singapore's workplaces as sites for learning then, we need to learn of and from these sites first, so we can better navigate them and exploit their differences instead of letting them be a barrier to the successful implementation of workplace learning.

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7 - UNPACKING THE LOGIC OF LOW SKILLS IN THE SINGAPORE PRIVATE SECURITY SERVICES INDUSTRY

Soon-Joo Gog
Singapore Workforce Development Agency
Singapore

INTRODUCTION

As this book goes into print, the Singapore government has raised the skills strategies atop its national agenda under the ambit of SkillsFuture. SkillsFuture has four key trusts: (1) to help individuals in making well-informed choices in training and career, (2) to develop an integrated high quality system of education and training that respond to constantly evolving needs, (3) to promote employers recognition and career development based on skills and mastery and (4) to foster a culture that supports and celebrates lifelong learning (SkillsFuture, 2015). While the policy intention is noble and high–sounding, it is doubtful that security firms and their security employees would benefit from the SkillsFuture agenda. The attitudinal, institutional and circumstantial factors, if left unresolved, will continue to trap the security sector in a low-skills equilibrium, leaving firms and employees in the sector behind.

The private security industry is well known for its low-skills, low-wages, and low productivity. It is an industry that is characterised by its network organisation type of work arrangement where the service buyers outsource the work to firms on fixed tenure contractual basis, and the service providers deploy workers to buyers' sites (see inter alia, Kirov & Ramioul, 2014; Mehaut, Berg, Grimshaw, Jaehring, van de Meer, & Eskildsen, 2010). As highlighted by Rubery, Grimshaw, and Marchington (2010), the chain of command, the quality of job, and the employment security are challenging due to the precarious employment arrangement arising from the outsourcing

arrangement. Under these labour market arrangements, workers have less access to formal, structured learning and skills upgrading. Notably, employers have little motivation to train and upskill their employees due to the complex management relationship between the buyers of service and service providers. Hence, the study of working and learning needs to delve deeper into the core of the issues: work arrangement, the job quality, the business environment and related institutional practices.

In order to have effective policy intervention to shape the low-skills sector towards high-skills equilibrium, better utilisation of skills, and improvement of job quality, we must have a comprehensive understanding of social facts that facilitate or impede working-and-learning. Previous studies mainly focus on how in-firm culture, work organisation and management practices affect workplace learning, implying the fallacy of management practices as the evil for restricting and limiting workplace learning (e.g. Ehrenreich, 2001; Fuller & Unwin, 2006). It is not helpful to ignore the influence of the institutional logic and to assume firms have full discretion in their decision making. One constructive way in identifying levers of change is to seek understanding in the sectoral institutional logic. I argue that it is the institutional logic of the industry that has a major impact on the industry operating as a low skills or high skills industry (Gog, 2013), rather than a simplistic treatment of management practices. This chapter takes a critical look at the unique institutional logic of the private sector services industry, analyses the coordination challenges confronting the security agencies, and reviews the job quality of the security workers, before putting forth recommendations to enhance the study of working and learning.

COLLECTING THE EVIDENCE

The private security services industry may be termed as the shadow industry that supports the Singapore Police Force in safekeeping Singapore's safety from potential crimes and terrorism. In Singapore, the positive economic growth has led to an increase in demand for private security services as more commercial and residential properties were mushrooming across the country. The high job growth in the private security services industry is met with a tight labour market situation due to Singapore's high employment rate and the regulation that prevents foreigners in taking up security employment.

The call to enhancing productivity and skills development for the industry has been top of the policy agenda since 2011. More recently, a Security Tripartite Committee for the Security Sector was set up to raise the skills level and the corresponding wages of the security industry workers under the Progressive Wage Model championed by the National Trade Union Congress.

The research was conducted in the time when Singapore's policy agenda is preoccupied with building a sustainable economy that is inclusive, so that all constituents will benefit from the economic advancement. The study draws on a range of different data, from secondary sectoral data, employment data, large sample quantitative studies involving security services buyers, security services employer (also known as security agencies) and security workers (Gog, 2013). However, the primary method of data collection was through interviews with a variety of stakeholders in and related to the security industry. In-depth interviews (n=20) were conducted with the Police Licensing and Regulatory Department, Workforce Development Agency, Union of Security Employees, Security Industry Associations, the National Trade Union Congress which leads the Progressive Wage Model, and the Workgroup for Security Sector Productivity, a group of security workers, and a group of security agencies. This primary and secondary data facilitated the construction of the full picture of how security jobs were created and designed in the sector. In the following section, I will provide a sketch of the institutional logic of the private security services industry.

THE INSTITUTIONAL LOGIC OF THE PRIVATE SECURITY INDUSTRY

Characteristics of the industry

As of 2014, there are about 245 private security agencies (SAs) licenced by the Police Licensing and Regulatory Department (PLRD). Amongst them, only three render armed guarding services; the rest provide security manpower services to a variety of premises. PLRD licenses the security services and security technologies providers; separate licenses are required for security manpower and security technologies. PLRD requires security services firms to renew their operating licenses on an annual basis, based on a grading system. Approximately 70% of the SAs are small-and-medium firms with less than 100 employees. Many of the SAs owners were ex-uniform personnel.

Separately, the PLRD also issues a vocational license to individuals who work as security officers (SOs). The license is renewable every five years. On record, close to 45,000 individuals hold the security vocational license, however, only 75% are active in employment. The majority of those holding the vocational license work in entry level roles as SOs. Traditionally, this industry attracts low-educated and older workers (see Table 1 for details).

Table 1. Profile of SOs in Singapore

Age profile	29 and below	30-39 yrs	40-49 yrs	50-59 yrs	60 yrs and above
	19%	16%	21%	26%	18%
Education profile	No formal education	Primary education	Secondary education	Post-secondary non-tertiary	Tertiary
	3%	11%	66%	10%	10%

Note: The data are from The Security Sector Manpower Development Study Report by The Research Pacific Group, 2010. Adapted with permission from Singapore Workforce Development Agency.

In Singapore, the security sector has been established with a strong emphasis on national security and as an extension of the state's policing structure. As such, the security industry is governed by the PLRD. PLRD has a heavy hand in determining the skills sets of the security services sector workforce. For example, PLRD requires potential SOs to complete and pass the two compulsory Workforce Skills Qualifications (WSQ) training before they can be deployed for work. PLRD also dictates the basic skills sets and experience of security agency owners. As part of the annual operating license renewal, PLRD places strong emphasis on security agencies' effort in ongoing staff training.

Security jobs are created as a result of a SA successfully bidding for a contract from a property owner, or most of the time from a management agent, which is the facility management team. Previous studies have shown that buyers of security services come with different expectations of security services. The breakdown of the deployment locations of SOs are shown in Table 2. Moreover, not all security contracts are for the purpose of safeguarding premises or life. The interviews with security services buyers implied that the buyers are demanding customer services above the security responsibilities.

Table 2. Deployment Locations of Unarmed SOs

Deployment location	Percentage
Office complex/Factory/Shipyard/Farm	39.27%
Residential building/Condominium	21.04%
Shopping mall/Centre	7.93%
Protected Areas and Places (e.g. Airport, Power Stations, Waterworks, and Telecommunication facilities)	7.89%
School, Polytechnic, Institute of Technical Education, Institute of higher learning, Private school	7.30%
Government/Statutory board building	5.02%
Construction firm/site	4.54%
Hotel/Country club/Entertainment outlet/Resort	3.67%
Checkpoint	1.64%
Foreign diplomatic mission, or foreign consulate, in Singapore	0.70%
Hospital	0.66%
Place of worship	0.34%

Note: The data are from The Security Sector Manpower Development Study Report by The Research Pacific Group, 2010. Adapted with permission from Singapore Workforce Development Agency.

SA secures a site contract, which usually lasts between 12 to 24 months; the employment of the SOs is strictly tied to the site contract. That is, the employment of SOs is for the length of the site contract. This precarity of employment is but one aspect of conditions under which SOs work; other conditions include the low basic wage (less than S$1,000 per month), and twelve hour shifts. Due to the tight labour market situation, the Ministry of Manpower has made an exemption for the security services industry workers to have extended overtime beyond the regular overtime requirement. Due to the low wage, it is well known in the industry that SOs may move quickly to another job, if the next job pays "a few dollars more". Other than full-time SOs, there are others who work on a part-time basis, usually on weekends to supplement their income. The SOs are paid a basic wage with anything extra forming an overtime payment (see Figure 1). In some instances, their gross wage includes uniform allowances, and meal allowances. Many SOs have a second security job or double-up for the next shift to make up for low pay.

	2004	2005	2006	2007	2008	2009
Basic	1018	949	914	834	929	837
Gross	1304	1381	1360	1354	1438	1422
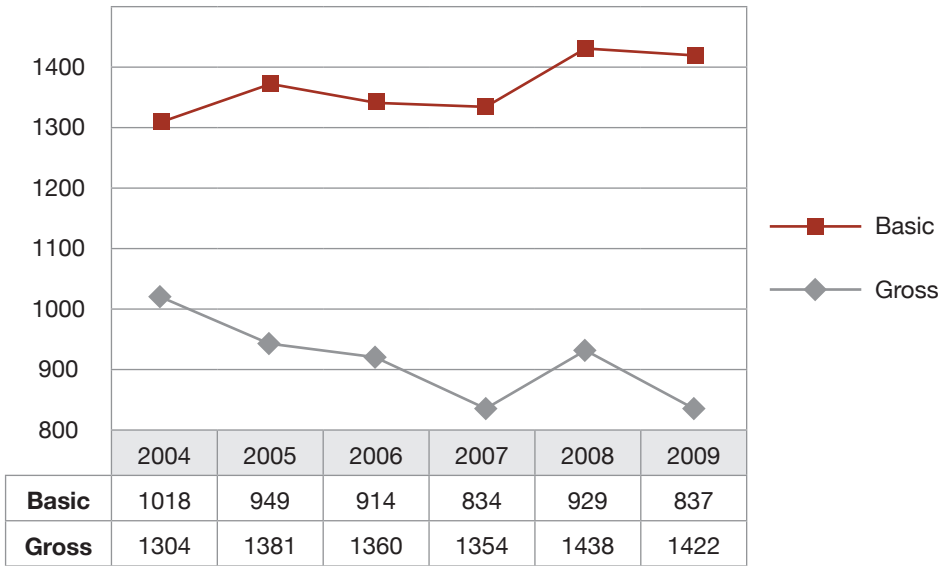
Figure 1. Basic and Gross Wage (Singapore dollar) of SOs from 2004-2009

Note: Compiled by author using data from annual labour force reports

Currently, there are five security industry associations in Singapore. The members of the two security associations, Security Association of Singapore and Association of Certified Security Agencies representing slightly more than 50% of the SAs in the industry. These associations also represent their members at meetings organised by the regulators. The union penetration rate is relatively low in this industry. The Union for Security Employees represents some SOs while there are quite a few workplace-based (house-union) unions representing SOs working for larger employers. Overall, there is no one single representative body for the SAs or the SOs that can mobilise concerted effort and decisions on their behalf.

The productivity of the industry measured in terms of value add per worker is amongst the lowest in the Singapore economy. With a value-add per worker of just over S$25,000, this is lower than the Retail industry and a little higher than Food and Beverage industry in 2010 (see Figure 2).
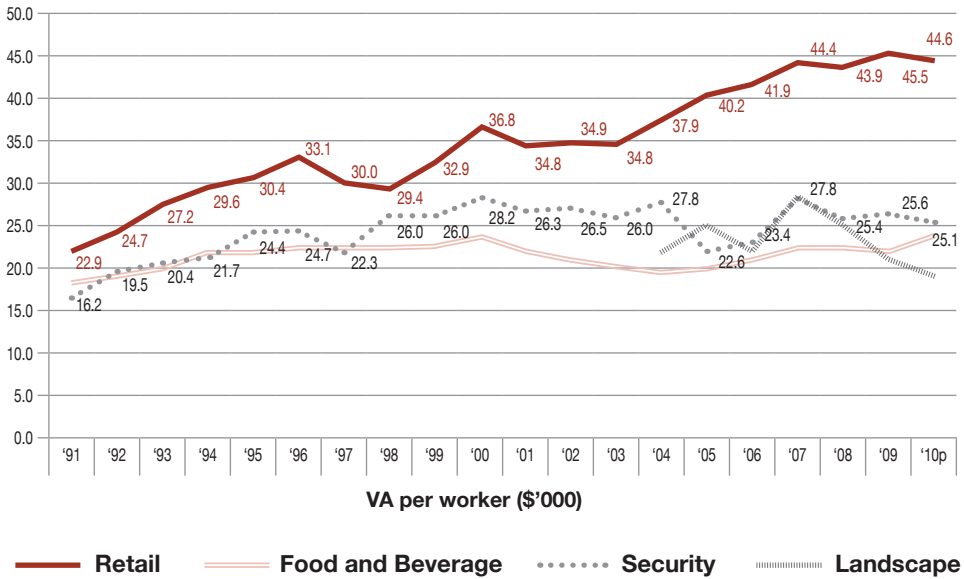
Figure 2. Basic and Gross Wage (Singapore dollar) of SOs from 2004-2009

Note: Compiled by author using data from annual labour force reports

Despite the tight labour market in Singapore, security services buyers continue to choose not to deploy security technologies to replace warm bodies. This may be due to a prevailing attitude of buyers to use SOs because it is cheaper to deploy people than installing security technology. Buyers also see the flexibility for them to deploy SOs to other duties such as customer service, life guard (at condominiums) and traffic warden. In fact, the SAs have almost no say in the design of security services at their deployment sites due to the contractual terms. The study also unveiled a historically entrenched one-sided contractual relationship between the buyers and the SAs. Not only was the contract dictating numbers of warm bodies to serve the site, it also stipulated the monetary penalties for non-compliance or non-performing incidences. The sample of deductibles in a security service contract is detailed in Table 3. The research participants shared that the monetary penalties was a pervasive practice in both public and private sectors. The challenge is further aggravated by the manpower shortage and low pay.

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Table 3. Sampling of Deductibles in a Security Service Contract (Singapore dollar)

	Shortcoming	Amount to be deducted
1	Unmanned Security/Fire Command Centre	$500 per occasion
2	Frequent change of security personnel, exceeding limit of the number of times in the contract year	$500 per occasion per supervisor/guard
3	Patrol vehicles fail to reach site within 30 minutes	$500 per occasion
4	Contractor fails to comply with any reasonable instructions	$500 per occasion
5	Failure to provide training to Supervisors and Guards, or deployment of Supervisors or Guards without consent of ABC Ltd*	$200 per occasion
6	Failure to keep proper records	$100 per item per day
7	Failure to submit/update (but not limited to), within the specific timeframe, the following data/records to ABC Ltd*, as requested or required by this contract: · Bio-data · CID screening reports · Daily reports · Investigation reports · Others as required by this contract	$100 per item per day
8	Failure to submit/update (but not limited to), within the specific timeframe, the following data/records to ABC Ltd*, as requested or required by this contract: · Clocking gun/Printer · Stationeries/Torch lights · Electronic Attendance System · Mobile phone/phone device · Others as required by this contract	$100 per item per day
9	Failure to rectify/replace any faulty equipment provided by the contractor	$100 per item per day
10	Security Supervisor stands in for more than 1 hour (up to second hour from starting of shift)	$100 per hour
11	Ditto for Guard	$50 per hour
12	Security Supervisor reporting for work later than the time specified (after 15 minutes), but within the first hour	$50 per occasion per Security Supervisor
13	Ditto for Guard	$30 per occasion per Guard
14	Security Supervisor found absent after the first hour (he is deemed to be absent for the whole shift)	$400 per occasion per Supervisor
15	Ditto for Guard	$300 per occasion per Guard

	Shortcoming	Amount to be deducted
16	Security Supervisor fails to perform his duties as stated in the contract specification	$200 per occasion
17	Ditto for Guard	$100 per occasion
18	Failure to carry out patrolling/clocking (include 15 minutes late or early clocking below five points)	$20 per round
19	Incomplete clocking (missed points, irregularity between points)	$10 per point
20	Absent Supervisor	$400 per occasion
21	Ditto for Guard	$300 per occasion
22	Supervisor leaves workplace without approval	$400 per occasion
23	Ditto for Guard	$300 per occasion
24	Abandon Post	$100 per occasion

Source: Permission granted by participant to reproduce the table. *ABC Ltd is a pseudonym.

The institutional logics of the private security services industry

Clearly, the security services industry is entrenched in a low-skills equilibrium, using price cutting as their dominant competitive strategy. Workplace learning and training do not feature in their business strategies except to fulfil licensing renewal requirements. As for-profit organisations, the SAs are driven by their desire to increase profits and minimise losses. Ideally, these objectives could be achieved through mutual beneficial arrangement between buyers, SAs, and workers. However, the historical cheap sourcing practices (lowest bid wins the contract), coupled with low-skills equilibrium (low-wage and low-skilled production), and poor job quality (low employment security, lack of career progression, low wages, and low-skills) have perpetuated the vicious cycle of the perceived low value of security services.

The industry's institutional logic may be explained as an economic-sociological approach of unveiling the roles, the actions and the rationale of relevant stakeholders, their power relations and the dominant societal pre-disposition. The unveiling of the logic will illuminate the interactions among the stakeholders and the results of their interactions which produce the intended and unintended consequences due to their potentially competing agendas within their respective roles. The institutional logics of the security services sector will be explained below.

INSTITUTIONAL LOGICS OF THE SECTOR

Due to outsourcing practices, SAs have responded with price/cost strategies to win bids, thus further depressing wage costs. The security services contractual design is dominated by the dictation of number of headcount instead of security solutions and outcomes; this is an entrenched practice in Singapore. Unlike other businesses where firms have discretionary power over product/services and process design, the outsourced nature of security services has taken the job design discretion away from firms. The possible deployment of security technologies coupled with skilled workforce barely features in their competitive strategies. Hence, the SAs have no influence on their employees' productivity at the deployed sites. Yet, security firms are penalised by service buyers for the "misbehaviour of security employees" and the "non-fulfilment of duties". As a result, firms have to commit substantial resources to managing liquidated damages imposed by buyers. Due to the price/cost strategies, the SAs have no motivation to train and upgrade skills of their employees. Rather, they resort to recruitment for sites and retention strategies to keep employees from leaving by paying a few dollars more and make do with minimal skills available.

The minimal skills technical training mandated by PLRD for the SOs keeps entry-level skills low. As reported in The Security Sector Manpower Development Study or SSMDS (The Research Pacific Group, 2010), the skills most desired by buyers, such as customer service skills, communication skills, and problem-solving skills have not been met. This is not due to the lack of training provision. Rather, it is caused by multiple factors. The mandatory training only addresses the regulator's skills needs but not the service buyers' needs. It is not a common practice for security service buyers to specify skills needs in the services contract, thus the SAs are not motivated to adopt skills as a competitive strategy due to the market conditioning for cost/price strategy.

The SAs perceived powerlessness in the price-cutting game and fixation on the low-skills equilibrium deserves a more in-depth analysis. One contributing factor is an environment that promotes a continuous supply of low-skilled workers who are willing to take up low wage employment in the security industry. In Singapore, there is an estimated 300,000 low-wage workers who recipients of Workfare Income Supplement (WIS). They are aged 35 years and above, and earn a monthly income of S$1900 and below; among them

are security sector employees. The WIS is a salary support given by the government to entice them to be economically active. Analysts posit that such an arrangement while is a government's transfer to the working poor, may inevitably encourage the low-skilled to take up low-wage employment, and the major potential downside is entrenching firms in low-skills equilibrium (Beaudry, 2002; Gog, Sim, Ramos, Sung, & Freebody, 2014)

The situation is further bolstered by the official permission granting the extension of the overtime work arrangement. This has inadvertently suppressed wages. Another factor is the inability of security firms and security employees to work as one collective force to change the rules of the game. Studies by Bosch, Mayhew, & Gautie (2010) showed that in sectors where the industry bodies and the labour unions are able to achieve mutually beneficial collective bargaining, sectors are likely to adopt a high-skills equilibrium with a correspondingly lower incident rate of low wages.

In the following sections, I will provide the narratives from the security agencies and the security employees to illuminate the institutional logic, which impede working and learning. The case will illuminate the attitudinal and circumstantial factors that make working unconducive for learning and skills upgrading. If the situation persists, it is unlikely that the security sector will respond to the call to enhancing skills level and productivity.

CHALLENGES EXPERIENCED BY SECURITY AGENCIES

In this section, I will examine the coordination challenges confronting security agencies. This serves to debunk the claims and assumptions that firms have full discretionary power in determining their organisation development, including staff learning and development, and the use of skills (see inter alias, Solow & Wanner, 2010; Felstead, Fuller, Jewson, & Unwin, 2009).

Product/Market Strategies: Ultimately, it is all about price!

As shown in Table 2, buyers of security services range widely from the public to the private sector. The security and services requirements of the various locations are also vastly different. The majority of the security service contract term is 12 months, although there are some that award 24-month contracts (The Research Pacific Group, 2010). However, the contract could

be prematurely terminated, if the relationship does not work out. The following comments from the interviewees reflect the unequal power relationship between the buyers and security agencies, which is characterised by transience and distrust:

> Every new client is a risk. I had a real bad experience with this client where he imposed unreasonable liquidated damages in the first month of operation. Ended up I have to pay them amount more than the contract sum. We can't work like this, so I said sorry, let's part way. (Security Agency Manager 1, August, 2012)

> The tender specifications dictate the number of security officers and supervisors needed per shift. We just quote based on the specification. Sometimes they (buyers) may not require so many head count but they don't care, they just insist on the headcount. (Security Manager 5, August 2012)

The quotation by headcount is an entrenched practice among the buyers. Data from SSMDS (2010) shows that the per head count pricing paid by the buyers ranges from S$1200 to $2900 per SO and S$1400 to $3000 per security supervisor. The difference between the per head count price and the salary paid out to security officers and supervisors on site is the margin that covers the firm's operation and administrative costs.

> The whole deal is so unfair to us. The tender specification ignored the need to employ relief staff for their off day and leave entitlement. When we factor this additional headcount cost, of course, we cannot pay too much to the worker. This is not our fault. It is the buyers who forced the wage down. (Security Manager 2, August 2012)

According to the interviewees, the PLRD's grading system has not contributed to their business, as buyers continue to choose the cheapest quotes among the bidders.

> It is all up to the buyers. They can specify grade B and above, but they still pick the cheapest. Ultimately, it is about price! (Security Manager 4, August 2012)

I think it is because of their limited budget. Most of them don't specify grade. Majority will pick the best price that comes with the best grade. (Security Manager 5, August 2012)

Productivity and work organisation: Minimising liquidated damage

Technically, the hierarchy of command includes an on-site Security Supervisor who leads a team of SOs. The Supervisor in turn reports to an Operations Executive who manages multiple sites. However, due to the outsourced nature of business, the deployed team reports directly to the buyer's representative who is usually part of the facility management team. Hence, the contact between the security agency and the site team is minimal, except when manpower issues arise. Due to the poor job quality and the tight labour market, manpower poses the greatest challenges, as shown by the interviewees' comment below:

I am not afraid of recruitment. It is retention that is the biggest headache. They (Security Officers) are mercenaries. They would leave for the extra dollars. It is very frustrating! It does not help when PLRD allows the licensed guard to work for two employers. Some work for one agency in the day shift, change uniform, and work for another agency in the night. Next day, too tired, did not report duty. (Security Manager 1, August 2012)

Agencies like us are toothless. I told the guard: You sleep on duty, I sack you! Sack lor! He goes to the next employers. Then, we are penalised by our customer. (Security Manager 4, August 2012)

"Liquidated damage" (LD) is a term that evokes tremendous fear among the security agencies. LD is a defined list of deductibles that buyers impose on security agencies for their failure to comply with contract terms (see Table 3). According to the interviewees, LD is a monthly occurrence for all their clients. As a result, minimising LD deductibles is one of the management priorities among the security agencies, which involves investigations and negotiations with the buyers. This has resulted in an interesting phenomenon of security agencies investing in technologies such as closed-circuit television, biometric attendance taking, and GPS tracking on their employees as measures to minimise LD claims.

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Skills strategies: Emphasis is on recruitment!

Due to the shortage of manpower and the unattractiveness of security employment, the security agencies are trapped in the vicious cycle of rampant poaching of staff. Many offer sign–on bonuses to attract staff, some offer higher titles as supervisors with one to two hundred dollar increments. The basic salary remains low due to masking of salary through a variety of allowances, despite the market bidding up gross salary through overtime.Skills requirements feature low in the security agencies' skills agenda. An analysis of classified job advertisements on security positions in the local newspapers revealed that only a small percentage (17%) stated the agency's name, with the vast majority remaining anonymous. The primary information in all the advertisements concerned pay, location, and shift. Most of the advertisements did not state any skills requirements. Most stated minimum education level (lower secondary) and English literacy as the top two criteria. Some included attributes such as "positive attitude", "pleasant personality", and "must be physically fit".

In general, interviewees did not see the value of sending SOs for more training. Almost all security firms from the SSMDS (The Research Pacific Group, 2010) required individuals to come equipped with vocational licences, that is, the new recruits could start work immediately without additional training. The ongoing development of their employees is not a common practice among the interviewees:

> They have to prove their worth, loyalty to company. Why should I train them when they may be leaving the next day? For those who stay long enough, and show supervisory potential, I may consider. Or, when buyers insist on specific training, such as first-aid. (Security Manager 1, August 2012)

> Some high security premises may stipulate additional skills for guard deployed to their sites. The management would demand to see proof of training within first month of contract. Usually, we submit training certificate as proof. (Security Manager 4, August 2012)

More recently, the PLRD imposed training as part of the annual grading requirement. This led to some bigger security agencies setting up a training department to provide on-site soft skills training such as community and

customer service skills to fulfil the licensing requirement. That said, it was not a common practice among the smaller players. The evidence suggests that security firms have little or no discretionary power in determining the skills of the employees. Most critically, the entrenched head count contract and punitive relationship between buyers and security service providers have totally removed design of the work from the security agencies. This implies that if this critical logic is not addressed, the security sector will be perpetually trapped in a low-skills equilibrium. The learning and skills upgrading will continue to be marginal activities driven superficially through legislation, such as the increase in mandatory skills and artificial fixing of wage ladders through the Progressive Wage Model.

JOB QUALITY OF THE SOs

In this section, I will examine the job quality issues of security employment. The aim is to showcase the disadvantaged situation of the low-skilled, low-waged security employees. The private security industry scored low in job quality and attained low levels of skills utilisation in the Singapore Skills Utilisation Study (Sung, Loke, Ramos, & Ng, 2011). Despite the low job quality, the older low-skilled and low-waged workers continue to join the sector. According to the SSMDS (The Research Pacific Group, 2010), the top five reasons cited for joining the sector are: (1) no other career options, (2) manageable workload, (3) employment security, (4) matched education level, (5) less laborious than other low-wage work.

Job insecurity amidst the abundance of employment opportunities

The findings from the SSMDS (The Research Pacific Group, 2010) and the security employees interviewed in the study showed that once settled into the sector, the security employees were likely to have long tenure of service of at least five years, on average. Yet, their tenures with employers tend to be short, averaging a maximum of just two years. Two of the interviewees recounted their experiences:

> I went for my security job interview; they told me I would be deployed to a hospital. It was a nice environment. But they did not tell me that the site contract would end in six months. Soon, I discovered that I was out of a job. They never bother to tell you. (Madam J, February 2012)

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I worked permanent night shift at XYZ building, did whatever the clients wanted me to do, including extra duties like changing light bulbs and repairing cabinets. I thought by pleasing my clients, my agency would recognise my effort. Then, one day, they (security agency) told me they failed to renew the site contract. I was offered a job at another site. But it was far away from my home and there was a $200 pay cut because the other site contract sum was low. I calculated that it was not worth my effort; so I had to look for another security job. (Mr. G, February 2012)

As security services are outsourced, the relationship between the security employees and their respective employers are transient by nature. The security agencies have no reason to hold on to excess manpower when site contracts are completed. Despite the high growth in the sector and concomitant high demand for workers, the work in security sector offers limited job security. Moreover, working hard offers no guarantee of any long-term career prospects.

Work arrangement

The 12-hour shift and six-workday week have come to be instituted in the security sector. The common explanation that arose repeatedly is "It has always been like that." The employment protection authority and the union have not objected to the practice. According to the SSMDS (The Research Pacific Group, 2010), close to 80% of the security employees worked 72 hours per week, exceeding the average 44-hour work week by 28 hours, and even the permitted maximum of 60 hours per week (inclusive of overtime) stated in the Employment Act by 12 hours. Obviously, the long working hours essentially hamper workers' accessibility to access skills upgrading opportunities:

Although my shift officially starts at 8am, we are expected to come in early, change into uniform, and have a handover-duty briefing. I have to arrive half an hour before the shift starts. I do this everyday; so by the end of the week, I would be so exhausted. Unless I go for training during working hours, I don't think I have time for training after working hours. (Madam J, February 2012)

It is very shorthanded and there is no relief staff. When someone is sick or something, one of us has to work double shift. I don't see how they can send us for training. (Madam H, February 2012)

As their basic pay is low and overtime pay makes up a large proportion of their gross salary, leaving work for training has a punitive effect on their take-home pay:

> I was so happy that my agency finally sent me for training. Later, I was shocked that my pay was cut because they only paid me the basic pay. My family suffered when I went for training. (Mr. G, February 2012)

Skills upgrading and career progression

Whether "skills upgrading for a better job" as spelled out in the low-wage worker policy is a worthy pursuit, or a broken promise, is ultimately dependent upon the opportunities available within the internal labour market of the security sector. The interviewees felt that the reality was not rosy:

> I don't think I will have the chance to be promoted to supervisor here. There are two other senior colleagues ahead of me. Unless I quit and join another site, … the chances are slim. My agency hardly knows me; I have not spoken to anyone from my agency since I joined this site. (Mr. N, February 2012)

> I am realistic: one site only has one supervisor. I don't see how I can get the promotion here. Maybe I need to work many years, know many people. I am new, I have not seen a female supervisor yet. (Madam H, February 2012)

> The frustration of having to prove yourself all over again whenever you join a new agency also means your chances of getting the supervisory post quite unlikely, unless you are so outstanding, or the opportunity is just right. (Mr. L, February 2012)

Based on the above quotes, it is evident that upward progression opportunities and access to skills upgrading are limited. The short employment tenures with employers and the long working hours are not conducive for the low-wage security employees to access skills upgrading at all. The limited progression opportunity (a limited number of supervisory positions) also means that there

is no economic impetus for low-wage workers to initiate their own training. The barriers to accessing skills upgrading and work-based learning remain high for the low-skilled workers.

CONCLUSION

In this chapter, I have deployed the institutional logic approach to analyse and explain the roles, the actions, and the rationale of key stakeholders in the security services sector. Power relations and interactions among the stakeholders (the regulator – the Police Licensing Regulatory Department, the security services buyers, the SAs and the security employees) have resulted in producing a sector entrenched in low-skills, low-wages, and low productivity. The SAs are stripped of the discretion to design services that compete on value and skills, resulting in low quality employment. The security employees are disadvantaged in their access to formal and structured skills upgrading opportunities. While the regulator (the Police Licensing Regulatory Department) has the good intention of enhancing the skills level of the sector through mandating core skills, it had created the unintended consequence of overemphasising the security technical skills while neglecting the soft skills desired by the service buyers. The power relations among the regulator, the security services buyers and the SAs have resulted in the sector's inability to value and develop skills. The disadvantaged are the SAs and the security employees who will not be able to take advantage of the SkillsFuture agenda.

This chapter has contributed to the literature of working and learning in two aspects. First, this case study further highlights the importance in seeking total social facts that cover the sectoral logic of practice. It is inadequate to simply study the process of learning and the power relations at the micro-level or firm-level. As the case study has demonstrated, the unique logic of the sector permeates the sector, and the solution must be addressed sectorally. This approach provides the policymaker a clear understanding of potential levers of change. In this case of security services industry, the levers of change would include influencing the buyer's behaviour and the service contract, the roles of regulators in the identification and use of skills, the working conditions, and employment nature of the sector which have great impact on the employees' access to skills upgrading.

A second contribution of this chapter is the call for a cross-disciplinary approach of studying, working, and learning. The case study has adopted the integrated lens of economic sociology, sociology of work, political economy of skills and the lens of working-and-learning. I argue that the comprehensive understanding of working and learning cannot be limited to micro-level understanding of the context and practices within firms. Felstead et al. (2009) offered a concise explanation of the importance of creating a comprehensive picture that encompasses diverse perspectives:

> If certain phenomena are studied in isolation and/or extracted from their context, they will burn as individual candles, while the rest of the world remains in darkness. Moreover, by privileging certain phenomena, we begin to formulate incomplete and potentially misleading accounts of the world to which they belong. (p. 190)

As the case has shown, the sectoral level and the larger national level institutions have a major role in affecting working and learning arrangements. This analysis, therefore, allows the research community that seeks to enhance working-and-learning to cast the spot light on these issues of concern.

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8 - VORTEX PATHWAYS: UNDERSTANDING THE DYNAMISM OF NON-PERMANENT WORK

Sahara Sadik
Institute for Adult Learning
Singapore

INTRODUCTION

This chapter calls into question the application of the workplace literature to the experience of non-permanent work. Socio-cultural approaches for researching work and learning are rich in studying the situated individual, but have traditionally privileged understanding learners in stable, site-specific communities. This may make the field less ready to respond to the changing nature of work that comes with the rise of neo-liberal global forces, where non-permanent work arrangements are set to grow while permanent workers can expect to undergo more frequent job and career changes. Using stories based on semi-structured interviews with four non-permanent workers in Singapore, I propose studying the dynamism inherent in the pathways of non-permanent workers, or what I call "vortex pathways", as an important lens towards shedding new light on alternative approaches for researching learning through, for, and at work, with significant implications for research and policy-making in Singapore and elsewhere.

THE WORKPLACE?

In 2014, Singapore's Deputy Prime Minister, Mr Tharman Shanmugaratnam, delivered a wide-ranging speech in support of Continuing Education and Training (CET), declaring that the workplace would be a "major site of learning" (Shanmugaratnam, 2014, para 6). This marks a paradigm shift in Singapore's evolving CET system that has been anchored, thus far, by a competency-

based qualification system delivered mainly through classroom training, whose effectiveness in terms of delivering learning outcomes and developing the creative potential of each worker is contested (Wilmott & Karmel, 2011).

The recognition at the highest rung of policy-making that learning is embedded in everyday work practices is significant in a developmental state like Singapore with the resources and political will to marshal policy directions into programme implementation speedily and thoroughly. The question, however, is the extent to which this shift is adequate given the changing nature of work and what constitutes the "workplace".

Globally, non-permanent work arrangements are set to intensify in a post-Fordist economic environment characterised by shorter business cycles, and the outsourcing of services (Brown, Lauder & Ashton, 2011; Ross, 2008). Singapore, as a global city firmly plugged into the global economy, is not expected to eschew this trend of the rise of non-permanent work arrangements among its workforce even though the context of full employment in the nation-state over the last few years may mediate this shift somewhat. No standard definition of a non-permanent worker exists, but if we were to take two likely categories in the data by Singapore's Ministry of Manpower (2014), namely "Term-Contract Workers" and "Own-Account Workers", non-permanent workers comprised about 21% of Singapore's resident workforce in 2013. The proportion was likely to be higher if we were to include the foreign workforce that relies on state-issued passes that may last from months to up to three years.

Indeed, there has been growing interest among policy-makers in the non-permanent workforce in recent years for a range of reasons. Industry development agencies such as the Media Development Authority of Singapore and the National Arts Council have been keen to step up efforts to develop non-permanent workers in the creative industries, as part of a strategic plan to grow the sector's contribution to the country's Gross Domestic Product. Likewise, the Singapore Workforce Development Agency (WDA) has been putting in considerable efforts to facilitate the development of the adult education industry where non-permanent workers dominate, seeing them as the backbone for the successful delivery of ambitious CET goals. The bigger backdrop to these efforts is the government's push under the SkillsFuture to "to provide Singaporeans with the opportunities to develop their fullest

potential" (Government of Singapore, 2015, para 1) to drive Singapore's next phase of development as an advanced economy that is built upon a high-skilled local workforce, thus reducing the nation-state's reliance on foreign labour that has led to the ruling government facing significant political backlash. There is recognition that more needs to be done to reach out to harder-to-reach workforce segments, including those outside of permanent employment.

DYNAMIC PATHWAYS AS A LENS TOWARDS NEW UNDERSTANDING

The decoupling of the worker and his or her skill sets from ongoing or continuous relationships with any one employer, suggests the emergence of a different kind of worker. Career theories have lauded the advent of these so-called "boundaryless" workers who are now emancipated from the rigidity of working for a single employer, to exercise choice and ownership in the deployment of their skills to drive their careers at times and sites of their own choosing (Arthur & Rousseau, 1996; Hall, 2002 & 2004; McKeown, 2005). Sociologists, on the other hand, tend to take a less benign view of the context of non-permanent work, arguing that it leads to "flexiploitation", where workers run the risks of deskilling, inconsistent income and unclear progression pathways (Ross, 2008; Standing, 2011).

How non-permanent workers experience non-permanent work significantly affects how they learn and develop at work. The use of socio-cultural lenses reveals how learning at work is embedded in production processes and social relations, but this is typically studied within a single "locale or setting" (Agnew, 2013). This approach may no longer be sufficient for non-permanent workers where the industry really is the "workplace", as non-permanent workers move across multiple locales rather than reside in a single organisation. Sociocultural approaches emphasise the interdependence of social and individual processes in the co-construction of knowledge but it is equally clear that workplace learning theories derived from such approaches have tended to rely on work in stable, site-specific communities (Grugulis & Stoyanova, 2011; Guile & Lahiff, 2012). In other words, they assume that workers learn and work within a single organisation where there is clarity in the goals and objects of learning, and where developmental pathways and trajectories are typically provided for. Billett (2001), for instance, in articulating

the concept of "goals of performance", appears to suggest that such goals are pre-defined, and that it is the role of workplace learning strategies to make them less opaque to the workers for enhanced performance at work. The work context of non-permanent workers, on the other hand, makes such goals more nebulous. Fundamentally, permanent workers have the opportunity to align their goals and search for personal meaning within the cultural norms and forms of the company they work for (Du Gay, 1996). Non-permanent workers, on the other hand, tend to move across multiple sites, being simultaneously both an insider and outsider to the organisations they work with. Success can be seen as arising from the development of capabilities to make multiple transitions, as well as steering one's own pathway deftly in a journey that is characterised by elements of uncertainties, risks and self-discovery.

Indeed, the wage relationship posits a different set of opportunities and constraints for the non-permanent worker. Whereas there is income stability to a certain extent for the permanent worker because of the nature of contractual obligations that enable them to draw regular income, this may be less so for the non-permanent worker who has to negotiate continuously his or her place in the labour market for a sustainable living. The non-permanent worker may thus risk acting in the present or short-term horizon of looking and seeking for work, whereas learning and development assume a longer trajectory. Accessing opportunities for learning and development thus becomes a highly individualised process involving short-term and long-term trade-offs.

At another level, the workplace learning discourse tends to advance workplaces as coherent communities with access to experts and peer support. Such assumptions are challenged in the context of non-permanent work because of the professional isolation that non-permanent workers tend to experience as a consequence of their contractual arrangements. For instance, in the UK's freelance-dominated TV industry, experienced workers are said to not be available for novices to consult or observe because of the siloed nature of contractual arrangements, thus "creating a community with a missing middle" (Grugulis & Stoyanava 2011, p. 342). Some argue that non-permanent workers are denied the opportunity to develop cohesive work-based identities because these workers are not part of workplace interactions in the same way as more permanent workers. Perrons (2003), however, cautions against assuming that non-permanent employment inevitably creates social fragmentation given the potential for new working

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arrangements to be developed to foster communal and affective ties. This is supported by the research by Guile and Lahiff (2012), who find social networks particularly key for the development of freelancers. This finding suggests that beyond the actual worksites, the spaces in between worksites are equally vital.

One concept from the workplace learning literature of significance to non-permanent work is the process of knowledge recontextualisation; it is claimed to lie at the heart of workplace learning as knowledge is put to work in different environments (Evans & Gibb, 2009; Evans & Guile 2012). For the non-permanent worker, knowledge recontextualisation is inevitable in the context of the shifting terrains they constantly navigate. As observed by Bound et. al. (2013) of Singapore's film and TV industry, each work arrangement typically requires "rapid reading" of the visible and invisible embeddedness of dimensions of workplace environments, requiring high metacognitive and cultural skills on the part of the freelancer. How non-permanent workers develop the ability to put knowledge to work speedily in different environments affects their development significantly.

To begin unpacking the experience of non-permanent work, I propose studying the dynamism inherent in the work pathways of non-permanent workers. This approach helps us achieve two purposes. First, it helps move the researchers' gaze beyond understanding workplace learning as taking place largely within stable and site-specific communities. Second, it caters for temporal aspects of learning and development to help us understand how non-permanent workers progress over time. I build on the work by the IAL that recently completed a comprehensive study on the identity and learning of non-permanent workers in Singapore. The research was based on semi-structured interviews with 97 workers on contractual arrangements of a year or less in a number of sectors and occupations. Data collection was carried out between January 2013 – November 2014. The research identified four types of motivations that workers have for taking up non-permanent work, which shape their approach towards work and learning significantly, even though motivations may evolve over time (Bound, Sadik, & Karmel, 2015). In this paper, I highlight the pathways of one category of workers, namely the purposeful workers who deliberately opt for non-permanent work to develop their craft. This category of workers makes up about one-third of the total respondents in the study by IAL. By focusing on this category of workers, we control for diversity of individual motivations. In many ways, the purposeful category of workers are seen

as having the "right" motivation as they tend to have a strong work identity, being motivated by their craft. Yet their pathways are characterised by remarkable diversity in terms of growth, struggles and stagnation. I first present the stories of four purposeful workers in the technical theatre, film and TV, and adult education industries that represent to a certain extent the diverse pathways of their compatriots in the purposeful category. Pseudonyms are used. I then analyse the common themes in their stories towards developing a new way of understanding the work trajectory of non-permanent workers. Finally, I discuss the implications the findings have for research and policy.

FOUR WORKERS, FOUR PATHWAYS

Carl, 42 years, freelance sound designer

In our interview with Carl, he highlights repeatedly that non-permanent workers have to get used to the idea of a "lateral" progression compared to a "linear" progression that is typical in permanent work. A music enthusiast, he took up theatre work as a co-curricular activity at university, where he pursued a degree in computer science. His passion for sound led him to knock on doors of event companies to give him a chance to do sound work for free. Upon graduating, he continued freelancing until a friend suggested that he take up a scholarship to study sound design that was issued by a government body interested to develop the theatre industry. That meant a fully-paid four-year study and work attachment in the UK. At the heart of Broadway, his entrepreneurial bent saw him proactively seeking out notable sound designers to do work with them. It was a loose "apprenticeship" approach, in his words, where he helped out in some areas while observing their ways of working. The government scholarship meant that he had to complete a six-year bond back home in Singapore at a theatre venue in a technical-administrative position. This was a position that did not allow him to practise sound design, and he resigned promptly on the last day of his bond. But Carl immersed himself again in the world of freelancing in a non-conventional way. He went cold turkey by avoiding work as a sound

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[4]   The four categories of workers are (a) purposeful workers, who opt for such arrangements to develop their craft, (b) opportunistic workers who fall into such arrangements because of difficulties in navigating the permanent work market due to retrenchment and other constraints, (c) lifestyle workers who prefer a lower set of responsibilities, and (d) lifestage workers who value the flexibility of such arrangements because of caring responsibilities or for pursuing unique interests such as travel (Bound, Sadik, & Karmel, 2015).

technician even though he could command high rates and there was plentiful work to keep him busy. Instead, he only took on sound design jobs. He had a way of working where he was always keen to have sound assistants to help him even if that meant giving them a cut from his rates. This was unique, he says, because sound designers in Singapore are typically underpaid. For him, this was an early investment because he was building up an unofficial team to eventually take on more projects with bigger fees. He previously lectured part-time in a university degree programme, which was also his way of recruiting assistants. It was quite clear that he took on different jobs for different strategic reasons. Some jobs provided opportunities for him to express his artistic flair, while others were commercial work that brought in money and recognition but with limited avenues for creative expression such as National Day parades. His narrative is one of not allowing himself to stay in his "comfort zone" for too long. For instance, he purposefully sought out "touring shows", which he viewed to be an important part of being a sound designer. Such opportunities were lacking in Singapore, given the absence of a hinterland, but he deliberately sought them out to maintain the ability to be malleable to handle challenges at different cities while performing the same show. More recently, he took the plunge to set up two companies. In his words, this was "the biggest kind of jump … in terms of personal development, [that is] pretending to be businessman." At the core, he was a "craftsman". It is worthwhile quoting him at length here on the fundamental difference he saw in terms of pathways for a non-permanent worker versus a permanent worker:

> If you are into [a] linear career, please don't join us because you will be very unhappy. What I mean by linear career, [and] … the simplest of example will be [the] military rank system. You said in 10 years "I want to be general", so you slowly climb [and] climb. So every time you climb one step, … there is advancement, there is pay increment, [and] then you pat yourself and say wah, I'm doing very well. So if you are that kind of person, don't do what we do because you will be very angry. You will be like why am I still stuck here. [M]y career, I always tell [my students] that it's a lateral career, grow … wider. More people, more experience. Now I do shows in Singapore, I do shows everywhere. I can still much do the possibly the biggest show there is in Singapore at that point in time and then … a one-cast theatre [in a] small little venue. I enjoy … [the] fluctuation …. I don't need the whole linear, I don't want to be a general.

Hannah, 40 years, freelance video editor-cum-trainer

While Carl and Hannah share the same narrative of a passion for their craft, they evolved their work pathways differently. While Carl assumed a new role as a businessman, Hannah was developing to be a freelance educator. A chance opportunity to work on video-editing convinced Hannah she had found her life-time passion. She soon found work as a permanent staff in Singapore's largest broadcaster. Not formally trained in video editing, she developed her skills through an "apprentice kind of relationship" with senior video editors. She subsequently joined a production house, but felt she was stagnating and so resigned to take up a film course. This was also the time she started freelancing. Like Carl, she picked and chose her jobs, using the project interview as a two-way process for her to assess the employer. She freelanced across a very wide spectrum of production houses, and edited almost every genre from drama, entertainment, sports and documentary. But her forte was documentary. In the last four years, she reduced her editing assignments to take on teaching roles because the punishing hours and strain on her eyes were taking a toll on her health. She was "quite happy" to make the switch. She said she learnt more as she taught. For instance, she made it a point to record "stories" from her editing assignments for sharing with her students, and this was in fact an exercise in reflection. Interestingly, Hannah applied the same approach as Carl of choosing and picking her teaching assignments. She first started out with the arts schools, but decided to step away from them to focus on workshops. In fact, she was proactively looking at running a new series of workshops with a software company. In her interview, she claimed she did not "network at all" but her narrative demonstrated that she was well-plugged into her professional networks. This included being a member of a society for editors that also meant invitations to product launches. She also received invitations to film screenings, which was another platform to exchanging tips and techniques. She was thinking of starting another editor-user group for a new software product, which was valuable because technological change had been "really very fast and furious". To her, the pressures of time, money and reputation compelled freelancers to produce good work fast, whereas one was "passive" as a full-timer. In her words, "the best way to upgrade our skills [was] to make sure that we churn out good and innovative projects."

Lata, 45 years, freelance adult educator

The narratives of Carl, Hannah and Lata share a common theme of enthusiasm for their craft, but uncertainty appears a dominant theme in Lata's pathway. She first developed her interest in adult education as a trainer in the military. She left her job with the interest to pursue this further, but did not know if she had what it takes and how to get there. At one point, she called and wrote to various people for six months, including offering to work for free, but no one was forthcoming. Finally, a work contact helped her get into a major training organisation where she was soon developing curriculum and facilitating workshops for a key training programme, and became what she calls a "core trainer". Four years on, however, management issues led to a change in the way things were run, and she soon found she had been relegated to being just one of the trainers, and assignments were getting fewer. Upon reflection, she realised that she had been too involved with the training organisation, assuming the work would continue to come even though her colleagues had moved on to other companies and urged her to do the same. She realised then that she should not be "putting [her] eggs in one basket." However, she might be repeating the same mistake. At the point of interview, she had been with another major training organisation that she strategised to get into. She had been spending more time there and turning down other opportunities. This was "not healthy", she says, as it ran the risk of her being struck off the lists of the other training organisations. Although her behaviour mimicked that of a perma-temp, Lata remained interested to continue as a non-permanent worker. She had turned down an offer to be a permanent staff at the current major training organisation. Of note in her narrative was her lament that there were insufficient platforms for sharing, making her experience distinct from that of Hannah who was plugged into networks of sharing. Lata shares:

> To be very frank, we don't really talk much on what we do and how we do over here. I think that is something quite consistent everywhere …. This is something I feel personally as an adult educator that something is missing … the lack of sharing …. Just … two days ago, I was talking to one of the trainers and the trainer said yeah, certain times we have to keep our trade secrets. If you don't keep it, you will lose.

This lack of sharing may be related to wider industry practices that put freelancers in a disadvantageous position in relation to the training organisations that hire them. Lata, for instance, felt that WDA, as a central organisation, could provide adult educators with credentials to acknowledge their role in running WDA-mandated skills framework. Freelance adult educators can use such credentials as evidence to secure jobs elsewhere with more confidence.

Hannah, 40 years, freelance video editor-cum-trainer

Ashley's story is one of a struggle between pursuing one's passion, while also fulfilling self, parental and societal expectations of a "getting a real job". A visit to the Sydney Opera House convinced Ashley that he wanted to work in lighting. He wrote to a theatre venue to enquire about a suitable position. He was deemed to be promising, and was put on a special one-year work-training programme specially for freelancers where he received theoretical classroom lessons and work opportunities, including being assigned a mentor who was an experienced full-timer in the theatre venue. Ashley also had to complete a thousand hours with the theatre venue. While Ashley learnt a lot from the mentor and was soon entrusted to do lighting programming on his own, he was unhappy with the authoritarian approaches employed by his mentor. Before long, he felt out of favour with the mentor and became "just one of the crew." He became more and more jaded with work because of the instability of income, as he was receiving fewer calls from the theatre venue. His only other source of work assignments was through his ex-school teacher. He felt he needed something "more permanent", and decided to sign up with a recruitment agency where he found work as a shipping clerk. He continued to freelance in his free time, and was recently offered the chance to do lighting design jobs. He said that he managed to feel more passionate towards theatre nowadays because it did not feel like a job anymore. He started out with passion "but slowly the passion became money and money became a job" while he had to juggle that with "bills and stuff". Looking back, he felt he definitely did not know the difficulties of freelancing. He felt that a stronger mentor-apprenticeship relationship would have helped him stay on as a freelancer. He would also feel more confident about freelancing if there was a pathway, for instance going into teaching, because he saw older colleagues who were getting weaker but performing the same work as him. Ashley's comments about the need for a more conducive support structure is ironic as his narrative demonstrates that he deliberately

avoided his non-work social networks. He said he did not smoke and drink, and therefore did not hang out with peers. He noted that there were informal groups out there, and they even "go on holidays together". For him, he tried not to hang out with them and tended to "just go home" after work.

VORTEX PATHWAYS: TOWARDS AN UNDERSTANDING OF THE TRAJECTORY OF NON-PERMANENT WORKERS

After analysing the work pathways of our four non-permanent workers, we can agree with Carl's comments that the pathway of non-permanent workers is certainly not a "linear" one. Yet, a form of progression is occurring. A "vortex" is a suitable analogy to understand the non-linear work pathways of non-permanent workers. In fluid dynamics, a vortex refers to a whirling mass of fluid or air, where the flow is mostly rotating along an axis line. The axis is the freelancers' craft identity, and he or she is best served when work activities reflect this core. This explains why the picking and choosing of work by Carl and Hannah is critical, as present work propels future work. Carl deliberately turned down technician assignments even though those jobs were readily available, as he wished to establish himself as a sound designer. Carl also invested early by taking on assistants even if that meant a cut in his earnings. This then allowed him to take on larger projects. Lata's permatemp behaviour, on the other hand, is perfectly logical in the current circumstances but could potentially jeopardise her future prospects. These narratives highlight the unique temporal challenge non-permanent workers face such that they need to work based on present circumstances but with an eye on the future. In their daily negotiations of their place in the labour market, their work choices have to make sense in the present, both financially and professionally, yet also allow them to occupy their desired space in the future.

Vortex breakdown may occur when there is insufficient activity such as in the case of Ashley, or when the activities are too disparate and takes the worker away from the core. Vortices need not be steady-state entities; they can move and change shape. Thus, Carl reinvents himself as a businessman, while Hannah assumes a new role as an educator. The diversity of experiences lends to a significant maturing of the non-permanent worker, such that even if he or she was to take on the same assignment again, he or she would be performing the task at a different level. This means that knowledge recontextualisation is not just about putting knowledge to work in different environments, but also

providing a platform to understand past experiences that then informs future work. Thus, Hannah's work in a wide variety of genres sharpens her assessment of how distinct the other genres are from documentary, which is her preferred genre and provides a source against which to evaluate the quality of the work.

Lata and Ashley's narratives also suggest the importance of understanding the spaces in between worksites. Lata laments the lack of sharing platforms, while Ashley avoids them, not being cognisant of the importance of such platforms for thriving as a non-permanent worker. Guile and Lahiff (2012) highlight the importance of building "social capital", that is the ability to navigate networks to secure jobs. The analysis here suggests that the spaces in between worksites go beyond networking, and are in fact support structures that act as a bulwark against the isolation that non-permanent workers experience. They are about sharing tips and techniques, as well as transmitting work norms and signalling trends, even if they also perform the role of distributing jobs. In our study, the spaces highlighted by non-permanent workers may be night-outs at a pub where lighting practitioners congregate, or social media platforms like chatrooms. There may also be informal mentoring such as during downtime at work when a more experienced co-worker demonstrates some tricks of the trade to wide-eyed juniors, or personalised coaching by an industry veteran or veterans both during and outside of work. Figure 1 provides a representation of the vortex pathway described in this section.
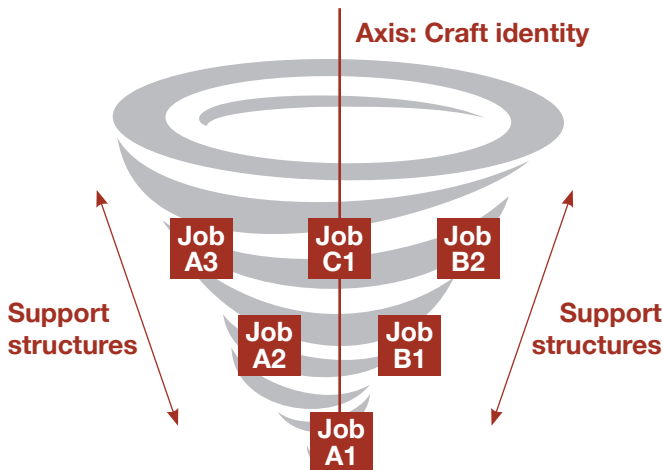

Figure 1. Vortex pathways of non-permanent workers. A non-permanent worker may start off with Job A1, but access other work opportunities (e.g. Job B1 or Job C1) expanding their range of experiences to enable deeper re-contextualisation even while performing similar A type jobs. Work choices can strengthen craft identity, contributing to the vortex character of their work pathways.

IMPLICATIONS FOR RESEARCH AND POLICY

The dynamism of vortex pathways holds significant implications for research and policy. As noted by Evans (this volume), much of the research on communities of practice is focused on the immediate work setting or group. While the workplace remains an important site for analysis, the experience of non-permanent work suggests that the spaces in between the worksites are equally crucial. That these may be virtual environments or temporary sites that shift frequently such as night-outs at different pubs, make research into such sites challenging. At times, the analysis of the lack of such spaces may be even more illuminating as suggested by Lata's experience. How workers effectively negotiate the multiple work and non-work sites also requires deeper research. Another important dimension is the simultaneous negotiation of the dual identity of the worker as both a practitioner/learner and a wage-earner that are amplified in the context of non-permanent work. Understanding the short-term and long-term effects of work choices are critical towards understanding the learning and growth, or lack thereof, of the non-permanent worker. It becomes valuable to understand why some work choices may make sense in the present but work against the worker in the future, and vice-versa.

The spaces in between worksites that shape vortex pathways also suggests that formal work-based programmes can play an important part as a key space to facilitate the learning and development of the non-permanent worker, provided they are connected to the political realities and social relations of the workplace as experienced by non-permanent workers. The work-study programme that Ashley underwent, which gave him a good grounding in terms of technical skills, failed to adequately prepare him for the reality of working across multiple sites. There are other significant implications to policy. The analysis of the pathways of non-permanent workers suggests that Singapore's emphasis on competency frameworks that focus narrowly on adaptation and compliance has little value-add to the long-term development of the non-permanent worker who has to carve out a niche for him or herself to stand out in the labour market. More importantly, competence frameworks are typically based on assumptions of linear progression, whereas the vortex quality of the pathway of a non-permanent worker requires present work to propel future work. He or she also has to negotiate his or her own current

and future place in the market as there are no fixed pathways, requiring great dexterity as well as reflexivity on the part of the non-permanent worker. At another level, social spaces are vital in our analysis, but the extent to which Singapore policy-makers will be comfortable to identify them as genuine learning sites remains to be seen. At present, we note the fervour with which Singapore policy-makers are moving beyond the traditional classroom training paradigm towards embracing workplaces as key sites of learning. We fear, however, that a single-minded shift towards workplace learning ignores the reality of shifting worksites due to the changing nature of work.

CONCLUSION

Building on the pathways of four non-permanent workers, I put forth a conceptual frame of vortex pathways for a better understanding of the trajectory of non-permanent workers. The vortex is rotating on an axis that represents the workers' craft identity. The quality of current work influences future work such that the vortex is fast-expanding, or is at risk of breaking down. Once formed, the vortex may also move or change shape, suggesting the agency required of individual workers. This understanding of the trajectory of non-permanent workers is an important lens towards shedding new light on alternative approaches for researching learning and development through, for and at work that has traditionally privileged understanding learners in stable, site-specific communities. Beyond specific worksites, the concept of vortex pathways points to the need to understand the dynamics inherent in worksite transitions, and the spaces in between. Vortex pathways also suggest a time dimension as present work propels future work. A deeper understanding of the dynamic pathways of non-permanent workers will make the field of workplace more ready to respond to the changing nature of work and workplaces.

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9 - FREELANCE ADULT EDUCATORS IN SINGAPORE: LEARNING TO SHAPE-SHIFT

Annie Karmel
Institute for Adult Learning
Singapore

An increasing number of workers do not conform to dominant notions of the employee bounded by a single organisation (Van den Born & Witteloostuijn, 2013). In this context, workplace learning is spread out across and between multiple sites with an individual facing pressure to figure things out with little formal structure to scaffold the way. Through the stories of freelance adult educators in Singapore, we can gain a sense of the potential for workplace learning as, perhaps, the only site for learning the crucial capability of reading this diverse and unpredictable environment and shape-shifting. We see this involves tension between a freelancer's internal compass, and the varying expectations and values of their clients and learners. These tensions are negotiated through experience, interaction, and reflection as freelance adult educators seek and perform work.

This chapter is based on the data and analysis of a study conducted by the Institute for Adult Learning or IAL (Karmel, Bound, & Rushbrook, 2013), with a focus on one aspect of the findings – shape-shifting. A qualitative methodology was adopted for this study with thirty adult educators (part of a larger study; see Bound, Sadik, & Karmel, 2015) participating in semi-structured in-depth interviews that were thematically analysed. The participants were selected to cover both the national qualifications and private markets, and trainers across a range of subject areas with varying years of experience and levels of income were chosen. All participants needed to conduct some face-to-face training in a non-permanent employment arrangement in order to be considered for this study. Pseudonyms are used throughout this chapter.

Shape-shifting is "behind-the-skin" work that needs to be done while appearing fit to adapt to each client's or learner's needs and able to offer appropriate knowledge only in contexts where it is valued (Fenwick, 2008).

Bauman (2005) shows how individuals are being increasingly positioned to lead a "liquid life" where workers develop multiple identities according to their positioning and contribution to different work teams. This is amplified for freelancers, where, in a "liquid life", success can arise from the development of capabilities to make multiple transitions or shape-shift and to navigate the diverse "worlds" they operate within:

> I think if you want to be a freelance, you got to be like a chameleon actually. You fit in to which organisation you go in at which level. I train the inmates, for example, in prisons so I do it in a certain way. If I'm doing corporate, then I have to do it another way. I could be training in Singapore, in Vietnam, Indonesia, so wherever I go I have to understand the culture and then blend in. ... you have to adjust yourself. (Evans)

> The thing is my customer send me ... to places they know it's challenging, to go to Egypt or Oman but you're not training Egyptians, ... you have different ethnics inside and you have French and English and this I found more and more. ... They trust my ability to manage these kinds of situations. And I show to my customers being in this kind of places here I can really make the difference to somebody compared to somebody else. (Bashir)

Shape-shifting encapsulates making sense of current situations through drawing on experiences and understandings, and is particularly important for approaching new clients and learners, positioning the "right face" and moving amongst diversity. This can challenge an individual's internal compass if shape-shifting occurs absent-mindedly, making it important to be reflective and aware of intentionalities and purpose. Learning to be a shape-shifter is located necessarily between the potency of new experience intermingling with the frequency (Billett, this edition) of seeking and adapting to new experiences, thus reinforcing and generating confidence to shape-shift without fragmentation, fear, and a feeling of fraud. Here the importance of individual agency and exercising intent become particularly apparent for seeing, creating and choosing to make use of freelance work affordances that can be effectively operationalised by shape-shifting.

This chapter will provide background on freelance adult educators, focusing on the diversity and flexibility inherent in their work. It will then look at how people learn to read the environment and shape-shift as a part of their work where experience, interaction and reflection are raised as important sites for learning. Stories of shape-shifting regarding language and values, agitation and diverse learners, choosing work and negotiating with clients as well as the importance of being reflective and aware, are shared in an effort to argue that, although freelancers are not bound by a single organisation, the nature of their work offers crucial sites for learning how to shape-shift amongst diversity while negotiating possible feelings of fragmentation and fraud. It is hoped that by raising the challenges and opportunities for learning to shape-shift through and for work, this chapter can further contribute to expanding the understandings of workplace learning introduced in the first section of this book.

BACKGROUND: FREELANCE ADULT EDUCATORS, DIVERSITY & FLEXIBILITY

The term "freelance" seems to be most commonly used by people in Singapore operating in non-permanent work arrangements and connotes being paid on an hourly or project basis, for one or multiple clients. "Adult educator" is a term coined by the IAL, Singapore, referring to people who develop curriculum, train, and/or assess adults. These workers are often known by many other names depending on personal preference or institutions of engagement. Other terms include trainer, teacher, lecturer, educational manager, coach, coordinator, mentor, training practitioner or facilitator in conjunction with adjunct, associate, casual, sessional, occasional or portfolio workers (Clayton, Meyers, Bateman, & Bluer, 2010; Guimarães, Sancho, & Oliveira, 2006; Jütte, Nicoll, & Olsen, 2011). This is a reflection of the diverse nature of the field, and also indicates the complexities of shape-shifting as an individual tries to identify which is the appropriate persona for which types of work.

The dominance of casual work arrangements for adult educators is prevalent in many developed economies, including Singapore, as the pressure to respond to unpredictable market demands makes a flexible pool of practitioners attractive (Simons, Harris, Pudney, & Clayton, 2009). The demand for flexibility has seen short-term project work become the norm for many adult educators. The inherent flexibility of such work arrangements limits the space for strong,

shared and common experiences, structures, or understandings that bond freelancers to an organisation, which has implications for workplace learning opportunities and how an individual makes sense of what they need to be able to do and value (Farinelli, 2010; Guimarães et al., 2006; Robson, Bailey, & Larkin, 2004). Xavier, a Quality Management Systems Trainer with 20 years' experience, shares the frequency of meeting new clients and how different this is compared to working for one company and having time to get to know it:

> I have to meet with so many different types of people almost every other day. So it is very, very taxing on the mind. You work for a company, the one boss and three supervisors you have to deal with. After a month or two you know how to deal with them. But with the customers that changes every couple of months, and in a week we may see two-three customers, and you may see them at different time of the life. So that is very, very taxing. (Xavier)

This diversity and mobility exists on a spectrum, however, with some freelance adult educators operating across multiple clients with multiple projects, like Xavier, and others looking more like "pseudo-permanent" workers, working for a single client with an, often, falsely secure impression that they can expect repeat assignments. Finding a place on this spectrum is initially informed by motivations for entry, where new entrants may be pursuing this work very intentionally, compared to those who are trying it out as the best current employment opportunity, or people who are carers or semi-retired and want some work but cannot commit to a full-time permanent position (in Singapore, permanent part-time positions are very rare). New entrants may find their intent to see and make use of the affordances of freelancing increases or decreases depending on their experiences, with some freelance adult educators finding mobility, diversity, and autonomy exciting and rewarding aspects of their work, while others may be valuing a slower, less mobile, slightly more predictable work flow. For the former group, shape-shifting is a crucial capability that their flexible work arrangement values, and developing this is something that can only occur through the getting and doing of work. The latter group may not be interested in utilising this potential of freelancing, or may limit it to interfacing with learners. New entrants from both groups, however, may find it hard to effectively shape-shift or recognise it as an explicit part of their work to be developed.

LEARNING TO READ THE ENVIRONMENT AND SHAPE-SHIFT

The nature of freelance work as an adult educator is posited to be individualistic and disconnected from organisational culture and practices; yet, much workplace learning literature emphasises the role of one's work environment and fellow employees as key factors for learning to do a job. The literature suggests that many freelance adult educators encompass an ethos of learning. They say they enjoy the constant need to change, learn and improve – Maier-Gutheil and Hof's work (2011) calls this "The Permanent Learner". Being a permanent learner means that unpredictability and diversity are not threats as needing to adapt constantly is embodied by the freelancer (Maier-Gutheil & Hof, 2011). With this mentality every experience can be viewed as a learning opportunity, and the individual can strive to appropriately shape-shift to meet diverse situations, which challenges and minimises routine boredom in what can be a flat career.

Moving between clients in an unpredictable market makes it crucial for freelance adult educators to know how to communicate that they have something their competitors do not in a way that speaks to potential clients (Edwards & Usher, 1996; Fenwick, 2008). Fenwick argues that freelance adult educators, particularly those with multiple employers, need to embody the ability to make new processes and structures of work, constantly bring something new to clients, and capitalise on their uniqueness, so that clients believe they have something special to offer. Communicating this in a way that aligns with clients' values is integral for freelancing, yet this is not an easy aspect of shape-shifting for many adult educators to learn. Lata, who had nine years' experience training trainers, depicts how difficult it can be for newcomers sharing, "It was trial and error and I realized that I have the thing but I do not know how to go about being an adult educator." It is through various ways of learning that an individual can absorb and react to norms and behaviours, informing their ability to read what is going on and shape-shift accordingly (Edwards & Usher, 1996). The processes entailed involve a series of knowledge recontextualisations, where knowledge from an original context is put to work in different contexts (see Evans & Guile, 2012; Evans, Guile & Harris, 2009).

Freelance adult educators talked largely about learning to shape-shift through experience, interaction and reflection. These three components are interrelated, with interaction being a part of experience, and reflection encompassing the process of making meaning of experiences inclusive of interactions. The following discusses experience, interaction and reflection for the workplace learning of freelance adult educators as they figure out how to shape-shift in terms of language and values, for learners, or for clients, and by being explicitly aware of personal thought and action.

Experience, interaction & reflection

Experience has always been a key signifier for adult educators as many depend solely on their industry experience, which they can adapt and reapply (Buiskool, Broek, Lakerveld, Zarifis, & Osborne, 2010). Also important, is continuing to learn through day-to-day experience. Experience provides learning that is "open, indeterminate, flexible, and not necessarily an organised process that favours rapid adjustments to changes" (Guimarães et al., 2006, p. 24). For a freelancer, trying to get work and delivering the work are learning experiences that help them understand what they can do, need to know, and what is valued as they try to shape-shift for and in different environments. Actual worksites have their own norms and it is only through experiencing them that one can be "socialised" and new ways of acting can be created and recreated (Guimarães et al., 2006). This can be particularly challenging for short assignments, which is why the ability to read quickly and shape-shift becomes crucial. Freelance adult educators talked about learning to read and shape-shift for appropriate language and values, agitation and diversity, choosing work and negotiating with clients, as well as the importance of being reflective and aware. Each of these situations requires sensitivity to what will be valued and how to present the right face, thus minimising friction, poor reputation, and maximising "value add", while retaining personal integrity.

Interaction is a part of experience that is particularly important for learning about appropriate languages, dress, as well as sharing more explicit types of knowledge. Learning interactions may occur with peers, mentors, learners, clients, and administrative personnel, and can involve questioning, listening, observing, discussing, writing, and reading amongst other actions. Interaction can also occur with texts, and may be mediated by artefacts. It is through interaction that knowledge is shared and created.

Reflection is largely seen as a process of mentalist, individual meditation on lived experience. Boud (2010, p. 32, as cited in Fenwick, 2010) however conceives learning as reflection, whereby "Reflection connects work and learning; it operates in the space between the two. It provides a link between knowing and producing". In this sense, reflection brings meaning to both experience and interaction as sites of workplace learning (Lehman 2003). Many commentators in adult education argue that the "reflective practitioner" has become a key signifier in the professional development of adult educators due to the unpredictable nature of adult education rendering irrelevant the notion of learning theory and applying it in predictable ways (Jõgi & Gross, 2010; Smilde, 2009, p.84).

Collegial sharing, language, and values

The work of freelance adult educators involves the multiplication of work environments and fellow colleagues and learners, thus changing the spaces of workplace learning. This may offer expansive challenges for workplace learning, but the multiplication of "colleagues", especially those who can be seen as competitors appears to restrict openly sharing and learning to "read" through interactions with peers. Here many freelance adult educators find their occupation can be a lonely one:

> This is something I feel personally as an adult educator is missing is that the lack of sharing. ... So this is something very sad ... there's always an element of fear that the more I share, I will lose what I have. (Lata)

In this context, there is an irony, where learning about appropriate language and cues for shape-shifting is highly informed by interpersonal interactions and experience, yet this appears to be largely through reflecting on instances with clients and learners, and less so with professional peers in similar markets.

Our less experienced adult educators had trouble figuring out who they could be and how their prior work experience could help them, making it hard to negotiate and shape-shift. The more experienced freelancers had been practising shape-shifting for much longer, and operated in a way that ensured their knowledge kept up with market demands and they had a healthy range of experience to draw from to read the situation as they chose the "right face" to don. Nevertheless, moving into new markets is always challenging:

They were not open to that and I think at that point, I kind of lost the day because I knew that I kind of frightened them. ... I lost a revenue opportunity which I don't know if I could have handled it more respectfully. ... So if I knew I would be talking to these people like five years of experience in the industry, then I wouldn't even talk about what am I going to do specifically ... until I reach a higher level. ... There are other situations where for example when I work with schools, I know what to talk about, I know how to talk about my strategy in meeting their needs … Most of the time it's by working with, by observing other people working with them and also talking to people who have worked in those kinds of industries, how I got a sense of what do they really need and what would they accept from me. (Karthik)

In this quote, Karthik, a leadership and organisational change trainer of three and a half years, shares a recent experience where he lost a potential client as he was focused on his organisational change ideals, which did not resonate with a client who wanted a "normal" training product. He expresses how reading these situations is difficult when the profile of the people you meet with is unknown. In other situations, however, Karthik has a lot more experience and can easily shape-shift to present the right face and communicate how his ideas align with his client's goals. This suggests that shape-shifting between intrinsic ideals and client ideals in different markets can offer different degrees of challenge. This degree of challenge depends on experience and the ease to which a freelancer can read the appropriate spaces to express features of their work, firstly to get the opportunity, and later to maximise value for all parties.

Here the job of a freelance adult educator comes with the pressure to perform, appear cutting edge and to prove their knowledge in a market of impressions, while also keeping in mind moral and professional decisions (Fenwick, 2008). Henry, with six years' experience as an innovation and teambuilding trainer, has figured out a few tricks that he feels help him "speak" to potential clients using "professional" language:

There are some times when I need to meet customers and try to sell a training program. So it [speaking Learning & Development language] brings you a lot closer. For example I could tell them, before you need to do this, let's do a TNA ([training needs analysis]. They say oh, actually you know your stuff you see. Whether you know how to do it or not, that's beside the question. But in a sales pitch it actually helps a lot. ... It's not just about selling a program, but understanding what your customers is looking for and what they want. (Henry)

Karthik shares a broader view and describes how he reads the "transactional" market and the "mindset change" market through the language used. His views on this inform his business decisions and which languages he is interested in speaking and connecting through:

These are the three questions that you hear - Can you do it? Are you available and can we afford you? If you fulfil these three criteria, probably you get the job [in this "transactional" market]. Whereas in the other space, if you want to look into mindset, it seems to be a much longer process and it needs a bit more patience. ... I sometimes make a lot of mistakes [but getting work depends] on my own experiences and sensing about what do they really want. (Karthik)

For him, and other freelance adult educators like Cathy, a communications trainer with seven years' experience, below, who enter intentionally to pursue the profession, reading the markets and shape-shifting to get the right work is important so that intrinsic values and their "niche" area are not corrupted:

Yeah there is sort of some, many hidden rules, unspoken rules, and that's the reason why once again, I'm highly selective of who I choose to collaborate with, to make sure that we are on the same plane. ... I may offend certain people by not accepting their propositions, but I know ultimately I sleep better at night. (Cathy)

These stories illustrate the tension between being able to read the markets and its various values, and figuring out the appropriate languages that also consider intrinsic values. Reconciling this suggests that the individual's ability to negotiate with the environment are crucial.

Reading agitation and shape-shifting for diverse learners

Diversity of learners is a well-known characteristic of the occupation. Adult learners can be attending a session for varying reasons, and have different ideas of what a program may "give" them. They can come from a multitude of backgrounds and may be from a single organisation or many. In many cases, a freelance adult educator will not have a detailed idea of the composition of their learners until they meet. This situation requires adept shape-shifting skills in order to read characters and values and try to adjust to maximise the impact of a session. Feeling confident when it comes to "reading" learners and adapting to the unexpected in a classroom appears to be reasonably "matter-of-fact" for many adult educators as Qui Ling says " you have all kinds of participants ... you learn and adapt to the different situations. (Qui Ling)

Bashir, a teambuilding and leadership trainer, has found that 15 years of experience has seen him change the way he faces issues with adult learners, such as those who are irritated because they would prefer to be somewhere else. In this way, he has learnt to adjust his approach to address a situation without agitating it and potentially affecting his relationship with his client:

> I always expect the unexpected and I try always to see by first managing, preparing myself for anything that can happen. So I think the experience at that time give me enough maturity to manage any situation. I was in Australia two days ago ... I started training, someone, he was totally out of, he was on the phone all the time. It's disrupting. You need to address that but how to address that? The thing is yes, ten years ago, I would say something and put everything wrong and it's happened to me while in Paris one day. ... So I said would you mind just for the rest being if you stay, just stay with us? So he said okay. Please send me your feedback ... then we can communicate [any issues you have] with the company. So you see, I think the experience helped me to manage change. (Bashir)

Bashir's skills in reading and addressing agitation involve internal dialogue and managing his own feelings in view of wider repercussions. Most freelance adult educators took reading diverse learners, and adapting to different environments as a part of who they were, which developed over time to cope with more complex issues.

Choosing work and shape-shifting to negotiate with clients

Similar to Bashir and his learners, Cathy shares how she reads and reacts to clients with unreasonable demands. She has two strategies developed through her experience that are informed by her understanding of the market, client responsiveness, and her own values:

> If they fall into that category of being a little bit unreasonable in their demands, the best way for me is to avoid doing business with them. The other way is to present different. Sometimes we have to sort of set the tone right at the beginning. So, in any sort of relationship, whether it's with client, participants, I find that, I learn that, one of the most important thing is to set their expectations early in the game, not late. (Cathy)

By setting the "right tone" early, Cathy needs to read the situation and figure out how to ensure things stay on track, minimising the risks to her meeting both client and personal needs. Her experience has shown her that letting things slide can mean a lot of unpaid work and less satisfied feelings for all parties involved. If she senses that clients will be unreasonable to work with, she makes the judgement call to avoid them. She also does this in relation to understanding what choosing an assignment means for her reputation, credibility, and niche. For other freelancers, however, getting to a position of being able to not only read when assignments are likely to go bad, but to turn down work, is one of luxury.

Finding himself in an undesirable situation, Terrence, a literacy trainer of six years, leveraged on his corporate experience to try to overcome his burning frustration with the system that he could not afford to avoid working with. He decided to try to communicate carefully with designers so that materials could be improved for his learners. This involved reading and shape-shifting to present the appropriate professional face to his irritated learners, and then a different face to the sensitive in-house developers, without jeopardising his own reputation from either side:

> The fire was burning because as it is, when I saw things that weren't so right, I made feedback to the organisations. ... I journeyed or I work or operate at a level of the learners. ... I think my corporate experience helped in terms of not stepping on someone's tail. (Terrence)

As a freelancer has little control over the organisations and operating systems in which they work, it can be difficult to know how to shape-shift to meet the needs of diverse situations and to try to change things. The skill in making these decisions and acknowledging what future repercussions they may have are crucial for freelance adult educators. Permanent workers may face similar challenges within their organisation, yet their continuing work does not depend on the success of their negotiations in the same way.

Reflexivity and being aware of shape-shifting

Being able to read the environment and acknowledge possible repercussions of actions in their context makes reflexivity an important workplace learning strategy for freelance adult educators. Edwards and Usher (1996) argue that reflective practice, which revolves around the bringing together of thought and action is a key condition of flexibility: "the significance of reflective practice becomes clearer when it is situated within socioeconomic changes" (p. 222). Karthik offers his perspective of reflexivity and the important place it has for freelancers as they figure out why and how to shape-shift for their work. This quote also highlights the importance of an internal compass for many adult educators who are often explicitly seeking meaning from their work choices:

> I was disillusioned initially thinking that everyone has the skill to self-reflect and I realised that probably not. ... And for one to go through this path of self-reflection and making adaptations is a key skill that one needs to have. ... It has to be an internal process and you need to create space for that and freelance will give you a lot of space ... so I get a whole month to think through, reflect and make sure that what I do is in alignment with my goals. (Karthik)

It is not simply the nature of professional practice that necessitates reflection-in-action, but also reflexivity for and between action in context. It is a part and an outcome of a particular organisation and division of labour within which flexibility and unpredictability are key components, alongside intrinsic motivational factors. For workers reliant on short term contracts and freelancers navigating work opportunities, reflexivity becomes all important, but, as Edwards and Usher (1996) take care to note, the possibility for enterprise of the self is neither uniform nor equal.

SUMMARY

Shape-shifting does not necessarily mean always changing face to appease clients, but more importantly, involves sensitised communication skills that can reflect a freelancer's best position at that time. Here reading the market, client, or learner is important, as is reflecting on what various approaches may mean in terms of personal repercussions. The significance of prior knowledge and skills is widely acknowledged, as is the evidence that moving into and between new workplaces involves much more than the simple transfer of prior skills and knowledge. Skills and knowledge have to be developed and changed, as they are operationalised in the culture of, and between, new workplaces. Furthermore, it is not the skills and knowledge that develop, but the whole person, as he/she shape-shifts, with greater or lesser success, to working, and getting work, in a new environment (Hager & Hodkinson, 2009). Workplace learning for freelance adult educators illustrates the importance of the "entwinedness" of context, where what is learned is driven by what the work values. Fluently moving and shape-shifting to recontextualise what you can do and align it with what clients and learners want you to know and what they value is crucial. This is particularly true for adult educators' intent on making the most of the affordances of freelancing, and its inherent mobility, unpredictability, and diversity. For freelance adult educators in less mobile arrangements, their shape-shifting is likely to be much weaker, and limited to their interactions with learners, which may be to the detriment should their work arrangement discontinue.

As mentioned by Billett (this edition) how one "reads" and shape-shifts is person-dependent, influenced by the individual's intentionalities, subjectivities, and cognitive processes. Some adult educators seem better at figuring out how to read and shape-shift, or indeed, whether they would prefer to decline work as shape-shifting to meet some client's needs would not align with their intrinsic values. Those who are pro-active in seeking information on their potential clients and learners develop an innate ability to sense different vibes through gaining a variety of experiences and interactions, and reflecting on these. This is an ongoing challenge, yet through learning within and for the work, reading each new potential client becomes slightly more natural.

Through the stories of freelance adult educators in Singapore, we can gain a sense of the potential for workplace learning as, perhaps, the only site for learning the crucial capability of reading the environment and shape-shifting. It is only through the experience, inclusive of interactions, and reflecting on these, that freelancers can gain insights into the diverse, unpredictable, and flexible terrain, and what they can, should, and want to bring to it.

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10 - PREPARING SINGAPORE'S ADULT EDUCATORS FOR WORKPLACE LEARNING: RETHINKING THE NOVICE TO EXPERT METAPHOR

Peter Rushbrook

Royal Melbourne Institute of Technology University
Australia

INTRODUCTION

Singapore's Workforce Development Agency (WDA) was created in 2003 and inherited a disparate Continuing Education and Training (CET) sector with a diverse community of trainers, the majority of whom did not have training qualifications. There were a few institutions that provided some sort of training credentials but there were no minimum trainer standards. Trainer quality control was, therefore, a major concern. The Workforce Skills Qualification (WSQ) system was developed to increase employability, improve worker performance and align industry needs with training provision. This required a certain level of skill in learning facilitation, assessment, curriculum, and courseware development not present in the adult educator workforce (Willmott & Karmel, 2011).

WDA's first system-wide qualification, the Advanced Certificate of Training and Assessment (ACTA), was introduced in 2005 to provide a basic training credential. The programme was developed using a Competency Based Training (CBT) approach. It soon became clear, however, that ACTA alone could not meet the needs of a rapidly changing CET sector. Rather, the sector required professionals with additional abilities to address complex workplace training issues and gaps in innovative ways, contextualised to meet the unique needs of specific sectors and employees. Within the implied critique of ACTA was also the suggestion that a CBT approach alone was not sufficient to encourage the development of these new capacities.

The evolution of vocational training in countries such as Australia, the United Kingdom and Canada was moving beyond the boundaries of CBT where there are high level and less rigidly CBT-based qualifications articulating to a range of higher education courses. Cross-accreditation and the breaking down of educational silos was better served through the creation of graded assessments, which was considered better matched to academic requirements (Clayton, 2009; Simons, Harris, & Smith, 2006).

Generally, it was the thinking within sections of WDA that ACTA was producing graduate cohorts who struggled to see beyond the relatively narrow framework of CBT curriculum-making and practice. It was felt that the existing WSQ system seldom encouraged sectoral change or critique within the body of practitioners working within the CET sector, a set of skills deemed essential for the sector to prosper into the future. Consequently, the Diploma of Adult and Continuing Education (DACE) was launched in 2010 to address this perceived inadequacy (interview with former senior WDA manager, April 2012).

DACE encouraged trainers to revise and reflect on ACTA's taken-for-granted assumptions. For example, one of the new modules introduced was *Develop Practice through Reflection*, which encouraged learners to be critically reflective on past curriculum design, writing and facilitation practices.

A further perceived limitation of ACTA was its non-inclusion of a practice-based or practicum component. In many cases, this meant that programme participants may never have facilitated a learning session prior to completing the programme. The lack of an extended practicum provision was due primarily to the inability of the sector to cope with the large numbers studying ACTA and the challenge of finding placements within a CET culture unfamiliar with the practice. A practicum component was introduced into DACE because there was a need felt to elevate the development of programme participants beyond ACTA to experience meaningful professional exposure through workplace activities emphasising reflective practice and a wider view of assessment. CET providers soon recognisedthat practicum placements were vital to the continuing success of the adult education sector.

DACE was intended to be more than a skills qualification in CBT, which was the original brief of ACTA. It also introduced learners to specialist study streams such as curriculum design, e-learning, facilitation skills, assessment and research, permitting learners to develop expertise within a range of fields.

Many of these ideas were outlined in a "Training Roadmap" (WDA, 2009), which outlined a range of possible future adult education qualification options, including DACE, and various additional qualifications, including graduate diplomas and workplace training certification, in addition to links with two specialist international masters programmes. Some WDA-appointed consultants believed it was sound preparation to have a diploma or similar qualification placed in a training pathway as ACTA alone leading to a Master's degree was deemed too wide a gap to bridge. To ensure all DACE outcomes were pulled together reflectively in preparation for graduation and adult education practice, with the possibility of further study, a capstone assessment project was included to complement the practicum.

DACE, therefore, was deliberately created as a "value-added" curriculum-making and learning facilitation qualification for the CET sector, and mooted as mandatory for future ATO-based curriculum design. ACTA, too, was considered by the WDA as essential entry-level training, and from 2010, was made mandatory for WSQ instruction purposes.

Following the introduction of DACE, the Institute for Adult Learning DACE Project was constructed in 2011 to assess the programme's impact on WSQ curriculum writing approaches and related learning facilitation practices. First to be considered was the meaning attached by curriculum writers to the idea of "quality" curriculum. This was teased out in the *What is Quality Curriculum?* report (Bound, Rushbrook, & Sivalingam, 2013) to facilitate further qualitative curriculum-making within the Singaporean context. This chapter further reports on the continuing journey made by DACE learners from a perceived position of "novice" curriculum writers and learning facilitators to one of "expertise" in the field. The chapter makes critical use of the accepted novice-expert literature to analyse the thoughts of DACE learners captured through semi-structured interviews.

Of interest is an apparent disparity in the collected longitudinal data of shifts in relation to the idea of curriculum and learning facilitation practice. Initial data suggested a relatively poor uptake or understanding of the notion of "quality" curriculum and diverse facilitation practice by CET-based educators. However, data collected towards the end of the research period suggests an encouraging view of DACE graduates as curriculum and learning facilitation innovators and change-agents, in spite of experiencing similar organisational implementation frustrations captured in the earlier period (Bound, Rushbrook, & Sivalingam, 2013). This change of trajectory may be explained by the 18-month data collection period which suggests a rapid shift in thinking from the time of the introduction of the DACE programme to its maturity over the period researched. It also suggests that an explanation of this shift may be usefully framed through the lens of the novice-expert literature, though not uncritically.

This chapter elaborates the themes outlined above in three sections. First, there is an overview of the dominant explanatory Dreyfus and Dreyfus novice-expert model used in the professional development literature and its relocation within a contextualised framework of "embodied understanding". Second, a narrative is given of the collected interview data that suggests a non-linear journey towards practitioner "expertise". The final section critically brings together the conceptual overview and the interview data to assess the value of the novice to expert metaphor in accounting for the development of educator "expertise" within Singapore's CET sector.

CONTEXTUALISED AND EMBODIED UNDERSTANDING

This section briefly locates and critiques the seminal Dreyfus and Dreyfus "Novice to Expert" stage model of professional development (Dreyfus & Dreyfus, 1980, 1986); for several decades, the dominant conceptual metaphor in the field. The model essentially identifies what the practitioner has achieved at each stage and what higher order skills he or she is then ready to undertake. It proposes that a practitioner passes through five distinct stages: novice, competence, proficiency, expertise, and mastery, which in turn are based on four binary qualities, namely recollection, recognition, decision and awareness (Dreyfus & Dreyfus, 1980).

The *Novice* is the first of the five linear stages. It is here that the learner rigidly adheres to rules or plans taught in training. The underlying assumption is that the learner has little situational perception and no discretionary judgement. At the next level, the *Advanced Beginner* is able to recognise some global characteristics of situations only after some prior experience (labelled as "*aspects*" in this model). Here, the learner is recognised for his or her limited situational perception and guidance for action for the set of prescribed attributes and aspects (treated as separate entities but given equal importance). Subsequently, the learner progresses to the *Competent* stage where the learner has to cope with an increase in the number of attributes and aspects to be learned. Through conscious planning on the part of the learner performing standardised procedures he or she is supposed to see the actions taken at least partially in terms of future goals. After that, the *Proficient* stage acknowledges the learner's ability to see situations holistically rather than in terms of aspects as well as is what is most important in a situation. This means that the learner is able to perceive deviations from the normal pattern and use maxims of guidance whose meanings vary according to the situation. The arrival to the second last stage of the model establishes the learner as an *Expert* who no longer relies on rules, guidelines and maxims as he or she has an intuitive grasp of situations based on deep tacit understanding. The learner has then reached a milestone by developing a niche through applying analytical approaches to familiar or novel situations as well as envisioning what is possible in the unchartered territories of the profession. The final stage assumes absolute *Mastery* of the know-how, know-what, know-why of the profession (Dreyfus & Dreyfus, 1980).

The model has widespread currency and value as an explanatory tool, but not uncritically. For example, use is made in this chapter of the work of Dall'Alba and Sandberg (2006, 1996; Sandberg, 1994, Sandberg, 2000, Sandberg, 2001) which reconfigures the metaphor from its original social psychological framework to one emphasising contextual socio-cultural assumptions. In sum, while acknowledging the value of the Dreyfus and Dreyfus's idea that professionals work their way from less to more expertise through a continuum that at various points may be labelled as stages, Dall'Alba and Sandberg suggest that in contextualised practice these "stages" are rarely unilinear or focused inwardly on individual cognitive issues alone. This is taken up through their notion of "embodied understanding" which suggests

that professional learning occurs within specific learning environments that extend beyond individual cognition to include dialectical interplay with workplaces and other practice-based socio-cultural contexts. Within these contested sites, the individual may also bring to learning prior biographical experience and knowledge. The manner in which these socio-cultural attributes relate iteratively within the novice to expert journey, then, becomes profoundly multi-directional and complex. Though Dreyfus and Dreyfus acknowledge these issues, the critical literature that suggests the processes involved are insufficiently interrogated. Dall'Alba and Sandberg acknowledge that this process of journey and increased professional understanding and practice accords closely with Giddens' ideas related to individual agency (Giddens, 1979) within interactive contexts: "practice is constituted neither by an objective structure constraining professionals' action nor by the professionals' subjectivity, as sometimes claimed. Rather, practice is intersubjectively constituted through mutual understanding of a specific institutionalised order enacted by individuals" (Giddens, in Dall'Alba & Sandberg, 2006, p. 385).

To shift away from the traditional focus of learning and stepped progression that curtails the development of "know-how" that is inclusive of embodied understanding, dispositions, problem-solving, prior learning as well as the social and cultural dimensions of the context and the encompassing nature of each individual's historical biographies, is to adopt an engagement with professional ways of "being" and "existing" within a framework that allows us to deal with the complex, ambiguous and dynamic nature embedded in professional practice (Dall'Alba & Sandberg, 2006). The iterative process of "know-what" and "know-how" merits careful consideration within a re-reading of the Dreyfus and Dreyfus model. The nature of professional development over time within a particular vocation according to this new focus will then have significant implications for both practice and the research that informs future practice.

THE EDUCATORS' PROFESSIONAL PRACTICE JOURNEY IN SINGAPORE'S CET SECTOR

This section brings together key issues raised in the literature with CET educator interview data (n=20) collected from 2010-2013 (Bound, Rushbrook, & Sivalingam, 2013; Rushbrook, Bound, & Sivalingam, 2013). The interviewees were both graduates of the DACE programme and experienced

CET educators, thus placing them in the unique position of being able to reflect on DACE and its contribution to their ongoing and contextualised educational practice. While having the overall goal of testing the veracity of the Dreyfus and Dreyfus (1980, 1986) professional development model as a vehicle to account for the continued growth (or not) of DACE learners as curriculum development designers and learning facilitators, the chapter goes a step further and embraces the points made by critics of Dreyfus and Dreyfus. This, it is hoped, will further the utility of the model when considering all forms of professional development within multiple workplace contexts.

The value of the Dreyfus and Dreyfus model is recognised as a heuristic device to account for the progression of DACE learners from "novices" to "experts". That is, it is a useful metaphor or shorthand means of outlining the contextualised journey of the professional DACE educator. However, explanatory value of the model is expanded by including the following. First, though the "stages" as outlined by the model are acknowledged, it is recognised that progression through the Novice-Advanced Beginner-Competent-Proficient-Expert framework is rarely clear cut. Arrival and departure from one stage to another is often opaque, including leapfrogging stages or occupying separate stages at the same time, depending on the contexts in which skills are being developed. That is, the model cannot be assumed to be unilinear or non-iterative. The categories, too, are rarely absolute, and overlap or merge in situated workplaces. Second, and as a corollary, it is pointed out that a fundamental flaw exists in that it is assumed to have a "beginning and an end" as a novice-expert continuum. Individuals and groups more often than not bring relevant life-skills and "practical wisdom" to professional development that challenges the idea that they are truly naive novitiates. At the other extreme, experienced professionals are similarly loathe to claim that they are absolute "experts" as there are always new challenges to face and skills to acquire. As such, the playing out of the model should be considered as cyclical and iterative rather than linear and procedural. Third, the model is further expanded beyond the assumption that learning through "stages" is an individual cognitive project devoid of context. Learning, however, should be assumed to take place in a socio-culturally informed environment and as such, individual cognition has external real world reference points. In recognition of this connection between individual learning and its socio-cultural context, we make use of the concept of "embodied understanding" as an explanatory tool of this interactive process

which also includes the capacity of individuals and groups to shape the multiple environments with which they interact. This is often referred to as "agency".

These ideas are explored within the dominant themes that have emerged from a thematic and critical analysis of the interview data. They are revealed and discussed within a series of headings that approximately reflect the "stage" categories of the Dreyfus and Dreyfus model. First explored are the DACE educators' prior learning and life experiences, and how these have shaped their entry to the programme as "novices". Second, the DACE experience, including reflections on their "novice to expert" journey is considered as a mediating influence on their professional development. Finally considered is the educators' ideas on their newly acquired or further developed curriculum design and learning facilitation skills and how they have in turn impacted their capacity to influence change in the CET sector.

Educators' prior experience

> If you come in and just do it [DACE], you will find it very, very difficult. It's going to be really difficult for you because a lot will be imagination and all that and then you may end up as being one of the casualties ... going through the whole system and studying it like a book, not applying it correctly, and you know, not making sure things are done correctly. (CET educator)

The interview cohort consisted of mature age workers with well-established professional careers before entering the DACE programme. They came from a variety of industries including education, hospitality, engineering, and commerce. Learners tended to make use of the areas as resources for building "practical wisdom" in the CET field as Subject Matter Experts (SMEs). These also often constituted their main domain knowledge or content teaching areas. Most of the interview cohort members, too, were well-established trainers with experience ranging from two to 18 years, though most fell within the two to four year range. Gender numbers slightly favoured males, with females strongly represented in the group and across the DACE programme. Most learners had completed ACTA before enrolling in DACE though there is no prerequisite to do so. This dual participation enabled

interesting comparisons to be made between the ACTA and DACE courses. Most in the interview group indicated a preference to enrol in DACE to improve their facilitation and lesson planning skills rather than for curriculum development and writing skills. As such, most avoided the curriculum writing elective, at least in the initial programme intakes. Later intakes were required to engage with the module as it became compulsory. The selected members of the interview group were considered typical and representative of the DACE programme cohort.

The division of the interview cohort into those who were interviewed in 2010-2011 (n=10) and those interviewed in 2012-2013 (n=10) provided an opportunity to compare the impact of the programme on learners over time. While many ideas were held in common, there were strong indications that the programme's effects on learners shifted, demonstrating a change in its effectiveness on influencing learners' pre-DACE learning facilitation and curriculum-making perceptions. The first cohort tended to hold "compliant" (Bound, Rushbrook, & Sivalingam, 2013) assumptions about curriculum and learning facilitation which were most likely acquired before embarking on the DACE programme. The second cohort, however, tended to be more "interpretive" in its approach, indicating a shift in perception through participation in the programme (Bound, Rushbrook, & Sivalingam, 2013). In other words, the first cohort tended to be less questioning of the CET system's regime of curriculum construction and learning facilitation, and adopted a technocratic, unproblematised approach to curriculum writing and delivery. On the other hand, the second group tended to adopt, but not exclusively, an interpretive stance that constructively challenged existing curriculum-making and learning facilitation practices with innovative alternatives based largely on the content of the DACE programme and the practice-based role-modelling of DACE facilitators. How these differences have manifested over time may be an indicator of the growing reputation and effectiveness of DACE and a maturing of the CET sector (Willmott & Karmel, 2011).

Learners acknowledged that prior non-adult education content knowledge was essential to inform the facilitation and curriculum skills developed within the "discipline free" DACE programme. However, they disagreed as to whether or not prior facilitation and curriculum experience was necessary before commencing DACE. Some claimed prior experience was indeed essential because of the relative complexity of concepts and skills covered

in relation to learning facilitation and curriculum writing. Most of these, too, believed that ACTA was an appropriate stepping stone as it covered learning facilitation and curriculum-writing "basics". Others, however, believed that beginning fresh as a "blank slate" without prior knowledge did not cloud their minds with thoughts about adult education that may have been ill-informed and prejudicial to acquiring the innovative thinking and approached perceived to be characteristic of DACE. If so, the "unlearning" process may have been challenging. The numbers interviewed favoured the "prior learning facilitation and curriculum writing experience" approach, though significant numbers supported the "blank slate" approach.

It is these tensions between the learners' prior experiences brought to DACE and the skills, knowledge, and attitudes gained through the programme that challenge some of the key assumptions of the Dreyfus and Dreyfus model. Clearly, the learners interviewed come to DACE as more than novices, for which the model does not adequately account. This emphasises strongly the effects of contextualised prior knowledge and experience, or "practical wisdom" on what learners actually gain from DACE participation; learners were able to compare, interrogate, and reflect on these experiences in relation to DACE's novel ideas. The programme, therefore, either challenged or supported earlier experiences, and potentially introduced valuable change-oriented curriculum and learning facilitation strategies. And, given the iterative nature of reflection between developing new skills and past practice, the process is clearly non-linear or stage-dependent, as suggested by the model.

Reflections on the DACE programme: a professional journey

> Definitely I will not treat myself as an expert because I want to learn, because I have to empty my jar. If I treat myself as an expert, I will not be able to learn anything. (CET educator)

This section suggests that the novice to expert journey should be considered as a metaphor only and not the literal linear journey from a lower to a higher point on a novice-expert continuum. However, there is a journey of sorts but the process tends to be "one step forward, two steps back", with frequent reflective pauses at any one or more points. In addition, such movements tend to be informed iteratively not only by individual reflection but also through participation in collective learning activities approximating Lave

and Wenger's "Communities of Practice" (1991). Learning, too, takes place in specific contexts that shape the value and meaning attributed to the practice environments in which it occurs. This is what is meant by Dall'Alba and Sandberg's concept of "embodied understanding", which moves beyond Dreyfus and Dreyfus's essentially individual and cognitive approach. The following insights from the interviews tease out some of these reflections.

The interview cohorts gained much from the DACE programme's perceived sophisticated approach to adult education. Learners who completed both the ACTA and DACE programmes, believed that the DACE programme was of a "higher order" in relation to conceptual rigour and sophistication, expanded content, and broad-based and innovative facilitation skills. The ACTA programme was considered a useful introduction to adult education and the skills of learning facilitation and curriculum-making. However, it was regarded only as the "how" of adult education; in addition, DACE also answered "why".

As a way of following up perceptions of the value of DACE in shaping their transformative learning journeys, learners were asked to nominate the modules that most influenced their thinking. The majority listed *Develop Practice through Reflection* as particularly important. For many, reflecting "in-practice" and "on-practice" was a personally ground-breaking strategy of using facilitation and curriculum-making experience as a source of learning and knowledge to further develop professional capacity. Moreover, DACE learners also re-contextualised the reflective skills gained through the module within their own teaching and learning environments. They reported that their learners, too, gained much insight into their own workplace practices through the reflective process. More than any other knowledge and skill set gained within the DACE programme, learners considered reflective practice as a significant lifelong learning strategy that would transcend their study experience.

Interestingly, within the DACE programme, learners considered they developed their reflective practice and learning facilitation and curriculum-making skills not only through the content of individual modules but also through the powerful influence of facilitator modelling. Many learners entered the programme expressing scepticism in relation to exposure to facilitative learning practices but were soon convinced once they, too, developed and modelled good practice within their own learning spaces, reporting an increase in positive learner and training organisation

feedback. Though particular DACE facilitators were identified as exemplary role models, there was consensus that the more-or-less uniform approach of all facilitators contributed to their educational sea-change to embrace genuinely and make clear a distinction between previous roles as "trainers" and their new positioning as "facilitators". Included in this too, was the semantic shift from working with "students" or "trainees" to "learners". This transformative leap, though not as evident in the earlier interviewed cohort, was still evident in their willingness to at least explore the idea of shifting from "stand and deliver" pedagogical approaches to those privileging the learner both as an individual and as part of a group. As such, there was evidence of all DACE learners taking up pedagogies emphasising self-directed learning, group work and reflective practice, among others.

In addition to learning from course content and facilitator role models, many interviewees indicated the importance of classroom and workplace peer support. Given the relative novelty of many of the DACE programme's ideas and potential challenge to previous teaching and learning practices, it was felt that this support enabled the acquisition, internalisation and practice of new approaches to learning. Those fortunate enough to be participating in the programme with workplace colleagues' peer support had a double advantage, enabling the development of ideas within the classroom and then practising them in actual workplace contexts. Some learners even indicated they would not have completed the programme without this support.

Most DACE learners indicated they were participating in the programme to develop further their facilitation rather than curriculum-making skills. There was a general perception that curriculum design was poorly paid and not as personally fulfilling as interacting in learning spaces. Given that most learners labelled themselves as "freelancer-trainers" (Rushbrook, Bound, & Karmel, 2014), they believed that the best opportunities presented for ongoing employment at that point in time in learning facilitation. Very few indicated an interest in combining the skills of curriculum design and learning facilitation, suggesting an acceptance of current CET sector practice that tends to separate the two roles. This also implies an interest in DACE beyond the programme as a means to practice superior adult education skills to one which simultaneously recognises the relative value of the qualification within the education marketplace. As such, DACE for learners also became a "positional good" that gives competitive employment advantage within the tough CET

sector. There was mixed evidence, however, in relation to how the DACE qualification was received in the marketplace as an indicator of superior educational practice. Some employers valued it because of the perceived quality of DACE learners and graduates, while others simply wanted a trainer who could be employed to deliver the nominated programme as written. This suggests differences in employer perceptions and expectations of learning facilitators in adult education workplaces.

Overall, while educators confidently expressed the idea that they were learning new skills and acquiring knowledge that led them beyond their pre-DACE adult education experiences, they were reluctant to identify as "experts", expressing a belief that to do so may lead to complacency and a consequent reluctance to further their professional skill development. In this sense, most recognised that to seek expertise in learning facilitation and curriculum-making was desirable but better to engage with as an unachievable lifelong process, or a journey without end. A few, though, believed that "true" expertise could be achieved through advanced study that incorporated research. Some of these have taken up this strategy and enrolled in postgraduate programmes.

CET educator agency

> I'll always customise it and I'll always contextualise it ... In fact, the auditor had a good half hour with me and asked me why. I realised [I was] not doing exactly what they were saying and I'm able to substantiate that it doesn't make sense and they say, "Okay". I said, "Don't you realise this is not working?" (CET educator)

From the evidence gathered, it appears there was a qualitative shift in CET educators' attitudes in their capacity to influence sectoral change. While the first group could be considered as more "compliant" in their assumptions about adult learning facilitation and curriculum-making, the second demonstrates clearly a developing capacity to be more "interpretive" or agential in their workplace practice and reflections on Singapore adult education. In many ways, the second cohort is well on the way to fulfilling the dream of a former WDA senior manager who imagined in a DACE adult educator:

> somebody who is a reflective practitioner, a person who had a broader educational background, an educational set of understandings and

somebody who is adjusted. Many of the ACTA trained may not have an area of specialisation...and there is some total understanding of education, training and learning – they were not educators; they were just very narrow trainers. So the idea was to create more of an educator, somebody who could have a discussion about the different approaches to assessment, who if wanted could talk curriculum...The idea is not to have a conformist but people who will have critical perspectives. There should be a bit of reading...I would like to have it run as a good academic program; for example various approaches to ID [Instructional Design – ed.], concept of ID, critics of ID, transform these people so they are not the same when they come out as when they went in (interview, April 2012).

Even though the DACE programme has recently been reviewed and reimagined, it is clear from the evidence that this trend to increased CET educator agency will continue given the maintenance of the programme's original values, courseware and outcomes.

It is, however, in the workplace, interviewees reported, that tensions have arisen that present some interesting challenges to the CET sector and to DACE course writers and managers. Current employment arrangements within the sector are generally based on a small core of ongoing staff supported by a larger group of freelance adult educators who work for fixed periods, generally part-time across multiple employers. Though there are exceptions, most training organisations have an expectation that freelancers will enter the organisation and deliver course content according to courseware approved by the then WDA's Quality Assurance Division (QAD). This often requires the adult educator to present vast series of PowerPoint slides and related information in pre-prepared course booklets in order and without missing any one slide and its associated courseware. Though this was not the intention of the QAD process, current practice assumes that total compliance is the norm. As such, DACE graduates armed with learning facilitation skills that privilege learners and their needs which may require courseware modification and timing within the stated WSQ competencies have expressed difficulty in practising their hard-won DACE skills. While some expressed that being "law-abiding Singapore citizens" in their learning spaces was a way to deal with this frustration, others actively sought to influence change within the training organisation's management of the WSQ framework, with mixed success. The best responses from training organisations were those in which

learners reported increased satisfaction from DACE-trained adult educators over those with lesser or no qualifications. Other organisations, too, felt confidence in their DACE adult educators and permitted "managed flexibility" in delivering programmes. These organisations tended to be those who had sent staff along for DACE training and, over time, saw the educational and market benefits of the programme.

This playing out of DACE learners and graduates and their newly acquired or reinforced knowledge and skills within workplaces once again suggests the contextualised nature of expertise and practice and how it is contingent on the value accorded it by the environments in which it is enacted. As such, there is no "objective" standard of novitiate or expert work as implied by the Dreyfus and Dreyfus model, but only that which is valued or labelled as such by participating individuals and organisations. This suggests that the value of DACE as a programme for adult educators can only be measured in terms of the aspirations held for it by the organisations which employ DACE learners and graduates. As such, as DACE is increasingly recognised and supported by the CET sector, whether through the growing reputation and quality of graduates or through CET providers' future mandated status (post-2015) to include on staff a DACE qualified curriculum designer, it is likely to gain increased purchase in the sector.

CONCLUSION

This chapter has summarised the evidence collected through semi-structured interviews with 20 DACE learners representative of the DACE cohorts from 2011-2013. The evidence was presented in an order that approximates the Dreyfus and Dreyfus journey from *novice* to expert. It has been argued that the model's *novice* stage undervalues the contextualised prior knowledge that DACE learners bring and contribute to the programme. This insight accords with Dall'Alba and Sandberg's findings that embodied prior learning contributes to programme understanding disproportionately to the actual content of the programme itself, in part accounting for the Dreyfus and Dreyfus model's failure to account for differential rates of learners once they enter a programme of professional development. In the middle stages of the model – the movement through the *advanced beginner, competent*, and *proficient* stages – the evidence suggests clearly that professional development is rarely linear with students progressing iteratively at differential

rates within a range of knowledge and skills sets. The course material explored, too, tends to be valued contextually by participants and the workplace according to its personal and enterprise value, and not as an objective or fixed "container" of skills. The final expert stage also has yielded some interesting outcomes with learners expressing reluctance to be labelled as such due to a belief that expertise is a never-ending journey and to assume self-belief would be to deny further development. CET employers appear to have two separate responses to perceived increases of expertise in their DACE-educated facilitators. The first is to deny facilitators an opportunity to practise their new professional knowledge through enforcing rigid adherence to existing programme courseware. The second, generally based on knowledge of the DACE programme and its possibilities for training innovation, permits DACE-trained facilitators increased opportunities to practise their skills flexibly and contextually within stated WSQ outcomes. This is often based on noted improvements in learner responses to teaching programmes and the quality of their facilitators. So, while the Dreyfus and Dreyfus model in its original form has limited contemporary value in accounting for the complexity of the educator's journey towards an uncertain self-definition of "expertise", it nevertheless remains useful as an explanatory metaphor when combined with the contextualised notion of "embodied understanding" that locates professional development within the complex world of authentic workplace learning and practice.

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11 - DEVELOPING CAPABILITY IN FACILITATING WORKPLACE LEARNING – IAL'S UNFOLDING JOURNEY

Poi Shan Lai and Wee Chee Lee
Institute for Adult Learning
Singapore

While much has been written about how to improve intra-organisation workplace learning, there is comparatively less on how to enable workplace learning as an external intermediary catalysing change within. At Institute for Adult Learning (IAL), Singapore, where the core mandate is to champion effective Continuing Education and Training (CET) solutions to boost employability and competitiveness, workplace learning has become a key strategic enabler. However, leading a paradigm shift away from conventional training solutions that adult educators, employers, and employees are accustomed to is fraught with challenges. The complexities involved in influencing the development of workplace environments that are more invitational, tailoring workplace learning interventions to the needs of the workplace supervisors or learners, and encouraging the development of metacognitive skills to enable ongoing reflection and learning (even without guidance) among employees requires a multi-faceted approach. This chapter documents our iterative and ongoing journey of refining the approach to enable workplace learning from without (as external intermediaries working with the enterprise for a defined period and project scope) and within (building capability of enterprise staff to continue advocating workplace learning). With a first-hand appreciation of the challenges and needs of various stakeholders involved, IAL would be in a stronger position to collaborate with other strategic providers to proliferate workplace learning across the Singapore landscape.

BACKGROUND

With the launch of the 2014 SkillsFuture agenda following the recommendations of the CET 2020 Masterplan (Workforce Development Agency, 2014), there has been a concerted government-led effort to foster skills mastery as a critical lever to enhance career resilience and future-proof Singaporeans (Shanmugaratnam, 2014). Specifically, SkillsFuture signals a shift to intentionally harness learning through just-in-time or on-the-job models at the workplace for more contextualised and authentic learning. Given that "learning and participation in work are inseparable" (Billett, 2004, p. 315), much work-related learning is already occurring in Singaporean workplaces, especially among Small-Medium Enterprises (SMEs) where specialised trainers are seldom deployed, and few formalise learning and development through instruments such as training budgets and training roadmaps (Ashton, Sung, Raddon, & Riordan, 2008). Learning in SMEs also tends to be mostly incidental; it occurs by using the ad hoc possibilities available within the normal daily work, and with different methods used in accordance with the demands of the workplace and experience of the workers. This does not mean that effective learning at work will likely happen spontaneously; in fact, the work environment needs to be intentionally designed to provide quality work that encourages autonomy, stimulate application of new knowledge through problem-solving, provide challenging work tasks, and encourage individual and peer learning from colleagues (Cedefop, 2004b, p. 168-172).

However, IAL has limited opportunities and experience seeding workplace learning practices directly within the organisation, with most of the capability-building efforts for CET professionals still confined to formal and structured learning activities that happen outside one's work. Its main business stream as a CET provider is derived from the delivery of competency-based Workforce Skills Qualification (WSQ) programmes for aspiring adult educators and practitioners. Much of such WSQ modular training is also focused on developing bite-sized competence within the confines of a classroom (Workforce Development Agency, 2007), and assumes the individual's ability and the supportive environment to re-contextualise the learning to new tasks and situations at the workplace (Evans, Guile, Harris, & Allan, et al., 2010). In light of the above, IAL initiated a series of projects from 2012

to deploy external Learning and Development (L&D) practitioners directly into enterprises to understand current workplace learning affordances and partner employees in using workplace learning to enhance individual and organisation performance.

THE EVOLUTION OF WORKPLACE LEARNING PARTNERSHIPS WITH ENTERPRISES

The following section details the various phases of IAL's efforts to groom a group of "workplace learning facilitators" (WoLFs), who are able to optimise learning and performance from daily work activities and the work environment based on needs and constraints of individuals and the organisation. Venturing into workplace learning required a significant shift in the pedagogical and partnership approach to equip the learners (namely, the IAL-deployed WoLFs, nominated enterprise workplace "trainers" and supervisors, and workplace learners) with the requisite capabilities to collaborate effectively with enterprises in what Harris and Simons (2006) call "the third space".

PHASE 1 - LEARNING FOR PERFORMANCE (LFP)

The first iteration of the series, LFP, involved three organisations: voluntary welfare organisation, a construction equipment company and a training organisation. From August to November 2013, a group of eight adult educators, united by a common interest to explore workplace learning in actual organisations, were assigned as WoLFs to conduct needs analysis and ideation so as to uncover performance issues that could be tackled through workplace learning. The LFP projects were mainly exploratory in nature, with the WoLFs seeking primarily to understand both formal and informal ways that employees learn to perform their jobs and identify potential opportunities for enhancement. Although the organisations too had little inkling of what to expect as the intended outcome, they were generally supportive enough to afford IAL access to their employees and work sites to facilitate the discovery and learning. The WoLFs were given a broad mandate to conduct onsite observations and employee interviews and guided to distil their findings into personas that represented the learning and performance needs of a target employee group. While the WoLFs did ideate on possible workplace learning interventions to address the gaps, the interventions were not implemented due to the lack of senior management endorsement from the onset.

As a first foray getting into workplaces to discover and hopefully influence workplace learning practices, important lessons were drawn from the LFP phase which shaped the next iteration of the journey.

Identify L&D practitioners with the "right" disposition

Instead of leveraging learning opportunities that already existed in the daily work activities of the organisation, experienced L&D practitioners could be wont to assume the consultant lens and propose conventional training solutions prematurely. In fact, L&D practitioners "needed to be responsive to the practicalities of the workplace, and to demonstrate ways of working that resonated with both the expectations of the companies' personnel (managers and workers) and the exigencies of the companies' work", and that "to be able to do this required an understanding and an appreciation that they had a considerable amount of learning to do themselves" (Harris & Simon, 2006, p. 484). In most instances, the WoLFs had to adopt a divergent stance in order to recognise and uncover the workplace as a learning environment within which lies a complex negotiation of access, knowledge, roles and processes, containing "pedagogical qualities to participation in work" (Billett, 2004, p. 313).

Workplace learning requires intimate knowledge of current workplace activities and environment

As workplace learning is highly situated and contextual (Billet, 2004), the WoLFs needed to acquire an intimate knowledge of daily operations, challenges and constraints to understand where and how learning occurs. Such information is typically not gleaned from official presentations, briefings provided by the Human Resources or Training Department, or even from job manuals and other standard operating procedure documents, which outline espoused processes that might not be practiced. The WoLFs had varying degrees of success drawing out employees' experiences of learning and working; in most cases, it was contingent on their own interview skills, specifically the ability to probe, draw inferences, and seek clarifications from the interviewee. It was also dependent on the employee interviewee's own perception of what constituted "learning" at the workplace. One commonality was the tendency for interviewees to more immediately associate learning as what is defined to be formal and structured learning that takes place "off-the-job",

whereas the WoLFs also had to uncover what is usually intentional but not highly structured learning catalysed by the "learning career" of the individual (Vaughan, 2008, p33). Understanding the dynamic interplay of structure and individual agency to appreciate the "affordances" (Billet, 2001) of the workplace was critical yet often challenging for the WoLFs.

Observation and interaction through "hanging around' in a work place are productive strategies in understanding the learning that happens in a work environment. For example, it was through interacting with the foreign workers of the safety equipment construction company after official working hours, and observing the habits and activities of the workers in their living quarters that the LFP participants uncovered an important source of informal learning that was already happening spontaneously among the workers. As the workers prepared their dinners and rested in the evenings, their conversation would often revolve around the work day's proceedings. As it turned out, this was a regular, protected time for learning, entirely initiated by the workers themselves. One potential workplace learning intervention that was proposed was to get the safety supervisor to take pictures of safety lapses observed during the day at the work sites on his mobile phone, send them to the workers in the evening (knowing most of these workers own smartphones), and use these pictures to facilitate short learning segments during the following morning's "toolbox" meeting to reinforce desired workplace safety behaviours.

Workplace learning is a nascent concept in Singapore

Given the exploratory and "experimental" nature of the LFP programme, there was no monetary cost incurred by the participating organisations. Even so, it was not easy to secure their support as it proved unexpectedly challenging to communicate effectively the form and substance of workplace learning to the management, given the prevailing perception that workplace learning equated to either more structured classroom training or on-the-job training. When learning takes on a strong element of contextuality influenced by cultural and social factors (Hager, 2004), it becomes less tangible and actionable in the eyes of the enterprise.

In the case of the voluntary welfare organisation, it took several visits to speak with different personnel ranging from the senior management to the Training Department to the senior social workers to explain the intent

and desired outcomes before the organisation gave the green light to proceed with the engagement. This underscores the multi-faceted nature of workplace learning which often requires cross-functional engagement and support of different business units for effective implementation.

Senior management support is critical

The LFP enterprises were primarily sourced from personal contact with middle management employees of the organisations, and the project scope and intended deliverables were often not clearly defined from the onset. While the project team was eager to pilot the workplace learning interventions, it was very challenging to gain organisational support, resources and commitment to follow through with implementation.

Although the LFP projects did not culminate in tangible positive changes in the organisations, they provided critical insights into the challenges of enabling workplace learning as an external intermediary and the need for a markedly different approach.

In the following section we will look at the next evolution of IAL's approach to partner enterprises in seeding workplace learning capabilities, based on what we learnt from the LFP.

PHASE 2 - IT'S ALL ABOUT BOTTOMLINE! (IAAB)

With greater clarity and insight into what Moore (2004) identified as three categories of factors affecting participation in workplace curriculum – internal features of the organisation, in terms of the roles, culture and production processes, the personal features of the participants, and the external environment that have bearings on the organisation, like market needs, IAL embarked on the next evolution of catalysing workplace learning from July to December 2014. To accentuate the business imperative for driving learning at the workplace, this next phase was called "It's All About Bottomline!" (IAAB). The primary objective was to design and implement workplace learning solutions for enterprises. At the same time, IAL wanted to distil insights on how workplaces effectively "distributed, shared and jointly created" knowledge (Fuller & Unwin, 2011, p. 48).

IAL set out to identify 10 participants from five companies across different sectors (two from each company; one in a learning and development function, the other from a business or operations function) to embark on an action learning project. Enterprise participants were teamed up with an IAL-appointed WoLF, who functioned as a pedagogical expert and resource person, to support the enterprise participants in analysing current workplace practices and uncovering a "learning issue with a business need". Specific workplace learning strategies were designed and implemented by the team to address the learning issue. Finally, these interventions were evaluated in terms of their contribution to the organisation's "bottomline" where possible. A total of four enterprises from fashion retail, shoe retail, food and beverage, and training and consultancy eventually participated in the IAAB phase. Drawing on the learning from the LFP phase, Table 1 below highlights key differences between the LFP and the IAAB programme approach:

Table 1. Differences between LFP and IAAB

	"Learning for Performance" (LFP)	"It's All About Bottomline!" (IAAB)
Positioning	The LFP initiative sought to highlight the relationship between enhancing learning and employee work performance as the key value proposition for enterprises to come on-board.	There was no explicit mention of "learning" as the assumption was that enterprises typically do not see learning as the primary driver of performance. Instead, the strategy was to hook the attention of enterprise management by mirroring their likely top priority – how to enhance the enterprise bottomline.
Selection of Workplace Learning Facilitators	There was no formal selection process and the individuals involved were either practicing adult educators or workplace supervisors who were keen to explore workplace learning and enhance work performance.	Interested applicants were primarily drawn from a pool of L&D practitioners who had some prior theoretical grounding in workplace learning and were keen to apply their knowledge in a live project.

	"Learning for Performance" (LFP)	"It's All About Bottomline!" (IAAB)
		However, to get a better sensing of whether applicants had the suitable disposition and intentions coming into the project, a selection interview was conducted to identify suitable individuals using criteria such as relevant prior corporate experience, grasp of workplace learning pedagogies, and attributes such as openness, curiosity, and collaboration.
Senior management support	Not obtained as the project was primarily pitched to middle management.	Each enterprise had a project sponsor (or representative in lieu) from senior management. The sponsor was invited to attend the kick-off workshop as well as the final project presentation session, where the enterprise participants presented their workplace learning intervention and evaluations.
Preparation of Workplace Learning Facilitators	Minimal; some tips were provided on how to conduct interviews with key stakeholders such as workplace supervisors and workplace learners to uncover performance issues and consolidate them into a persona for analysis.	More structured – the workplace learning guides went through a one day workshop by renowned expert practitioners, Professor Stephen Billet and Dr Sarojni Choy, for an overview of workplace learning affordances and how to overcome typical challenges in enabling workplace learning. They also went through an Ecology Room (Stack & Bound, 2012) session together with the enterprise representatives involved in driving the project to build common understanding of what workplace learning entails, how it is manifested in the enterprise, and the enablers and barriers that currently exist in their organisation.

	"Learning for Performance" (LFP)	**"It's All About Bottomline!" (IAAB)**
Documenting the workplace learning intervention	The WoLFs created a visual mapping of the desired learning experience and the different touchpoints involved (e.g. organisation personnel, job aids etc.) for the intended workplace learner profile which was shared with the organisations.	As a project requirement, the WoLFs drafted a case study to document the end-to-end process of uncovering a workplace learning issue, brainstorming and piloting the workplace learning intervention, and evaluating outcomes.
Project wrap-up	Individual project teams sought to present their findings and suggestions to their respective organisations at an appropriate juncture. However, there was no follow-up implementation.	A sharing session by all four project teams was organised (with three enterprise sponsors in attendance). At this platform, each team shared their journey from conception of intervention to post-implementation outcomes.

Reflecting on what went well

In the IAAB phase, one of the significant enhancements was the clear articulation of desired project outcomes and a common objective to implement a workplace learning intervention. This was accomplished in three out of the four enterprises, where workplace learning strategies such as developing the facilitation cum coaching capabilities of workplace supervisors, creating more application-focused learning activities to ascertain workplace learners' ability to apply product knowledge, or setting up informal social conversations between the more experienced and less experienced staff for knowledge exchange and relationship-building were trialled.

Although the IAAB projects involved various performance interventions, some of which were not training-related, the Kirkpatrick training evaluation model (Alliger & Janak, 1989) was used for an impact assessment among key stakeholders such as workplace "trainers" or supervisors and "learners" directly involved in the implementation. However, this was done with full knowledge that cause and effect is not easily isolated and identified in a dynamic business context. Post-intervention evaluations, conducted by the WoLFs showed positive indicators of success at Level 1, 3 and 3 (ie. reaction, learning, and application level respectively) of Kirkpartick's four level training

evaluation model. For the fashion retail enterprise, the fashion coordinators at the outlet were observed to demonstrate a more competent and professional demonstration of sartorial trends and product knowledge (e.g. colours, print patterns, fabrics, and finishing) in a mix-and-match learning cum product test activity where they were required to put together an outfit and recommend it to the outlet manager. Pre-and-post self-assessments of work competencies (e.g. product knowledge and selling skills) completed by the workplace learners also yielded positive numerical shifts. There were also unintended positive outcomes for the workplace learners in some instances where they rated themselves lower on their grasp of work-related competencies after the intervention. This was precipitated by their experience of the workplace learning interventions where more structured guidance and coaching in product knowledge, trend looks and sartorial knowledge broadened the mindsets of the staff on the limitations of their current competence.

The most revealing learning point from the IAAB phase was the confirmation that there was no one fixed model in fostering workplace learning. At first sight, this might seem like a limitation, but on closer examination, it gives hope that learning can always "find a way" in organisations, sometimes in spite of the "restrictive" environment the workplace learner operates in (Fuller & Unwin, 2011). Through work in all its individualistic and participatory dimensions, the multiple interactions between individual players within and outside the organisation, and the work environment itself, obstacles and opportunities emerge and dissolve fluidly. Such authentic and dynamic experiences enriched the learning of the WoLFs and the enterprise participants' learning in a way no planned curriculum could do.

Reflecting on the limitations

Given the limited project timeline for implementation, most of the enterprise participants and WoLFs focussed their resources on mounting tangible pedagogical interventions. This could entail either introducing new or enhancing existing workplace learning methods or job aids that could support work performance. While the post-intervention evaluation yielded promising outcomes, it was difficult to ascertain if the enhanced grasp of product knowledge actually translated into enhanced *business outcomes.* The limitations of the Kirkpatrick model, specifically the challenge of establishing

a causal relationship between "training" and enhanced business "bottom line" due to a myriad of other individual and contextual factors are well-documented (Bates, 2004). Moreover, the IAAB performance interventions were not explicitly aimed at addressing organisational goals and enhancing financial metrics given the limited project scope and resources availed. Nevertheless, the IAAB enterprise sponsors appeared to appreciate the positive outcomes reported, albeit not always business-centric. This corroborates research by Michalski and Cousins (2000) that clients and different stakeholder groups may have widely divergent perceptions and expectations of learning and performance interventions and outcomes. The onus will be on IAL to develop an evaluation model with success indicators derived from stakeholders; such measures will likely have a more nuanced view of learning and performance beyond just organisational productivity or financial metrics.

Moreover, many of the commonly cited challenges of sustaining the intervention beyond IAAB entailed non-learning factors in the "transfer climate" (Wick, Pollock, & Jefferson, 2010). They include factors such as *motivation* (employee's perception of the utility and relevance of the learning and whether he or she believes that improved performance will be recognised and rewarded), and *environmental* catalysts and impediments, including workplace learners' supervisors and peers, performance criteria and incentive pay systems. These factors, together with *ability* (a combination of the learning intervention's effectiveness to promote assimilation of new skills and behaviours and the employees' personal capacity to change), interact to reinforce or weaken each other in the "transfer climate". This was borne out in the IAAB projects where other considerations, ability notwithstanding, influenced individual commitment to the act of learning and demonstrating the learning output consistently to yield observable performance gains at work. In the case of the shoe retail enterprise, outlet staff were of the perception that the "products sell themselves", and that the customer service required of them in most cases was transactional and functional (e.g. checking stock availability or making the merchandise available for customers to try). This reinforces firstly what Hager (2004) opined, that participation in itself does not constitute learning, as not all learning at the workplace is of the positive type, and secondly, the notion of "personal epistemologies" (Billett, 2013, p. 151) which posit that personal intention, intensity of engagement, and existing capacities all shape individuals' participation in activities and learning. Where

the IAAB interventions enabled a more "invitational workplace" by enhancing its "pedagogic qualities" (Billett, 2004, p. 313), the individual's participation is still contingent on perceived utility of which activities they should direct their energies towards.

Other challenges

Notably, one common hurdle to be managed was that organisations tended to be more interested in "non-learning" problems. As the project unfolded, some of the WoLFs discovered that the client organisation was keener on tackling human resource management or organisation development issues. This was compounded by the fact that most of the WoLFs and enterprise participants did not have a systematic way of identifying potential learning issues that could be further scoped for the project. The preparedness of the enterprise staff to drive the project was also compromised when they were unable to commit the time and effort required to attend the capability-building workshops or take a more active role in driving the intervention. In some cases, the enterprise also limited access to the relevant learning and development documents or operating procedures that made it challenging for the WoLFs to support the enterprise participants effectively. When this happened, the ability of the WoLFs to gain the trust of the enterprise participants and other key stakeholders became paramount in driving the project onward towards a reasonable conclusion.

On hindsight, a two-pronged approach is needed to align the potential of workplace learning with stakeholders' interests and priorities. To secure enterprise top management support for the project, it was imperative to position workplace learning as a more cost-effective solution in a challenging business climate of labour crunch and productivity bottlenecks. However, to secure the active participation of employees to implement the workplace learning intervention requires that it be aimed at addressing daily operational challenges which hinder their performance at work. In many cases, the close and timely support offered by the WoLFs allayed concerns of the workplace supervisors about assuming additional responsibilities. It also helped them to appreciate the benefits of deploying workplace learning strategies intentionally to help their staff perform more effectively, and hence freeing them up to focus their energies on supervisory-level work that would presumably enhance their prospects in the company.

PHASE 3 - LEARNING@WORK BOOT CAMP

The earlier phases outlined above are characterised by a more exploratory and loosely structured approach. The SkillsFuture mandate in 2014 provided a new-found impetus to build on our earlier learning and develop a more intentional, business-oriented, and scalable model that could be adapted by other CET providers to facilitate proliferation across the industry landscape. Called the Learning@Work Boot Camp, its objectives are to:

a. partner enterprises in harnessing workplace learning as a key strategic lever to enhance business outcomes.

b. provide a work-based learning certification programme that develops workplace learning facilitation capabilities among learning and development practitioners.

The target enterprise profile would still be SMEs who may either rely on outsourced training or have less structured on-the job-training practices which are unoptimised. Notably, the enterprise management's willingness to explore a multi-faceted solution that addresses more than just the ***ability*** dimension underlying performance issues was preferred.

To facilitate the likelihood of more strategic and sustainable intervention outcomes, the Learning@Work Boot Camp was thus conceived to enable interventions across multiple levers of change. Figure 1 on the next page shows the key "levers of change" that can be used to influence performance and the "transfer climate" deemed critical for effective application of learning.
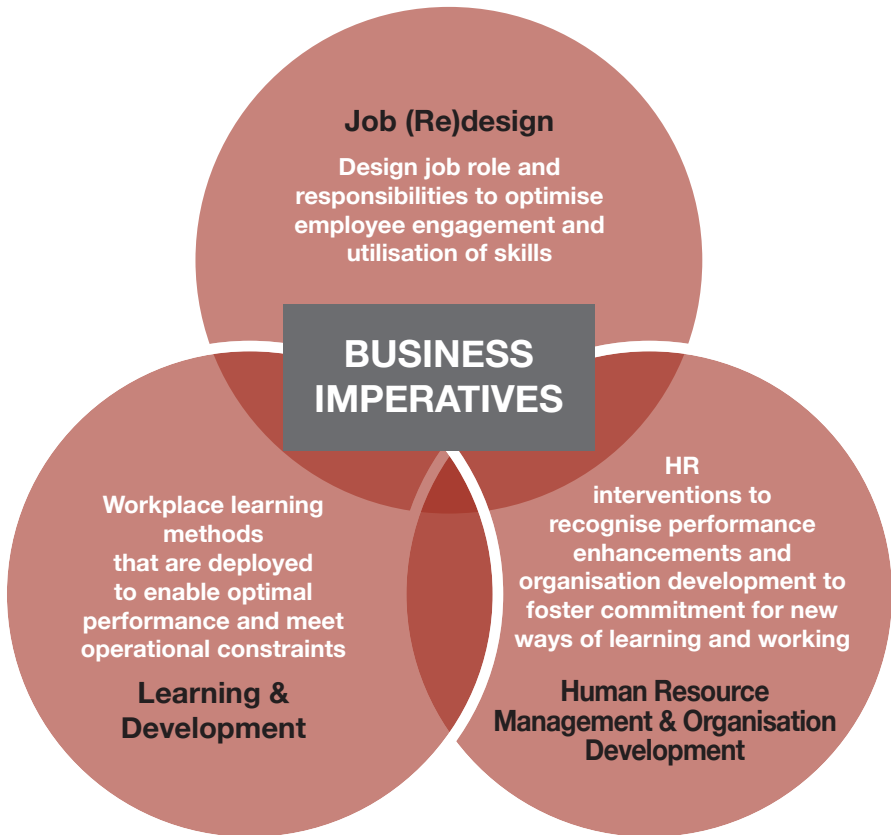
Figure 1. Change Levels to Drive Workplace Learning

The Learning@Work Boot Camp comprises two key stages:

Stage 1 - Index for Learning@Work

Drawing on past learning that enterprise senior management is more open to a "learning intervention" when it directly impacts a business imperative, a more strategic and "whole-of-organisation" approach was used to engage the enterprises from the onset. IAL developed the **Index for Learning@Work** as a complimentary diagnostic service to provide a snapshot of how learning is currently happening in a particular workplace. The instrument construct draws from workplace learning literature and research conducted on conditions for a learning workplace (Skule & Reichborn, 2002). Figure 2 on the next page is a visual illustration of the learning conditions (evident in the branches) critical for an organisation to enable learning through work and for work.

Refers to organisational systems and structures that reward enhanced proficiency, especially that related to learning.

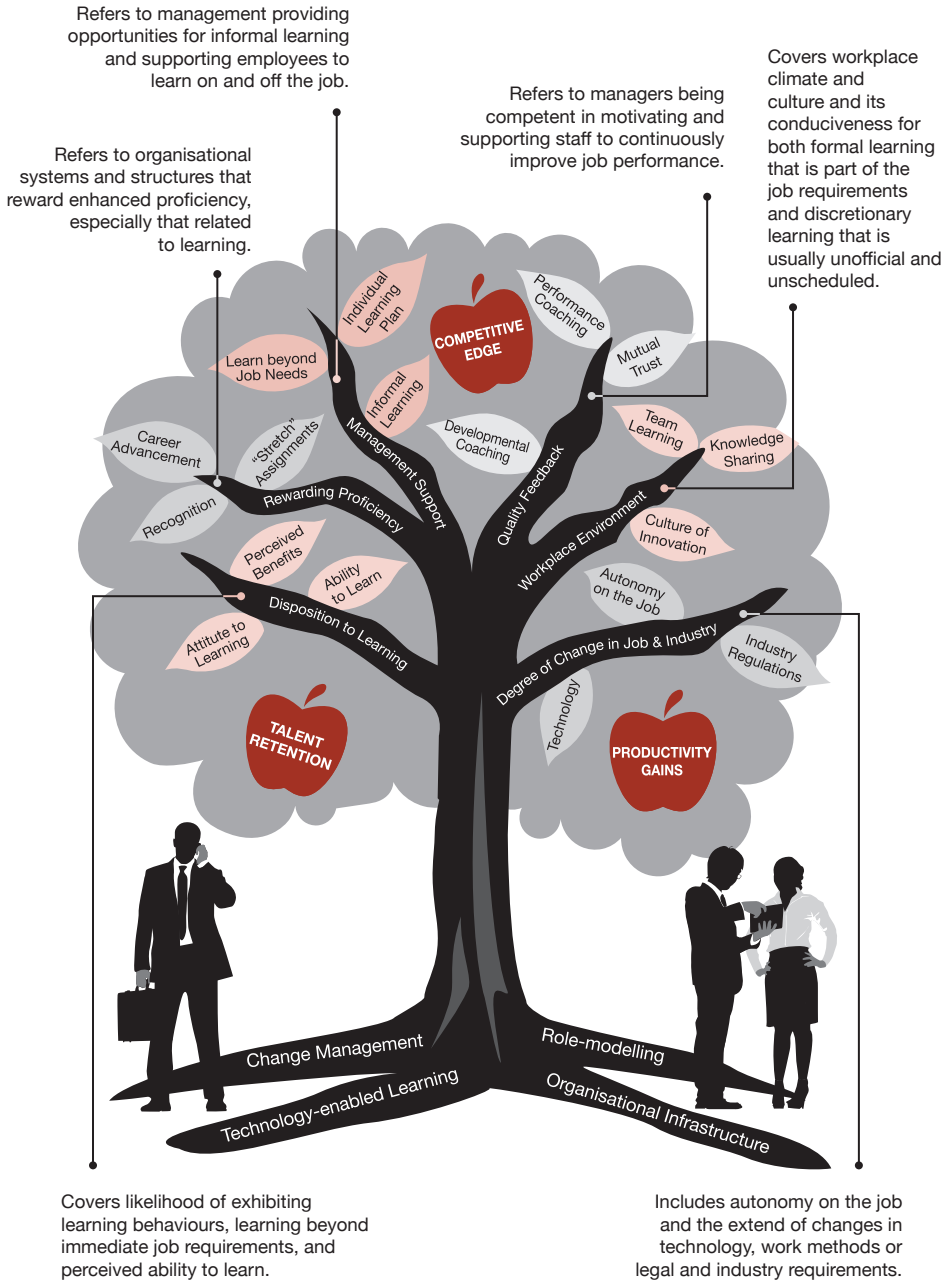Refers to management providing opportunities for informal learning and supporting employees to learn on and off the job.

Refers to managers being competent in motivating and supporting staff to continuously improve job performance.

Covers workplace climate and culture and its conduciveness for both formal learning that is part of the job requirements and discretionary learning that is usually unofficial and unscheduled.

Individual Learning Plan

COMPETITIVE EDGE

Performance Coaching

Mutual Trust

Learn beyond Job Needs

Informal Learning

Developmental Coaching

Team Learning

Knowledge Sharing

Career Advancement

"Stretch" Assignments

Management Support

Quality Feedback

Culture of Innovation

Recognition

Rewarding Proficiency

Workplace Environment

Autonomy on the Job

Perceived Benefits

Ability to Learn

Industry Regulations

Attitude to Learning

Disposition to Learning

Degree of Change in Job & Industry

Technology

TALENT RETENTION

PRODUCTIVITY GAINS

Change Management

Role-modelling

Technology-enabled Learning

Organisational Infrastructure

Covers likelihood of exhibiting learning behaviours, learning beyond immediate job requirements, and perceived ability to learn.

Includes autonomy on the job and the extend of changes in technology, work methods or legal and industry requirements.

Figure 2. Conditions for Fostering Learning at the Workplace (Adapted from Skule & Reichborn, 2002)

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Designed to include qualitative data (through staff interviews) and quantitative data (through online surveys), the instrument seeks to harvest differences in the experience of workplace learning affordances by those in a supervisory or managerial capacity versus non-supervisory or managerial employees. Significant disparities when comparing the data sets for both groups and sub-optimal scores in any of the key domains become the basis for IAL to propose broad performance issues (eg. supervisors lack coaching expertise to support their team members' career and professional development). The issues identified were considered for further investigation, scoping and subsequent intervention in Stage 2.

Stage 2 – Diagnose, Co-create, Implement and Evaluate (DCIE)

Assuming the enterprise management found the findings of the Index for Learning@Work sufficiently compelling to continue the engagement, IAL then appoints "trainee" WoLFs to work with enterprises to scope a specific learning issue underlying a business need, as well as **diagnose, co-create, implement** and **evaluate** the intervention (or what is termed as the DCIE process) over a period of approximately six months. Unlike earlier phases where the professional development of the WoLFs was less structured, DCIE also acts as the backbone for defining the requisite competencies and dispositional qualities that a certified WoLF ought to develop. Table 2a and 2b below summarise the requisite qualities and competencies respectively.

Table 2a. Summary of Desired Qualities of a Workplace Learning Facilitator

Quality	Outcomes
Openness and Curiosity	Demonstrates curiosity and willingness to question assumptions and explore different approaches
Adaptability and Flexibility	Demonstrates resourcefulness and resilience in driving solutions that take into account enterprise and stakeholder constraints
Change management	Employs appropriate communication and support to gain buy-in from stakeholders
Professionalism	Maintains strict confidentiality, and establishes credibility and trust with stakeholders

Table 2b. Summary of Competencies of a Workplace Learning Facilitator

Competency Domain	Task Descriptor	Outcomes
Diagnose (D)	Identifies the performance issue that is aligned to a business need	1. Analyses the enterprise and key stakeholders' priorities, needs, and constraints 2. Scopes the performance gap(s) and defines desired performance standards
Co-create (C)	Co-create workplace learning intervention with key stakeholders	1. Collaborate with key stakeholders to build consensus on desired intervention(s) 2. Advocates a multi-disciplinary approach that takes into account organisation development and job design issues to create the conditions for success
Implement (I)	Facilitate the piloting of the intervention, monitor progress, and trouble-shoot as required	1. Designs and implements the intervention in partnership with key stakeholders 2. Proactively surface issues and solutions to maintain progress of the intervention
Evaluate (E)	Evaluate the impact of the workplace learning intervention and make recommendations on sustainability and feasibility	1. Evaluate intervention outcomes and make recommendations for potential next steps to sustain or scale positive outcomes 2. Use reflective practice to review individual professional growth and development throughout the process

The enterprise project, culminating in the implementation of a workplace intervention, constitutes the primary authentic platform for WoLFs to apply and deepen the DCIE competencies. Besides the WoLFs, enterprises also have the option to nominate their staff as appointed project leads to undergo the certification and work alongside the WoLFs and an IAL-designated Senior

Workplace Learning Facilitator (SWoLF). In this way, there is presumably a greater likelihood of capability development for the enterprise that can last beyond the duration of the Learning@Work Boot Camp. The Learning@Work Boot Camp curriculum also comprises several key features detailed below to address inadequacies in the LFP and IAAB phases.

Coaching to develop desired dispositions

As the WoLFs are deployed to work with enterprises, they also undergo customised workshops to develop their appreciation of the three change levers for enabling workplace learning. As the WoLFs need to possess not only workplace learning pedagogy skills, but also the requisite qualities outlined in Table 2a to be successful, working closely with a SWoLF with prior experience in workplace learning facilitation projects provides developmental and performance support to the WoLFs, as they hone their skills working on a live project.

Work drives the learning

Unlike many other classroom-based certification programmes, Learning@ Work Boot Camp is designed along work-based learning principles for authentic and timely application of learning. Raelin (2000) highlights the common characteristics of effective work-based learning such as reflection on work practices, learning as arising from action, problem solving within a working environment, creation of knowledge as a shared and collective activity, and the development of meta-competence – learning to learn. Hence, the WoLFs are required to maintain a learning journal that documents their own reflections and insights throughout the DCIE and their action plan in response to feedback from the enterprise and coach. This indirectly fosters individual accountability of every individual's progress in terms of their personal learning and project goals. A learning community is also maintained when WoLFs and SWoLFs assigned to different enterprises come together to share common challenges and engage in peer-solutioning and knowledge creation.

"360° assessment"

The certification assessment design for the WoLFs is premised on the intent to cover assessment for, as and of learning (Earl, 2012). The WoLFs are required to keep a learning journal that documents the individual's reflections of progress

vis-à-vis the certification competencies and their personal learning intentions. At the same time, assessment of learning occurs with inputs provided by the enterprise and SWoLFs at critical stages in the work-based learning project to enable ongoing feedback and enhancement of performance. Notably, the coaching support designed for facilitators is premised on principles of "sustainable assessment" (Boud, 2010, p.11). Rather than "pushing" feedback to the learner, the SWoLF's role is to collaborate with the learner to adapt the feedback according to the effects and develop the learner's ability to calibrate judgment of their own performance and accomplishment.

VALUE EXCHANGE FOR ALL STAKEHOLDERS

At the time of publication of this article, there are 10 organisations from diverse industries that have completed Phase 1 of the Learning@Work Boot Camp. While the key stages of the intended experience, benefits, and outcomes have been illustrated above, much of the success of the programme will hinge on the partnerships forged between the various key stakeholders and the corresponding levels of individual and organisation commitment afforded by all parties. Indeed, the Learning@Work Boot Camp is essentially the mechanism to develop a partnership model between external CET providers (e.g. IAL) and enterprises in order to drive workplace learning adoption effectively. Partnership as defined by Smith and Betts (2000) is "(unlike) a more loosely defined relationship or even cooperation, and implies the conscious and active participation of all partners, albeit at different levels and possibly at different times in a partnership process" (Smith & Betts, 2000, p. 594). In particular, effective partnerships in work-based learning should be predicated on "collaborative self-interest" (Smith & Betts, 2000, p. 596); each key stakeholder (i.e. enterprise management, learning and development professionals, workplace supervisors, workplace learners and CET centres such as IAL) ought to derive value from the interactions afforded through the Learning@Work Boot Camp. Figure 3 on the next page shows a mapping of the likely value exchange between the stakeholders.

Relationships, the tools used, and the goals of different stakeholders were mapped out to enable IAL to analyse how the different aspects are intended to work and to better anticipate stakeholders' needs and goals. In effect, there are two overlapping dynamic systems (within the enterprise and between the enterprise and IAL) at work. It remains to be seen if the two systems
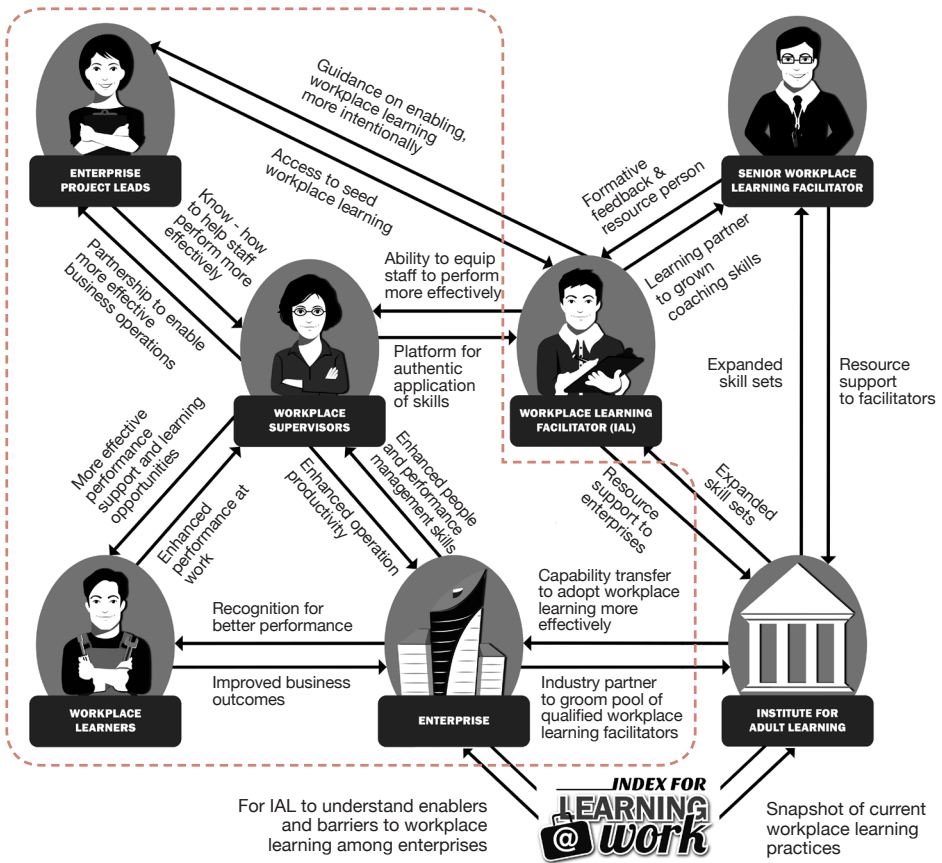
Figure 3. Potential Value Exchange between Key Stakeholders

can maintain a healthy equilibrium, with each stakeholder deriving intended value and delivering the expected contribution in the partnership. This has important implications for the viability of replicating the Learning@Work Boot Camp model through other CET providers who will presumably examine the market demand for workplace learning facilitation expertise from enterprises, as well as from CET professionals looking to upskill themselves accordingly.

CONCLUSION

This article has attempted to illustrate IAL's efforts in nurturing industry demand for using workplace learning to enhance business outcomes, while building up a pool of workplace learning facilitators with the expertise and disposition

to fuel this demand. In essence, the ability to negotiate the complexities of learning environments that are highly contested and structured by power and interests (Billett, 2004, p. 319), and to align the priorities of the various stakeholders towards common objectives is critical. As the enterprise partnerships and projects unfold, IAL will also be mounting a more structured research and development effort to uncover what constitutes success for the various stakeholders involved. This will facilitate the development of evaluation indicators to spur continuous enhancement of the partnership model. The Learning@Work Boot Camp as the latest and potentially most scalable iteration of IAL's efforts can form a blueprint for adaptation by strategic CET partners with the common vision of making *work the learning and learning the work.*

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12 - CONCLUSION: TOWARDS A NEW UNDERSTANDING OF WORKPLACE LEARNING

Helen Bound
Institute for Adult Learning
Singapore

In this book, our understanding of workplace learning moves far beyond the individual acquiring knowledge and competencies, or updating skills. Eteläpelto (this volume) for example, reminds us that human actions have a social genesis, but as emphasised also by Billett (this volume), the individual worker's engagement is essential for learning. It follows however, that engagement is not entirely related to an individual's disposition; the circumstances of work also mediate such engagement. As Eteläpelto notes, "work identities are negotiated interdependently within the local socio-cultural and material context of the workplace." Billett (this volume) expands this understanding beyond the context of the workplace using Searle's (1995) term, "institutional facts" (societal factors); comprising "norms, practices and privileging that can be identified as sets of cultural, historical, societal and situational factors".

This entwinement of context in learning through, for, and at work beyond the immediate context of the practice setting is referred to by Evans as the social ecology metaphor consisting of the relatedness between the socio-political and organisational scale (inclusive of national policies and regulations); the immediate work environment and the activity of the individual worker and their dispositions to learn. Gog approaches this expanded understanding of context from the perspective of what she calls "sectoral institutional logic". It is institutional logic within a sector, argues Gog, that has a major bearing on the industry operating as a low-skills or high-skills industry. Using the security industry as an example, she illustrates the effect of an industry being entrenched in low-skills equilibrium, using price cutting as their dominant competitive strategy, on the limited affordances for workplace learning

and training. Analysing the roles, interactions and power relations among the stakeholders and the results of their interactions is what unveils the institutional logics of a sector, discretion (or lack of in this instance) over design of the work, and the role of the regulator resulting in lost opportunity for taking up the affordances offered by new policy directions in the SkillsFuture agenda. Tan adds yet another dimension to our expanded understanding of context, through her exploration of space and use of stories to illustrate space in relation to structuring of the economy and flow of globalisation and its effect on affordances for learning highlighting that ways in which workers can engage are dependent on the design of the work. Story 1 for example, narrates Singapore's reliance on foreign workers with its impact on conditions and different nationalities in different job roles on their retrenchment. This cuts off affordances for learning within the space of that type of work for the key protagonist. Story 4 is of the impact of supply chains and changing capabilities across the globe in those supply chains and the effect this has on the final product, constituting the learning challenges faced by the couple who own the Small Medium Enterprise (SME). In story 2, the bright-eyed intern is exposed to and engaged with different cultural ways of being and thus, of identity, very different from her schooling experience. In her role as new intern in a global firm, she is trusted to take on and handle responsibility rather than being monitored constantly. Both this story and story 3 are illustrative of dominant cultural mores and what they mean for acceptance of difference and therefore learning opportunities and identity. As Eteläpelto (this volume) states, work identities are negotiated at the intersection of the individual and the social.

It is this enhanced aspect of context and its entwinement in everyday activity and learning in, at, and through work that constitutes a contribution towards a new and expanding understanding of workplace learning. Our understanding of context and its entwinement in everyday practices is inclusive of societal, cultural, historical, economic, political, and situational factors that mediate learning. This complex picture takes in agency and identity of individuals and work groups as their own biographies and dispositions enable them to sense-make (Weick, Sutcliffe, & Obtsfeld, 2005) and engage in varying ways with opportunities or seek ways around constraints. This may seem as though we are arguing that learning is everything which is not the case. What we are arguing is that when considering the learning of individuals or collectives in, at, and through work, it is important to look beyond the individual and beyond the immediate setting in relation to *affordances* for learning.

Individuals' engagement in learning affordances, mediated by their own biographies and dispositions, constitutes what Billett refers to as goal directed activity. Thus, when human resource personnel or top level management seek to understand and to develop opportunities, individuals, and teams through workplace learning, it is not as simple as asking the question, "How do we motivate our workers to develop and grow?" This human capital approach places the source of issues at the feet of the individual, rather than understanding both the context of the company/organisation and its affordances for learning entwined with individual and team agency and sense of identity. Our expanded understanding of context in workplace learning offers opportunities for different questions to be asked. Examples of such questions and possibilities are shared in the next section.

There are also additional contributions to this expanded understanding of workplace learning evident in the chapters within this book that question taken for granted assumptions in much of the literature on workplace learning. For example, Karmel and Sadik point out much workplace learning literature emphasises the role of one's work environment and fellow employees as key for learning at, through, and for work, assuming stable, continuous employment with a single employer; yet for non-permanent workers, the work environment expands beyond a single locale and organisation. Sadik uses the metaphor of a vortex to describe the trajectory (as opposed to traditional notions of career) of these workers. The vortex is constituted of the unstable, fast changing affordances of different contexts, requiring considerable agency and self-directed learning for the non-permanent worker to maintain their desired trajectory. A vortex rotates on the axis of the non-permanent workers' craft identity. It is, argues Sadik, the ability of the non-permanent worker to make use of the spaces in between the work, as much as the work itself and the transitions between work that are important in creating their own pathways as there are no pre-established pathways for these workers.

Karmel explores the learning of non-permanent workers through work; rather than formal provision, the work structure is essentially the curriculum for learning (Billett, 2001), constituting almost the entirety of learning opportunities for this group. She explains the heightened reliance this has on their own self-directed learning initiatives, be it through utilising networks, experiences, and thinking reflexively in order to make knowledge work in different settings – the process of recontextualising (Evans, 2009). To develop

shape shifting capabilities, to survive and continue to gain satisfying work, non-permanent workers such as the adult educators learn this through doing it; work and its entwinement with agency and identity is a critical space for learning such capabilities.

Additional contributions to the understanding of workplace learning and thus of opportunities to pose different questions as suggested by contributing authors include the diverse valuing of different kinds of knowledge for different purposes, by different stakeholders, namely employers and educational institutions/providers as discussed by Evans, Lee and Rushbrook, captured in the following section.

BOUNDARY CROSSING POSSIBILITIES: EDUCATIONAL INSTITUTIONS AND SITES OF WORK

Evans (this volume) makes reference to the divergence of understandings of workplace learning between educational provider conceptions and socio-cultural perspectives. Socio-cultural perspectives emphasise work practices, relations, cultural, political, and social dynamics of work. As such, learning and knowing are understood as indistinguishable parts of the performance of practice (Dall'Alba & Sandberg, 2014), that is, "learning and knowing is not considered to be located within individuals or intellectual activity which drives behaviours; learning and knowing are seen to be performed within social practice" (p. 283). On the other hand, educational institutions focus on knowledge acquisition disassociated from the complex realities of work. These understandings of knowledge where the educational institution cherishes and values canonical knowledge of a discipline and/or occupation perhaps arise from assumptions that knowledge is neutral and that the world is not only separate but inert and objective (as in context is usually thought of as a container). As Lave (1996) argues, it is then consistent for educational institutions to think of themselves as separate from the world.

> From this, assumptions are derived about the privileged character of schools … as sites where knowledge is produced, where learning takes place, but where what is learned is independent of, and not affected by, the circumstances in which it was produced. Further it is assumed that what is learned is of a general nature and powerful because it is not embedded in the particularities of specific practices. (Lave, 1996, p. 24)

Once learning is perceived as practice, such assumptions become a focus of critique and questioning. Guile and Griffith (2001) argue that educational institutions have long designed curricula that reflect a privileging of systemic or vertical knowledge through formal learning of knowledge categorised into separate disciplines, whereas workplaces offer opportunities for the development of horizontal knowledge. Different places and spaces of learning take on different thought patterns and ways of being, and we often accept these without thinking about them (Bound & Lee, 2014). Beyond differences in the valuing of different kinds of knowledge by educational institutions and sites of work, is the need to address relations between practices, rather than privileging the value and contribution of knowledge and learning only from the perspective of one site or another.

> They are performative practices that require a constant weaving to and fro between, rather than an integration of, their categories and locations. Thinking "betweenness" in education, occupying the space where what is other is also within, helps us refuse singular models, models which are based on one type of educational practice as the norm by which all others are judged. (Mulcahy, 2011, p. 215)

Giving recognition to relations between and different practices in different sites of learning is to take hold of the affordances offered not only by the different sites of learning but the spaces in between (Bound & Lee, 2014). Multiple dimensions across mental, material, social and cultural planes (Evans, 2009, p. 98) are involved when applying what was learnt in one context to another context. Eraut (2002, p. 69) describes the process as including the recognition of what prior knowledge is relevant to the current situation; transforming that prior knowledge so it fits the situation, then integrating the new assembly of knowledge and skills to create an understanding of the new situation and respond with appropriate action. This process of recontextualisation (Evans, 2009) requires time and support, with considerable new learning often posing considerable challenges.

Lee (this volume) advances this argument in his statement, "it is not so much the context that is important although that defines the chief kinds of learning that one tends to experience … but more *the opportunities that each context affords for both kinds of knowing...*". Lee unpacks practices as they relate to science in a way that places less emphasis on the *location* of formal educational

institutions or work, but rather provides opportunities for boundary crossing between the different sites of learning. What is important to consider in enabling such boundary crossing deepens the argument by Evans (2009, p. 98) that there are "multiple dimensions across mental, material, social and cultural planes" involved when applying what was learnt in one context to another context. Lee's reference to explaining differences not so much in ways of the who or what values and organises knowledge but appreciating differences of activity or practice, provides a more ready frame for moving across boundaries and appreciating the different affordances of different spaces and contexts. Mulcahy (2011) too highlights the need to weave to and fro across and between sites (see also Bound & Lee, 2014). The call to forge new partnerships and ways of working between educational institutions and workplaces (Lee, this volume) is also a call to develop not only innovative understandings of learning, knowing, and practices, but of the development of expertise and tools for developing expertise.

Rushbrook (this volume) takes up this issue in his critique of the Dreyfus and Dreyfus model of linear stages of developing expertise. He notes that movement from one stage to another is far from being clearly delineated; it can include leapfrogging stages or occupying separate stages at the same time, depending on the contexts in which skills are being developed. This is yet another reminder that development of expertise is not devoid of context; rather it is "intersubjectively constituted" through a specific institutionalised order enacted by individuals (Giddens, as cited in Dall'Alba & Sandberg, 2006, p. 385). In other words, individuals' exercise of agency through their engagement with affordances within given contexts, is a "dialectical interplay" (Rushbrook, this volume) between individuals' sense making based on their past experience and opportunities and the contexts in which they live, work, and play. Billett (this volume) expands and explores this interplay in his discussion of institutional and individual facts. His discussion of what he calls the individual's construal, construction and subsequent enactment mediated by the context that is learning, the making and remaking of practices, societal norms and practices is a reminder to socio-culturalists that to understand learning, we also need to understand the "dialectical interplay" (Rushbrook, this volume) between individual sense making and context. This adds another dimension to understandings of the mediation of subjectivities and intentionalities of individuals and their learning.

THE NEXUS BETWEEN RESEARCH, PRACTICE AND POLICY

The considerable body of literature on the nexus between research and policy and practice highlights the vexed nature of this issue. Good quality research can lie in dark corners, albeit being published in academic peer-reviewed journals, often not accessible to policy-makers and practitioners. Even where there is access, the different ways of thinking and the different conceptual frames may still set up barriers. Different fields use different language, have different purposes and intent, operate under different rules and norms, and interact and network with limited (if any) overlap in their communities of practice. Consequently, researchers feel there is a huge gulf between themselves and policy makers; likewise, policy makers shake their heads and wonder what world it is that researchers inhabit. In this section, we touch on a few ways in which bridges can begin to be built between these different communities.

In relation to research being taken up by practitioners in a field, the methodological approach of research such as developmental studies, action research, and so on, can do much to address this issue. However, this is fine for very localised implementation and take-up of research findings, but does not address systemic issues as it requires policy makers within an organisation, institution, industry eco-system or those within government and often all of or combinations of these stakeholders to work collaboratively to address the identified issues.

Given that the research we do at IAL is both theory building and intended to have practical, applied outcomes, this is an issue we actively seek to address. While we very successfully publish academic journals and books, our mandate is application of research and capability building around research.

The IAL Centre for Work and Learning (CWL) seeks to begin this process through extensive consultation with stakeholders throughout a research project. As the project is designed, we deliberately seek to understand and to place ourselves in the shoes of relevant stakeholders, for example, policy makers, practitioners, learners, and employers. We use this understanding and weave it into our research questions and methodological design. Once a project has been approved, and we have deepened our understanding through reviewing the literature and finessing the design, we then pull together

a group of relevant stakeholders to share the project with them formally and to gain their inputs into suggestions for access to sites, individuals, documents, and so on. At the point where we have almost completed the project and have a draft report ready, we circulate this to a now expanded group of stakeholders and bring them together to discuss and debate implications of the findings from their perspective and potential recommendations. Often, this is the first time stakeholders have been brought together and they can be surprised at the experiences of other stakeholders. From a research perspective, this process moves beyond validating our interpretations of the data and assisting us to frame up recommendations and implications. It is a dissemination process, serves the purpose of building capability about the process of and potential contribution of research and also contributes to a democratisation of the research process. Further efforts to enhance take-up of findings are achieved through being part of a government agency, and thus having direct access to and reporting to top levels in the agency. This however, does not address the issue identified above of accessing whole or partial institutional and/or industry eco-systems to seek collaborative activity to address the issues identified through the research. An example of the need for such was given by Gog (this volume) in her story of the security sector. The issue is also evident in the different institutional arrangements between educational providers and work sites.

Boland and Tenaski (1995) suggest that the first step in working collaboratively is to recognise, acknowledge and value differences; the unique thought worlds of others needs to be made visible and accessible to others. The first step, claim Boland and Tenaski (1995, p. 359), is differentiation requiring examining one's own assumptions and those of others, and of imagining the point of view of others. Only after a perspective is differentiated can it be reflected on and represented so the actors from different groups or activity systems have something to integrate. Once a representation has been made of an individual's knowledge, it becomes a boundary tool, providing a basis for perspective taking (Boland & Tenaski, 1995). Such an approach assumes highly developed skills in differentiation and in communicating that differentiation appropriately and meaningfully. It also demands a platform for such boundary tools to be used meaningfully.

A very successful example of researchers working with practitioners is within the programme developed by Lai and Lee (this volume) designed to develop workplace learning facilitators. These skilled practitioner-researchers experienced innovative pedagogical approaches through research led by Stack and Bound (2012) which they built into the design of the programme. In addition, as they engaged and interacted with employers, they used the lens of practitioner researchers to sense-make the complex and multiple demands of different stakeholders. In the process, they developed and enacted an understanding of workplace learning drawing on multiple strands of research in the field.

This volume offers some small clues in developing boundary tools for researchers in their engagement with policymakers and practitioners. We will not address here the issue of bringing together stakeholders from an ecosystem to undertake collaborative work. As much as policy makers like to see figures to justify expenditure and allocation of resources, they, like the rest of us, also need the stories to understand what it is a future policy, and/or allocation of resources is addressing. Tan (this volume) in her powerful narration of stories illustrates how we can convey complex issues through stories that engage. The writing up of cases collected through ethnographic approaches, while being mindful of the audience, is another approach from a different methodological perspective. Phenomenology, another powerful methodological approach offers potential for telling of stories of how actors organise themselves, attend to and give meaning to "figural concerns against the ground of ongoing social interaction" (Lave, 1996, p. 19). Cultural historical activity theoretical (CHAT) approaches offer important tools for being heedful of, and collecting and analysing data relating to different dimensions of interaction within an activity. However, if as researchers, we are to apply the expanded understanding of workplace learning of the wider circumstances of the context of work and learning, of agency and subjectivities, we need to creatively design approaches that a practice lens, CHAT and other socio-cultural perspectives, phenomenology, ethnography or narrative enquiry or indeed the use of quantitative surveys for example, alone do not address. All of these methodologies offer rich possibilities; we need to use them in combinations of ways that align with the research problem, the research questions, and our own epistemologies and ontological understandings.

With this in mind, we conclude by turning to noting the research that authors in this volume have identified as being needed to deepen our understanding of workplace learning.

Eteläpelto and Billett (this volume) call for further work in relation to identities and learning. Eteläpelto notes that we lack developmental studies on practice-based interventions in relation to the role of work identity and the exercise of agency in workplace learning, and not to ignore the role of emotions within identity development and agency. In particular, she seeks better understanding of resources and constraints within the socio-cultural and material conditions of the workplace such as work cultures and hegemonic discourses, and how these influence identity negotiations and the exercise of agency. Evans calls for a rethinking of competence frameworks and new pedagogic strategies to support the development of workers as knowledgeable practitioners at all levels of the workforce. She also highlights the importance of better understanding the "interplay" of classroom-based and workplace-based learning within the context of national policy, societal norms and expectations. Tan, like Eteläpelto, draws attention to power differentials and how it mediates access to learning affordances. Lee notes the potential of the interplay of different knowledge structures within different settings. He poses the question, "How these all can add value to an individual or how it counts as meaningful learning?" adding that this has not been well-theorised.

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ABOUT THE EDITORS

Helen Bound

Dr. Helen Bound is Principal Researcher at the Institute for Adult Learning (IAL), Singapore. She heads the Centre for Work and Learning (CWL). Prior to commencing with IAL in 2009, Helen was a lecturer and researcher with the University of Tasmania coordinating the online programme, Bachelor of Adult and Vocational Education. Helen has worked for Tasmanian Technical and Further Education Institute, run her own training and development business, been a National Industry Training Officer for the Trade Union Training Authority, worked as a training and workplace change officer for Tasmanian unions, and taught in secondary schools. Her PhD is from University of Tasmania on institutional collaboration, learning and context. Her research interests and publications include non-permanent workers, their learning and identity, professional learning, work and workplaces as learning environments, e-learning, competency based training (CBT), curriculum, and generic skills.

Peter Rushbrook

Associate Professor Peter Rushbrook is Deputy Head, Learning and Teaching, in the School of Education at RMIT University, Australia and a former Senior Research Fellow at IAL. He is an experienced adult educator, researcher, and consultant, and has a wide range of publications in the field. His research interests include workplace learning, adult learning curriculum and assessment approaches, adult and vocational education policy analysis, and the history of Australian adult and vocational education. He has a PhD from Monash University, Australia, on the development of the Victorian and Australian Technical and Further Education (TAFE) sector.

ABOUT THE CONTRIBUTORS

Stephen Billett

Dr. Stephen Billett is Professor of Adult and Vocational Education at Griffith University, Brisbane, Australia and also an Australian Research Council Future Fellow. He has worked as a vocational educator, educational administrator, teacher educator, professional development practitioner and policy developer in the Australian vocational education system, and as a teacher and researcher at Griffith University. Since 1992, he has researched learning through and for work, and published widely in fields of learning of occupations, workplace learning, work and conceptual accounts of learning for vocational purposes. He has been Fulbright scholar, national teaching fellow, and recipient of an honorary doctorate from Jyväskylä University in Finland.

Anneli Eteläpelto

Anneli Eteläpelto, PhD (Psychology) is a Professor (Adult Education) at the Department of Education, University of Jyväskylä, Finland. Before that, she was the Professor of Educational Psychology, University of Helsinki. Her research interests have addressed work-related learning and how to promote workplace learning through the renegotiation of professional identity and enacting professional agency at work. She has widely published in international and national refereed forums, edited and co-edited books on professional and work-related learning, identity, agency, creativity, expertise development, and social aspects of learning and education. She is currently leading a research project, The Role of Emotions in Agentic Learning at Work (REAL), funded by the Finnish Academy.

Karen Evans

Karen Evans is Professor in the UCL Institute of Education, University College London. She is a leading researcher in the UK Economic and Social Research Council's LLAKES Research Centre, investigating Learning and Life Chances in Knowledge Economies and Societies. Karen Evans' main fields of research are learning in life and work transitions, and workplace learning. She is a Fellow of the Academy of Social Sciences. Her international appointments have included a two-year Visiting Fellowship with the Institute for Adult Learning, Singapore, 2011-2013.

Soon Joo Gog

Soon Joo Gog is the Group Director, Training Partners Group, and Chief Research Officer of the Singapore Workforce Development Agency (WDA). She has more than ten years of experience in workforce development at the national level. Her research interests include political economy of skills and sectoral institutional logic. She has a keen interest in national skills policy and comparative study of skills formation systems. Soon Joo is a strong advocate of leveraging on sectoral institutional logics in shaping high-skills ecosystem. She has a doctor in education from the Institute of Education, University College London and the National Institute of Education, Nanyang Technological University Singapore.

Annie Karmel

Annie Karmel is currently a researcher with the Centre for Work and Learning (CWL), Research Division at the IAL, Singapore. She has predominantly published in the areas of adult educator professional identity, careers, and Singapore's Continuing Education and Training landscape. Her current area of focus is in workplace learning and work-integrated assessment. Prior to joining IAL, Annie was a research scholar in the Master's programme for Southeast Asian Studies at the National University of Singapore where she pursued her interests in intercultural interaction and labour migration.

Poi Shan Lai

Ms Poi Shan Lai is a Principal Learning Designer with the IAL. She reviews and designs adult learning solutions to build capability of adult educators such as the Specialist Diploma in Advanced Facilitation offered under the Workplace Skills Qualification (WSQ) framework for the Training and Adult Education sector. She has also designed and implemented blended learning innovations such as Massive Open Online Courses (MOOCs) in blended learning and facilitation, an accelerated learning pathway for recognising prior competency, and initiatives to encourage enterprise adoption of workplace learning.

Yew-Jin Lee

Associate Professor Yew-Jin Lee has interests in sociocultural theories of learning, inquiry science, informal learning environments, and curriculum theory. In 2002, he pursued his interdisciplinary doctoral studies at

the University of Victoria, British Columbia; the dissertation looked at issues of learning, identity and history in a salmon hatchery. Overall, the research contributed to theory development in cultural-historical activity theory as well as bettering workplace practices. As a teacher educator, he now works closely with primary science teachers and has graduate students pursuing workplace research in science-rich organisations in Singapore.

Wee Chee Lee

Mr Wee Chee Lee is an Assistant Director with the IAL. He is involved in the design, implementation, and review of key programmes like the Advanced Certificate in Training and Assessment (ACTA) and Diploma in Adult and Continuing Education (DACE), both of which are WSQ initiatives by the WDA, aimed at professionally developing adult educators in the Continuing Education and Training landscape in Singapore. Wee Chee was responsible for introducing pedagogical innovations in IAL, like the use of video-recording and e-portfolios in assessment, as well as initiatives to facilitate effective workplace learning in enterprises.

Sahara Sadik

Sahara Sadik is a senior researcher with the Centre for Work and Learning (CWL) at the Institute for Adult Learning, Singapore. She holds a Master's Degree in Comparative Politics from the London School of Economics and Political Science. Her research interests pertain to the comparative political economy, employability, and labour market institutions.

Renée Tan

Renée Tan is with the WDA, Singapore, and is pursuing her Doctorate in Education with the University of Bristol. Her research interests include national narratives, globalisation and its social and cultural impact, diversity and inclusivity, as well as narrative inquiry and the use of creative ethnographic writing in research. Her most recent published work is a chapter in *Using Narrative Inquiry for Educational Research in the Asia Pacific*, edited by Sheila Trahar and Wai Ming Yu.

Towards A New Understanding of Workplace Learning:
The Context of Singapore

The chapters in this book contribute to a new understanding of workplace learning. Using a socio-cultural approach, the editors and authors explore the idea of context as a pivotal influence on learning through its entwinement within everyday activity in, at and through work. This positioning is inclusive of the societal, cultural, historical, economic, political and situational factors that mediate learning. It is necessarily a complex picture as it explores the shifting agency and identity of individuals and groups as their biographies and dispositions variously enable them to make sense of and engage in meaningful work.

"Originating from but not limited to the efforts of researchers at the *Centre for Work and Learning (IAL-Singapore)*, what emerges in this collection is a lively and rather comprehensive treatment of workplace learning as a mediated phenomenon. In taking up many of the most relevant issues in this field of study today – from the role of identity, agency and creativity to the meaning of training, facilitation, skill, the effects of globalization, diversity and more – it reflects the past and present, the relevance of place, and brings clarity to ideas that can make a difference in Singapore... and elsewhere."

Peter H. Sawchuk
Professor of Adult Education, Work and Learning
Cross-appointed, Centre for Industrial Relations and Human Resources
University of Toronto

"At a time when conventional approaches to learning are being challenged as never before, this critical analysis of approaches to workplace learning, located in a society at the crossroads of Western and Asian cultures, offers insights not only into the challenges of developing our understanding of workplace learning in a global context but also of the new possibilities such a context provides for theoretical development."

David Ashton
Emeritus Professor, University of Leicester

"This book not only offers a distinctly holistic and contextual perspective on workplace learning. It also provides unique insights about workplace learning in Singapore. It is definitely a timely and essential reading for researchers, educators and policy makers."

Jörgen Sandberg
Professor in Management and Organisation, UQ Business School, The University of Queensland, Australia.

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