

Literacies @work: professional development in an organizational learning system

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Abstract

This paper explores the effects of changing technologies, demographics and community expectations at the learning-work interface. Over the course of the twentieth century, the economies of Western nations such as Australia have moved from a mass production, industrial workforce to a white-collar and service workforce. In the twenty-first century, 'knowledge' – its creation and its management – is evolving as a new currency for workers in global marketplaces. For new knowledge workers, the acquisition and deployment of multiple literacies is essential for their very survival.

To contextualize this engagement with the notion of literacies at work, emergent findings from research undertaken during the implementation of a recent workplace literacy course are presented. The course was conducted with a group of seven vocational educators working for an organisation in the health services sector. Operating as they do at the vortex of change within their organisation, these educators grappled with the changing knowledge and performance-based demands of curriculum documents, their colleagues-as-learners, themselves as learners and teachers, and community expectations.

The research project reported in this paper offers a futures-oriented approach to professional development that utilises conceptual and methodological tools related to knowledge management, action learning and discourse analysis. It engages with questions related to language, literacy and numeracy knowledge and skills utilised by the educators when designing learning activities for their colleagues-as-students. The main data gathering and analysis approach is interpretive and qualitative. The findings identify insights the educators bring to the development and enhancement of their colleagues' reading, writing, thinking, problem solving, critically analytic and interpretive abilities, as well as their mathematical, technical and technological understandings. Finally, the paper will discuss the ways in which this course could become integral to the policies and business practices of the organisation and thus fundamental to growing the workforce capabilities of health service professionals in new times.

Introduction

In a complex and constantly changing world, forces of neo-conservative globalism have constructed a particular view of vocational education and training (VET) as subservient to, and dependent on, the vicissitudes of a knowledge economy. Characteristically, a knowledge economy exhibits an economics of abundance (knowledge grown, shared and applied); an annihilation of distance (global information communication technologies operating 24/7 marketplaces); a de-territorialisation of the state whereby knowledge flows into and out of nation states on market demand; an acknowledgement of the importance of local knowledge to accommodate diverse cultures, value systems and contexts; and an explicit investment in human capital (preferably in organisational systems and processes but also in individual workers) (Peters, 2001, pp. 7-8). In national education and training policy constructions of the knowledge economy, vocational education and training is deemed necessary for the "development of 'human resources'; for upskilling and increasing the competencies of workers; and for the production of research and scientific knowledge" (Peters, 2001, p.1). As individuals and organisations in the twenty-first century are increasingly defined and identified by their relations to knowledge and skills, the concept of a knowledge-based economy is reflected in policies and practices of both governments and organisations throughout the world.

With respect to their engagement with the knowledge economy, organisations in the community and human services sector are operating in turbulent times. They are

continually brokering new roles, responsibilities and community relationships as they respond to the changing social, physical, emotional and intellectual needs of their clients and employees. Trainers working for such service-industry organisations are professionally mobile as they work among inter-sectoral and transnational contexts in which socio-economic changes and technological innovations are being continually brokered. In practice, they teach the ‘literacies’ of many worlds of work, learning and daily living, incorporating contextually relevant knowledge in multi-disciplinary learning environments. From their recent investigations into the changing work roles of VET practitioners, Harris, Simons and Clayton (2005) conclude that, “at its core, change in the VET sector is being driven by changing values, values which embrace the free market, competition, new ways of organising VET teachers’ and trainers’ work, and shifting relationships with industry (p. 63). The study reported in this paper engages with the tensions and dilemmas confronting trainers in a health and community service industry organisation as they grapple with brokering changes, connections and compliance with new identities for themselves and their colleagues-as-learners.

In this paper, ‘literacies’ is a term used to encompass the multiple combinations of language, literacy and numeracy which people use in the worlds of workplaces and educational institutions, social groups, the home and family. ‘Literacies @ work’ was conducted as part of one organisation’s professional learning processes for language, literacy and numeracy (LLN) development of not only their staff, but also their vocational trainers. The study is concerned with changes in a cohort of seven trainers’ notions of literacy that shifted the knowledge bases they had formerly relied on, and the consequent effects of this shift on their identities as professional educators. Accordingly it asks: How do these trainers broker their own and their employing organisation’s co-ordinations of power as to what constitute the concept of ‘literacy’ and their work as trainers? In responding to this question, the paper is structured around a brief overview of literature relevant to the current state of literacies @ work in Australia’s VET sector. An explanation and justification of the research methods employed in this study follow. From that contextualisation, the paper reports on insights the trainers brought to initially, their own conceptualisation of ‘language, literacy and numeracy’(LLN) and to subsequently, the development and enhancement of their colleagues’ reading, writing, thinking, problem solving, critically analytic and interpretive abilities. Here they also included technical and technological understandings that were also considered to be fundamental for growing the workforce capabilities of themselves and their organisation in new times. Finally, in terms of this conceptualisation, the challenges involved in engaging with literacies @ work, as that workplace itself is continually changing, are analysed.

Where to now for literacies @ work in VET?

Speaking at a UNESCO conference on *Learning to Know in the 21st Century*, Ordonez (1998) foreshadowed three key differences between education of the previous century’s industrial era and that of the future. First, the content of learning (what to know) will be different. Second, the process of learning, or how people learn, will be different. Third, learners themselves will be different. In the world today, investment in vocational education and training is considered to be “essential to increase human and social capital, which in turn will help to achieve economic growth and competitiveness, social inclusion and active citizenship” (Bathmaker, 2005, p. 82). In a knowledge economy, vocational education and training is expected to provide highly skilled, adaptable, mobile human capital (Chappell & Johnston,

2003; Marginson, 2000). Furthermore, the construction, management and dissemination of knowledge that this education and training facilitates, is deemed to bring health, wealth and happiness for individuals and society as a whole.

For health and community service organisations that operate in such a knowledge economy, the implications are profound. They are at the mercy of changing client needs, employee cohorts, funding sources, technologies, marketplaces for knowledge production and distribution, as well as societal expectations as to what counts as knowledge and skills, how it is to be learned and taught. Trainers are exhorted to be flexible in their pedagogical responses to this diversity of organisational and individual's learning needs. They are also expected to be professionally responsible in their choices of appropriate interpretations of training package/s, content, learning activities, assessment tasks and intended learning outcomes for direct application in the workplace.

A decade ago now, the National Board of Employment, Education and Training (NBEET), together with the Australian Language and Literacy Council (ALLC), investigated various approaches to the incorporation of English language and literacy competencies within industry standards of the day (NBEET & ALLC, 1996). At that time, the notion that every trainer should also be a trainer of language, literacy and/or numeracy was thought novel enough to warrant specific attention in such a study. The change in thinking required for vocational trainers to feel confident and competent to construct and manage knowledge about their students' language, literacy and numeracy (LLN) learning needs in relation to workplace requirements is reflected in new training package competency standards for trainers and assessors, TAA04 Training and Assessment (Business Services Training Australia, 2004). For Australian Registered Training Organisations (RTOs), language, literacy and numeracy issues are addressed explicitly in Standard 6 (Access equity and client services) and Standard 9 (Learning and assessment strategies) of the revised Australian Quality Training Framework (Australian Government, Department of Education, Science & Training, 2005, p. 8 and p. 11). In combination, this presents three key challenges not only for trainers, but also for their employers, the profession and credentialing authorities.

First, employers face a human resource management challenge from within their organisation/s if integrated LLN knowledge is to be employed productively to build capacity within the organization/s (Lonsdale & McCurry, 2004). Second, there is a challenge for a profession in which the dichotomy between generalist and specialist LLN teachers/trainers has continued to be maintained (Business Services Training Australia & Australian National Training Authority, 2004; McKenna & Fitzpatrick, 2004). Third, credentialing authorities in Australia are being explicit in their requirements for the underpinning LLN knowledge base for trainers and assessors which serves to reinforce a generalist-specialist binary (Business Services Training Australia & Australian National Training Authority, 2004; Wickert, 2004). This is illustrated in the LLN-specific competency unit extract from the training package for trainers and assessors:

(TAALLN401A) Address language, literacy and numeracy issues within learning and assessment practice

This unit addresses the skills and knowledge that trainers and assessors must possess to provide appropriate instruction and assessment to learners with language, literacy and numeracy needs within their vocational program drawing on the expertise of relevant professionals as required ...

Relevant professionals include specialist adult language and literacy or numeracy practitioners ... Competence in this unit does not indicate that a person is a qualified specialist adult language, literacy or numeracy practitioner. (Business Services Training Australia, 2004)

From earlier work on the notions of professionals and practitioners, Darling-Hammond and Wise (1992) claimed that “in all occupations that claim the term, professionalism exists in some tension with alternative forms of regulation and accountability” (p. 1359). In Australia, the determination of what counts as the knowledge base of English language, literacy and numeracy and who gets to teach/train that knowledge is a source of continued tension as the national and international workforce of trainers comes under the surveillance of public sector VET regulators. The regulation and accountability mechanisms of Australia’s VET sector positions RTOs and trainers in potential tension with the espoused principles for professional educators as outlined above.

For trainers who perceived themselves to be employed solely for their technical knowledge, expertise and workplace experience and who identify with that professional framing, the notion that they have a responsibility to concern themselves with the English language, literacy and numeracy demands of the content and processes of learning for their trainees can be quite daunting. Yet the multimodal literacies of living and working in local/global communities of practice require pedagogical processes and content knowledges that are congruent with the socio-culturally situated contexts in which that training and learning is enacted. In a discussion paper prepared for a national strategic forum on adult language, literacy and numeracy, the Director of Education and Training for the Australian Council of Commerce and Industry called for the “development of a comprehensive approach to addressing workplace language and literacy” (Balzary, 2004, p. 11). In the field of language, literacy and numeracy professional development, it is timely then to investigate a knowledge hierarchy predicated upon a novice-expert binary and short-term models of professional development which can perhaps no longer serve the distributed social learning and/or earning networks of the twenty-first century.

Designing the study

To explore this issue further, a study was designed to work with seven trainers who were learning about LLN so as to better equip them to satisfy their organisation’s requirements that employees successfully complete their nationally accredited training programs from Certificate III to Diploma levels. Situated within a qualitative paradigm of interpretatively framed research, learning is positioned as a process and work a lived experience in which the meaning of the process *and* the experience constitutes the knowledge to be gained. Explicitly stating the research design outlines a logical ‘fit’ between what the study set out to do and what it actually found. The study set out to investigate how this particular group of trainers brokered their own and their employing organisation’s co-ordinations of power as to what constitutes the concept of ‘literacy’ and their work as trainers. The decisions that have been made to address this question will now be explained and justified.

The development of the research methodology was an iterative process as the question was developed and refined in conjunction with the development of the eventual research design. Theoretically and methodologically, the study is concerned with discourses and the ways in which people use language and coordinate power

within discourses to construct their professional identities. Methodologically, discourses constitute a heterogeneous field of study because the primary condition of all discourse is dialogue, and dialogue is inherently social (Macdonnell, 1986). Through dialogue, discourses become conceptually viable and as such 'open' to interpretation. In her extensive examination of the *Theories of Discourse*, Macdonnell (1986, pp. 1-4) identified "discourses of knowledge" in which the social production of meanings via dialogue is inscribed in both processes of speech and writing and interchanges of verbal and non-verbal signs. In these discourses of knowledge, meanings are made known through organisational practices, techniques and forms of knowledge construction and dissemination, including pedagogical forms of knowledge transmission and diffusion (Foucault, 1991).

In his *Introduction to discourse analysis: Theory and method*, Gee (1999) refined MacDonnell's (1986) notion of dialogue, noting that, while speaking and writing form part of social languages, the meanings that are taken from this speaking and writing are actually embedded in "specific *social conversations*" (pp. 34-37; emphasis in original). Gee's penchant for the use of capital letters is reflected in his use of the 'capital C' to denote these "social Conversations", which he determined to be constitutive not just of people using language, but also of controversies, values and ways of thinking, as well as of the symbolic value of objects and organisations that could be termed non-verbal participants in Conversations (Gee, 1999, pp. 34-35).

The specific focus in this study is on the 'symbolic value' of objects and the discourses mobilised in and through them. Objects peculiar to this workplace include: (1) the organisation's paper-based and electronic forms used for recording and reporting important information; (2) its range of communication technology used; (3) instruments and technologies used as part of various jobs within the organisation; and (4) training package units of competency. Language fuelled assumptions, perceptions, beliefs, interpretations, values and ways of thinking and learning about these objects are expressed through social conversations or dialogue expressed in spoken, written, visual and iconic language forms.

Data collection techniques included observation, interviews, artefact collection and journalistic writing. Observations of trainers in the training room, their interactions with one another and their colleagues on site were noted in researcher journal. Interviews were unstructured open-ended, informal discussions before, during and after training sessions. Artefact collection yielded emails, paper-based records of focused group discussions, whiteboard drawings and words of issues raised and training plans incorporating LLN specific learning activities. The data sets were then subjected to a discursive reading of issues and dis/continuities emerging.

There were two stages to the data analysis strategy. First, a preparatory stage prepared the data for analysis. This 'tidying up' process involved compiling a data inventory that functioned as a library for ongoing data retrieval (LeCompte & Schensul, 1999). As part of this process, data which were related to the research question, and which could be used as evidence of values, beliefs, assumptions, perceptions, interpretations, representations of self and others were selected. At this stage, pseudonyms were allocated to preserve anonymity for the participants. Second, 'chunks' of text from the data were identified for further intensive analysis. For the purposes of this study, text is understood to be "any stretch of oral or written language such as a conversation, story, argument, report and so forth" (Gee, 1996, p. 94). In linguistic terms, the stretches of oral or written language in the data were text.

Selected text were chosen for analysis in terms of their contextualised, thematically organised discursive meanings that were actively constructed and negotiated with the listeners and viewers in the focused group discussions and readers of the LLN learning strategies. In the findings and discussions reported in the next section, data are presented in italics with the trainers' pseudonyms used to track the evidence.

Notions of literacy: findings and discussion

The findings identify insights the trainers bring to the development and enhancement of their own and their student-colleagues' reading, writing, thinking, problem solving, critically analytic and interpretive abilities, as well as their mathematical, technical and technological understandings. Literacies @ work for these professionals start with language:

Language is ... a means by which we translate our thoughts and words to others. (Aileen)

Language is ... about cultural communication combined with effective understanding and listening skills. (Daniel)

Kieran's explanation was arrived at after a long focused discussion session and was unanimously voted the 'best' because it was the longest.

Language is ... a complex collection of words, sounds signals that make up a collective method of communication in order that groups, populations, cultures, races or species can communicate in an efficient manner to meet with the requirements of safety, teaching and learning, general functional needs and social interaction. (Kieran)

Given the world of work in which these trainers operate, 'communication' in which 'thoughts and words' are 'translated' to others so as to convey the meaning of the speaker/writer is vital because of their workplace specific 'requirements of safety, teaching and learning, general functional needs and social interaction'.

When it comes to literacy though, the concept is a more complex notion for these trainers. For them, literacy is conceptualised through: (1) their own shifting knowledge bases; (2) their pedagogical work as trainers; and (3) the contexts in which learning and teaching takes place in their organisation. The ways in which their understandings of literacy are expressed are not neat and easily defined so the following data will give but a snapshot of their conceptualisations. Because of the location of this study within a professional development course, there were common stimuli to the focused discussion session which are reflected in some of the data.

Me and my LLN

All trainers were present at the initial focused discussion sessions and shared the histories of their personal literacies and the challenges they were facing with present day notions of LLN. The following data evoke the tenor of those exchanges which captured the changes in their thinking during this time. For some, the change was swift and dramatic. For all, it was an unsettling time because:

... we have now opened the door to a huge knowledge base ... in such a short time my [...] view of the term 'literacy' has been exploded and torn in to a million little pieces; I am now working to re-assemble these pieces like a huge jigsaw puzzle. (Kieran)

Gary found it all 'overwhelming at first'. He saw links between what they were discussing in the sessions and his personal life because he could 'recognise new concepts of literacy in my children's learning'. In these early focused discussion

sessions, the trainers shifted from personal to professional contexts and often used the personal to explain particular professional stances.

Aileen and Kieran were among the most loquacious about their personal literacies and the challenges faced in engaging with the notions of LLN.

... [I] read that Vygotsky and am now sure I need to be Bipolar to understand it (Aileen).

Reading unfamiliar texts is, for Aileen, a chore; but the reasons for this were articulated and shared with colleagues (some of whom nodded empathically on hearing it):

...when I get a different type of text to read, I find it difficult ... It makes a difference if you want to read it. (Aileen)

From personal to professional reading, Aileen made a clear distinction. Her awareness of her own response to reading unfamiliar text was reflected in her pedagogical work with colleagues in which she made extensive use of case studies, simulation and role play to complement the reading and writing requirements of the particular job/s.

Kieran's thoughts below were shared on an email with his colleagues:

We are constantly subject to change, both on a global basis and within the [organisation]. As a result we have to not only keep abreast of changes, but we need to keep our thinking and our teaching of literacies fluid and flexible, to mould to the changing needs of society and our students. (Kieran)

Here there is an acute awareness of the global/local dynamics of learning, earning and living in twenty-first century society that was shared throughout the group.

Rapidly moving to the professional learning contexts of the organisation, the trainers identified challenges for themselves, their colleagues-as-students and the organisation.

Me, my students and the organisation

Richard summed up his perceptions of the challenges he and his colleagues face:

- 1. Individuals who struggle with every day language and numeracy. These people struggle to maintain their currency and end up isolated within the workforce.*
- 2. Individuals who struggle with the specific literacies of the profession. Many of these people were at one time at the leading edge of our profession but change, technology, and new literacies have left them behind.*
- 3. The increasing shift to formal tertiary education amongst a workforce that has traditionally been blue collar in nature has resulted in a significant gap between the knows and the don't knows. The don't knows, colloquially called "silverbacks" are being left behind at an ever increasing rate.*

Paul believed there to be 'a considerable amount of resistance, not resistance but uninformed people within the organisation'. Daunting as it appeared, they maintained a robust hope that their work with those colleagues in the first two of Richard's categories above could achieve both personal and professional satisfaction for themselves and the colleagues-as-students.

Gary's response was to initially question 'how to introduce new concepts to our workforce?' leading to an assumption that he would perhaps 'need to adapt my methods and style to address what I am learning'. His LLN focused learning plan was developed after a critical analysis of the reasons for an employee's failure to

progress through a workplace assessment undertaken by his line manager and on-site tutor. Following in-depth interviews with all three people concerned, Gary concluded that the employee was not 'illiterate' or 'innumerate' as claimed because:

His daily completion of documents which were regularly audited, was overlooked ... ability to complete equations by writing them down ... [assessed] for activities he had not been trained in ... assimilated his information primarily by observation ... [X] found it difficult to verbalise information in a structured sentence format and preferred to demonstrate his understanding via practical demonstration and explanation using key phrases ... supervisor was not training to the level at which [X] was being assessed.

Gary designed a series of learning strategies that incorporated mathematical equations, simulations, focused observations and a unique blend of contextualised content and process that, while utilising the employee's thinking processes within his comfort zone, did not compromise the workplace specific requirements for the particular job. For Gary, as for the others in the group, *'time and resources are a constraint and it is difficult to work consistently with the same person/people'*.

The workplace context is always present and shapes every pedagogical decision they make because, *'our students are not learning how to bake a cake, they are learning skills/knowledge to be able to independently in 3 years save a life, and still require some supervision from time to time (Aileen)*. Daniel's view is that *'we need to keep an open mind that some literacy teaching methods work and others don't, there still leaves a lot off unanswered questions'*.

Shared values as to the purpose of their work in the organisation are reflected in Richard's thoughts when he critically analysed the challenges *'in developing and presenting knowledge and skills in a manner that can be used by all'* [in the organisation]:

Bailey (2004) discussing the dichotomy between the desire to generate self-directed learning on one side and the need to ensure public safety on the other suggests presenting learning in familiar contexts. This I believe is one of the big challenges of coping with the changing literacies in our workforce...The need to present more and more information in less and less time with tighter and tighter budgets and still keep a dynamic and diverse workforce engaged.(Richard)

What does this mean for the future of LLN professional development for workplace trainers? In a practical sense it means that trainers such as those in this study will continue to do their jobs with albeit an increased insight into the potentialities of individuals' learning needs and the LLN demands embedded in specific on-the-job tasks, training package units of competency. Some of the strategies developed (and some that were trialled successfully) will continue to be used and shared with their colleagues.

Me and my job

From her extensive research into the character of literacy at work, Hull (2000) identified eighty metacategories for literacy functioning in one factory. Each function was classified according to seven broad categories that described the purpose of particular work practices:

- Performing basic literate functions;
- Using literacy to explain;
- Taking part in discourse around and about text;
- Participating in the flow of information;
- Problem solving;

- Exercising critical judgment; and
- Using literacy to exercise or resist authority
(Hull, 2000, p. 651)

These have been used to analyse the nature of the literacy tasks that the trainers identified via a series of Occupational Literacy Audits which identified a particular occupation, work environment/s, social interactions involved and specific job tasks. The result is an extensive list that has been mapped against Hull's metacategories for literacy functions (see the tables below).

Table 1: Performing basic literate functions

Completing forms	Locating	Providing documentation
Copying	Looking up	Reciting
Correcting	Matching	Recording
Identifying	Notetaking	Requesting documentation
Keyboarding	Practicing	Tallying
Labelling	Proofreading	Translating

Table 2: Exercising critical judgment

Assessing	Evaluating	Using irony
Certifying	Highlighting	Validating
Critiquing	Inferring	Verifying
Disputing	Interpreting	Bestowing dis/approval

Table 3: Using literacy to exercise or resist authority

Admonishing	Gaining consensus	Fudging
Assigning	Constructing rules	Deferring
Interpreting	Using irony	Granting permission
Proposing	Requesting action	Requesting permission or approval

Table 4: Taking part in discourse around and about text

Citing	Perusing	Referencing
Constructing rules	Presenting	Reflecting
Highlighting	Quoting	Signifying
Miming	Recounting	Summarizing

Table 5: Participating in the flow of information

Coaching	Providing linguistic assistance
Constructing rules	Receiving instruction
Giving instruction	Requesting or providing clarification
Invoking	Seeking direction
Practicing	Seeking instruction

Table 6: Problem solving

Brainstorming	Gauging reactions
Calculating	Justifying
Categorizing	Planning
Conjecturing	Representing
Creating hypotheticals	Revising

Table 7: Using literacy to explain

Analogizing	Exhibiting
Contextualizing	Explaining
Demonstrating	Illustrating
Dramatizing	Role playing
Elaborating	Doing show-and-tell

Because of the ethical considerations around this study, it is not possible to provide explicit examples of job tasks that led to this list. However, it was presented to a larger forum of professionals in this field for comment and confirmation. Such a process would be worthwhile in job redesign and/or training plan development activities at a later date. As this study demonstrated, it is a worthwhile learning activity for trainers LLN professional development because it enables them to safely challenge previous stereotypical notions of literacy as confined to reading and

writing. In addition, it facilitates trainers' use of a language to talk about LLN in ways that value not only the reading and writing at work, but also the social roles and work environments in which the communication takes place (Hull, 2000).

Conclusions

Given the hierarchical, centralised nature of their organisation's training environment, in the short term it is unlikely that these trainers will have the opportunity to influence large-scale curriculum renewal. Yet the data indicate that their learning as a result of these experiences has been considerable and they readily accepted their role as encompassing LLN aspects of the learning programs they were expected to deliver. From their research into integrated approaches to adult literacy teaching in community services in Victoria, McKenna & Fitzpatrick (2005) found that 'generalist' trainers can deliver integrated LLN provided that they:

- have a framework for conceptualising linguistic practices in the workplace context and within the training package; and
- can facilitate strategies and activities to develop critical workplace communication. (p. 7)

Furthermore, as was found in the study reported in this paper, access to a specialist LLN teacher is advised to assist with understanding the reading, writing, oral communication and numeracy skills required by employees undertaking particular on-the-job training.

These trainers brokered their own and their employing organisation's co-ordinations of power as to what constituted the concept of 'literacy' and their work as generalist LLN trainers through: (1) engaging in focused discussions with their peers; (2) reading and responding to other views on LLN including theoretical perspectives from a range of scholarly sources; (3) analysing training package competency units in terms of their embedded and explicit LLN requirements against the stated Australian Qualifications Framework (AQF Advisory Board, 2002) level/s of the award; (4) comparing and contrasting National Reporting System (Coates, Fitzpatrick, McKenna & Makin, 1996) levels against workplace-specific LLN demands and the aforementioned analysis of competency statements; (5) conducting occupational literacy audits of key jobs for which they must train their colleagues in the organisation; and (6) designing, trialling and evaluation a series of LLN-specific activities for inclusion in a range of small group and/or one-on-one learning programs.

Much has been written about literacies in Australian workplaces and much has been done over the last sixteen years since International Literacy Year in 1990. At the beginning of this century, McDonald (2000) identified key areas of change that called for the immediate attention of VET professionals: "new kids, new work, new actors and new productions" (p. 20). Brokering these changes has remained a fundamental challenge for the profession (Chappell & Johnston, 2003; Harris *et al.*, 2005). Kell, Shore and Singh (2004) believe a key challenge to be:

preparing adult educators with the technical skills, disposition, and multicultural and political understandings to use the new technologies of human interaction, knowledge production and community formation.

(p. xxiii)

Despite continually evolving 'high-tech' plant and equipment, more work for less staff and an unceasing globally competitive marketisation for goods and the positioning of citizenry as consumers, service industries are still dependent on the

human capital of their staff for their operations. Here the 'human interface' is as important in these industries as it ever was – perhaps more so as people (i.e. the service 'consumers') expect technologically mediated services delivered through empathic, culturally sensitive interactions.

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