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Vocational education and training and people with a disability: A review of the research

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NATIONAL CENTRE FOR VOCATIONAL EDUCATION RESEARCH

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About the research



Vocational education and training and people with a disability: A review of the research, Tabatha Griffin and Lisa Nechvoglod, NCVER

One of the priorities of the Australian Government's social inclusion agenda is employment for people living with a disability or mental illness. This year the government has been developing a National Mental Health and Disability Employment Strategy which, in part, will examine vocational education and training (VET) issues for people with a disability.

It is therefore timely to assess what we know and do not know about how people with a disability engage with the VET system. This paper summarises what recent research tells us about VET participation, education and employment outcomes, and the costs and benefits of VET for people with a disability. In doing so, it also highlights further questions and indicates where research efforts could be focused in order to help shape future directions in policy and practice.

Key messages

- Data show that over the last several years there has been an increase in the proportion of VET students reporting a disability. Whether this is a consequence of an increase in participation or disclosure of a disability is unclear.
- Educational achievement and employment outcomes are generally poorer for people with a disability compared with the general VET population, although this does vary considerably by disability type. Other factors, such as previous educational attainment, identifying with additional equity groups, or having more than one disability also affect outcomes for people with a disability.
- ☆ The costs and benefits of VET for people with a disability from the point of view of both individuals and the government are not fully understood. These need to be investigated further to enable returns on investment to be explored.
- ✤ Future research need not focus on what the barriers are for people with a disability undertaking VET, but should concentrate on how barriers are overcome to improve outcomes. Effort should also be put into the appropriate dissemination of key findings to ensure that those working in the sector can use them effectively.

Tom Karmel Managing Director, NCVER

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Introduction

Background and purpose of this document

A review of the literature reveals much discussion and research into the issues of how people with a disability engage with the vocational education and training (VET) system. However, there are still considerable gaps in the knowledge base and there is more work to be done. A recent review by the Organisation for Economic Co-operation and Development (OECD 2007) found that in Australia people with disabilities were at high risk of poverty, as they are under-represented in employment and also experience substantially lower levels of income. This paper, however, is not concerned with solving these issues. Its purpose is to highlight the limitations of our knowledge and to identify what we need to know in order to influence future directions in policy and practice more effectively.

The current climate provides an ideal opportunity to take stock of what we know and to look at where gaps in the research exist. The Australian Government has made a commitment to the development of a National Disability Strategy. Situated underneath this will be the new National Mental Health and Disability Employment Strategy. One of the aims of this strategy is to examine vocational education and training issues for people with a disability. Any future research that is both timely and tightly focused should help in the development of the new strategy.

This review of the literature has been loosely structured around the *Bridging Pathways: National strategy* (ANTA 2000) developed by the now-defunct Australian National Training Authority¹. It considers four broad aspects of VET and disability:

- ♦ participation
- \diamond education outcomes
- ♦ employment outcomes
- \diamond costs and benefits of VET.

These topics should not be considered independent of each other. In fact, most issues faced by people with a disability impact on more than one aspect of their education and employment pathways.

This document does not summarise every piece of work conducted on VET and disability. There are already useful reviews of the research in the published literature. For example, Buys, Kendall and Ramsden (1999) provide a thorough review of research conducted prior to 1999. The national inquiry into employment and disability conducted by the Human Rights and Equal Opportunity Commission in 2005 is another useful summary of the barriers to employment for people with a disability and also considers the role VET has to play.

This paper is based on findings from research conducted over the past decade. Themes that impact on the four topics noted above are explored to identify what we now know and to elicit potential questions for further investigation, based on gaps in the evidence. To highlight gaps in existing

¹ The Australian National Training Authority (ANTA) was abolished in 2005 and its functions assumed by the Department of Education, Science and Training (now the Department of Education, Employment and Workplace Relations).

knowledge and identify areas for future research, the project team firstly compared the extent of literature coverage against each of the themes in the national strategy. This gave an indication of where research coverage was either strong or weak. Gaps and opportunities were also identified through a careful examination of reports and literature for indications of areas of knowledge deficiency or where further research (or statistical data) was needed.

The final part of the paper describes ways to move forward from here, considering how future research could be undertaken to fill the gaps in the literature.

Participation

Participation in VET by people with a disability

The National Centre for Vocational Education Research's (NCVER) national collection of student data from VET providers contains data on the number of VET students who report having a disability. The most comprehensive report on the participation in VET of people with a disability is given in the 2005 NCVER publication *People with a disability in vocational education and training:* A *statistical compendium* (Cavallaro et al. 2005). This publication covers participation and outcomes for students with a disability between the years 1998 and 2003. The number of students in VET reporting a disability steadily increased from 53 475 students in 1998 to 91 439 students in 2003. This was an increase from 3.5% of the total public VET student population to 5.3%. It should be noted that these data rely on students self-reporting disability and may therefore reflect a willingness to disclose rather than actual rates of disability. The limitations of the data are discussed further below.

More recent figures show that the increase has continued, with 102 100 students (6.1% of the total public VET student population) reporting a disability in 2007 (NCVER 2008). From 2002 to 2006 participation in VET by people with a disability increased by 24% (Department of Education, Science and Training 2006). Recently there have been concerted efforts to increase participation of people with a disability, such as the 2005–08 Commonwealth–State Agreement for Skilling Australia's Workforce, which set out a target for an additional 10 000 places for people with a disability.

Unanswered questions

What are the reasons behind this increased participation seen over the past eight years?

- Is it because of improved access; higher levels of awareness; higher levels of acceptance, leading to increased disclosure; increased incidence of disability in the general population; the allocation of additional places?
- What is a practical level of VET participation for people with a disability?
 - Assuming that the appropriate level is higher than currently demonstrated, what needs to occur to improve participation further?
 - What has worked well and can this be expanded/replicated elsewhere?
- What is preventing people with a disability from enrolling?
 - Are the pathways too difficult to navigate?
 - Where do they seek information?
 - Is suitable information available?

The patterns of participation across qualification levels also differ for students reporting a disability compared with the general VET population. Students with a disability are less likely to enrol in Australian Qualifications Framework (AQF) certificates III and above (38% in 2003) compared with all VET students (46%). This could be a consequence of the lower schooling levels of people with a disability, as they are much more likely than the general VET population to have left school before Year 10 (Cavallaro et al. 2005).

Unanswered questions

- What is preventing people with a disability from participating at higher AQF levels?
 - Is it because of lower schooling levels?
 - How can participation be increased?
 - What can we learn from those people with a disability who are participating in higher-level courses?
 - Are there easily accessible pathways from lower qualifications to higher ones for people with a disability?

People with a disability also participate in apprenticeships and traineeships at lower rates compared with the general VET population (1.3% versus 5.3% in 2003). Some group training organisations have been relatively successful in placing people with a disability into apprenticeships and traineeships (Barnett 2004). A best-practice guide for placing and supporting new apprentices with a disability was developed by Lewis (2002) through consultations with group training organisations. A key factor in the successful recruitment and placement was the strong partnerships developed between the group training organisations and disability employment agencies. Apart from these successes, however, participation remains low.

Unanswered questions

- How can participation in apprenticeships and traineeships be increased?
 - Can there be better pathways or links from school?
 - Might this increase participation in apprenticeships that are not placed through group training organisations?
 - How can partnerships between disability employment agencies and group training organisations be fostered?
- How do group training organisations compare in their abilities for placing apprentices with a disability?
 - Can other group training organisations learn from those who are demonstrating outstanding successes?

There are limitations to the data presented in this document. The NCVER VET Provider Collection relies on self-reporting, based on information collected from enrolment forms. It is assumed that disability is under-reported by students for various reasons. Because there is still a perceived stigma associated with disability, especially mental illness, a high proportion of students do not disclose whether they have a disability or not. It is also possible that students do not disclose a disability because of uncertainty over potential consequences. In 2003 the disability status was unknown for over 280 000 students; in 2006 it was over 313 000. In addition, of those who do report a disability, there is a high number who report 'other' or 'unspecified' for disability type, leading to issues with analysing detailed statistics. Further limitations relate to the scope of the data, which is based on publicly funded VET and includes very little data from private providers.

Other data collections regarding people with a disability have similar issues. For example, the Australian Bureau of Statistics (ABS) collects information about disability in Australia through the Survey of Disability, Ageing and Carers (SDAC). Similar to the VET Provider Collection, the ABS data rely on people self-reporting disability.

The VET Provider Collection and ABS data differ in their definitions of disability and so comparisons between the VET population and the general Australian population should be made with caution. Another issue worth highlighting is the regularity of statistics available relating to people with a disability. The ABS collected data on disability in 1981, 1988, 1993, 1998 and 2003. The most recent data available are from 2003 (ABS 2003) and therefore the time lag in data availability may add to the difficulties of planning services for people with a disability. Similarly, the VET Provider Collection is annual and publishes statistics from the previous year's activity.

Despite these limitations, it is important to continue measuring levels of VET participation by people with a disability in order to provide some empirical basis on which to analyse issues and evaluate policy interventions and practice.

Unanswered questions

- ♦ Can limitations in the data be reduced?
- ♦ Would there be any value in trying to estimate/model what more accurate statistics might look like?
- Is there a better way of collecting regular data that would allow access to up-to-date statistical information, which training organisations and other interested parties could obtain?

Barriers to participation

Research suggests that, in periods of transition (for example, when leaving school, moving from welfare to work, after rehabilitation, or when moving from one job to another after acquiring a disability), people with a disability have problems accessing suitable information about their training options. A lack of user-friendly and accessible information about the VET system and poor career guidance make it difficult for students or potential students to make informed choices (Barnett 2004). While information is available (for example, the Australian Government's JobAccess website), students may not be able to access it through their usual information networks. In her report on deaf students in VET, Clark (2007) claims that the available information is difficult for deaf people to use effectively as a result of the communication barriers they experience. She also suggests that deaf people often do not have the same levels of career knowledge as other students, because they have not worked part-time while at school. This may also be true for other disability groups.

Unanswered questions

- ♦ What are the networks and sources of information that people with a disability are using?
 - What services are available to guide training decisions for people with a disability?
 - Do they differ substantially from people without a disability?
 - Do they vary for the different disability sub-groups?
 - Are there any examples of good information sources, and, if yes, do people with a disability know about them?
- What are career advisors/employment agencies telling people with a disability about training options?
- What information/services are available for people who acquire a disability later in life and who can no longer work in their previous role?

Students are not alone in requiring information. It is often the case that industry training advisory bodies, industry groups and employers are unaware of available funding and resources, which can assist in training or employing someone with a disability (Barnett 2004).

Clark (2007) also highlights another barrier to receiving suitable career information—the attitudes of those providing the information. She suggests that there is a general perception in the community and among career professionals that people with hearing loss (irrespective of the degree) are unable to pursue a range of employment opportunities. This is also likely to be true for other disability groups. Students' understanding of available pathways is influenced by those providing advice (often parents, peers, teachers etc.). These people may have preconceived ideas about the choices available for people with a disability.

Unanswered questions

What are the perceptions of career advisors, employers, teachers, family members etc. about what people with various disabilities are capable of?

There is some evidence suggesting that pathways need to be developed before people with a disability leave school (especially considering that many people with a disability leave school before Year 11). Case studies from the Enterprise and Career Education Foundation's Lighthouse Disability Initiative demonstrate the potential benefits of engaging young people with VET in Schools programs (Barnett 2004; Barnett & Ryan 2005; Enterprise and Career Education Foundation 2002).

Unanswered questions

- Are there other examples of programs designed to engage young people with a disability before they leave school?
 - If so, how can lessons learned from these programs be put into a format useful to others?
- How do you engage with people who have already left the education system?

Developing a pathway before leaving school is clearly not applicable for people who acquire a disability later in life. Different pathways into VET need to be used for people who can no longer continue with their previous work due to disability. Services specifically targeted to those with a disability may provide access to VET for some people. An example of this is the spinal cord injury project, a pilot VET program for people who had recently suffered a spinal cord injury. Outcomes of this project included a high proportion of the participants planning to undertake further vocational study, which demonstrated the value of providing participants with information about training possibilities (West & Warth 2002).

Unanswered questions

- What pathways are available for people who have onset of disability later in life, perhaps when they have already been in the workforce?
 - Are there other programs designed to introduce VET to people who can no longer work in their previous jobs?
 - Do rehabilitation services have a role to play?
 - What other services are available and how do people access them?

Education outcomes

Educational achievement

Generally, people with a disability have lower levels of educational achievement than those without a disability. The subject completion rate in 2003 was 75% for people who reported a disability compared with 82% for all VET students. The proportion of people with a disability who completed an AQF qualification (13%) was also lower than for all VET students (18%, Cavallaro et al. 2005). Recently, there have been slight improvements for certificates III and IV pass rates (70.8% in 2002 increasing to 72.0% in 2006) and more significant improvements for certificates I and II (60.8% in 2002 increasing to 65.1% in 2006) (Department of Education, Science and Training 2006).

Educational outcomes also vary significantly between different disability groups. In 2003, higher subject completion rates occurred in the vision (78%) and hearing (78%) groups, while the lowest subject completion rate occurred in the mental illness group (67%) (Cavallaro et al. 2005). Students with a vision disability also had the highest rate of achieving a qualification from the Australian Qualifications Framework (15%). The lowest rate was experienced by students with an intellectual disability (8%). Cavallaro et al. (2005) provide detailed information on VET participation and outcomes for each of the disability groups.

Research conducted to analyse the factors that influence the likelihood of completing an apprenticeship or traineeship for commencements in 1998–99 found that the probability of completion for a student with a disability was 42% compared with 46% for those with no reported disability (Ball 2005).

Poor educational outcomes for people with a disability are compounded by other factors such as previous educational attainment, having more than one disability, or identifying with additional equity groups. The prior schooling levels for people with a disability are much lower than for all VET students (Cavallaro et al. 2005). More than half (54%) of VET students with a disability left school at or before the end of Year 10 compared with 39% for all VET students. This also differs by disability type. The highest prior schooling was Year 10 or less for 60% or more for the learning disability and intellectual impairment groups.

Karmel and Nguyen (2008) report on analyses aimed to tease out the effects of disability and educational background on VET completion rates. The findings show that, for some types of disability, completion rates were affected more by other student characteristics (most notably prior education) than by the disability itself.

The compounding effect of other characteristics on top of disability has also been investigated by John (2004) and Ball (2005). These two studies found that the probability of completing VET studies for people with a disability was further affected by age, employment status and membership of other equity groups (Indigenous and non-English speaking backgrounds, for example). However, these studies did not consider the different disability groups separately.

Similar to the participation statistics in the previous section, these figures on completion may be affected by the limitations of the data, especially the reliance on self-disclosure. Of those students who do not disclose their disability, there is likely to be a mixture of those who succeed in completing their VET course and those who do not. Whether the data are being systematically biased through the reliance on self-disclosure is unknown.

Unanswered questions

- How can educational outcomes be improved for people with a disability?
- How can multiple barriers be overcome?
- Are people with a disability enrolling in courses at higher levels than they are ready for (for example, do they have the appropriate educational background, study skills, support)?
 - Can better use be made of preparatory courses?
 - Are students more successful in mainstream VET after completing preparatory courses?

Accessing additional support

An individual student's chance of successfully completing their VET studies may be improved if they access additional support (Montague & Hopkins 2002). The availability of support for students with a disability has been influenced through compliance with the *Disability Discrimination Act 1992*, the development of strategies such as Bridging Pathways and associated action plans, and equity standards for the Australian Quality Training Framework. Providing adequate timely support is not easy, however, and findings from the research literature suggest that there are still improvements to be made.

The provision of support requires that students disclose their disability to the training organisation. Whether students choose to disclose their disability or not is influenced by a number of factors. Students in some disability sub-groups are less likely to disclose their disability than others. Most research about the consequences of disclosure has been centred on students with mental health issues, a disability which is often invisible. Bathurst and Grove (2000) present findings from 17 accounts of students with mental illness studying at university or technical and further education (TAFE) institutes. The researchers found that students who disclosed their mental illness battled against stigma, ignorance and discrimination. In order to access support or explain behaviour, some students chose to 'disclose' a physical illness or disability (sometimes fabricated) rather than disclose their mental illness. Some students reported that they would not disclose their mental illness in the future because of bad experiences in the past. Other students chose not to disclose, as they felt undeserving of additional support or, alternatively, they wanted to prove they could succeed without additional support. An earlier study by McLean and Andrews (1999) on students with psychiatric disabilities found similar trends, in that students found the risk of stigma too great to disclose their disabilities. Concerns about confidentiality are also an issue. Responding to the needs of students who do not disclose their mental illness is a big challenge for TAFE institutes (Miller & Nguyen 2008). While a large proportion of students with mental health issues have limited support needs and successfully go through the system, others may reach a certain point in their course when they begin to feel overwhelmed and decide to drop out of the system without accessing valuable support.

Students with other types of disabilities also may not disclose their disability at the time of enrolment. Clark (2007) suggested that this may be the case for students with hearing impairments. Little is said about this for other disability groups in the literature. Researching this issue is problematic because of the difficulty of engaging those students who choose not to disclose their disability. However, a report (Rose 2006) from the United Kingdom provides a comprehensive discussion about reasons why students may not disclose their disability and provides practical

suggestions about how to encourage students to do so (at enrolment and through other opportunities). While there are some examples in the Australian literature of how organisations encourage students to disclose their disability, these tend to be buried in various reports (for example, in Robertson et al. 2004) and they may not be easily accessible to others.

Unanswered questions

♦ What else do we need to know about disclosure?

- Are there ways to encourage students to seek help?
 - Would training organisations benefit from a practical guide to encouraging disclosure?

For those students who do attempt to access support, are they getting what they need? The degree of support needed for individual students varies with the type and severity of disability. There does not appear to be any comprehensive piece of work on whether support provided to students is meeting their needs or expectations. McLean and Andrews (1999) investigated student satisfaction in students with psychiatric disabilities, and this may be a useful exercise to conduct more broadly. Scattered through the literature are examples of where the provision of supports have failed (for example, when interpreters have not turned up [Clark 2007]) or where support services have been seen by students as inappropriate (for example, embarrassment over having the specially supplied photocopier in full view of other students [Bathurst & Grove 2000]). There are also examples of where students have reported that services have been useful (for example, Bathurst & Grove 2000), but the evidence is limited. The students' voices are largely missing from the literature.

There is a considerable amount of literature on how new technologies can be used to support students with a disability. Evaluations of how useful these are to students in a training environment are important and there are examples of this (for example, Paez, Wilkes & Gurgone 2004).

Unanswered questions

Do we need a more comprehensive study on student satisfaction with support services?

- Would there be value in a broader 'survey' of satisfaction?
- Do individual organisations collect data on this?
- How does the adequacy of support differ for the various disability types/severities?
- Do the guidelines for providing support correspond with what students want?
- And are training organisations implementing strategies outlined in published guidelines?

Support is not just about the provision of equipment and additional services. The attitudes of staff and their abilities to provide support are also important and require that teachers are provided with professional development opportunities to gain these skills. McKenna (2004) provides overviews of 40 projects that were conducted to address the professional development needs of VET staff involved with students with a disability. Not all staff are likely to have the opportunity to participate in these types of programs and may have to rely on obtaining information on an as-needed basis. And it is not clear whether teachers are able to easily access (and implement) information on how to be inclusive of people with a disability.

There is some evidence that suggests that there is more to be done in this area. Miller and Nguyen (2008) spoke to TAFE teachers about how they provide support to students with mental health issues. They found some issues that need to be addressed for teaching staff. Teachers were often confused about the boundaries of their roles, with many providing some level of counselling support. Some teachers admitted that they did not know how to deal with certain situations. In another study on students with mental health issues Bathurst and Grove (2000) reported some

examples of inappropriate actions (even if not intentional) and discriminatory attitudes exhibited by teachers, highlighting the need for teachers to be better informed. Difficulties in balancing confidentiality and seeking additional support for students have also concerned teachers (Miller & Nguyen 2008).

There are also examples of teachers receiving good support from specialist staff. Casey and Laing (2006) suggest that programs based on the needs of learners will have a holistic approach that includes professional development for staff. Some of the better examples of teachers receiving good support develop from such programs (Access Training and Employment Centre 2003).

An alternative view to the provision of training for staff was given by 'best practice' group training organisations consulted by Lewis (2002). In general these group training organisations believed that their current staff were experienced and skilled enough to support apprentices with disabilities without providing them with disability-specific training (although there were some who reported sending staff to disability awareness courses).

Unanswered questions

- Are teachers getting the support and professional development opportunities they need?
 - Where do they obtain information about how to teach and assess people with a disability?
 - Are they accessing information on an as-needed or ad hoc basis?
 - How does staff support differ between those in special programs and mainstream VET?
 - And can lessons learned from special programs be incorporated into mainstream VET?

Employment outcomes

Obtaining employment after training

Employment outcomes after VET are generally poorer for people with a disability compared with those without, although this does vary by disability type, as discussed below. In 2004, 51% of VET graduates with a disability were employed after training, compared with 77% of VET graduates with no disability (Cavallaro et al. 2005). A higher proportion of people with a disability were unemployed after graduating (16%), compared with people without a disability (11%). Similar results are seen for module completers.

These outcomes need to be considered in the light of the reasons for training. Cavallaro et al. (2005) report that in 2003 employment outcomes were higher for those who undertook training for employment-related reasons than those whose reason for training was further study or personal development. However, they were still lower than for people without a disability. Lower levels of employment outcomes could also reflect the tendency for people with a disability to study at lower AQF levels. Lower-level courses are less likely to lead directly to employment for the general VET population (Stanwick 2006). Could this be true for people with a disability also?

Employment outcomes vary by disability type (Cavallaro et al. 2005). Based on the 2003 Student Outcomes Survey, graduates with hearing and visual disabilities had higher employment outcomes (64% and 61%, respectively), while those with chronic illness, physical disability or other disability had the lowest (43%, 45% and 45%, respectively). Similar patterns were seen for module completers.

How are better employment outcomes achieved? A common theme in the literature is that people with a disability whose training involves practical experience in the workplace are more likely to find employment (Clark 2007; Guenther, Falk & Arnott 2008; Dawe 2004). Training targeted to specific employment opportunities or career pathways is also more likely to lead to employment (Moskos 2007; Guenther, Falk & Arnott 2008).

Better employment outcomes have been seen for students enrolled in an apprenticeship or traineeship (Barnett 2004; Clark 2007), probably because of the immediate employment relationship embedded in the apprenticeship and traineeship model. However, as discussed earlier, participation is lower for people with a disability compared with those with no disability.

Partnerships between training organisations, employment agencies and employers are valuable in creating opportunities for work experience and targeted training opportunities. Several case studies have demonstrated how these strategies work (Lewis 2002; Access Training and Employment Centre 2003; Ziguras & Kleidon 2005). Good partnerships can help in developing career pathways and training targeted to employment opportunities.

Unanswered questions

- How can partnerships between training organisations, employment agencies and employers be fostered?
 - How might they be resourced?
 - Can the lessons learned in the published case studies be spread more widely and put into use by others?
 - Have enough studies/evaluations of successful practice been conducted and disseminated in ways that assist lessons learned to be replicated?

The role of VET in the welfare-to-work pathway has been investigated recently (Barnett & Spoehr 2008; Guenther, Falk & Arnott 2008). These studies found that VET does play a role in helping welfare-to-work target groups (including people with a disability) into work, but that short-term prevocational courses alone are not likely to lead to sustainable employment. These courses may be more useful as stepping stones to mainstream VET. These studies also highlight the need for an information flow between employment services, Centrelink, training organisations, and health workers.

Unanswered questions

- What policy changes need to occur to provide welfare-to-work target groups with access training that is more likely to lead to sustainable employment?
 - Will this be answered in the current policy work and consultations?

Employment services are likely to play a large role in helping people with a disability to transition to work. How well prepared are employment services to advise people with a disability? Clark (2007) reports that even disability employment services are unaccustomed to working with deaf people, raising the question of how well these services can help people with varying needs.

Unanswered questions

- What roles do employment services play in helping people with a disability to find work?
 - What advice are they providing and how well is it tailored to the diverse needs of this client group?
 - How do specialist disability services compare with mainstream services?
 - Are specialist services easily accessible to people with a disability?
 - · How well do employment services partner with other relevant services?
 - Are there examples of good practice, where key lessons learned could be replicated elsewhere?

Employers

There has been little focus on employers in recent research on the topic of employment outcomes for people with a disability. Most information on this is located in research reports that have not focused on this aspect specifically.

The perceived cost of hiring people with a disability may make employers reluctant to consider taking on such workers (Moskos 2007). These costs might be associated with the need to make physical adjustments to the workplace; a loss of productivity; or higher costs of insurance, workers' compensation and occupational health and safety. Many employers are also likely to demonstrate a lack of awareness about the skills and abilities of people with a disability (Clark 2007). Hence the attitudes and preconceptions of employers can pose additional barriers to obtaining employment for this group of people.

Most of the success stories in the literature have involved good relationships between employment agencies, training organisations and employers (as discussed earlier). These partnerships are not normally driven by the employers. The employers are usually 'recruited' by one of the other parties, sometimes as part of a special program (for example, the Westgate Community Initiative Group Disability Employment Program [Ziguras & Kleidon 2005]; the Northern Melbourne Institute of TAFE's Work Education Unit [Access Training and Employment Centre 2003]).

A current project being conducted for NCVER aims to answer the question of 'what will it take?' to encourage employers to consider employing people from equity groups, including those with a disability. The approach of this project is to look at what larger enterprises are doing and then follow this by investigating small and medium-sized enterprises in more detail. This project should help address some of the following unanswered questions.

Unanswered questions

- What do employers think of hiring people with disabilities?
 - Are they aware of any incentives and support/services available to them when hiring a person with a disability?
 - What has been the experience of employers who have employed a person with a disability?
 - What has been the experience of employers who have had a person acquire a disability while employed by them?

Costs and benefits of VET

Costs and benefits for individuals

Costs incurred by individuals with a disability, by comparison with the general VET student population, for undertaking training are not well understood. Recent research on returns on investment for students undertaking VET included, in the modelling, various costs, such as course fees, investment of time and the opportunity cost of foregone earnings (Long & Shah 2008). Depending on the circumstances of the person with a disability, these costs are likely to change; for example, because of any changes in welfare payments, increased transportation or carer costs, lack of employment opportunities, and so on. Trying to apply a return on investment model to such a diverse group is likely to be difficult.

There are likely also to be benefits for people with a disability who participate in VET. As for all students, the NCVER Student Outcomes Survey shows that people with a disability study VET for employment, personal development and further study reasons. People who report a disability are more likely to participate for personal development reasons compared with the total VET student population, but we do not know enough about whether these students actually obtain the desired outcome and how they benefit; for example, through increased community participation, better health and greater confidence. Employment, one possible outcome of undertaking VET, brings its own range of benefits to an individual, including improved economic situation, health and self-esteem and the development of social networks. Research examining the relationship between employment and quality of life for people with an intellectual disability found that those in open employment experienced a significantly greater quality of life than those who were unemployed (Eggleton et al. 1999).

Unanswered questions

- What are the costs and benefits of undertaking VET for people with a disability (including those additional disability-specific costs)?
- What is the return on investment for people with a disability and how does this vary by disability type and severity?

Costs and benefits for government

The Australian Government's recent discussion paper on a National Mental Health and Disability Employment Strategy asserts that 'there are many myths about increased risks and costs of employing people with disability and/or mental illness', noting that in many cases the benefits that such an employee brings to their business can far outweigh any costs (Department of Education, Employment and Workplace Relations 2008). The paper cites the Australian Safety and Compensation Council (2007) and the OECD (2007), which list benefits such as reduced numbers of occupational health and safety incidents, lower workers' compensation costs, lower absenteeism and higher retention rates and therefore reduced costs—in terms of recruitment and training of new staff—along with increased staff stability. The movement of people with a disability from disability support into employment provides a benefit to government, as the current regime of spending on disability support is increasing and potentially unsustainable (OECD 2007; Guenther, Falk & Arnott 2008). The ACE National Network (2008) has estimated that, due to lost employment opportunities, the cost of under-engagement of people with a disability is in excess of \$54 billion per annum.

Given that we know that studying higher-level VET is a pathway to work (Stanwick 2006), there is little doubt that public funding of VET training for people with a disability is likely to produce many returns, such as economic growth, innovation and development of human capital. However, as discussed earlier, employment outcomes after VET for people with a disability are poorer than for people without a disability. To better understand the benefit to the government of supporting people with a disability in VET, it would be useful to determine what sub-sets of this group benefit the most.

Understanding costs and benefits are essential when working out total return on investment. In addition to knowing the current costs of supporting people with a disability in VET, it would be useful to model the additional costs required to achieve better outcomes. This requires a better understanding of the costs of participation for this group of people, taking into account, disability type and severity.

Unanswered questions

- What are the costs of VET for people with a disability from a government's or provider's point of view?
- What would be the additional costs required to achieve better outcomes?
- What is the return on investment for employers and governments for providing training and support for people with a disability?
 - How does this vary by disability type and severity?

Funding models

In 2004 Selby Smith and Ferrier investigated how the vocational education and training system allocated funds to support students with a disability and what other funding models might provide more effective support. They found a mixture of base and special funding, which was different in each state or territory, and concluded that this resulted in complexity and competition for limited resources. Furthermore, funding was not always used in the most efficient way, and this was exacerbated by limited information on where funds would be best spent. Although difficult, establishing more accurate estimates of the costs of supporting people with a disability would help to determine how funding would be best distributed. The report noted that factors such as the type, level and location of the course, the type and severity of the disability, the needs of people with disabilities who have not yet entered VET, and the interaction between VET study and other aspects of the lives of these students all need to be considered when selecting a preferred model for funding.

Unanswered questions

- Are there any funding models or aspects of other arrangements that work in the international arena, which could be applicable in Australia?
- How can the system build in flexibility in support funding to cater for different sub-groups at the times they require support?
- Do private providers have the potential to play a greater role, thus possibly alleviating the burden of support and access carried by public providers?
- ♦ What is known about the requirements of various groups of people with a disability?
 - How is such information collected and disseminated?
 - Can these processes be improved?
 - Do we need a framework for the costs of providing support to help providers adequately plan?
- Would trials of different systems of funding, including an intersectoral approach and one that allocates funds to individuals, be useful?

The way forward

The current literature adequately describes the barriers faced by people with a disability. We know that many people with disabilities face difficulties when participating in VET and seeking employment. We know that there are good reasons, both social and economic, for improving this situation. The way forward needs to involve research that will break new ground and investigate how to improve participation and ensure better employment outcomes.

A disappointing finding in this review of recent research literature is that many of the questions raised in earlier reviews (for example, Buys, Kendall & Ramsden 1999) remain unanswered. Part of the problem is that the research on the topic of VET and disability is fragmented. While there have been numerous projects and case studies, a disjointed approach has left gaps in the knowledge base. One issue is that most studies focus at either a macro level (considering people with a disability as one group, ignoring the diversity within it), or at a micro level (perhaps considering people with one type of disability). These approaches inevitably leave gaps in the knowledge base. The focus now should not only be on *what* is researched but also on the *way* the research is conducted.

One possible strategy to avoid this fragmentation would be to use a research program approach. A research program, consisting of a number of research projects, could be specifically designed to provide answers to a set of closely interrelated issues rather than providing just one small piece of a puzzle. This type of coordinated research is much more likely to provide a significant contribution to the knowledge in this area.

Another issue is that, while there are useful findings in the literature, often they are buried in unlikely places. This is particularly true of case studies that illustrate good practice. Case studies can teach us a great deal about what works (and what does not), but the information needs to be easily accessible and clear about how the lessons learned can be replicated elsewhere or incorporated into mainstream practice. The dissemination of future research needs to be carefully considered to ensure that those working in the VET sector can engage with the findings and therefore improve policy and practice.

In this paper the topic of VET and disability is divided into four aspects: participation, education outcomes, employment outcomes and the costs and benefits of VET. The information presented is specific to the interaction between the individual person with a disability and the VET system. However, an overarching theme in the literature is that a 'whole of life' approach is required to achieve the best results for people with a disability. This means that future research needs to draw together broader aspects of the lives of people with a disability. Multidisciplinary and cross-sectoral research (which could be incorporated into a research program) could further this approach.

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