

TDA/AVETRA

Innovation Scholarship

Paper

2014

**Meeting client demand for health
service providers: a service design
approach**

Author: David McLean

RMIT

Paper No: 2014-1

Published: 30 October 2015



About the TDA/AVETRA Scholarship

Commencing in 2014, the TDA/AVETRA Innovation Scholarship is a joint initiative by TAFE Directors Australia (TDA) and the Australian Vocational Education and Training Research Association (AVETRA) to foster applied research and innovation in TAFE capabilities in TAFE.

Recipients of the scholarship, either individual practitioners or groups of practitioners, receive \$6,000 to investigate innovative ways to meet new and emerging skill needs through projects that address specific research priorities. The outcomes of the research are shared at the TDA and AVETRA annual conference to inform new practices and/or partnerships between TAFE and specific industry/community sectors.

The Scholarship is part of a Memorandum of Understanding between TDA and AVETRA that supports TDA's Strategic objective to position TAFE in competitive training markets through applied research with industry and AVETRA's strong commitment to the development of research capability in vocational education and training nationally.

About David McLean



David McLean is the Deputy Head of School (Business Services) in RMIT's School of Vocational Business Education. His industry group delivers a broad range of business qualifications including a New Enterprise Incentive Scheme (NEIS) program and RMIT's Associate Degree in Business. David is interested in continual innovation in the sector and has contributed to the design and development of learning resources, non-semester based delivery models and the establishment of youth programs. He is currently interested in how mentored enterprise development programs provide

strong vocational outcomes for students. He enjoys writing papers from a practitioner perspective and, further to the TDA/AVETRA Innovation Scholarship, was also awarded the AVETRA Early Career Researcher Award in 2011.

Meeting client demand for health service providers: a service design approach

Abstract

This paper explores the case for establishing a funded training model to enable the development of micro-business start-ups for the Community Services and Health Industries (CS&HI). The research methodology primarily uses a review of existing literature of how Australia's ageing population and implementation of the National Disability Insurance Scheme (NDIS) will create a growing demand for provision of disability health care services in the home. Research also draws on data from RMIT's Business Enterprise Unit (BEU) that illustrates the high success rates occurring in mentored business startup programs and how that training model could be applied to the CS&HI sector. A user-choice funding model is a key feature of the NDIS, where the funding recipient determines the carer or service provider of their choice. This change potentially disrupts the employment model of carers and means many may become self-employed or work as contractors.

To provide quality service and insure integrity of the user-choice funding model a range of small or micro-business skills will be required for disability carers. Data from the BEU supports an argument that current mentored enterprise development schemes, such as the New Enterprise Incentive Scheme (NEIS) or Apprenticeship to Business Owner (A-to-B), should be used as a model to develop the micro-business capabilities of disability carers. The innovation outlined in this paper recognises the broad success of an existing model and adapts it to the specific needs of another. That need is ensuring the capability of disability carers to provide quality services to clients that are able to determine the care they require and who provides it. The paper justifies the need for a funded training model that specifically develops the service delivery skills for CS&HI workers to meet the opportunities offered by user-choice funding.

Acknowledgements

Specific thanks to AVETRA and TDA for the scholarship awarded to write this paper.

Ms. Linda Simon

Ms. Melinda Waters

Professor Roger Harris

It has been a highly enjoyable experience; writing and learning.

Thanks also to colleagues from RMIT:

Dr. Helen Smith

Dr. Angela Dobebe

Ms. Vicki Molloy

Ms. Sherridan Maxwell

And very many thanks to the BEU team:

Mr. Brett Stavenuiter

Ms. Helen Dougiakis

Mr. Anthony Hassell.

Contents

Abstract	3
Introduction.....	6
Background.....	8
Practitioner research.....	9
Methodology.....	11
Defining innovation	13
Social innovation and service design	15
An instance of radical innovation: the National Disability Insurance Scheme	18
Demand for carers.....	19
Future skill needs in the Community Services and Health Industry	22
Workplace mentoring	24
Commonwealth enterprise start-up schemes with mentoring	25
NEIS and A-to-B successes.....	28
Findings	30
A Model	31
Conclusion	32
Bibliography	34

Introduction

The research presented in this paper defines an innovative approach to training for a specific need in the Community Services and Health Industry (CS&HI). The focus will not be on the development of core technical skills for those filling a growth in demand for carers in the CS&HI, but is a justification of the need for a transformative post-training solution for developing the business management and client service skills of carers. The justification for this innovation is constructed around the changing relationship between carers and their clients under new funding and regulatory conditions shaped by Australia's National Disability Insurance Scheme (NDIS). The change in service provision warrants a service design approach that looks to develop a considered and flexible solution centred on the clients' needs and expectations (Snelders, Garde-Perik & Secomandi 2014). Clients' experiences and needs are important considerations as health care providers actively change their service delivery models to incorporate greater focus on individual needs and design efficiencies (Ben-Tovim et al. 2008a; Greenhalgh et al. 2004).

The improvements in service provision have many drivers, workflows, incident reports (Ben-Tovim et al. 2008b), competition and specifically in the case of this research, policy driven changes to funding for the delivery of disability care services. User-choice funding is a key component of the NDIS where clients of disability services can make personal decisions on who provides the services they require, many of which will be delivered in their home (Commonwealth of Australia 2013). Based on similar user-choice models implemented in Canada (Chenoweth & Clements 2009) and the UK (Glendinning et al. 2008), many individual carers may end up working directly for the client and not for established institutional health care providers. The change to how care is funded through the user-choice model promotes two issues. Firstly, there will likely be an increase in the demand for carers which will mean an increase in the training demand to develop the core technical skills required for CS&HI workers. Secondly, the skill base of carers may need development of a broader range of service delivery and small business skills.

In research on innovative models of training delivery to meet skills shortages in the health care sector, Kilpatrick et al. (2007) state that a balance is required between two areas of need, the short term and the medium to long term. Training provides a short-term solution to skills shortages but medium to long term solutions require job-redesign and cooperation between training providers, industry and the government to ensure longevity of employment in the area of need.

The cooperation of all stakeholders in the change process ensures an alignment of resources that will support and underpin the durability of innovative change. Direct technical skill training is often too narrow and may not provide graduates with sufficient skills where job-redesign and changes in funding have occurred. In any service (re)design process the investment into innovative practice requires continuous input and monitoring from all stakeholders to ensure that the aims and outcomes of job-redesign are met. Questions consistently need to be asked in regards to innovation and changes in job-redesign: what is actually trying to be achieved and how can it be enabled and sustained? (Mortati & Villari 2014). Job re-design is something more than a simple reclassification of a job-role and looks to developing new systems and support around a specified need driven by technological or social innovation (Klein 2008). To be most effective the cooperation of training providers, industry and the government is required for the (re)design of a fit-for purpose solution that meets an identifiable need with the solution driven by evidence-based decision making (Kilpatrick et al. 2007).

Evidence presented throughout this paper addresses the need for a medium to long term approach by arguing a new model for how training providers, industry and the government can respond to both the needs of care providers and their clients. The main argument will be centred on how small business training, mentoring and funding can be designed to meet the growing need for disability carers working in a changed funding environment

The solution proposed to address the medium- to long-term need will not suggest a model unfamiliar to the vocational education and training sector; it will propose an innovative solution based on an existing scheme that develops additional value-added skills in graduates of vocational qualifications. The foundation for exploring an innovative solution

is drawn from two Commonwealth Government-funded enterprise development schemes. These are the New Enterprise Investment Scheme (NEIS) and Apprenticeship to Business Owner (A-to-B). These two schemes provide funded enterprise development training supported by a structured mentoring component that increases the business startup's chances of success. The NEIS is broad in the type of business startups it will support. The A-to-B scheme is narrower in that it supports start-ups in a more specific field. The model proposed in this paper essentially narrows the focus further and will justify the need to provide a funded enterprise development scheme inclusive of mentoring for disability carers.

Background

The research detailed in this paper was jointly funded through a scholarship by the Australian Vocational Education and Training Research Association (AVETRA) and TAFE Directors Australia (TDA). The aim of the scholarship is to enable an early career researcher employed in a practitioner's role within the Australian Technical and Further Education (TAFE) sector to undertake research in an area of potential innovation within vocational education and training. The decision to preference a vocational education and training practitioner located in the TAFE sector suggests some value or perspective that a practitioner can bring to the research; an innovation suggested by observations and connections made by an individual who is active in a changing and an increasingly competitive sector (Seddon 2008). The value of practitioner research is framed by Costley and Armsby:

The macro- and micro-organisational and individual influences on the design of a practitioner-led research and development project interweave and affect each other to form a rich picture. By investigating emergent issues, some of the important implications of this rich picture are informing. (2007, p.133).

From a practitioners' perspective the macro-organisational influences would be those of policy changes, the business environment, the impact of globalisation and the strategic direction of an institute or business. These four factors influence the micro-organisational and operational decisions developed and implemented by practitioners. Many of the macro

influences are distilled into business intelligence that is provided to the sector for the development of new and emerging skill needs. One current and macro influence is the longer lived and ageing Australian population that is generating growth in the demand for aged carers employed in the CS&HI.

At a micro-level there are significant business opportunities for training providers that want to develop educational opportunities or innovative training products to meet growing demand for skilled workers in the CS&HI (Community Services Health and Industry Skills Council 2014). The pursuit of these opportunities, the development of training models and the management of delivery solutions are where micro-organisational knowledge resides. It is the blend of macro- and micro-organisational influences encountered as a practitioner that have shaped this research.

Practitioner research

In my current role I have managerial oversight for RMIT's Business Enterprise Unit (BEU). The BEU is part of the College of Business and sits within the School of Vocational Business Education (formally Business TAFE). My observations as a practitioner are that the BEU offers something quite different in relation to the general business of vocational education and training. Whereas most vocational education is targeted at skill development for a specific titled job role the BEU delivers something broader; self-employment is the vocational outcome. The Certificate IV in Small Business Management is the core qualification offered in a range of different programs, each with variations in funding and student eligibility. At the heart of the learning experience is development and implementation of a business plan. Funding often extends engagement with the student beyond assessment for the qualification and onto a mentoring arrangement for the first 12 months of enterprise operations. The key measures of success for enterprise development programs often do not end with the completion of a qualification but continue on with the establishment of a business with the full measure of success being its durability over time

Training and assessment in enterprise programs usually include a robust mentoring component that is designed to produce successful enterprise development outcomes. This

style of program design pays out a broader range of outcomes to institutional stakeholders and participants. Not only is training provided but an enterprise is developed with all the potential that has for growth and the employment of others. To ensure a high level of success mentoring is provided to participants to further ensure that the investment in training is given every opportunity to succeed. The success rates reported in NEIS programs have been high for a number of years, not only the issuing of qualifications but the establishment of enterprises which in many instances grow to be employers (Crooks, Cameron & Asgari 2008; Dockery 2002). As a practitioner it is of interest to me how the successful features of funded enterprise development programs can be applied to other contexts. It is that practitioner observation that resonated with the research guidelines for the scholarship:

This initiative...aims to foster innovation in industry workforce development initiatives...investigate innovative ways to meet new and emerging skill needs through projects in industry or community settings. The outcomes will inform new practices and/or partnerships models for TAFE and specific industry/community sectors...to position TAFE in a competitive training market through research into producing high quality and work-ready graduates (TAFE Directors Australia/AVETRA 2014, p. 1).

Keywords and phrases from the above statement resonate strongly with the everyday work that I do. They are *innovation, workforce development, emerging skill needs, new practices, partnership models, industry/community* and *high quality work ready graduates*. All of these terms or phrases define the modern competitive and responsive nature of vocational education and training in Australia and connect throughout this paper. The highlighted terms would be familiar to all leaders and managers in the vocational education and training sector. In recent years vocational education and training has by necessity become rich with innovative practice driven chiefly by competition and changes to funding criteria (Seddon 2008).

Competition in the vocational education and training sector has occurred chiefly through policy shifts that have enabled broader access to government funding, thus enabling the growth of private registered training organisations (RTO). The change over time from

centralised public provision of skills training to a public private model has been driven by a series of complex interconnected issues. The most significant driver of change in recent years has been globalisation and the growth of free trade and access to international competitive markets (Shah & Burke 2006). A human capital development strategy has led to changes across the vocational education and training sector as international competitiveness and skill shortage concerns are addressed by changes in state and federal government policies (Quiggin 1999). This phenomenon has had a significant influence on vocational education and training, specifically the ongoing need for skills development and the maintenance of those skills in the development of lifelong learning (Edwards & Usher 2001; Van Der Linde 2008). Policy changes, reductions in public funding, open training markets and responsive delivery models have led to a variety of transformative and transactional change (Hyde, Clayton & Booth 2004). Workplace assessment, online learning, recognition of prior learning and the rise of private registered training organisations have all required significant service redesign and innovation within the vocational education and training sector (Curtin, Stanwick & Beddie 2011). In many cases it has been essential to adapt and develop innovative delivery models or lose out to a competitor. It is both the necessity born from competition and the adaptability of new practices that lead to the development of broad ranging innovations in the vocational education and training sector (Organisation for Economic Co-operation and Development 2009).

Amidst these changes, the primary aim of vocational education and training remains the same; provide education to individuals to allow them to participate in the Australian workforce at an entry level or to up-skill or meet the challenge of job-redesign. Job-redesign is the focus of the innovative model proposed in this paper. A model that meets the key aims of the AVETRA/TDA scholarship brief - that is, an innovative training model that produces *quality work ready graduates*. This paper sets out how that can be achieved in the CS&HI by proposing new models of work created by the social innovation inherent in the NDIS.

Methodology

Practitioner-based research is in itself an innovative initiative to exploring and developing innovative workforce development. As discussed by Costley and Armsby (2007) the nature

of practitioner-based research does present some epistemological and methodological challenges but also some opportunities in regards to the research produced:

Practitioner-led research and development, with its own epistemologies and hybrid methodologies, draws upon existing methodological frameworks but rarely uses them in their pure form. (Costley & Armsby 2007, p. 133)

The challenges are generally around the conventions and expectations of how discipline knowledge is constructed. The opportunities offered by practitioner research are the insights and understanding experienced at an operational level and the potential that brings to viewing problems in a new or different way. While the methodologies used in this paper are indeed hybrid they are largely viewed through a sociological lens. The key research question is how can a significant social innovation be supported through a specialised training program to succeed and improve the wellbeing of a large number of potentially marginalised people? An innovative approach to research is being undertaken to provide an innovative solution to a social need.

Innovation is at the heart of this research, a term that “...has shown itself to be a slippery construct – in fact, chameleon-like, adapting its meaning according to time, place and economic circumstances, and who is defining the term” (Curtin, Stanwick & Beddie 2011, p. 10). What may add to that slipperiness is that the aim here is not to analyse an existing innovation but to develop an evidenced-based argument for the production of an innovative training product to address emerging skill needs and produce high quality, work-ready graduates. The argument that justifies the need for an enterprise training model for disability carers will be constructed from two sources of data. The first source of data is a literature review that frames the need for a different approach to the funding and training of disability carers. It also details features of two programs that offer a solution to the need. That will be achieved by categorising the literature in relation to the core components of the argument.

- a. Innovation and vocational education and training
- b. The NDIS as social innovation
- c. Social innovation and service design

- d. The growth in demand for carers
- e. The nature of Commonwealth funded Enterprise Development Programs, specifically the New Enterprise Incentive Scheme (NEIS and the Apprenticeship-to-Business Owner (A to B) program.

The second source of evidence is data provided as a case study of RMIT University's Business Enterprise Unit (BEU) that operates a variety of business enterprise initiatives including NEIS and A-to-B. The number of enrolments and success rates of participants in the NEIS and A-to-B programs will be presented and compared with data from national studies of NEIS programs. Both sets of data will inform the design of a specific, innovative, narrowband scheme targeted at developing business skills for disability carers.

Defining innovation

The term innovation is central to this paper and defines the development of a new idea or process associated with change, competitiveness and improvement (Mootee 2013). To help shape the argument that follows, it is necessary to explore the term innovation and consider how it relates to the contemporary vocational education and training sector and to the CS&HI. As stated previously the term innovation is often open to interpretation and in some cases interchangeable with the word invention. Invention more accurately describes the newly developed or imagined, the development of something that has not been seen before, whereas innovation is more closely related to adaptation or modification (Curtin, Stanwick & Beddie 2011). The Organisation for Economic Co-Operation and Development (2005) defines innovation as the following:

An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations (p. 46).

The OECD definition is broad but clearly states innovation can be both tangible (goods) and intangible (services). Innovation's centrality to people suggests that it is social and occurs in a variety of locations and across many different strata of society (Hill 2010). With such breadth and depth innovation must also be considered in its

scale with large social innovations potentially having a disruptive impact on the way people work and live their lives (Seddon 2008). Toner (2011) discusses how disruptive radical innovation is generally at a macro level and disturbs existing technological and policy paradigms. Normally only governments or industrial developers of technology are capable of generating and sustaining large-scale, radical innovations that affect significant numbers of people or establish new information systems and technologies (Solis 2013). The ripples or effects of radical innovation will often lead to the implementation of incremental innovations where solution-based new practices are developed to address the disruption:

...incremental innovation is the principal source of productivity growth within firms and the economy as new applications are found for existing technologies and as these technologies undergo gradual optimisation and the scope of their application is extended. (Toner 2011, p. 129)

An incremental innovation then is one of improvement or adaption of an existing solution that is modified or pushed out to remain relevant or functional. Invention is crucial to the development of original solutions but pre-existing models can be modified and applied to new contexts to solve identifiable problems.

Innovation is often dependant on having the components of a product or process already existing and it is the practice of innovation to join and adapt the components to form a new whole (Mootee 2013). There are significant efficiencies in working this way, least of all cost effectiveness and reduced timelines. The other benefit is access to data that can provide evidence of the surety of existing methods and processes. The capability to connect interacting parts of a pre-existing system and produce a service improvement that addresses a social transformation would be considered innovative in both practice and design.

The idea of devising interacting and interconnected parts of a system rather than single elements, and the focus on intangible things as well as tangible ones, is at the centre of the connection between social innovation and service innovation. (Mortati & Villari 2014, p. 80)

In affluent societies there are expectations that innovations will be used not just to produce *technological optimisation* but to improve a range of social needs related to the quality of living such as the environment, health and education (Hubert 2010). Social innovation has become an essential part of contemporary society where there is a need to develop “...innovative solutions and new forms of organisation and interactions to tackle social issues” (Hubert 2010, p. 25). Social innovations that develop new services or create broader more efficient systems for people are intangible in nature – there is no manufactured object. In a post-industrial world where there are significant numbers of knowledge and service workers there are needs for social innovations (Hubert 2010) that “...are driven by a social mission, and create value that is at once social and economical” (Mortati & Villari 2014, p.80). The interrelationship of social and economic considerations suggests that innovative practices provide the capability to develop balanced and holistic solutions where one aspect does not dominate the other.

As a consequence of societal transformation such as economic development and technological specialisation, the labour market and work environments are changing rapidly. These changes are particularly relevant for vocational colleges because they are expected to prepare students for future jobs, Vocational colleges function as link between the general educational system and the labour market. (Messmann & Mulder 2011, p 64)

While it will be experts in the fields of health care and community services that will drive larger radical innovations in the development and delivery of services to their clients (Ben-Tovim et al. 2008b), the vocational education sector can also innovate to provide the necessary skills for maintained successful self-employment in the sector by interconnecting parts of an existing solution (social) to the needs of another (economical). The vocational education and training sector has the capability to respond to social need and develop innovations that provide a functional solution to change that has occurred on a macro scale.

Social innovation and service design

An enabler of social innovation is service design. Service design is a new and growing discipline and is drawn from the field of design. The interrelationship between service

provision and service design is essentially the same as consumerism and product design. A specific need is met through a planned and considered approach to a solution. The inputs that go into the development of a design solution are also the same: observation, prototyping and production with the client/customer needs at the forefront of solution development (Stickdorn & Schneider 2011):

...design practices linked to the service field have recently paid increasing attention to social issues and human-centred concerns, to the importance of devising relationships, to the development of practices to aid citizen participation, and to systemic interventions. Design seems to be moving closer to social innovation linking with its key characteristics at multiple levels. (Mortati & Villari 2014, p. 81)

By putting people at the centre of service design the focus is on the user experience. A service design solution moves away from organisational or institutional foci to that of the individual (Polaine, Reason & Løvlie 2013). That approach is a specific challenge in large bureaucracies where most systems are developed to meet organisational needs and structures as opposed to the service needs of individuals. In these environments the many-to-one relationship has dominated rather than a one-to-many. As social innovations differ from technical innovations, in that they are generally intangible, referencing inter-human interaction and the user's need and experience becomes hugely important to how design can improve the delivery of services (Polaine, Reason & Løvlie 2013).

People will always be at the centre of any health service provision. If there are large system problems in health provision then service design may be the methodology that provides a way to solve those problems. The NDIS with its emphasis on empowering and improving the care of citizens with disabilities must be considered a social innovation. The scope of the change is large with not only the economic challenge in implementing a full nationwide rollout but the fact that change is being made in a sector that is large and complex (Greenhalgh et al. 2004).

The health care field is exemplar for the complex and networked nature of systemic change. This makes systemic social innovation slower and more

difficult to be achieved, as constraints are higher in number. Moreover, combinations involve changes in technologies and behaviours, structures, and processes, which are more difficult to be shifted, as they tend to organise around current interests to maintain a status quo. (Mortati & Villari 2014, p. 85)

The status quo for aged care and disability workers would be to continue working in an industry that reports high levels of casualisation and low wages. For employers it is adjusting to the disruption of the funding model and working out how they continue to function in a user-choice model which may include different relationships and collaborations with care workers. It could be expected that a smaller, targeted innovative approach designed specifically to solve one challenge in the large and complex roll out of the NDIS would contribute to the whole of change in the CS&HI.

Social innovations are innovations that are social in both their ends and their means. Specifically, we define social innovations as new ideas (products, services and models) that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations. They are innovations that are not only good for society but also enhance society's capacity to act. (Hubert 2010, p. 7)

The broader social relationships to be considered are those between carer and client and the collaborative relationship between vocational education providers and the government. The principles of service design are relevant to the CS&HI and with its human-centred design approach ideally suited for exploring the new relationships between care provider and client (Donetto et al. 2014).

The challenge of change in the health sector as well as the challenge to service providers under the NDIS is how to ensure the more radical aspects of the change can be effectively enabled. In a service-based knowledge economy, service design becomes an innovative enabling solution to address the impact of social innovation. The first component of service design resides in the heart of the NDIS: user-choice. The secondary component of service design is 'the how': How can user-choice be enabled to be at its most socially effective?

From a vocational education and training perspective it is: what skill development can we offer to better enable the service design intentions of the NDIS? A service design approach suggests (Snelders, Garde-Perik & Secomandi 2014) that there would be little point in continuing to train aged care and disability workers solely to the technical requirements of the job if the way they were employed or could be employed has changed and the way that carers relate to their clients has also changed.

An instance of radical innovation: the National Disability Insurance Scheme

In 2010 the Australian Federal Labor Government established an inquiry into long-term disability care (National Disability Insurance Scheme 2015). The inquiry was undertaken by the Productivity Commission and was known as the *Disability and Care Inquiry into the Establishment of a National Disability Long-term Care and Support Scheme* (2011). The NDIS was passed into legislation in 2013 (Commonwealth of Australia 2013).

The Government is committed to finding the best solutions to improve care and support services for people with disability. An exploration of alternative approaches to funding and delivering disability services with a focus on early intervention and long-term care will be an important contribution to the National Disability Strategy. (Productivity Commission 2011, p. IV)

As part of a broad overview of existing solutions the commission looked to user-choice schemes in the UK and Canada. Individuals requiring disability services would be able to make a personal decision on what service agency or provider would deliver the care they required. The need for the user-choice is framed by the following finding that “The current disability support system is underfunded, unfair, fragmented, and inefficient, and gives people with disability little choice and no certainty of access to appropriate supports” (Productivity Commission 2011, p. 2). The Productivity Commission (2011) suggested that a self-directed funding model would allow people to:

...cash out their packages, and subject to a plan and oversight, manage their own disability support needs, including employment of support workers (‘self-directed’ funding). Empirical evidence from multiple studies shows that self-

directed funding has significant benefits, but that it also takes time before many people take advantage of it (p. 3).

It was suggested in the Productivity Commission report that any delay in implementing the self-directed or user-choice funding model would occur as cultural change in adjusting to greater self-determination amongst users of disability needs is developed. There would also need to be adjustment by service providers whose business models may be disrupted due to changes in funding and for carers that may want work as contactors or employees of their clients (National Disability Services Victoria 2012). Training and information provision was seen as a way to manage the transition and generate a more informed and complete roll-out of the user-choice model (Productivity Commission 2011).

Demand for carers

Prior to the inquiry, it was noted that there was a growing shortage of disability support workers in Australia and the shortages were predicted to increase for some time (Precision Consultancy 2011; Rimfire Resources 2010). The introduction of a National Disability Insurance Scheme would only exacerbate the demand. The Productivity Commission (2011) outlined the nature of the problem.

The expansion in the disability system will increase the demand for disability support staff. Workforce pressures will also rise as the aged care system expands (and as labour force growth subsides with population ageing). The capacity to provide expanded services will depend on attracting new employees and enabling workers in the system to work longer or more flexible hours if they want to. (p. 49)

Self-employment and contractual work does offer a degree of flexibility to both client and service provider, however it is not without risks to either. The risks most often identified with the user-choice model are the capability of carers operating as a small business or contractor to manage finances, compliance and other associated business skills needed to function as a business or contractor (KPMG 2014). For the client it is their responsibility as employers or contractors to meet a range of responsibilities which include safety issues, insurances and other guarantees (Cortis et al. 2013). Many of these obstacles

could be met with appropriate training for both parties but most significantly the service provider. The risk would best be addressed with investment from federal and state governments into training to ensure the integrity of the user choice model. The Productivity Commission (2011) makes this need clear:

Where training was unlikely to respond quickly to market signals, the Australian Government should examine the obstacles to training and, if required, provide scholarships and subsidies in areas where impending shortages would undermine quality outcomes for people. (p. 50)

The Productivity Commission's report is quite succinct in that it recommends a proactive and targeted training intervention that will support the need for a greater number of skilled individuals to meet the service demand created by implementing the NDIS. The need for scholarships or subsidies would likely be implemented for core skills or technical training in aged or disability care. However the 'quality outcomes' referred to can be read more broadly than the development of only technical skills. There will also be a need for efficient and manageable service provision under the new funding regime.

There are significant opportunities for service providers under the NDIS... The amount of funding to disability would be much greater, and there would be strong incentives for innovative practice (with providers as well as people with a disability 'unshackled' from block funding). (Productivity Commission 2011, pp. 51-52)

As noted above the capability to implement consumer choice will require time for people accessing the services to take full advantage of the privilege. There will be many reasons for this, including but not limited to setting up the bureaucracy to manage the plan and oversight of it, develop workforce capacity to deliver the services and also the mechanisms to employ and pay support workers (Cortis et al. 2013). The last point has two perspectives, one about the ability of health consumers to locate reputable and capable support workers, the second about the new health workforce's capability to operate as a contractor or micro business.

The capability of self-employed or contracted workers to provide adequate services under a user-choice model is extensively explored by Cortis et al. (2013). The long standing user-choice models employed in rural Western Australia and a pilot program trialled in Victoria (National Disability Services Victoria 2012) are compared with the Individual Budgets program from the United Kingdom. The challenges of the user-choice model are explored, and the research discusses the impact that funding changes will have on established well-resourced providers and casts significant doubt about the capability of individual contractors to meet basic levels of service. The new funding model will disturb the current business model of established providers and they may need to restructure their employment and funding models. The complexities of employer and contractual regulations will be a significant impediment to disability clients that will need to ensure any arrangement they enter into does not leave them liable or at risk with the decision they make.

This concern could be addressed with a training model that develops the capability of CS&HI workers to run effectively their own business or enter into contractual arrangements. Cortis et al. (2013) note that the Victorian trial that tested contractual arrangements between carers and clients was deemed a success but used a very small sample size. It was also noted that many of trial participants had small business capabilities which may have contributed to the success of the trial (National Disability Services Victoria 2012). If financial and contractual skills benefited the success of that model then it can be assumed that rolling out supported small business training for self-employed workers in the sector could be beneficial to the success of the user-choice model.

The NDIS should be considered a significant social change project and as such a different more sustainable approach to developing the contemporary CS&HI workforce needs to be considered. The key metric of success for any training should be the number of people that actually commence employment in their chosen field with sustained application and further skill development in that role (Karmel, Mlotkowski & Awodeyi 2008). A funded training model should be developed that ensures the success of graduates in a new career and also increases the longevity of employment. The Productivity Commission suggested that additional incentives to training could be made available.

Future skill needs in the Community Services and Health Industry

An overview of the CS&HI (Karmel & Blomberg 2009) reveals a broad range of job roles ranging from complex professions that require high levels of technical skills and knowledge usually obtained in the higher education sector through to certificate and diploma level qualifications that are delivered in the vocational education and training sector. In 2008 36.1% of workers in the CS&HI were vocational education and training qualified, 38.5% qualified in higher education and 25.4 % had no qualifications at all. Roles that are more supportive or focused on the rehabilitation of patients and delivered in the home are mostly undertaken by carers with vocational education and training qualifications and are employed by service providers (Cortis et al. 2013). Data show that graduates employed in the CS&HI tend to take on jobs appropriate for their training and stay in that role for some time (Karmel & Blomberg 2009), despite conditions best described as mixed. Other data show a high attrition rate of 17.4% of allied health care workers which were mainly casual (Precision Consultancy 2011). There is a high degree of casualisation of people filling the roles of carers as well as low pay rates. Around 35% of the workforce is casual and a further 37% employed part-time (Rimfire Resources 2010)

Prior to the introduction of the NDIS there was unmet demand for carers with continued projected increases in demand into the future. This is due to a need for more carers to service an ageing population, and an increase in life expectancy of people with disabilities and the aging of those currently employed as carers (Community Services Health and Industry Skills Council 2014). For example, in Victoria:

Between 2009 and 2021, the Victorian population is projected to grow by at least 20 per cent, which will increase demand for services. Demand will also be increased by the longer life expectancy of people with disability (2 to 4 years on average depending on the nature of the disability) and by aging carers no longer able to provide unpaid care (Precision Consultancy 2011p. vii.)

In Victoria alone the demand for disability services is growing at 7.5% per annum (National Disability Services Victoria 2012). More current data from the Department of Employment project continued growth in Aged or Disabled Care at a rate of 31.3% from

2012 to 2017 (figures cited in Community Services Health and Industry Skills Council 2014). The numbers of actual employment positions created suggest that the growth in demand is greater than that projected. Job opportunities in Aged or Disabled Care grew at 39.8 % from 2006 to 2011, which was an increase in 30,800 new jobs. In the same timeframe Personal Care Assistant jobs grew at 6% for a total of 6,100 new jobs (Community Services Health and Industry Skills Council 2014). The growth relates directly to the job roles most likely to be affected by NDIS user choice: Aged or Disabled Care and Personal Care Assistant (Community Services Health and Industry Skills Council 2014). These are the types of in-home carer roles that are likely to be resourced with user-choice funding (Precision Consultancy 2011; Productivity Commission 2011).

There is growing concern about the vocational education and training sector's capacity to service the growing demand for carers (Community Services Health and Industry Skills Council 2014). There is also an acknowledgement in job-redesign terms that the skill set needed to work under the NDIS will be much broader than that which is currently delivered. This is mentioned in a report on the evaluation on the pilot Individual Budgets program in the United Kingdom (Glendinning et al. 2008) which was the implementation of a similar program to the NDIS. A broad range of training was initially offered to both providers and clients of the UK's user-choice program. One of the recommendations from the review was that, other than the continued need to develop core technical skills, "...employment law and responsibilities, and how to manage finance were identified as areas either being considered [for additional training] or being acted upon" (Glendinning et al. 2008, p. 198). This is acknowledged in Australia where the potential impact of the NDIS changes will affect how services are delivered and what additional training will be required:

Changes in service delivery must be supported by appropriate training and workforce development. Consumer directed funding; clients with multiple needs; client-centred care and support; and providing services in a person's home all demand a broad skills base (Community Services Health and Industry Skills Council 2014, p. 5).

A contributing facet to the transformation of services is that there are a number of home care and service provision roles that can be resourced and sustained as small businesses,

including many roles of growing need that are certified at lower levels, specifically aged and disability care (Community Services Health and Industry Skills Council 2014). The capability to operate as a small business is increasingly likely with the changes in funding.

That broad skill base includes not only the technical capability to provide care but also knowledge of policy, legislation and business skills, and including less tangible skills such as empathy and an ability to communicate (Cortis et al. 2013). The additional business and governance skills will need to be enhanced with knowledge of service provision for offsite care delivered in the home and business skills to access and manage user-choice funding. There is likely to be significant opportunities for self-employment for those developing broader business skills capability.

Considering all aspects of the broader skill set are the key inputs into developing a service design solution as opposed to a fully technical solution (Stickdorn & Schneider 2011). The capability to develop technical skills with business and governance knowledge would be greater than that at the core of a single vocational qualification. It is clear from many sources that the need for additional disability and aged care workers is current and that demand is growing. It is also clear additional skill sets will be required of those workers to respond to user-choice funding models as the NDIS moves from trial status to full national implementation. The simple solution would be the attainment of additional skills through completion of an appropriate business qualification. This of course would further delay the entry of graduates into an area of high demand and growing need. Therefore, to ensure both timely entry and appropriate skills development, an enhanced training model should be developed.

Workplace mentoring

It would be expected that any new publicly-funded scheme or program to address a skills shortage is designed in a way that maximises a return on investment. The measure that underpins success of a targeted scheme would likely be employment opportunities for graduates in the field of study with a high degree of longevity of employment in the chosen field (Wibrow 2014). The design of a program that successfully meets skill shortage needs must consider employment and support of graduates as they settle into the area of need.

Kilpatrick et al. (2007) state when there is no direct link between skill development and employment the initial investment in training is wasted: “When this occurs, it undermines the whole point of training and may discourage others from undertaking it” (Kilpatrick et al. 2007, p. 31).

Choy, Billett and Kelly (2013) suggest existing employees in the aged care industry may prefer supported workplace training when securing additional skills or a secondary qualification. In their research the preferred method of learning by employees in the aged care industry was “working and sharing with another person on the job” (Choy, Billett & Kelly 2013, p 8). They also discuss the importance of mentoring to enhance training for existing aged care workers: “Learning support in the workplace may be more pertinent and specifically directed than support in TET [tertiary education and training] institutions (Groot et al quoted in Choy, Billett & Kelly 2013, p 80).

Mentoring, buddying and coaching may mean different things to different people and also be context specific. The term mentoring will be used from this point on to be representative of a person that gives useful professional advice to a person transiting to a new career. Whether that mentor happens to provide functional mentoring which is mainly outcomes focused or relational mentoring where the development of ‘self’ is included (Holland 2009) would be dependent on other facets of training development.

Mentoring or workplace coaching is known to be an effective way to increase success and assist in the transition from student to employee. There is growing evidence to show that mentoring that is inclusive of a study program or occurs on entry to the workplace is highly effective. Mentoring increases the chances of success in a new career and also affects the longevity of employment in the role (Holland 2009). Mentoring has been a key component of the NEIS and A-to-B programs with data from two studies suggesting mentoring’s effectiveness (Crooks, Cameron & Asgari 2008; Dockery 2002).

Commonwealth enterprise start-up schemes with mentoring

Over the past 30 years the Commonwealth Government of Australia has provided funding for several enterprise start-up schemes. The most enduring is the New Enterprise Incentive Scheme (NEIS). This scheme has been in existence since 1985 and is delivered

around Australia primarily by registered training organisations (RTOs). The aim of the NEIS is to provide training and mentoring to individuals in the creation and establishment of a small or micro-business. A particular feature of this program is that to be eligible for the scheme one must be unemployed and referred to a NEIS provider by a Job Services Australia (JSA) provider. As such it is an alternative job creation scheme whereby participants in the program are finding work through self-employment and enterprise start-up. To be enrolled potential participants must present a small business proposal to the NEIS provider. If the proposal is achievable the participant is enrolled and undertakes training in either a Certificate III in Micro-Business Operations or a Certificate IV in Small Business Management.

Alongside the skills and knowledge required to run a small business, students develop a business plan that they will then implement. On completion of training graduates continue in the scheme for 12 months whence they receive the equivalent of the unemployment benefit for the first 39 weeks of their business start-up. Instead of reporting to Centrelink, participants report to the NEIS provider with which they have signed on. During that 12-month business establishment phase, graduates receive between four and six contacts with a mentor to help provide advice and assistance in the establishment of their business (Department of Employment 2015).

The Apprenticeship to Business Owner (A-to-B) program commenced in 2012 and was set up and coordinated by the Department of Industry, Innovation, Science, Research and Tertiary Education, the same Commonwealth Government department that was responsible for NEIS. After the 2013 federal election ownership of the program was transferred to the Department of Industry and Science. The A-to-B program's aim was to increase the number of self-employed tradespeople across Australia. The program was seen as a pro-active contribution to setting up qualified tradespeople in the career for which they had trained. To be eligible for the program participants had to be within the first two years of post-apprenticeship completion. A-to-B uses a similar model to NEIS where participants receive training in the Certificate IV in Small Business Management and are also mentored for 12

months once the training has completed (Department of Industry and Science 2015). In 2014 the A-to-B program was discontinued in the first budget of the Federal Liberal Government (Australian Government 2014). The program ran for approximately two years and limited data are available to gauge its success. The last enrolments into the program are likely to occur in early 2015.

Individuals who undertake the NEIS or A-to-B programs usually have existing trade or tertiary qualifications. They also have to undertake a selection process where their business case is scrutinised and their capability to carry it out is appraised. It is acknowledged that the high success rates in the NEIS program are likely due to the selection process and the prior skills and knowledge participants bring to the program (Dockery 2002). Participants entering either program may already have experience in working and/or existing credentials. This possibly makes the transition back into the workplace easier and they more likely to succeed. This is also the case for the A-to-B program where participants are qualified earlier as career tradespeople.

While previous work experience or qualification may point to high levels of success in the NEIS there are many participants who have been long-term unemployed, have cultural and linguistically diverse origins or come from lower socio-economic backgrounds. There are incentives for NEIS providers to select individuals who may have a disadvantaged background. The diversity of participants and the known success rates of the NEIS suggest a unique feature of the program's design contributes to graduates successfully launching and maintaining a small business. The key feature that differentiates NEIS and A-to-B from other government-funded training is mentoring. At the conclusion of training in a small or micro-business qualification NEIS and A-to-B graduates have 12 months of supervision in the establishment of their businesses.

Mentoring in the NEIS program is often provided by experienced small business owners. In A-to-B the mentoring is generally provided by tradespeople with experience in running their own businesses. The Commonwealth Government funding paid to RTOs running both programs includes a milestone payment for the mentoring component and mentors are paid a fee for the work that they do. As both programs are designed to develop start-ups, business development and management is the focus of the mentoring sessions.

The full cost of mentoring must be considered against the cost of training, the success of graduates in finding work in the specialisation they trained for and the longevity of employment. If mentoring is a successful addition to training, especially in areas of high skill need, it may mean that public money is actually saved with a decrease in the churn rate of students and the longevity of employment in a high needs area. Evidence from research into the effectiveness of early career mentoring\coaching supports this observation (Billett et al. 2014; Choy, Billett & Kelly 2013; Holland 2009). The whole concept of post-study mentoring or coaching requires further research and it is this unique feature and the existing success NEIS has with CS&HI that point to an option that an A-to-B style program could be successful for the CS&HI.

NEIS and A-to-B successes

With self-employment as the vocational outcome the NEIS program provides training and mentoring for participants who are able to develop small business startups that are varied and broad ranging. Examples of startups can vary from small retail operations through to professional and paraprofessional roles. Within that mix there are a significant number of participants who seek self-employment in health related industries. This is identifiable in data from a longitudinal national study into the NEIS program (Crooks, Cameron & Asgari 2008). From the sample surveyed the percentage of NEIS participants starting up business in the CS&HI was 6% of all NEIS participants. Of that sample 79% of graduates had commenced a small business operation in CS&HI after three months of completing the program. An additional 11% had found employment, for a total of 90% who became engaged directly in the industry sector for which they had received training. After sixteen months 65% were still operating their own business with an additional 17% employed for a total of 82% employed. These results are similar for most graduates of the NEIS program where high numbers either maintain a self-employed status or find work in their chosen field.

One significant feature of data sourced on the success of NEIS participants is the sustainability of their business or employment in the field they have chosen. This is higher than those of mainly non-trade qualified VET graduates who directly enter the workforce post training (Karmel, Mlotkowski & Awodeyi 2008; Wibrow 2014).

The NEIS operation that is part of RMIT’s Business Enterprise Unit enjoys similar levels of success for participants as detailed in Dockery (2002) and Crooks, Cameron & Asgari (2008). The table below details the conversion rate of enrolments to business startup status. Successful startup means the participants have completed the Certificate IV in Small Business Management, developed a successful business plan and have begun the mentoring phase of the scheme.

Table 1: Conversions of RMIT NEIS enrolments to business start-ups

2011			2012			2013			2014		
Enrolments	Actual startups	% Business startup	2012 Enrolments	Actual Startups	% Business startup	Enrolments	Actual startups	% Business startup	Enrolments	Actual Startups	% Business Startups
229	212	93%	237	215	91%	230	212	92%	251	226	90%

The A-to-B program which was also run out of RMIT’s Business Enterprise Unit was specifically targeted to provide small business development skills for early career tradespeople. As such it is more narrowly focused than NEIS, however it has enjoyed a similar success rate for conversions to enterprise start-up.

Table 2: Conversions of RMIT A-to-B enrolments to business start-ups.

2013			2014		
Enrolments	Actual startups	% Business startup	Enrolments	Actual Startups	% Business Startups
29	24	83%	226	201	89%

As stated previously the A-to-B program had short lifespan. Funding only ran for two years with delivery of the program extending into a third year to meet budget and service

commitments. Close analysis of data from the program would well inform the nature of a similar scheme for the CS&HI. While conversion rates from enrolment-to-startup are useful it is the longevity of the business that is most informative. A national review of the A-to-B program would be helpful in understanding the potential for future targeted enterprise startup schemes.

Findings

The data presented in this paper have led to the following analysis. National Governments in particular are capable of creating large radical social innovation that requires many smaller enabling incremental innovations to ensure success. Vocational education and training providers are well placed to develop and implement incremental innovations that require new ways of developing workplace skills due to their focus on vocational education and close links to industry. The NDIS as a radical social innovation has been designed to provide greater surety of funding to people with disabilities through a user-choice model. The current shortage of, and growing demand for aged care and disability carers will only be exacerbated by the national implementation of the NDIS. As changes in funding models are implemented the carer-client relationship will require broadening of knowledge and capability to manage the intricacies of a user-choice model and the changing relationship between clients and providers of disability care. This challenge was experienced in the UK during the implementation of their equivalent of the NDIS, Individual Budgets. To ensure the success of the NDIS additional training of carers will be required to ensure they can manage the financial and regulatory requirements of user-choice funding.

There is a strong history of mentoring or buddying in the CS&HI that suggests any successful training model should have post-training mentoring as a component. The NEIS model provides the two components that would contribute to the success of the user-choice model: small business skills training and post-training mentoring. Mentoring is likely to contribute to the high levels of success and longevity of enterprise development in the NEIS program. This suggests that the Commonwealth would get a strong return-on-investment from a funded enterprise creation scheme for transiting carers to the new funding model. The success rate in conversions to business start-ups in the more narrowly

tailored A-to-B program suggest industry specific start-up schemes can be successful if allowed to run for some time. A-to-B may provide the best model with its narrower focus on addressing skill needs within a defined career, that is, the trades. That focus could be further narrowed to disability or aged carers to ensure an incremental innovation enables a radical innovation. The additional skills would also ensure the clients, those with disabilities being cared for in their homes, work with knowledgeable and capable people, thereby reducing the risk and added challenges of managing user-choice funding.

A Model

The training and certification model proposed here is one that provides small business training and mentoring to individuals who already hold an appropriate qualification in providing care services to aged or disabled people. The model could be used for people wanting to set up a business from scratch or for those already operating as a small business or working as an individual contractor. As such, the model should draw on effective training methods for adult learners and those already operating in the workplace.

The model proposed significantly references the existing NEIS and the now defunct A-to-B programs. As noted previously the NEIS program is specifically targeted at individuals registered as unemployed and covers a broad range of start-ups. The model proposed here would provide small business training specifically targeted to CS&HI workers intending to operate as a business or contractor. They may be currently employed or already operating as a business. That status would disqualify them from access to NEIS which is why a standalone enterprise development scheme similar to A-to- B is being proposed.

The core features would be:

1. Eligibility for the program is dependent on applicants already holding the appropriate qualifications to work as health carers or disability works. These would likely be:

CHC40212 - Certificate IV in Home and Community Care, 15 units of competence,

or

CHC40312 - Certificate IV in Disability, 15 units of competence.

Funding would be for the attainment of BSB40415 - Certificate IV in Small Business Management that has been contextualised to ensure qualification content is specifically developed for people in the CS&HI who may be accessing NDIS funding. However, the Diploma of Business could provide similar outcomes with fees deferred through VET-Fee-HELP to lessen the financial burden during training and set up of the business.

Participants would develop a business plan.

There would be mentoring for 12 months from an experienced practitioner during the set-up and establishment of the business on completion of training and a business plan.

Ongoing support would be available through membership in an industry support network.

2. A financial incentive would be paid to the participant either through fortnightly support payments as in NEIS or a bonus paid to graduates who are still operating after 18 months. The bonus would be equivalent to the incentive payments made to employers of trainees.

As with both NEIS and A-to-B, delivery would be open to tender with a funding and reporting model similar to that used in those two enterprise start-up schemes. Payment would be based on part payments after reaching specific milestones to the approximate value returned to a NEIS provider for completion of the full program inclusive of mentoring. This is approximately \$5000.00 for each participant completing training and operating their business for 12 months.

Conclusion

Teaching, policy, funding and training solutions in the vocational education and training sector must be transformational both internally and externally to meet the demands of rapid societal transformation. The capability to adapt and innovate is both necessary to survive in a competitive training market as well as provide skill development in strategic and

high need areas. This does not always require re-invention but adaptive, innovation-driven change based on existing best practice models.

With increases in the life expectancy of individuals with disabilities there has been significant growth and unmet demand in the need for aged and disability carers. The implementation of the NDIS will only add to the increase in demand for carers who will also need a broader range of business skills to ensure service expectations and operational regulations can be met under a user-choice funding system. The capability for aged and disability care workers to succeed in the new funding environment could be increased if a mentoring or buddying program is established as they make the potential transition from employees to employers. The transitional relationship between service provider and client will require new skill development to ensure both the success of the NDIS and that there is successful and maintainable return-on-investment of any new training initiative.

Programs with established mentoring components like the NEIS have a high level of success suggesting that any preparatory program developing business skills for carers could also emulate that success rate. Many of the service delivery and job redesign challenges posed by the introduction of the NDIS could be met through the development of a specialised enterprise delivery training program targeted at the CS&HI that is financially supportive and inclusive of mentoring. This program would ensure the broader employment success of graduates and provide a good return-on-investment as the user-choice model is made more efficient and will be less prone to abuse or error.

Bibliography

- Australian Government 2014, *Budget Paper No. 2: Budget Measures*, viewed 06/04/2015 2015, <http://www.budget.gov.au/2014-15/content/bp2/html/bp2_expense-17.htm>.
- Ben-Tovim, DI, Bassham, JE, Bennett, DM, Dougherty, ML, Martin, MA, O'Neill, SJ, Sincock, JL & Szwarcbord, MG 2008b, 'Redesigning care at the Flinders Medical Centre: clinical process redesign using "lean thinking"', *Medical Journal of Australia*, vol. 188, no. 6, pp. 27-31.
- Ben-Tovim, DI, Dougherty, ML, O'Connell, TJ & McGrath, KM 2008a, 'Patient journeys: the process of clinical redesign', *Medical Journal of Australia*, vol. 188, no. 6, pp. 14-7.
- Billett, S, Choy, S, Dymock, D, Smith, R, Kelly, A, Tyler, M, Henderson, A, Lewis, J & Beven, F 2014, *Refining models and approaches in continuing education and training*, NCVET, Adelaide.
- Chenoweth, L & Clements, N 2009, *Funding and service options for people with disabilities*, Griffith University, Queensland.
- Choy, S, Billett, S & Kelly, A 2013, 'Engaging in continuing education and training: learning preferences of worker-learners in the health and community services industry', *Australian Journal of Adult Learning*, vol. 53, no. 1, pp. 68-89.
- Commonwealth of Australia 2013, *National Disability Insurance Scheme Act, 44*, 2013, Office of Parliamentary Counsel, Canberra, 29 May 2013.
- Community Services Health and Industry Skills Council 2014, *Environmental scan 2014: agenda for change*, Community Services Health and Industry Skills Council, Sydney.
- Cortis, N, Meagher, G, Chan, S, Davidson, B & Fattore, T 2013, *Building an industry of choice: service quality, workforce capacity and consumer-centred funding in disability care*, UNSW, Sydney.
- Costley, C & Armsby, P 2007, 'Methodologies for undergraduates doing practitioner investigations at work', *Journal of Workplace Learning*, vol. 19, no. 3, pp. 131-45.
- Crooks, S, Cameron, M & Asgari, M 2008, *New Enterprise Incentive Scheme longer-term outcomes*, Department of Education, Employment and Workplace Relations, Canberra.

- Curtin, P, Stanwick, J & Beddie, F (eds) 2011, *Fostering enterprise: the innovation and skills nexus – research readings*, NCVET, Adelaide, South Australia.
- Department of Employment 2015, *Help available and eligibility for NEIS*, Australian Government, viewed 06/04/15 2015, <<https://employment.gov.au/help-available-and-eligibility-neis>>.
- Department of Industry and Science 2015, *Apprentice to Business Owner Program (AtoB Program)* viewed 06/05/2015 2015, <<http://www.industry.gov.au/skills/ProgrammesandAssistance/ClosedProgrammes/ApprenticeToBusiness/Pages/default.aspx>>.
- Dockery, AM 2002, 'The New Enterprise Incentive Scheme: an evaluation and a test of the Job Network', *Australian Journal of Labour Economics*, vol. 5, no. 3, pp. pp 351-71.
- Edwards, R & Usher, R 2001, 'Lifelong learning: a postmodern condition of education?', *Adult Education Quarterly*, vol. 15, no. 4, pp. 273-87.
- Glendinning, C, Challis, D, Fernández, J-L, Jacobs, S, Jones, K, Knapp, M, Manthorpe, J, Moran, N, Netten, A, Stevens, M & Wilberforce, M 2008, *Evaluation of the Individual Budgets Pilot Programme - final report*, Social Policy Research Unit, University of York, York.
- Greenhalgh, T, Robert, G, Macfarlane, F, Bate, P & Kyriakidou, O 2004, 'Diffusion of innovations in service organizations: systematic review and recommendations.', *The Millbank Quarterly*, vol. 82, no. 4, pp. 581-629.
- Hill, BM 2010, *The sociology of innovation*, MIT, viewed 10/10/14 <mako.cc/academic/generals/bmh-generals-sociology_innovation.pdf>.
- Holland, C 2009, *Workplace mentoring: a literature review*, Work and Education Research & Development Services, New Zealand.
- Hubert, A 2010, *Empowering people, driving change: social innovation in the European Union*, Publications Office of the European Union, Luxembourg.
- Hyde, P, Clayton, B & Booth, R 2004, *Exploring assessment in flexible delivery of vocational education and training programs*, NCVET, Adelaide.
- Karmel, T & Blomberg, D 2009, *Workforce planning for the community services and health industry*, NCVET, Adelaide.

- Karmel, T, Mlotkowski, P & Awodeyi, T 2008, *Is VET vocational? The relevance of training to the occupations of vocational education and training graduates*, National Centre for Vocational Education Research , Adelaide.
- Kilpatrick, S, Lê, Q, Johns, S, Millar, P & Routley, G 2007, *Responding to health skills shortages: innovative directions from vocational education and training*, NCVET, Adelaide.
- Klein, L 2008, *The meaning of work: papers on work organization and the design of jobs*, Karnac Books, London.
- KPMG 2014, *KPMG interim report: Review of the optimal approach to transition to the full NDIS*, viewed 10/10/14 <<http://www.ndis.gov.au/document/865>>.
- Messmann, G & Mulder, RH 2011, 'Innovative work behaviour in vocational colleges: understanding how and why innovations are developed', *Vocations and Learning*, vol. 4, pp. 63-84.
- Mootee, I 2013, *Design thinking for strategic innovation*, John Wiley & Sons, Inc., Hoboken, New Jersey.
- Mortati, M & Villari, B 2014, 'Design for social innovation. Building a framework of connection between design and social innovation', paper presented to Fourth Service Design and Innovation conference, Lancaster, U.K., 9–11th April 2014.
- National Disability Insurance Scheme 2015, *History*, viewed 13/02/2016 <<http://www.ndis.gov.au/about-us/our-history>>.
- National Disability Services Victoria 2012, *Victorian Disability Services transition plan*, National Disability Services, Melbourne.
- Organisation for Economic Co-Operation and Development 2005, *Oslo manual: guidelines for collecting and interpreting innovation data*, 3rd edn, OECD & Eurostat, Paris.
- 2009, *Systemic innovation in the Australian VET system: country case study report*, viewed <http://apo.org.au/node/16582>.
- Polaine, A, Reason, B & Løvlie, L 2013, *Service design: from insight to implementation*, Rosenfeld, Brooklyn, New York.
- Precision Consultancy 2011, *Workforce gap analysis project: towards a sustainable workforce supporting people with a disability*, Precision Consultancy, Melbourne.

- Productivity Commission 2011, *Disability care and support*, Commonwealth of Australia, Canberra.
- Quiggin, J 1999, 'Human capital theory and education policy in Australia', *Australian economic Review*, vol. 32, no. 2, pp. 130-44.
- Rimfire Resources 2010, *National Disability Services Victoria: Disability Services workforce data project*, Melbourne, Victoria.
- Seddon, T 2008, *Crafting capacity in VET: towards an agenda for learning and researching in the VET workforce.*, Monash University, Melbourne.
- Shah, C & Burke, G 2006, *The labour market and qualifications in Victoria*, Monash University - Centre for the Economics of Education and Training, Melbourne.
- Snelders, D, Garde–Perik, Evd & Secomandi, F 2014, 'Design strategies for human relations in services', paper presented to Fourth Service Design and Innovation conference, Lancaster, UK, 9–11th April 2014.
- Solis, B 2013, *What's the future of business: changing the way businesses create experiences*, Wiley, Hoboken, New Jersey.
- Stickdorn, M & Schneider, J 2011, *This is service design thinking*, John Wiley & Sons, Inc., Hoboken, New Jersey.
- TAFE Directors Australia/AVETRA 2014, TDA/AVETRA Research Scholarship 2014.
- Toner, P 2011, 'Tradespeople and technicians in innovation', in P Curtin, J Stanwick & F Beddie (eds), *Fostering enterprise: the innovation and skills nexus – research readings*, NCVET, Adelaide, pp. 127-43.
- Van Der Linde, C 2008, 'TAFE Diploma graduates: personal capital investments and returns.', *International Journal of Training Research*, vol. 6, no. 2, pp. 54-74.
- Wibrow, B 2014, *Qualification utilisation: occupational outcomes – overview*, NCVET, Adelaide.