

# Older workers, employability and tertiary education and training

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## Older workers and employability

As working populations age, issues associated with older workers' employability and lifelong learning arise for national economies, enterprises, communities and these workers themselves (OECD 2006). This paper seeks to outline the range and extent of these issues and how the provision of Australian tertiary education and training might best respond to them. In all, it proposes that, rather than proceeding with responses of a uniform kind, these issues likely play out in distinct ways for particular categories of older workers (that is, those over 45). The workers most warranting an education or training response are in occupations that are age-intolerant; have lower levels of educational achievement and engagement in low-status work with narrow pathways, leaving them vulnerable; and have workplace circumstances, health or dispositions that constrain their capacity for learning during their working life.

The issues associated with older workers' employability are not wholly age-related. Factors other than age shape their prospects for ongoing employability (Karmel & Woods 2004). Therefore, rather than comprising a problem for all workers aged over 45, issues associated with their employability will be varied and distributed differently across the older working population. Indeed, there may be greater similarities with other measures of disadvantage (that is, levels of education, kinds of employment, life chances etc.) than with categories of age.

The paper commences by advancing propositions about older workers' employability and their lifelong learning and offers suggestions for the most appropriate responses from the tertiary education and training system. When considering how best to promote older workers' employability through education or training initiatives, the following premises are noteworthy. Firstly, workers normally learn through their work, and older workers are no exception. They report possessing and demonstrating the capacity to engage with new tasks, novel work practices and emerging technologies as part of their work. Secondly, however, wholesale change can be confronting for these workers, particularly those who have had stable work histories comprising similar kinds of activities over an extended period of time. Thirdly, enduring perceptions of employers and supervisors about older workers' limited capacities are often contradicted by other forms of evidence, which are doggedly ignored. Fourthly, the often reported reluctance of older workers to participate in training (Noonan 2007) might arise variously through a lack of confidence, or beliefs by these workers that they are already competent and effectively address new challenges, which is what they frequently report (Billett 2009; Billett et al. 2009). Fifthly, opportunities for employment and employability within the growing fields of professional and technical work and for meeting changing work requirements are most likely to impact on workers with low levels of educational achievement and those whose work histories have not provided them with opportunities to engage with and learn that technology. Finally, approaches to continuing education for these workers may need to go beyond those provided through existing education and training provisions, which are

primarily established for initial occupational preparation and position learners as students, rather than as collaborators in their own and others' learning.

## Older workers, employability and lifelong learning: some propositions

The following propositions arise from a consideration of the growing body of literature on older workers and recent empirical work undertaken by the author. They comprise a synthesis of that literature and work and are advanced as the bases upon which the elaboration of the specific issues associated with older workers' employability might progress. They both refine and augment the findings of much of the existing literature on older workers, particularly those found through mass surveys.<sup>1</sup> These propositions are as follows.

- The Australian workforce is ageing and, for the foreseeable future, is likely to work longer than previous generations (Colebatch 2009) (that is, pension entitlement is now at 67).
- Yet, like all workers, those aged over 45 will need to sustain their employability by:
  - maintaining workplace competence, including being deemed worthy of promotion and advancement, should they want them
  - resisting unemployment by securing a level workplace performance that sustains their employment, even during recessions or when significant changes in work requirements occur
  - having the capacities to secure re-employment should they become unemployed (Gringart & Helmes 2001).
- However, for such workers, these issues may be more prevalent because:
  - societal perceptions of older workers' capacities are far from uniformly positive (Disney & Hawkes 2003; Kossen 2003; Quintrell 2000)
  - employers' largely negative attitudes towards these workers appear entrenched (Rosen & Jerdee 1988; Steinberg, Donald, Najman & Skerman 1996)
  - changing requirements of work (for example, technology) are often seen to be misaligned with some older workers' capacities (Billett et al. 2011)
  - the brute fact of ageing does restrict and inhibit the range of work and occupations in which these workers can participate (Bosman 1993; Sigelman 1999).
- Such factors have consequences for older workers in terms of:
  - security of employment, opportunities for advancement, and contributing to and having access to training and development opportunities (McNair, Maltby & Nettleship 2007)
  - most perilously, for those older workers who are unemployed, finding re-employment and sustaining employability (Gringart & Helmes 2001; Kossen & Pedersen 2008).
- However, some important qualifications need to be made here. These are:
  - some forms of work and occupations are more age-tolerant than others, meaning that issues of any disadvantage associated with age are not uniform across the ageing workforce
  - in some instances, being older brings distinct advantages over younger workers (Billett et al. 2010)
  - these advantages are most likely to be found when older workers have high levels of education, are engaged in professional work, or where experience or maturity is essential (Billett et al. 2010; Karmel & Woods 2004)

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<sup>1</sup> These studies used a combination of interviews and surveys with particular cohorts of older workers in Australia, Singapore and drew on partners' work from Scotland. Their findings partially contradicted much of what is proposed from survey studies alone.

- these advantages are least likely to be found when these workers are engaged in low-skill, low-esteem forms of employment or physical, high-energy and high-impact work, or where being youthful is an essential criterion (Billett et al. 2010).
- When considering how best to promote older workers' employability through education and training initiatives, the following findings from empirical studies are likely to be worth noting:
  - workers ordinarily continue to learn through their work, and older workers are no exception, reporting that they have the capacity to engage with new tasks, novel work practices, and emerging technologies as part of their everyday work
  - wholesale change for these workers can be confronting, particularly if their work histories have been stable and have comprised similar kinds of activities over an extended period of time
  - employers' and supervisors' perceptions of older workers' limited capacities are often contradicted by other forms of evidence
  - reluctance to participate in training might arise through a lack of confidence or genuine beliefs by these workers that they are competent and effectively address new challenges
  - changing work requirements, including the increase in conceptual and symbolic knowledge and the growth of professional, paraprofessional and technical work, are most likely to impact upon workers with low levels of educational achievement, which includes many older workers
  - approaches to and models of education and training for these workers need to look beyond those existing provisions primarily established for initial occupational preparation and which position learners as students, rather than collaborators in their own and others' learning.

A discussion of each of the above propositions is important, as they all require further elaboration and qualification. However, this is not possible within the scope of this paper, nor is it necessarily appropriate to its focus: on how tertiary education and training policy and practices can assist older workers' employability. Instead, after a short set of preliminary comments, this final set of propositions about older workers' employability is discussed, as are implications for individuals' lifelong learning and the education and training system's response for supporting and sustaining the employability of Australian workers aged over 45.

## Starting point: older workers, employability and lifelong learning

From an analysis of selected literature and a program of research across three countries (Billett 2011; Billett et al. 2009; Billett et al. 2010), the discussion here is framed by a conclusion that, while there may be societal attitudes that act against older workers, the processes of maturation are not always helpful to older workers and that changing work and work practices are not always aligned with older workers' needs and aspirations. Yet, the issues of older workers' employability cannot be constrained to ageing. That is, older workers' employability is dependent upon:

- the kinds of work they undertake
- whether they are employed or not
- their level of education
- the kinds of support they secure in their workplaces
- their occupational capacities, personal attributes and interests
- their age (Billett 2010; Billett et al. 2009; Meyers, Billett & Kelly 2010).

Consequently, having a focus on age and older workers per se is less likely to be as productive or as helpful as a consideration of the factors which make employability problematic for certain kinds of older workers. Through such a focus, the intention here is to suggest ways in which tertiary education and training provisions can address these workers' needs. Some of these factors will need responses at the societal level (for example, beliefs about the standing of older workers), but most likely the key benefits arising from interventions associated with education and training are those targeted at particular kinds of older workers, and probably at a local level. However, the more fundamental concern is the way the education and training system assists Australians to secure their employability across their working life, regardless of age. This emphasis on development across working life was one of the original goals for the formation of a national vocational education system nearly five decades ago (Byrne & Kirby 1989).

## Older workers learn through everyday work activities

The proposition that older workers per se are not good or effective at learning new tasks and activities (that is, 'cannot teach old dogs new tricks') appears to be a fallacy, despite being a commonly held belief about older workers. The evidence suggests they continually learn in and through their work (Billett 2010), as most contemporary accounts of cognition would predict (Valsiner 2000). More important is understanding those areas or forms of learning they find difficult to achieve in their everyday activity, and the reasons for these difficulties.

Workers aged over 45 consistently and not surprisingly refer to the significant changes in their work in the past decade (Billett 2010; Billett et al. 2009), indicating that these changes vary in scope and extent. They also refer to engaging in new roles and responsibilities and in new forms of work and employment. Put simply, if older workers were inept or incapable of learning, they would not be able to meet the changing requirements of that work, take up those new roles and responsibilities and change employment. As all of these circumstances require learning and, indeed, new learning (that is, the development of novel conceptual, procedural and dispositional knowledge), there is clear evidence that learning throughout everyday practice at work occurs for these workers. This finding is consistent with contemporary understandings about cognition that suggest that the processes of learning and experiencing are one and the same and that individuals learn through engaging in activities and when negotiating wholly new experiences (Anderson 1993; Billett 2009; Rogoff 1990, 1995). Moreover, the studies reported here (Billett 2010, 2011; Billett et al. 2009) indicate that these workers also routinely deploy a range of strategies when engaging with and learning new activities. They report accessing a range of resources (for example, others, books, the internet etc.), and also overwhelmingly see that the responsibility for this learning for employability largely resides with themselves. Hence, beyond the normal cognitive processes that ordinarily engage workers in the learning process, these workers often referred to being quite intentional and proactive (that is, agentic) in the learning associated with their work. This agency extends to being active in seeking out, through an array of means, the kinds of knowledge they need to acquire.

## Discussion and implications for tertiary education and training

This proposition has quite different implications for older workers and depends upon whether they are employed or not. For the employed, the prospect of sustaining their employability is found within opportunities often accessible in workplaces. These include engaging in novel activities, which will assist them to further develop their capacities, so that eventually they become highly competent in those new activities. Their ongoing engagement in the workplace means that their ability to respond

to new activities will be enhanced. The important point is that these workers, if they are given adequate opportunities to engage in new tasks and roles as they arise in the workplace and access to some support in these activities, are likely to develop further their employability, even with activities different from those previously encountered. The evidence suggests that there is little or no evidence that older workers are unable to learn new tasks, activities and roles and continue to do so across their working life. So, for those in work, sustaining employability comprises participating fully in, and securing support to participate in, work activities, including new opportunities and challenges.

However, for older workers who are unemployed the challenge of sustaining employability is far more severe. They will not have access to opportunities for the kinds of everyday learning referred to above. Moreover, as many of the workplace performance requirements are situational, older unemployed workers participating in courses may find that these do not provide the kind of routine and non-routine experiences necessary to develop the employability required for the workplace. Consequently, education and training provisions for older unemployed workers necessarily require practice-based components to enable these workers to participate in workplace settings as active and engaged employees, and for longer duration than simply to provide experience of those settings.

## Significant workplace and occupational change can be overwhelming

While much evidence suggests these workers have continued to learn across their working lives and in ways that permit them to be successful in managing new tasks, requirements, roles and responsibilities, wholesale change can be quite confronting, and/or the requirements become overly demanding and intimidating (Billett 2011; Billett et al. 2009). Shifting to a new occupation or an entirely new way of working can be overwhelming for a worker of any age, with some types of work becoming particularly overwhelming as workers age (Meyers, Billett & Kelly 2010). For instance, it is acknowledged that frontline work roles in defence and emergency services become too difficult as workers age. Hence, areas such as these have traditions of early retirement and transition arrangements associated with workers' movement to other forms of employment. However, there are other age-intolerant occupations, for instance, the examples reported in the recent research included work by professional cooks in frontline restaurant work and marketing workers in the private sector. These informants reported, respectively, that the physical demands of the work became too much, and that the requirements and profile for working in marketing were strongly associated with youth and the ability to work excessive hours. One informant, when asked what it meant to be an 'older worker', suggested that for the concreter it was 40 years, yet for an academic it is far older (Billett et al. 2009). The point being here is that the physical demands of being a concreter are such that this work is age-intolerant, which is not the same for academic work.

However, the data provided examples of how older workers managed to negotiate these circumstances. For instance, the chef moved to work which didn't require à la carte style of restaurant cooking, and the marketing person secured a position within the public sector in the public relations section of a government department (Billett et al. 2011). However, not all workers will be able to negotiate such changes, particularly if there are no appropriate opportunities, or their specialism offers no such options.

## Discussion and implications for tertiary education and training

Assisting workers to deal with significant change of the kind outlined above requires responses that are timely, incremental and focused on the individual. Timing is important because wholesale change can bring about issues of anxiety, concern and self-doubt, which might inhibit productive engagement

in work and learning by older workers. Incremental responses may be the most appropriate way to assist individuals to learn about large amounts of new knowledge gradually and non-threateningly. Hence, an educational response might seek to assist learners to understand the overall nature of these changes and requirements, to inform them about occupation-specific changes, and finally to aim to develop in them the capacities enabling them to be effective in their new workplace roles, tasks or activities. Specific education and training might also be required to assist older workers to move to more age-tolerant versions of their existing work, or be supported in transitions to occupations that are. It is nevertheless important to keep in mind that, as in much of continuing education and training, the kinds of challenges individuals will have to face will be person-dependent (Meyers, Billett & Kelly 2010). Individuals will have different levels of readiness and capacity and their concerns about significant workplace change will vary. Curriculum and pedagogic initiatives to assist individuals learn for new roles, tasks and even occupations are likely to require knowledge of the individuals themselves. Rather than presuming to know the workers, it is important to identify their needs and determine how these might best be met in responding to these new challenges.

## Employers' and supervisors' views represent barriers to older workers' employability

Consistent across the international literature (Bartel 2000; Brunello 2001; Brunello & Medio 2001; Giraud 2002) and very much from Australia (Gringart, Helmes & Speelman 2005) is a view that employers demonstrate a strong preference for the employment of younger over older workers and that this is also exercised in terms of which of their employees receive support for ongoing development. The views supporting this preference are reported to be highly constant and propose that older workers are far less capable than younger workers and also far more difficult to train. Older workers are therefore positioned as not being worthy of opportunities for further development or training. Other reports, on the other hand, are less dismissive of older workers and indicate that this group of workers is highly valued for their diligence, reliability, problem-solving capacities etc., although concerns remain about the currency of their skills and their ability to continue learning, with these influencing employers' decisions about the worth of older workers as employees (Bittman, Flick & Rice 2001). That is, they are good, but are still not up to the job.

The quantitative evidence from Europe, North America and Australasia indicates that employers are more likely to spend funds on developing the capacities of younger and well-educated employees than on older employees (Bartel 2000; Brunello & Medio 2001; Giraud 2002). Here, a cost–benefit analysis is often held to be the key source of decision-making: can the employer secure a return from their investment in the further development of employees? Because older workers are seen to have a finite period of employment, it may not be worthwhile to expend funds on them since younger workers are potentially long-term employees. However, such analysis denies that the most mobile of workers are young educated workers and the least mobile of workers are older workers (Giraud 2002). Other groups of employees (non-native speakers, women, migrants etc.) may also be denied access to employer support for further skill development (Brunello & Medio 2001), which indicates that age alone is not the key barrier to receiving.

While many widely held views on older workers do not help their case for being able to secure either employment or opportunities for advancement and training within the workplace (Gringart et al. 2005), many workplaces that employ older workers strongly endorse their worth (McIntosh 2001), particularly their diligence, reliability, punctuality and their problem-solving skills and ability to work with others. What is particularly ironic here is that these are the very qualities which employers

frequently request that education systems generate in their students (Department of Education, Science and Training 2002). However, seemingly, when faced with workers who have these capacities they view them with low esteem. Or do they?

In the studies reported here, it was found that managers' perception of older workers was far more nuanced and diverse than some of the views reported above. For instance, some of the informants indicated that it was not age per se that was the basis of their decisions, but other kinds of fit with work. There were repeated instances where older workers had been employed and also granted opportunities for progression. Moreover, in an employment-related scheme in Singapore, in which employers have to consider the options for workers approaching the age of 62, it has been found that many of them exercise the option to continue to employ that worker. It is only those who are perceived to be poor performers who are subjected to any re-employment interview. One group of mature-age nurses reported that, because of a shortage of nurses, they did not experience any work-related bias, could access opportunities for development and were able to negotiate a kind of shift arrangement which suited their needs (Billett et al. 2010). In addition, some older workers suggested that, rather than their being the subject of workplace bias, younger workers found it far more difficult to establish their professional profile and to gain secure employment in situations where employers were commonly using contracts for new employees.

## Discussion and implications for tertiary education and training

It seems that there is a widely held attitude that privileges youth over age (Giddens 1997) and which also appears to shape decision-making by employers about both employment and developing further older workers' employability. Just as issues associated with equity for the employment of women in the workforce required and continue to require concerted action to overcome societal bias, so too there is a need for action at several levels to secure equity in employment for older workers. Firstly, at a society level, a response is necessary that emphasises the importance of workers aged over 45 and the kinds of contributions that they make. Secondly, there is a need for decision-making about participation in ongoing development to go beyond views linked to gender, age, race etc. and to be based upon evidence rather than norms and beliefs. More effective advice and tools for employers for considering the basis on which they expend funds on their employees (for example, retention, portability, employability etc.) might be made more widely available. Thirdly, the education and training system needs to develop continuing education and training provisions that meet the requirements and imperatives of older workers and allows them to demonstrate competence and achieve recognition (certification) outside their workplace setting. When crucial decisions in enterprises are failing to address the national interest, then appropriate educational provisions may be needed. Consider, by way of example, the provisions, such as group training schemes, enacted to assist young people. This kind of approach would necessitate understanding the ways in which older workers engage with tertiary education and training initiatives in meeting their needs. Initiatives in this area would need to be enacted locally and directly meet these workers' needs and interests and extend their knowledge.

## Bases by which older workers want to maintain their employability

In some instances the literature reports older workers as being unwilling to participate in training programs and vocational education training (Noonan 2007). This is often taken as their being uninterested in further and ongoing development, which in turn positions them as being unworthy or undeserving of the support of employers or the state. Certainly, in the empirical work some workers

expressed this view. However, they were in a minority. The majority report either engaging or being willing to engage in such programs, depending on availability and accessibility. They also emphasised, almost universally, that they understood it was their responsibility to learn through and for work. Moreover, older workers' attitudes towards training are premised on a range of factors that go beyond mere reluctance. Firstly, many reported being adequately skilled for their work and not in need of further training and provided evidence of this (Billett 2010; Billett et al. 2010). They also indicated that they had the ability to continue much of their own development in self-directed and locally organised ways.

A number of workers reported that the kind of training they were offered was often inappropriate or inaccessible, or considered to be demeaning (positioning them as 'learners'). Some workers referred to preferring an approach of skill development in which they could play an active part rather than being positioned as a student. For instance, some reported being involved in dialogue forums, where they could both share their knowledge with other workers and also learn from those workers. Going beyond concerns about their engagement in ongoing development or ambitions associated with advancement (that is, promotion), many of these workers referred to currently assisting other workers to learn and making lasting contributions in this regard. For many of these workers certification of their skills was not necessarily a high priority. That is, their interests were likely to be more associated with performing in their field of practice in ways that provided them with satisfaction as an employee, than with becoming a manager or supervisor (Meyers, Billett & Kelly 2010). Indeed, many of these employees claimed that their contributions to the workplace were often underestimated, particularly through working with others, developing the capacities of others and performing competently (Billett 2010; Billett et al. 2010).

## Discussion and implications for tertiary education and training

The majority of older workers interviewed and surveyed indicated that they were actively learning in and through their work, and that they were willing to engage in structured training programs should these be appropriate and accessible. So, against a view that suggests that these workers are unwilling learners, the evidence suggests quite the opposite is the case. Indeed, what these workers claim is that the means by which they are learning needs to be supported in ways derived from their particular imperatives and needs. The existing research suggests that a greater consideration of these workers' needs, readiness and interests is required – rather than assuming that the existing educational provisions are perfectly adequate and that, if older workers do not wish to engage with them, they are demonstrating reluctance or unwillingness. It is also clear that there may well be a preferred pedagogy for those who are continuing to learn within their existing work practice to ensure that they are not positioned as 'learners' or 'students'. As noted above, a starting point might well be to gain an understanding of the diversity of their needs, readiness and imperatives, and build pedagogic practices which best respond to them. This process might also facilitate an assessment of the fit between these workers' needs for developmental courses and their access to them. Courses tailored to the specific needs of older workers are likely to reveal their value to workers who had previously expressed little interest in them.

## Changing work requirements

Some of the features of contemporary work may present difficulties to older workers. Firstly, the occupations that are increasingly available in the labour market are those associated with professional and paraprofessional work, which normally have high educational requirements for entry (Bailey 1993;

Berryman & Bailey 1992; Billett 2006). Consequently, given the changes in levels of educational certification over recent decades, many older workers may lack the necessary entry qualifications for these occupations. Secondly, many contemporary forms of work now require a greater component of conceptual and symbolic knowledge (Martin & Scribner 1991; Zuboff 1988). This is a consequence of the introduction of electronic technology, which has seen a decline in easily discernible and observable mechanical and processing activities (Barley & Batt 1995; Suchman 1996; Whalley & Barley 1997) and an increase in work that requires forms of knowledge which are highly opaque and symbolic in nature. For instance, a study of the knowledge requirements for computer numerically controlled lathes compared with those of manually controlled lathes demonstrated that workers whose ways of knowing and understanding were premised on the latter had great difficulty adapting to the former (Martin & Scribner 1991). That is to say, workers whose work–life history has privileged the development of capacities associated with one way of knowing and forms of knowledge may struggle to operate with new forms of working knowledge (Lewis 2005). The effort these workers have expended on developing understandings about their practice is wasted and the competence and standing they enjoy from possessing that knowledge is imperilled. Moreover, this symbolic kind of knowledge is perhaps more difficult to learn and less accessible in practice. Hence, workers may need specialised and focused educational experiences to help them understand and comprehend this different type of knowledge. However, these experiences are often not provided to the majority of older workers, as indicated in a series of studies internationally. Thirdly, new forms of work organisation and participation can present new challenges to contemporary workers. For instance, teamwork and group decision-making might be seen as being a threat to the seniority of older workers and a process that denies their contributions and experience (Billett 2010). It can also result in their deriving little satisfaction from their work.

## Discussion and implications for tertiary education and training

One of the positive features of the Australian tertiary education and training system when compared with other countries is the relatively high level of articulation across and within the educational sectors. In some ways, these represent pathways or curriculum for individuals' career trajectories. Consequently, for those older workers without certification or appropriate levels of certification, these pathways might have to be enacted in ways that make them more obvious and easier to access and traverse. Mechanisms such as the recognition of prior learning, credit, and articulation through and beyond the vocational education and training sector's programs might need to become far more explicit and also involve mechanisms that allow individuals to move smoothly through the industry-focused vocational education programs. It appears that pathways and articulations premised upon movement vertically within an industry may not be the kind of trajectory which is typically practised by workers: individuals engage in some kinds of work until retirement. However, this is far from a common experience and progression across occupations and within industry sectors is likely to be a more common experience.

Articulation arrangements that therefore permit individuals to move through occupation-specific programs and certification and do so in ways which provide maximum credit for existing capacities might well be an important curriculum innovation. These curriculum arrangements should also necessarily involve pedagogic practices to assist these workers to develop the kinds of conceptual knowledge required for working and understanding components that increasingly rely upon symbolic representations. The use of analogies, explicit explanations, diagrams and other means of representing knowledge, which has long been a priority within science education, might guide the selection of pedagogic strategies for such purposes. Moreover, extending these pedagogic practices

into workplaces may well be required for ongoing learning. Curiously, many of these strategies arise from work-based experiences.

## Models of continuing education and training appropriate for older workers

Much of the existing provision of tertiary education and training in Australia and elsewhere is premised on the requirements for young people learning an occupation. That is, the provisions are either based across workplace and educational settings, as in traineeships or apprenticeships, or else they are college-based provisions, which are premised on daytime attendance. Of course, there are evening and weekend provisions, as well as other forms of flexible delivery within the vocational education system. However, it is not at all clear whether these kinds of models of continuing education and training are those which are most suited to older workers. For example, participating in an apprenticeship program can take as long as or longer than securing a university degree. This emphasis on initial preparation is a common feature across most vocational education systems, which were established to assist young people to secure the occupational skills and other capacities needed for work and civil life. Indeed, Australia has better structures than many countries for the provision of continuing education and training.

The establishment of the contemporary Australian vocational education system in the 1970s emphasised that this was not to be a system for young people only, but a system for Australians of all ages. Yet, predominantly, it has remained exactly for the former and it is only in times of economic distress that the percentage of older Australians participating in vocational education increases (that is, when labour shortages dictate the need for further vocational qualifications). However, it seems likely that other and perhaps structural factors inhibit high levels of participation by older workers. For instance, in the late 1990s it was found that the vast majority of participants (92%) in vocational education in Victoria were participating in only one or two modules rather than completing certificates. This is despite vocational education programs being based upon a series of qualifications that are premised on national occupational standards and certification. This suggests that there may well be a mismatch between the needs of students and the kinds of provisions made available to them. This may also apply to older workers, for whom a college-based program may be entirely inappropriate. The kinds of models that might attract older workers to participate may be those associated with wholly local provisions and which might require the types of engagement that value the contributions of these workers and position them as both contributors to the learning process – particularly those who have specific and valuable knowledge – and learners.

## Discussion and implications for tertiary education and training

There is a clear need to look beyond the existing provisions of education and training, which are primarily focused on initial occupational preparation and full-time attendance or engagement by young people. The prospect of completing a lengthy period of study over a number of years to secure a certificate which may not materially assist the older worker is not a particularly attractive prospect. Instead, there is need to identify models of continuing education and training that have curriculum elements (the ordering of experiences) that are suited to the needs and goals of older workers and which are supported by pedagogic practices appropriate to their needs as adults and mature learners.<sup>2</sup> Not all these provisions need to be considered as being of the kinds which are offered within vocational education institutions; those that can be supported and sustained within community

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<sup>2</sup> This work has recently been commissioned by NCVET and will be undertaken by a consortium from Griffith University.

or workplace settings also need to be identified and developed. The evidence strongly suggests that the majority of workers continue to learn across their working lives in ways that sustain their employability through their everyday engagement in their work activities. Yet, there is also other evidence that suggests that these experiences need to be strengthened and augmented, and there is much to be gained for both the worker and the employer when opportunities arise for workers to come together and share experiences, understandings and procedures. Models such as these are not necessarily difficult to organise, and in some occupations are standard practice (for example, the clinical supervision model employed by social workers and psychologists). However, these kinds of approaches cannot be fully understood unless the goals, readiness, capacities and circumstances of older workers are more fully understood so that the education and training models – the most appropriate curriculum and pedagogic arrangements – meet their needs to the same extent as those who sponsor them (that is, government and industry enterprises).

## Conclusion

In summary, it seems that:

- *Australian workplaces* need to be encouraged to employ, engage and develop further the capacities of mature-age workers and advance their employability. This will likely require redressing a societal preference for youth over age, but, more realistically, understanding the business case for employing these workers.
- *Tertiary education and training institutions* need to identify the educational purposes and processes most likely to be helpful in sustaining the employability of mature-age workers. In particular, it is probable that age-related bias and disadvantage will play out amongst workers who have low levels of education and are employed in low-skilled work and whose employment tenure is contingent (Billett et al. 2009, 2010, 2011; Karmel & Woods 2004).
- *Workers aged over 45* need to engage in intentional and focused programs of learning within their work and, where appropriate, through the tertiary education and training system. Without interest and a specific attention, their learning is likely to be limited, and efforts by workplaces and educational institutions will not be wholly realised. At the same time there may be a need to overcome concerns about mature-age workers' capacities and to build their confidence and ability in engaging in new forms of work and education.

## References

- Anderson, JR 1993, 'Problem solving and learning', *American Psychologist*, vol.48, no.1, pp.35–44.
- Bailey, T 1993, 'Organizational innovation in the apparel industry', *Industrial Relations*, vol.32, no.1, pp.30–48.
- Barley, S & Batt, R 1995, *The new crafts: the rise of the technical labour force and its implication for the organisation of work*, University of Philadelphia, National Center on the Education Quality of the Workforce, Philadelphia.
- Bartel, AP 2000, 'Measuring the employer's return on investments in training: evidence from the literature', *Industrial Relations*, vol.39, no.3.
- Berryman, T & Bailey, T 1992, *The double helix of education and the economy: executive summary*, Teachers College, Columbia University, Institute on Education and the Economy, New York.
- Billett, S 2006, *Work, change and workers*, Springer, Dordrecht.
- 2009, 'Conceptualising learning experiences: contributions and mediations of the social, personal and brute', *Mind, Culture and Activity*, vol.16, no.1, pp.32–47.
- 2010, *Promoting and supporting lifelong employability for Singapore's workers aged 45 and over*, Institute for Adult Learning, Singapore.

- 2011, 'Promoting lifelong employability for workforce aged over 45: Singaporean workers' perspectives', *International Journal of Continuing Education and Lifelong Learning*, vol.3, no.2.
- Billett, S, Dymock, D, Johnson, G & Martin, G 2011, 'Overcoming the paradox of employers' views about older workers', *International Journal of Human Resource Development*, vol.22, no.6, pp.1248–61.
- Billett, S, Dymock, D, Martin, G & Johnson, G 2009, 'Retaining and sustaining the competence of older workers: an Australian perspective', paper presented at the Lifelong learning Revisited: What Next? conference, Stirling University, Scotland, 24–26 June.
- Billett, S, Johnson, G, Dymock, D & Martin, G 2010, 'Older workers and work: societal and personal sentiments', paper presented at VET Research: Leading and Responding in Turbulent Times, AVETRA annual conference, Gold Coast, 8–9 April.
- Bittman, M, Flick, M & Rice, J 2001, *The recruitment of older Australian workers: a survey of employers in a high growth industry*, Social Policy Research Centre, UNSW, report for Department of Family and Community Services, Sydney.
- Bosman, EA 1993, 'Age-related differences in in the motoric aspects of transcription typing skills', *Psychology and Aging*, vol.8, no.87, pp. 87–102.
- Brunello, G 2001, *On the complementarity between education and training in Europe*, IZA discussion paper 309, Institute for the Study of Labour, Bonn.
- Brunello, G & Medio, A 2001, 'An explanation of International Differences in Education and Workplace Training', *European Economic Review*, vol.45, no.2, pp.307–22.
- Byrne, M & Kirby, P 1989, 'Education ideas and ideals: is there a TAFE philosophy?', in *TAFE in the 1990s*, ed. W Hall, TAFE National Centre for Research and Development, Adelaide, pp.1–5.
- Colebatch, T 2009, 'Retirement by 70 a fading hope for many', *The Age*, 25 February.
- Department of Education, Science and Training 2002, *Employability skills for the future*, DEST, Canberra.
- Disney, R & Hawkes, D 2003, *Declining employment of older workers: has Britain turned the corner?* Institute for Fiscal Studies, Centre of Research on Ageing, London.
- Dymock, D, Billett, S, Martin, G & Johnson, G 2009, 'Retaining and sustaining the competence of older workers: an Australian perspective', paper presented at the Lifelong Learning Revisited: What Next? conference, Stirling University, Scotland, 24–26 June.
- Giddens, A 1997, *Sociology*, 3rd edn, Polity Press, Cambridge.
- Giraud, O 2002, 'Firms' further training practices and social exclusion: can industrial relations systems provide greater equality? Theoretical and empirical evidence from Germany and France', in *Education, training and employment dynamics: transitional labour markets in the European Union*, eds K Schoman & PJ Connell, Edward Elgar, Cheltenham.
- Gringart, E & Helmes, E 2001, 'Age discrimination in hiring practices against older adults in Western Australia: the case of accounting assistants', *Australasian Journal on Ageing*, 20, pp.23–28.
- Gringart, E, Helmes, E & Speelman, C 2005, 'Exploring attitudes toward older workers among Australian employers: an empirical study', *Journal of Aging and Social Policy*, vol.17, no.3, pp.85–103.
- Karmel, T & Woods, D 2004, *Lifelong learning and older workers*, NCVER, Adelaide.
- Kossen, C 2003, 'The case for older workers at Tesco: an examination of attitudes, assumptions and attributes', paper presented at the Age, Work and Employment: Thinking About the Future, University, Scotland, 24–26 June.
- Kossen, C & Pedersen, C 2008, 'Older workers in Australia: the myths, the realities and the battle over workforce "flexibility"', *Journal of Management and Organization*, vol.14, no.1, pp.73–84.
- Lewis, J 2005, *Driver competence – understanding hidden knowledge through guided learning*, Griffith University, Brisbane.
- Martin, LMW & Scribner, S 1991, 'Laboratory for cognitive studies of work: a case study of the intellectual implications of a new technology', *Teachers College Record*, vol.92, no.4, pp.582–602.
- McIntosh, B 2001, *An employer's guide to older workers: how to win them back and convince them to stay*, Department of Labor, Employment and Training Administration, Washington, DC.
- McNair, S, Maltby, T & Nettleship, S 2007, *Age, training and employment: a review of the literature*, Centre for Research into the Older Workforce, Leicester.
- Meyers, R, Billett, S & Kelly, A 2010, 'Mature-aged workers' learning needs and motivations for participation in training programs', *International Journal of Training Research*, 8, pp.116–27.
- Noonan, P 2007, *Skilling the existing workforce*, Australian Industry Group, Canberra.
- OECD (Organisation for Economic Co-operation and Development) 2006, *Live longer, work longer: a synthesis report*, OECD, Paris.
- Quintrell, M 2000, 'Older and wiser; or just at the end of the line?', *Westminster Studies in Education*, 23, pp.19–31.

- Rogoff, B 1990, *Apprenticeship in thinking – cognitive development in social context*, Oxford University Press, New York.
- 1995, 'Observing sociocultural activity on three planes: participatory appropriation, guided participation, apprenticeship', in *Sociocultural studies of mind*, eds JW Wertsch, A Alvarez & P del Rio, Cambridge University Press, Cambridge, pp. 139–64.
- Rosen, B & Jerdee, TH 1988, 'Managing older workers' careers', in *Research in personnel and human resources management*, ed. RRG Ferris, JAI Press, Greenwich, Connecticut, pp.37–71.
- Sigelman, CK 1999, *Life-span human development*, vol. 3, Brooks/Cole Publishing Company, Pacific Grove.
- Steinberg, M, Donald, K, Najman, J & Skerman, H 1996, 'Attitudes of employees and employers towards older workers in a climate of anti-discrimination', *Australian Journal on Ageing*, , vol.15, no.4, pp.154–8.
- Suchman, L 1996, 'Constituting shared workspaces', in *Cognition and Communication at Work*, eds Y Engestrom & D Middleton, Cambridge University Press, Cambridge, pp.35–60.
- Valsiner, J 2000, *Culture and human development*, Sage Publications, London.
- Whalley, P & Barley, SR 1997, 'Technical work in the division of labor: Stalking the wily anomaly', in *Between craft and science: technical work in U.S. settings*, eds SR Barley & JE Orr, Cornell University Press, Ithaca, NY, pp.24–52.
- Zuboff, S 1988, *In the age of the smart machine: the future of work and power*, Basic Books, New York.