

Connecting the dots: A successful transition for deaf students from vocational education and training to employment

Catherine Clark

Centre of Excellence for Students
who are Deaf and Hard of Hearing
Northern Melbourne Institute of TAFE



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The views and opinions expressed in this document are those of the author/project team
and do not necessarily reflect the views of the Australian Government,
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Publisher's note

Additional information relating to this research is available in *Connecting the dots: A successful transition for deaf students from vocational education and training to employment: Case studies of deaf people who have graduated from VET or who have just commenced study in a VET course—Support document* and *Students with a hearing loss in VET in Australia: A statistical snapshot—Support document*. They can be accessed from NCVER's website <<http://www.ncver.edu.au/publications/1798.html>>.

To find other material of interest, search VOCED (the UNESCO/NCVER international database <<http://www.voced.edu.au>>) using the following keywords: career development; career planning; disability; employment; special needs students; transition from school to work; vocational guidance.

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Foreword

This research was undertaken as part of the National Vocational Education and Training Research and Evaluation program, a national research program managed by the National Centre for Vocational Education Research (NCVER) and funded by the Department of Education, Science and Training on behalf of the Australian Government and state and territory governments.

The challenges faced by students who are deaf or hard of hearing in successfully completing education and obtaining rewarding employment are indeed daunting. This project, involving interviews with seven young people from regional and metropolitan Victoria, puts a human face to the issues that need to be addressed.

To improve outcomes, the report contends that deaf students require more specialised assistance, for example, life coaching and specialist deaf career advisors, to help determine appropriate career paths. Those interviewed felt they would like access to role models who are deaf and more accessible information to assist them to make more informed decisions about their careers. It is argued that a more holistic approach may result in better outcomes for students who are deaf and hard of hearing.

The report will be of interest to all VET practitioners, technical and further education (TAFE) institutes and other registered training organisations, and policy-makers and support agencies who are involved with those with disabilities, especially those who are deaf or hard of hearing.

Tom Karmel
Managing Director, NCVER

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This study was undertaken by Catherine Clark, Coordinator of the Centre of Excellence for Students who are Deaf and Hard of Hearing at the Northern Melbourne Institute of TAFE.

The vision of the Centre of Excellence for Students who are Deaf and Hard of Hearing is to facilitate an environment of support, whereby students who are deaf and hard of hearing can have positive learning experiences in vocational education and training (VET). By achieving this, students will obtain VET qualifications that will assist them to move on to further training and/or satisfactory and suitable employment equivalent to that of the wider community.

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- ✧ Ms Gina Bertsch: Team Leader, Independent Living Skills, VicDeaf
- ✧ Dr Merryn Davies/Ms Lois Bedson: Research Officers, Equity Research Centre
- ✧ Mrs Heather Goddard: Principal, Hearing Support Unit, Monash Secondary College
- ✧ Ms Libby Hughes: Head of Department, Vocational Pathways, Northern Melbourne Institute of TAFE
- ✧ Mr Garry Kerridge: Regional Disability Liaison Officer, University of Ballarat
- ✧ Ms Janice Knuckey: Policy Manager, Deaf Children Australia
- ✧ Mr Grant Roberts: Manager, Victorian Council of Deaf People
- ✧ Ms Tamara Trinder: Employment Consultant, Deafworks, Deaf Children Australia

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Key messages

Through interviews with seven young people from Victoria, this study identifies and evaluates the pathways available from vocational education and training (VET) to work for students who are deaf or hard of hearing.

- ✧ Deaf people are able to access a variety of careers. Nevertheless, the ‘dots’, represented by secondary school deaf facilities, deaf schools, mainstream students and other support services available to deaf people, such as specialist employment agencies and disability liaison officers at technical and further education (TAFE) institutes, need to be better ‘connected’ to ensure a smoother transition from school, to further education and to employment. This will enable students to achieve more satisfying jobs commensurate with their skills and training.
- ✧ Those interviewed indicated that their career options were limited by the perceptions, both their own and others, of what they were able to do.
- ✧ The largest barrier faced by deaf and hard of hearing students in a learning environment is the availability and provision of communication support (such as Auslan—Australian Sign Language—interpreters, notetakers, real-time captioning and voice recognition software).
- ✧ Deaf students require more specialised assistance, such as access to life coaching and specialist deaf career advisors to assist in determining appropriate career paths. The deaf people interviewed also felt they would like access to deaf role models and information in a more accessible format to help them to make more informed decisions about their career.

Executive summary

Introduction

This project explored the journey that deaf people experienced in determining their career paths and future employment once secondary school had been completed. For any senior school student, this journey begins in Year 10, when teachers, parents, specialist career counsellors and other professionals begin to educate students about the wide range of career options and pathways available to them. This project aimed to determine how this progression of advice, study, and employment occurred in order to identify the areas in need of intervention so that, ultimately, a satisfactory outcome (that is, employment in the field in which the deaf person is qualified) could be achieved. If a holistic approach to this journey is not undertaken—by ‘connecting the dots’ effectively—then these students may become welfare-dependent, may be unable to hold down regular employment, and may encounter difficulties in their adult lives.

The research project involved case studies of seven deaf people who were between the ages of 15 and 30 years and who had either just completed secondary school and were enrolling in a vocational education and training (VET) course, or who had just completed a VET course and were looking for work. The seven participants represented a broad cross-section of people with hearing loss, drawn from both metropolitan and rural areas. There were six males and one female in the group.

Each participant was interviewed twice and a total of fourteen interviews were conducted. The interviewer herself was deaf and communicated using Auslan (Australian Sign Language). Four of the participants were also Auslan users, with the remaining three communicating via speech. At each interview there was an Auslan interpreter present for two reasons: first, because when two deaf people communicate using Auslan there is a need to record the dialogue onto an audiocassette; therefore, the Auslan interpreter ‘voiced’ the signs—what was said—into the tape. The second reason was that the deaf interviewer could not always understand what the deaf people who did not use Auslan said, due to lip-reading difficulties. Accordingly, an Auslan interpreter was again used to interpret what they said to ensure clear communication and understanding.

Although the sample size was limited, a range of valuable insights were obtained from the project’s informants. These are outlined below.

The study found that, while deaf school leavers were able to access several career pathways, questions remained over whether they were able to obtain maximum benefit from these experiences. It is suggested that, by making the appropriate choice, deaf people would be more likely to enjoy a long and successful career. The study also found that students who graduated from a VET course did not find employment related to their field except where they were undertaking a traineeship or apprenticeship and gaining practical experience in the workplace. More emphasis also needs to be placed on developing strategies to assist deaf students to overcome the attitudinal barriers resulting from their hearing loss and which prevented them from pursuing certain career paths.

Informed choice

Like the general population, deaf young people rely on their parents, teachers of the deaf and peers to assist them to consider their future career options. However, there is a perception in the broader

community and amongst careers professionals that, regardless of degree of hearing loss, such individuals are still ‘deaf’ and therefore unable to undertake a range of employment options—an assumption that is both erroneous and potentially severely limiting.

The research found that it would be useful to develop career guidance materials specifically aimed at deaf students, because some of the written information available can be complex, and therefore difficult to read and comprehend. As well, there is a view that it would be extremely beneficial for these individuals to have access to deaf role models, for example, through presentations at school from other deaf people holding the types of jobs in which they were interested, and for discussing career possibilities with deaf people themselves, thus enabling them to make more informed choices about their future career options.

Most importantly, the report highlights the need for better linkages of services to support deaf people in the move from school, to further study and to work. It suggests that specialist careers advisors, working closely with employment agencies servicing people with the disability of deafness, could provide realistic and functional workplace information prior to job seeking.

Experience and opportunities of VET

For some students, especially those who communicate using Auslan and have been through a deaf facility or deaf school, the challenge of commencing a VET course with 20 to 30 other hearing people who do not know Auslan can be quite daunting.

As well, many people who communicate using Auslan find it challenging to watch interpreters all the time; it is very draining watching the same person for several hours. There are also often problems with attracting and retaining interpreters. On occasions, interpreters or notetakers are sick or do not turn up, and this is frustrating for the deaf learners as there may be no time to find a replacement. This means that students have to either miss the class or sit in the classroom and not understand what is being discussed—a very demoralising experience for deaf people.

Some hearing-impaired students use an electronic FM system in the classroom to enhance what they can hear, but just having this facility was not seen as sufficient to ensure they were able to understand all that was happening. Often tutorial support was required to clarify information discussed and to ensure they properly understood what they had learnt. This service was available to them at secondary school but many found they were not always able to get the tutorial support at technical and further education (TAFE) institutes in Victoria.

Employment outcomes

Barriers to employment opportunities are a problem for many, and some are deterred from completing courses, or unsure of the usefulness of the outcome due to the uncertainty of sustainable employment opportunities. There is also uncertainty about how to overcome the barriers perceived by employers. A wide range of barriers to employment exist for deaf and hard of hearing people and many are attributable to the lack of awareness amongst employers of the skills and abilities deaf people can bring to a job. Many employers are therefore unaware of the ways in which a person with a hearing loss can, both safely and adequately, contribute fully in the workplace and not become a ‘burden’ to be accommodated by the employer.

From the information obtained through the interviews, it was found that those who have a clear career pathway through either an apprenticeship or traineeship had more success in obtaining work related to their studies. By comparison, those who did not have a clear pathway—particularly a contract of training, which characterises both apprenticeships and traineeships—were not successful in gaining employment during the six-month period of the study.

In addition, specialist disability employment organisations may have limited experience working with deaf people, particularly in relation to advocating for adjustments and overcoming employers' attitudinal barriers because they (the employers) are unaware of the adjustments that can be made to accommodate the needs of employees who are deaf or hearing-impaired; for example, how to overcome perceived occupational health and safety risks.

The task of raising awareness is significant as it requires a major paradigm shift, not only by employers and employment agencies, but also by the community at large. Legislation has provided for equality of rights, but it has not changed attitudes and misconceptions about the skills and abilities of deaf people.

Pathways

This research project reveals that deaf people are accessing a wide range of pathways. However, what is clear is that the 'dots' are not being connected between a range of education providers and specific support agencies (including employment agencies) to ensure that deaf people are able to make the most of their potential and progress towards satisfying career outcomes. The majority of the people interviewed, especially those who communicate using Auslan, were still unsure of what their long-term career path would be.

Policy implications

Other people's expectations of deaf people who use sign language to communicate have historically been extremely low, with the skills and abilities of these individuals generally not being fully recognised and used. In the past, deaf people have been undereducated as a direct result of beliefs held about the importance of the development of speech skills, and their academic abilities would have largely been ignored. Those with a mild or moderate hearing loss have fared a great deal better as they are able to manage with the assistance of a hearing aid in general day-to-day activities.

Today, then, high but realistic expectations are crucial. In particular, school career advisors need to be informed about the appropriate provision of advice to deaf people. Deaf people are now better educated and some have broken through the barriers and are working in high-level positions; however, many are still streamed into a handful of potential employment areas that are seen as a 'good' job for a deaf person.

The situation needs to change. This research highlights the need for improved access to information on career pathways. It advocates for funding to be allocated for the employment of specially trained careers counsellors/life coaches to assist deaf school leavers. The research suggests that a resource kit be developed to educate deaf students about disability discrimination law; the kit should also provide strategies to deal with obstacles in educational and employment settings. Further work needs to be undertaken to encourage high but realistic expectations of the students, both by employers and tertiary education establishments. It is essential that obstacles associated with obtaining interpreter and/or notetaker support are eliminated.

The report further suggests that a longitudinal study be undertaken to track a group of deaf students in deaf schools, deaf facilities and in mainstream settings, and to study their progress from school, to further study in VET or higher education to employment. Finally, it is proposed that a better understanding be gained of the numbers of deaf people who require support in an educational setting, along with an assessment of whether those people are obtaining employment outcomes commensurate with their training.

Outline of support documents

This report is complemented by two support documents. The first provides a statistical snapshot of students with a hearing loss in VET in Australia. The second provides more detailed accounts of the seven deaf and hard of hearing people studied in this research. This latter document provides a richer and fuller account than the present report. The support documents are available at <<http://www.ncver.edu.au/publications/1798.html>>.

Research purpose

The aim of this research project is to identify and evaluate the available pathways from secondary school to vocational education and training (VET) and employment for students who are deaf.¹ The research team interviewed seven deaf people from two target groups. The first group consisted of students who had completed secondary school at the end of 2004 and considered applying for a vocational education and training (VET) course in early 2005. The second group were those who had completed a VET course at the end of 2004 and were looking for work in early 2005. The data were collected from face-to-face interviews recorded on audio tape, with transcripts made from the tapes. Face-to-face interviews were considered important for gathering data to ascertain students' experiences in accessing existing VET pathways from secondary school to VET and from VET to employment.

Findings from the research will contribute to information about available and accessible pathways and include reference to the barriers that students encounter. Some suggestions have been made about approaches which, if adopted, might increase the opportunities and pathways to training and support for students, and therefore lead to more highly paid jobs commensurate with their skills and training.

The project team researched the following questions in the case studies:

- ✧ Are these students able to make informed choices about the pathways and opportunities for further study from the career guidance and other advice and services available to them?
- ✧ What experiences or opportunities from VET do deaf students have during their years of study?
- ✧ What are the employment outcomes for people who have completed VET courses? Are they able to obtain employment commensurate with their skills and qualifications? How quickly does this occur?
- ✧ What other pathways to further study need to be available and how can identified barriers for those who are deaf be overcome? What are the barriers to employment and how can these be addressed?

Support services available for deaf people

Types of support offered to deaf students

Evidence from annual surveys conducted by the Centre of Excellence for Students who are Deaf and Hard of Hearing at Northern Melbourne Institute of TAFE in the Victorian TAFE system suggests that the cost of providing education to people with a severe-to-profound hearing loss, particularly to those who communicate using Auslan, is more than double that of other disabilities. This is because of the need to provide ongoing communication support personnel such as sign language interpreters,

¹ For the purposes of this research, the term 'deaf' will be used to refer to all people with a hearing loss.

notetakers and/or real-time captioners in the classroom. Additional tutorial time to ensure that students are able to keep up and fully understand material taught is another cost.

The system for providing support to students with disabilities varies from state to state. In Victoria, for example, the type of support available to deaf students will vary depending on whether they attend a public or private VET provider.

Public providers of VET, such as TAFE institutes, receive funding from the Office of Training and Tertiary Education to provide additional support to students with disabilities. Some of the support services available are:

- ✧ an Auslan interpreter
- ✧ a notetaker
- ✧ a participation assistant
- ✧ extra tutorial time
- ✧ extra time during mid-year and final year examinations
- ✧ technological equipment such as an FM system to assist with classroom learning.

The annual survey of the Centre of Excellence for Students who are Deaf and Hard of Hearing at Northern Melbourne Institute of TAFE produced the following statistical returns. Within the Victorian TAFE system, approximately 26 000 student contact hours of Auslan interpreting support, 20 000 student contact hours of note-taking support, 2000 student contact hours of participation assistance and 2000 student contact hours of out-of-class tutorial support were provided to more than 100 deaf students. This figure can only increase as a consequence of the Disability Standards on Education (Commonwealth of Australia 2005).

From research undertaken by the Centre of Excellence, it is evident that students who are deaf do not necessarily identify themselves as having a hearing loss. Usually, those who require support do not indicate a hearing loss on an enrolment form. For this reason, it is difficult to compare statistics of people enrolled in VET obtained by the National Centre for Vocational Education Research (NCVER) with the numbers of students who actually receive specialist support.

In 2004 there was a 37% increase in the number of deaf students who attended a Victorian TAFE institute and received interpreting support; however, there was only a 25% increase in the number of student contact hours where support was provided. One explanation for this is an increase in part-time or short-course enrolments as opposed to an increase in the number of full-time enrolments.

Similar increases were noted in the requests for support of notetaking services (19% increase in student numbers and 24% increase in communication support given as per student contact hours), participation assistant services (64% increase in student support and 62% increase in student contact hours) and out-of-class tutor support (79% increase in student contact hours).

This indicates that more students are becoming aware of the services offered to students with disabilities and are beginning to take advantage of these services. In 2005, the Disability Support Fund for Victorian TAFE institutes was increased from \$1 million to \$2 million. The Centre of Excellence is monitoring this to see if it provides an opportunity for more support services to be given to deaf students and whether more people are able to access support for all of their course hours.

Future technology to support deaf students in mainstream classrooms

Traditionally, support services for people with disabilities in post-secondary education are human resources. In recent years, there has been increasing interest in the development of emerging technologies with the potential to improve the range of options available to deaf students.

A report prepared by the Australian Flexible Learning Framework (Odgers 2005) lists a range of adaptive technology that can support people with disabilities in post-secondary educational settings. Odgers (2005) found that there are ‘no real adaptive technologies’ and has the view that deaf people are able to access mainstream education in the same way as other learners. However, they may benefit from the use of ‘video captions, subtitles and transcripts [which may be] either essential or helpful, depending on the content’. The author acknowledges that some deaf people have literacy and numeracy issues, but does not offer solutions on how these can be overcome. As far as we are aware, no comprehensive national research project has been undertaken to examine the potential of mainstream or emerging technologies that could support deaf students in post-secondary educational settings.

In 2005, the Centre of Excellence for Students who are Deaf and Hard of Hearing conducted a national and international literature review that included the specifications required for the technologies to be used by Victorian TAFE institutes. The research (O’Reilly 2006) identifies an extensive range of options available to students and includes the following:

- ✧ video relay interpreting (VRI) and video relay service (VRS)
- ✧ video conferencing (VC)
- ✧ real-time captioning through captionist
- ✧ real-time captioning through speech recognition software
- ✧ video streaming
- ✧ online delivery modes
- ✧ signing avatars
- ✧ interactive learning resources
- ✧ sign lab.

Video-based technologies

The main advantage of using video technology through the internet (broadband or internet protocol) or a telephone line is that it enables communication visually, using Auslan from two different locations. However, given the speed of sign language, the download and upload speeds required through the internet to achieve a high-quality picture equivalent to a television picture is a minimum 256 kbps. International and national research shows that anything less than this speed will result in package dropouts and loss of data and information in the transmission process (National and Post Telecom Agency [Sweden] 2004). Costs incurred in achieving this speed are significant, and the best technology for delivering this quality of service is video-conferencing technology, which is expensive both in start-up and operation.

A number of organisations working in the deafness sector (Australian Communication and Exchange and some of the state deaf societies in Australia), including the Centre of Excellence for Students who are Deaf and Hard of Hearing, are conducting trials to determine if newer, lower-end technologies such as web cams and PCs can achieve similar results and what the requirements for achieving quality of service are likely to be.

Video-based technology can be used in the following ways:

- ✧ video relay interpreting or video relay service (live interpreting of mainstream class for deaf students in regional areas)
- ✧ video conferencing (with a class of deaf students)
- ✧ video streaming (pre-recorded lectures can be played back using internet).

Text-based technologies

There is currently a belief amongst some policy-makers and researchers that speech recognition software will provide a solution in the classroom to difficulties experienced by deaf students. The most critical issue is that current programs of voice recognition software do not allow anyone to just walk in, pick up the microphone and start talking—with the expectation the computer program will automatically transcribe what is being said onto a laptop. The software program must be trained extensively to an individual's voice to allow the program to recognise and understand that person's voice. Even then, there is a high margin for error in the transcription of the spoken language. Another issue with voice recognition software is that it is one-way communication. If someone is deaf and uses Australian Sign Language (Auslan), they have no way of asking questions or participating in group discussions in the classroom. Deaf students require as close to 100% accurate transcription as possible, and currently no voice recognition software program can deliver that. To address this challenge, a consortium of multinational companies and educational institutions is involved in a project titled *Liberated learning* (<<http://www.liberatedlearning.com>>), which is looking at developing speech recognition software for the classroom.

Another solution is the use of professional captionists in the classroom, although it costs twice as much to employ a captionist as it does to employ Auslan interpreters. Currently, all free-to-air television stations must provide captions of all television programs from 6.00 to 10.30 pm, including news and current affairs programs. Programs are often captioned at a remote location. Some universities are exploring a service known as remote captioning service, which is an extension of that being done in television stations. This service will benefit people attending university or lecture-style technical and further education (TAFE) classes and who have good English literacy skills; but it will not be appropriate for practical classes that involve a great deal of student interaction or group work, as it will not allow two-way communication, especially for learners who communicate using Auslan.

Network support

Currently, Victorian TAFE institutes or other VET organisations offer none of these technologies. The major barrier to the use of these emerging technologies is the significant start-up costs and the need for information technology networks to have broadband or ADSL capability. However, the emergence of high speed wireless connections may provide or offer a solution in the near future. Many higher education institutions, such as universities, are developing networks and can accommodate these technologies. Some TAFE institutes are moving towards the use of internet protocol to support the information technology networks, as it is significantly cheaper than ISDN (integrated services digital network). The Centre of Excellence for Students who are Deaf and Hard of Hearing has trialled the use of video technology and is aware of other trials using remote-captioning services. Currently there is no guarantee of high quality of service using either technology. There are issues with drop-out and poor video and audio quality, which create problems for Auslan reception or voice recognition software transmission.

Until these technological solutions become cheaper or more mainstream, TAFE institutes are using traditional means to provide disability support to deaf students.

Summary of issues identified in the literature

An extensive review of national and international literature indicated that there has been minimal research in the area on which this research project is focused. The little research that has taken place is centred around the following themes:

- ✧ career pathways
- ✧ careers information and advice

- ✧ employment outcomes
- ✧ barriers to learning
- ✧ better linkages of services to support deaf people moving from school to work
- ✧ life coaching and whole-of-life approach.

Career pathways

The secondary and post-secondary education systems have, in the last ten years, developed a range of strategies to assist deaf students to make suitable career choices. The importance of this is now underpinned by the Commonwealth Disability Standards in Education (2005) under the *Disability Discrimination Act (1992)*. It is unclear from the literature reviewed whether deaf students are able to access the pathways available to students who are not deaf. What is clear is that deaf students often require more specialised assistance to determine appropriate career paths. Research conducted by Punch, Creed and Hyde (2005) and Pressman (1999) suggest that deaf students do not have the 'career knowledge' of other students; often do not undertake part-time work while still at school which would assist in improving their knowledge of what is available and determining what is suitable; and think that there are potential barriers that will restrict their choice of career.

Recommendations from Punch, Hyde and Creed (2004) indicate that more research into factors contributing to career indecision in this population is warranted. The same authors conducted another study (Punch, Creed & Hyde 2005) which recommended that intervention designed to address career indecision be implemented.

While such 'career indecision' may be an issue for all deaf school leavers, students who have a severe-to-profound hearing loss are often unable to make constructive use of the information and resources available to assist students to make informed decisions.

Indeed, 20 years ago in the United States, it was widely accepted that deaf workers would work in unskilled or semi-skilled employment or work in the field of deafness as counsellors, teachers of the deaf, and/or sign language teachers (Pressman 1999).

Until twenty years ago, the prevailing view of deaf workers was that they were only suited for unskilled or semi-skilled types of employment or as teachers of other deaf people. Generations of deaf youth grew up learning from well-meaning parents, teachers, and counsellors that their career options were limited. The result was chronic under and unemployment. (Pressman 1999, p.1)

Traditionally, Deaf workers tended to believe they were best suited for, and entered occupations that did not involve continuous and complex communication with the hearing world. (Pressman 1999, p.4)

As outlined in Bonser and Burns (1998), the case is similar for deaf people in Australia. McCarthy (1998), cited in Pressman (1999), showed a group of deaf individuals a list of 515 occupations. The results indicate that the male members of the group believed they were able to do only 31 of the listed occupations, while the female members believed they could do only 14 occupations. This indicates that deaf school leavers find it difficult to envisage themselves in a broad range of careers; it also reveals the type of advice they are receiving from career counsellors and teachers of the deaf about choosing careers. As Pressman (1999, p.7) notes: 'career counsellors working with Deaf clients cannot adequately explore and support career options well known by [the] hearing population'.

This is further supported by an Australian study conducted by Punch, Creed and Hyde (2005) in which itinerant teachers of the deaf (also known as visiting teachers of the deaf) throughout Australia were asked to conduct a survey of their deaf students to determine their career maturity. The results were compared with a group of secondary school hearing students in Brisbane. The results indicated that, while deaf students do not differ greatly from their hearing peers in career maturity, they do

believe their hearing loss 'presented strong barriers to their career efforts and that they were less likely to be active in career exploration and planning' (Punch, Creed & Hyde 2005, p.18).

Careers information and advice

For any school leaver, working through the wealth of information available to assist in the career decision-making process is extremely time-consuming and requires a great deal of thought, research and discussion with many people, including family and friends. Generally speaking, school leavers have access to specialist careers advisors within the school system and a wide range of literature. Print-based material provided to them is often extremely detailed and complex. In addition, much of this information is electronic, from the internet, libraries and government departments.

This information is also available to deaf school leavers, but is often inaccessible because of the very nature of their 'disability', which is about communication. To further complicate matters, careers teachers, parents and teachers of the deaf often have preconceived assumptions that deaf people cannot follow certain career pathways. They may convey this to them overtly and covertly.

It is accepted that, within the deafness sector, 90% of deaf people are born to hearing parents who may also have other hearing children. This creates unusual family dynamics, especially if one member of the family communicates using Auslan and the majority of the family members are unable to communicate in that language.

In a family where parents and children cannot often talk with one another adequately or at all, this lack of communication and interaction frequently screens out the family's cultural and religious heritage that would have been passed down from the parents family of origin.

(Pressman 1999, p.2)

In deaf family dynamics (where the majority of family member are deaf), non-family members such as counsellors, teachers and peers often play more of a decisive role in the deaf person's career planning than family members (Pressman 1999, p.26).

Employment outcomes

As is the case for people with disabilities, deaf people occupy a wide range of occupations at all levels of employment. However, as indicated in recent unpublished data collected over five years from 1999 to 2004 by a specialist employment agency that provided services to deaf, hard of hearing and hearing jobseekers, there are very few deaf people who are employed at professional and managerial levels. For the purposes of the employment research being discussed here, clients were categorised as deaf, hard of hearing and hearing. The term 'deaf' refers to those people who use Auslan to communicate. The term 'hard of hearing' refers to those who have some residual hearing and communicate primarily using speech, and the hearing category comprises those who do not have a hearing loss and are mainstream jobseekers. The employment agency believes that the statistics are representative of the Australian population. The survey found the following:

- ✧ 67% of their deaf jobseekers were placed in trade or casual-type employment compared with 63% of their hearing jobseekers and 49% of their hearing-impaired jobseekers
- ✧ 10% of their hearing jobseekers returned to study compared with 8% and 7% respectively of their hearing-impaired and deaf jobseekers
- ✧ 24% of their hearing jobseekers obtained entry-level employment compared with 18% and 13% respectively of their deaf and hearing-impaired jobseekers
- ✧ 5% of their deaf and hearing jobseekers obtained employment in apprenticeships/traineeships compared with 2% of their hearing-impaired jobseekers.

(pers. comm. Manager Deafworks 2004)

What these data do not reveal is the age of the jobseekers, the length of their employment and whether their qualifications matched the employment. Hands Up NSW (Bonser & Burn 1998) also

found that the majority of deaf people were employed in trade or factory-type roles but there was strong evidence from that survey that deaf people were largely underemployed and were often overqualified for the employment they eventually gained. As Pressman showed:

Deaf workers have frequently been employed at levels incommensurate with their skills or education, and as a group, have been employed in a more narrow range of occupations than hearing workers. (MacLeod-Gallinger 1992 cited in Pressman 1999, p.4)

At Deakin University, a program entitled the Willing and Able Mentoring Project has been funded by the Department of Employment and Workplace Relations. The project matches new university graduates with a disability, with an experienced professional who is highly skilled in their field, for example, a lawyer or engineer, to act as a mentor and work with them to find permanent employment in their chosen field. Initial conversations with staff who worked in the Willing and Able Mentoring program indicated that a deaf person who uses Auslan is participating in the program. They have not as yet been able to find a mentor or employment for that person.

Barriers to learning

As mentioned earlier, the Disability Standards for Education (2005) are now in force. This makes it unlawful for an education provider (such as a TAFE institute or a registered training organisation) to discriminate or deny access to students with disabilities to their courses. The areas covered in the new standards are: enrolment, participation, curriculum development, accreditation and delivery, student support services and elimination of harassment and victimisation (Commonwealth of Australia 2005). The largest barrier for deaf people in a learning environment is the availability and provision of communication support. It is vital that this issue is addressed as a matter of urgency.

The provision of communication support to deaf and hard of hearing students is highly problematic. This highly vexatious issue has been well documented by the Centre of Excellence for Students who are Deaf and Hard of Hearing and the Commonwealth of Australia (Knuckey 1999; ORIMA Research 2004). Briefly, there are insufficient numbers of Auslan interpreters with a significant level of skill to meet the interpreting demand. This shortage is the result of a combination of issues that Auslan interpreters face, including:

- ✧ insecure employment
- ✧ lack of career pathways
- ✧ insufficient ongoing training
- ✧ a high risk of overuse injury.

To further complicate matters, in the United States leading researchers from the Rochester Institute of Technology found that deaf students only comprehended 60–75% of information relayed by a Native Sign Language (NSL) interpreter compared with 85–90% obtained by hearing peers (Marschark et al. 2004). This reinforces the need for deaf people to have greater support, in addition to an Auslan interpreter, during all levels of education, in particular with the provision of extra tutorial support to ensure they are able to have a comprehension level of 85–90% to bring them in line with their hearing counterparts.

In 2004, Victorian TAFE institutes provided over 26 000 hours of communication support, which includes Auslan interpreters, notetakers, out-of-class tutorial or a participation assistant. These services are required to enable students who are deaf and hard of hearing to access mainstream courses and to participate in the local TAFE institute in the same way as other students. As it is difficult to determine the true extent of support services costs, it is estimated that interpreting costs alone are between \$500 000 and \$1 million per year. The Victorian Government provides funds to cover the services of support personnel at a rate of \$26 per hour, but the actual cost individual institutes pay to interpreters is anywhere between \$28 per hour to \$37 per hour. These rates vary widely because interpreters charge different rates and the market is quite competitive. Research conducted by the Commonwealth Department of Family and Community Services highlighted that,

nationally, significant funds were invested in providing Auslan interpreter support to students in post-secondary education:

Partial data provided by State governments, Deaf Societies and further education institutions suggest that total expenditure on Auslan interpreting in 2002–03 for further education (both vocational training and tertiary education) was at least \$2.6 million. This represents half of the total expenditure on Auslan interpreting across all service areas.

(ORIMA Research 2004, p.111)

ORIMA Research (2004, p.7) also noted that ‘49% of interpreting was for educational settings’. The provision of Auslan interpreters to deaf and hard of hearing students in VET should be straightforward and provide an opportunity for these students to learn in an environment which enables them to go on and develop outstanding careers and contribute substantially to the community. Most importantly, it is difficult to obtain highly qualified interpreters who are willing to stay in the field of Auslan interpreting. In addition, given the precarious nature of Auslan interpreting, it is vital that two interpreters work on any assignment that is more than of one hour’s duration. This is often the case in educational settings and must be complied with for occupational health and safety reasons. Thus if one interpreter is ill, the other interpreter will more often than not cancel the assignment, but the organisation will still be required to pay for their services.

Stakeholders indicated that there is a shortage of sufficiently skilled Auslan interpreters in the further education sector, particularly in some non-metropolitan and outer suburban areas.

Deaf people are choosing a diverse range of subjects and courses but there is a lack of interpreters with the high-level skills and specialisation necessary to interpret these subjects.

Many Auslan interpreters have not undertaken studies at a tertiary level, and there are some subjects for which there are very few interpreters with relevant background knowledge.

A number of stakeholders were also concerned about the use of unaccredited interpreters in the further education sector. Universities generally only employ accredited interpreters and some States and Territories (such as the ACT) only permit accredited interpreters to interpret at Technical and Further Education institutes.

(ORIMA Research 2004, p.111)

Barriers to employment

One of the key barriers for deaf people in the employment market is the widely held assumption that they are unable to communicate and interact with co-workers. Too often, employers have a narrow view of what communication involves; for example, merely being able to speak and lip read. This disregards other forms of communication such as visual, written and electronic, which show that communication is broader and more complex than most people realise. Even two hearing people who share the same spoken language can talk a great deal and not communicate. Good workplace communication can be established, regardless of whether it is done verbally or not. Most people who are deaf are experts at communication; they have to be as they interact with the wider community on a daily basis. Conversely, most members of the wider community cannot use Auslan nor can they use finger-spelling. They do not understand what is required to support clear communication with a person relying on lipreading or residual hearing. This creates the irony that it is, in fact, the wider community who is lacking the expertise in communication.

The life experience of most, if not all, people who live with a hearing loss is that they adapt and find different ways to make their message understood and to understand another’s message. As well, people with a hearing loss use other senses, most frequently vision and touch, to compensate for what is not available to them through their ears. Deaf people look around them more frequently, making good use of their peripheral vision, and feel for vibrations through their hands and feet. This includes watching people’s facial expressions and body language which helps them to interpret the environment around them.

The other challenge facing deaf people is that computers and other technological solutions have replaced many of the ‘traditional’ areas in which they were employed. Many white-collar clerical positions that did not require the use of the telephone (especially in the public service) and which

required a great deal of data entry (such as changing personal details) were slowly replaced by call centre operators who were able to undertake these duties while talking on the telephone; these jobs also became automated due to large computer systems streamlining processes. This means that employment opportunities, as viewed by potential employers, employment agencies and deaf people, are seen as 'limited'. Also over the last 20 or so years, many of the larger blue chip companies in Australia and in the United States have downsized, and the majority of the workforce is now employed by small business. Often small businesses do not have the infrastructure or additional funds to provide the modifications to the workplace that can be accommodated comfortably by larger companies. This means that opportunities previously available prior to the technological revolution and downsizing of large corporations are no longer there. Pressman alluded to this in her doctoral thesis where she stated that, in the United States:

... was the downsizing of large public and private employment and the growth of small business. Traditionally deaf people have found employment in the public sector and large corporate and manufacturing firms. (Pressman 1999, p.5)

This situation needs to be improved to provide opportunities and enable greater acceptance of people with disabilities in the employment market. One way this can be accomplished is by employment and recruitment agencies playing a more significant role in the education of employers, as they are frequently the intermediary between a deaf person and potential employers. If employment agencies are not clear themselves about the abilities of deaf people, then they will not be 'on-selling' these abilities to the potential employer and will not be providing answers when the employer raises objections to the person with a hearing loss being a suitable employee. It needs to be noted that most specialist disability and generic employment agencies do not currently have the skills to appropriately 'sell' deaf people's suitability for employment. The upskilling of employment agency staff would be the first step in raising the awareness of employers.

Life coaching and whole-of-life approach

In 2004, a comparative study was conducted to compare Australian and Norwegian models of inclusion in the instruction of deaf and hard of hearing students (Hyde, Ohna & Hjulstad 2004). This study reported that 83% of students who were deaf in Australia were instructed in mainstream class settings (that is, one student in a class of hearing students). The same study found a 'surprisingly large 32% had a profound hearing loss'. This is considered to be a very high rate of general classes placement by world standards (Hyde, Ohna & Hjulstad 2004, p.4).

On one hand this is seen as an achievement, given Australia's strong policies of inclusion and the belief that people with disabilities should be educated in mainstream settings and not segregated in special schools. This policy was the result of a strong lobby from parents of children with disabilities in the 1970s.

However, current research (Hyde, Ohna & Hjulstad 2004) suggests that, while deaf students may be achieving results comparable with their hearing peers, there is concern over whether their social and emotional intelligence has the ability to cope independently in extra-curricular and social activities in the school environment, since these play an important part of preparing them for situations later in life.

An inclusion model is that it should involve social as well as dimensions of participation with hearing peers and classmates ... even though some deaf and hard of hearing people, when reflecting on their integrated school experiences, have said that they often felt lonely and isolated socially, even if they were successful academically.

(Hyde, Ohna & Hjulstad 2004, p.7)

As far as social integration is concerned only one-third of the Australian deaf students were regarded as being well-integrated with their hearing peers with another 30% seem as 'going along with' the school activities without playing a significant role in their planning and

execution. Only one-third of these students were reported as being ‘completely independent’ in the academic and social life in their classrooms and 46% as being ‘independent with support’.

(Hyde, Ohna & Hjulstad 2004, p.8)

For students to be successful and independent later in life, it is important that they develop social, emotional and academic success. While it is clear that students are achieving academically, more needs to be done to ensure they are able to develop a degree of emotional intelligence to assist them through life.

Deaf students learn more quickly by ‘doing’ and through experiential learning. This is due to the fact that they compensate visually because they are unable to hear general discourse in a social environment. As indicated above, it is clear that 32% of students (who have a severe-to-profound hearing loss) need some form of communication support to achieve marginal results in a social situation at school, and this is likely to carry on throughout adult life.

By establishing a ‘whole of life approach’ to education and by providing them with access to life coaching and specialist deaf career advisors, it is possible to overcome some of these problems. Currently, employment agencies, education providers and case management organisations all work with these individuals independently; however, if a team approach were to be adopted, as evidenced in the Enterprise and Career Education Foundation Lighthouse Initiative (Barnett 2002), this more holistic approach may result in better outcomes for students who are deaf and hard of hearing.

Better linkages of services to support deaf people moving from school to work

The Enterprise and Career Education Foundation Disability Lighthouse Initiative (Barnett 2002) is one of the few excellent examples of projects for people with disabilities that could benefit people with hearing loss. Barnett (2002) undertook an evaluation of three specialist disability projects that incorporate mainstream enterprise and career education programs. The model involves a process whereby a collective of public and private schools, as well as employment organisations, work together to place people with disabilities into the workforce. It appears from the literature that the main focus is on those with an intellectual disability. While this model may benefit some students who are deaf, especially those who are educated in specialist support units and deaf schools, it will, nonetheless, have barriers to its implementation. These would include costs, particularly the significant cost of interpreting support, and a resistance by many deaf people who would not identify with other (disabled) participants and who would not wish to be included in a program with them. This is the direct result of the fact that their ‘disability’ is one of access to communication rather than a cognitive disability. However, this model offers an opportunity to consider how the major players in education and training can work together to improve the career pathways, educational outcomes and employment opportunities for this group.

Ideally specialist careers advisors/life coaches would work closely with employment agencies linked to people with disabilities or deafness and could give advice on realistic, functional workplace information prior to job seeking.

Resulting research questions

From the information gathered, the researchers were able to develop a series of questions to fully explore students’ experiences of VET. It was clear from the literature that, while deaf people are able to participate in education and obtain employment, the ‘dots’ are not being connected to ensure they are able to use their educational experience and qualifications to obtain employment commensurate with their knowledge and skills.

Through personal interviews, we discussed each participant’s journey through school, post-secondary education and/or employment. From these we can begin to understand the types of

pathways that students are accessing and can determine whether they are appropriate in leading them to sustainable employment.

The following themes were explored in the interviews with each participant:

- ✧ What career pathways did they access and what sort of career guidance did they receive?
- ✧ What were their experiences of secondary school and VET?
- ✧ When they finished their course, what information did they receive about looking for work?
- ✧ Did they register with an employment agency and how helpful was the service to them?
- ✧ Were they able to obtain work after six months and if not, why not?
- ✧ On reflection, what would they like to see changed or improved to help them access pathways or make choices more readily?

Methodology

Design of research

The research utilised case studies from students commencing their first year of studies in the VET sector. Deaf students interviewed in the study were identified from around Melbourne and regional Victoria by linking with disability coordination officers, regional disability liaison officers and local schools.

A qualitative approach to the research has been utilised in this project, including a review of relevant literature, an analysis of documents and seven case studies employing naturalistic inquiry. The case study as a method of recording and reporting was chosen because, according to Lincoln and Guba (1985, p.138), it is not only suited to the naturalistic paradigm but is the form most responsive to its axioms. The case study is ideal for addressing the qualities of:

- ✧ communication of multiple realities
- ✧ communicating interactions between respondent and investigator
- ✧ communicating the values of the context
- ✧ communicating the values of the investigator.

Methodology

The research utilised four students who graduated from secondary school in 2004 and began their first year of studies in the VET sector in 2005. There were also three students who completed a VET course at the end of 2004 and who were looking for employment during 2005.

The method used in the case studies was personal interview, with each of the seven participants interviewed twice over a six-month period. The face-to-face interview was chosen over a postal survey for gathering detailed and accurate information and for ensuring the validity of the data collected. A postal survey with open-ended questions would not give the depth and quality of information that could be obtained through personal interviews. In addition, while a postal survey may have provided us with a greater response, the information obtained would not be as extensive as that from personal interviews.

Deafness involves issues of communication access and the ability of people with hearing loss to access mainstream information. For deaf people whose first language is Auslan and who have significant barriers to English literacy, the task of completing a paper survey may be difficult. Other deaf people who communicate using speech may also not have a good command of English, and again generally respond better to face-to-face interviews. The researcher was able to obtain a more accurate picture of the situation by discussing issues in person rather than via a paper survey or telephone calls via the TTY (the National Relay Service), or email. The face-to-face interview gave the opportunity for interviewees to seek clarification, ask questions and discuss issues.

Each group of students was interviewed twice. The first interview addressed their background, secondary school or VET experience (depending on whether they had finished school or VET at the end of 2004) and their plans for the next six months. The second interview followed up on how

they went with their goals, whether they had commenced a VET course or had found employment, and their experiences of that process. The questions were framed around the following areas:

- ✧ the personal background of the student, including age, family background, primary and secondary schooling and communication mode
- ✧ what sort of career guidance they received at school
- ✧ how they prepared for life after school, including help with selecting further study in TAFE/VET
- ✧ their experience of TAFE/VET—were they given support, was it in a mainstream classroom, were they isolated, did they have support from the Disability Liaison Unit?
- ✧ did they complete their studies, if so, did they have a graduation ceremony? Were they referred to employment agencies for support to look for work?
- ✧ what was the process in finding employment, did they have support in looking for work?
- ✧ did they find a job related to their course of study, how long did it take them to find employment, was their salary in line with their qualifications?

The project developed descriptive case studies from the face-to-face interviews, with participants utilising a list of standard questions. The interviews were audio-taped and transcribed. From the transcripts, we were able to develop an understanding of student experiences in three areas:

- ✧ the nature of the career guidance they received
- ✧ information received in preparation for VET
- ✧ experience of VET during their first year of study.

These case studies are discussed more fully in the support document *Case studies of deaf people who have graduated from VET or who have just commenced study in a VET course*.

Developing the case studies

The first interviews were conducted between November 2004 and February 2005, with the second interview conducted six months later. All interviews were conducted in person, as this method best suits deaf people, regardless of their communication. The study was Victorian-based.

The investigator, who is also deaf and can communicate fluently in either Auslan or spoken English, conducted all the interviews with research participants. However, an Auslan interpreter was also employed at each interview. In the case of interviews conducted in Auslan, the interpreter's role was to interpret both questions and answers into spoken English. These were recorded onto audiotape. In the case of interviews conducted in English, the interpreter's role was to make certain that the audio recording of the interview went smoothly, as well as to interpret participants' English responses into Auslan to ensure that the investigator's own deafness did not interfere with the smooth flow of the interview. Upon the completion of each interview, the audiotape was transcribed and a copy sent to the interviewee to allow them to check that their responses had been accurately represented (particularly in the cases when actual interpretation from Auslan into English had occurred).

All interviewees were sent examples of the types of questions that would be covered in the interview beforehand. This was to assist them in preparing for the questions that would be asked. This is a common practice when dealing with deaf people as it assists in anticipating the likely dialogue during an interview or meeting. At the initial interview participants were informed that their identity and responses were confidential and their anonymity protected. It was explained that they would be given pseudonyms and that details identifying their place of residence, educational institutions and/or employers would be concealed. At the second interview, each participant was

reminded of these facts. During each of the two interviews, each participant was asked a series of pre-planned questions, as well as other questions that arose as a part of the dialogue. As noted above, these interviews were recorded and then transcribed at a later time.

Sample details

The response from the original advertising for study participants was very poor, with the only interested participants who responded being outside the selected age range of 18 to 24 years outlined in the original case study protocol. The research team is unsure why it was difficult to find participants but, in all probability, because the information about the research was advertised in written form, it was not readily accessed by this client group. In addition, as the researcher had limited access to the client group, it was necessary to endeavour to identify potential participation through third parties (for example, specialist employment agencies, teachers of the deaf). It may be the case that these third parties erroneously determined that their clients were unsuitable when, in fact, they may have been suitable. Some other theories include the following.

- ✧ The age range selected did not reflect the career pathways people were choosing.
- ✧ School students were choosing either to look for work straight after school or go onto university after school rather than into VET.
- ✧ Deaf people may not have clear career pathways after school and may be choosing to defer study for a few years, allowing time to alleviate the stress of coping in secondary school.
- ✧ Teachers contacted may not have informed students of this project or decided on behalf of students that they were not suitable for the research.
- ✧ Employment agencies may not have informed their clients.
- ✧ Teachers, disability liaison officers and employment consultants were passing on the information to potential participants but these people chose not to come forward.

After further discussions with the project steering committee and discussions with the National Centre for Vocational Education Research (NCVER), the target age range was expanded from 18 to 24 years to 15 to 30 years to take account of the issues noted above and also to attempt to capture VET in Schools students who may still be at high school, or those undertaking school-based apprenticeships/traineeships. In addition, it appears that deaf students are coming to TAFE later than 18 years old, the age common for the general population. It appears that they may first be entering the workforce unskilled and then realising the value of further study. This is consistent with data obtained from NCVER indicating that a total of 384 Victorian students with a hearing loss completed a vocational qualification in 2003, of which 59% (225) were between 30 and 59 years. Similarly, of the national figure of 1569 people with a hearing loss who completed a vocational qualification in 2003, 59% (922) were between the ages of 30 and 59 years (unpublished data obtained from NCVER September 2006).

The flyer calling for participants was once again circulated to the community, allowing for the larger age range. Following this, we received seven names from potential participants, which meant we were one short of the planned cohort of eight participants. After discussions with the advisory group and the research team, it was decided to go ahead with the seven people. This meant that the total number of interviews would be 14 rather than the planned 16 interviews. It was felt that enough information would be obtained from the 14 interviews to develop an understanding of the career pathways and choices made by deaf people in Victoria.

Each person has been profiled and given a pseudonym to protect their identity. The seven people represent a wide cross-section of the types of deaf and hard of hearing people participating in VET. There are six males and one female in the group. Four participants were from rural Victoria and three from metropolitan Melbourne.

The first interviews focused on the student's educational experiences, communication modes, hearing loss, careers advice and reasons for choosing their VET courses. Jasmine, Brent and Glenn (not their real names) had all been through TAFE and were either looking for work or had employment following TAFE. Scott, Dylan, Phillip and Stephen (also not their real names) were all school leavers commencing their pathways from school in 2005.

The second interviews were conducted between May and June 2005 and focused on their experiences in obtaining work and whether the work they had obtained was related to their course of study. For the school leavers, the focus was on whether they were still in the course and if it met their expectations.

The participants

Jasmine

A 27-year-old female from a regional TAFE institute in Western Victoria, Jasmine completed Certificate III in Business Administration and graduated at the end 2004. She is currently looking for employment as a clerical officer and has registered with a disability employment agency. This agency does not specialise only in assisting deaf or hard of hearing people. Jasmine's primary communication mode is Auslan and she has a profound hearing loss.

My secondary high school education was quite mixed up. In Year 7 and Year 8 I went to a [Melbourne] metropolitan secondary college school. In Year 9 and 10 I was in [regional Western Australia]. There was no support for me there. I had to lip-read and try and write my own notes. There were a lot of barriers for me there, and a lot of frustrations. Then we moved back to Victoria and I went to [a high school in the western suburbs of Melbourne] at the end of Year 10 and for Year 11. I had an interpreter, which was a great relief, but I wasn't really happy with the curriculum I was being taught, so I moved to [regional Victoria] for Year 12, which I really enjoyed. That was the best support I ever had. The TOD [teacher of the deaf] and I worked closely together and we had a very good rapport. They assisted me with the improvements that I required. My academic grades rose significantly because of that.

(Interview with Jasmine, November 2004)

Dylan

A 17-year-old male from a mainstream secondary school with a special deaf facility to support students with hearing loss, Dylan has completed his Victorian Certificate in Education. He was school captain (voted by all students in the school) for the entire school and was certainly a role model to his deaf and hearing peers. Dylan wants to look for work before commencing study in 2006. He has some clear ideas about what he wants to do in the future, but feels it is better to take a break from study after the pressures of school. Dylan's primary communication mode is Auslan and he has a profound hearing loss.

I went to [primary school with a deaf facility] in [outer Melbourne]. It is an integrated school. Then I went to [metropolitan high school deaf facility], which was also integrated. Both schools had [deaf] facilities.

(Interview with Dylan November 2004)

I went to [a deaf school in Victoria] first, and then the deaf facility was introduced at my [primary school in Melbourne's east]. It was the first one in Australia.

(Interview with Dylan November 2004)

I was integrated with hearing kids [with an Auslan interpreter]. If I was not sure about something, if I didn't understand the work then I'd go to the deaf facility and they'd make it clearer for me. On my timetable there was also a regular time for deaf facility.

(Interview with Dylan November 2004)

Scott

An 18-year-old male who was fully mainstreamed with a teacher's aide in a local high school in the western region of Victoria, Scott completed Year 10 and is working towards obtaining an apprenticeship. He is currently working full-time in a motorbike repair shop in his local town. If the employment opportunity continues to be successful, he will be offered an apprenticeship with the employer. Scott has a moderate hearing loss, but has a deaf mother and uses Auslan and speech to communicate.

I went to [local] High School. I'm the only deaf person at this school.

(Interview with Scott, November 2004)

Yeah, I have plenty of support at school. If I had problems in the classroom, I had integration people to come into the class with me.

(Interview with Scott, November 2004)

She comes every Friday [visiting teacher for the deaf]. They have integration people there who come to me in class from [another local] high school [specialist people who come here and help with work].

(Interview with Scott, November 2004)

Phillip

An 18-year-old male who was fully mainstreamed with support from the Visiting Teacher Service once a term at his local high school in western Victoria, Phillip was offered a hospitality apprenticeship in 2005. He has a moderate-to-severe hearing loss and his primary mode of communication is speech. At the time of the interview, he had not yet commenced his apprenticeship.

I attended [local] primary school and then went on to [local] P-12 College for secondary school. At primary school I had a visiting teacher until about Grade 5. Then at high school I continued having a [visiting] teacher until about Year 8, and then [a different visiting teacher] started seeing me in Year 10. At primary school in Grades 5 and 6 I had an FM unit and then started with a new model at high school in Year 10.

(Interview with Phillip, February 2005)

I had a teacher's aide from Year 8 through to Year 12 but only for English and Maths. They [the teacher's aide] helped out by clarifying and helping me understand the context. If I didn't need any help they'd help other people in the class as well.

(Interview with Phillip, February 2005)

I had an FM unit and I relied a lot on lipreading and clarifying with the teacher, and also asking my other classmates.

(Interview with Phillip, February 2005)

At the start I felt a bit left out because I was a different person, but as I grew and got older they understood me and helped me so I started to feel like one of them.

(Interview with Phillip, February 2005)

Stephen

Stephen is an 18-year-old male from Western Victoria who completed Year 12 at his local high school with support from the Visiting Teacher Service (once a term visits); Stephen has applied through the Victorian Tertiary Admissions Centre to enrol into a hospitality management course at a local TAFE. Stephen is severely deaf and his primary communication mode is speech.

I attended [the local Catholic] primary school. Then I attended [local TAFE] college for my secondary years. In primary school, at about the age of 5, I was diagnosed with my hearing loss up at the [local rural] hospital in the Speech Pathology Department when my brother was undergoing a speech therapy course. I didn't really have any support in primary school. It wasn't until I really got the support in Year 7, from [the Disability] Liaison Officer, when I went to high school, that I was transferred to Australian Hearing Services. Around Year 9 I was fitted with a Peel unit, or an FM radio with microphones for myself and a microphone

for the teacher. Then about six months ago I was also fitted with a hearing aid system called a Cross hearing aid system. I got access to the Visiting Teacher [Service] from about Year 11 onwards, because there'd been no visiting teacher in the south-west district for at least four years or so.

(Interview with Stephen, February 2005)

Looking back, at times it was very hard when teachers didn't understand how to really communicate with me ... [or use other kinds] of communication. I suppose one advantage of primary school was though because I did have a very bad literacy problem at the start, in Year 2 I did a reading Recovery programme, and then again in Year 6 I did a six-month Bridging the Gap Literacy programme which definitely did help to perfect my literacy and numeracy skills. Without the Visiting Teacher Service in the last 2–3 years I think it probably would have been an absolute personal hell to try and get through VCE, especially if I hadn't been able to get the special considerations, and so on, for exams and extended writing time and the like.

(Interview with Stephen, February 2005)

Brent

Brent is a 23-year-old male from Melbourne, who is currently doing a traineeship at [a major university in Melbourne] working as an administrative assistant in the Disability Liaison Unit. When Brent left school, he went to university to study law. He eventually dropped out and spent a few years doing a number of different courses before joining a disability employment agency who managed to find the traineeship position at [that major university in Melbourne].

The role of the deaf facility was to try and put the hearing impaired and deaf students into the mainstream. They have teachers and interpreters there to help support the students. In addition to the mainstream classes, I believe there were some students who were having difficulties keeping up with the work. They were set aside time in the deaf facility to help the students, etc.

(Interview with Brent, February 2005)

I did have time in the deaf facility but that was really to do my own work. Instead of going to the library and studying I'd go to the deaf facility and study there. The only time I had in there, apart from that was that I did history by correspondence. They didn't offer it at the school. I did it in Year 11 and 12. One of the teachers of the deaf offered to help with teaching ... well, she didn't teach me but she was like the supervisor because there was no one at the school. The teacher didn't have time so she offered to help me out. That was really good. I enjoyed doing that subject. There was another hearing student who did it as well, and she came into the deaf facility.

(Interview with Brent February 2005)

For some classes I had a Notetaker, but I never really used the support in class as much. I mainly used the deaf facility to go and study etc.

(Interview with Brent, February 2005)

Glenn

A 20-year-old male from the southern suburbs of Melbourne who communicates using Auslan, Glenn commenced the Diploma in Building Design at [a Victorian TAFE provider]. He went through three different deaf facilities/schools before completing his Victorian Certificate of Education. He chose [a Victorian TAFE provider] because another deaf person was studying the same course and he thought it would be good to have some company. After completing semester 1, Glenn withdrew from his course due to the heavy workload and difficulty in having consistent Auslan interpreter support.

I went to [a deaf facility in Northern Melbourne]. I went there in Year 12. I went to [a deaf school] up to Year 11 and then I went [to the deaf facility in northern Melbourne] for Year 12. I went to [a deaf facility in northeast Melbourne] for Years 9 and 10.

(Interview with Glenn, February 2005)

I went to [deaf school] in Years 7 and 8. Then in Year 9 I went to [a secondary school near home that has a deaf facility] and I was integrated in that school because it was close to home.

Then in Year 10, half way through Year 10, after first semester I went back to [deaf school] again and I was there for another two-and-a-half years. I finished Year 11 at [deaf school] and then last year I went to [northern suburbs] Secondary College and completed my Year 12 there.

(Interview with Glenn, February 2005)

I was with other deaf people. I wasn't the only one in a hearing environment so that was great. I could communicate openly and comfortably with everyone.

(Interview with Glenn, February 2005)

Limitations of the study

As noted, one limitation of the study was the small number of participants. Initially, eight participants between the ages of 18 and 25 years were to be interviewed. When it was difficult to obtain even this small number of participants, the age range was extended to between 15 and 30 years. This proved far more fruitful; however, ultimately, only seven participants were located.

In choosing the methodology of case study via interview, it was accepted that, as a qualitative study, the number of subjects would be low and that the investigator would need to make some choices about the people to study (Sarantakos 1995, p.141). One of the necessary choices was the manner in which potential participants were identified; that is, each interviewee was identified by a professional working with that person rather than the interviewee self-identifying. While this had potential to skew such a small sample, in the end the sampling was relatively balanced and random. The only exception to this was a lack of gender balance (that is, one female and six males).

The ability to identify and attract participants was also a limitation of the study as it was necessary to broker participants through other professionals, for example, teachers of the deaf and specialist employment agencies. The numbers of participants might have been higher had the investigator been able to identify and approach potential participants directly.

Finally, the fact that some interviews were interpreted (from Auslan to English) must also be recognised as a limitation because of the potential for error within the interpreting process. This issue was addressed by allowing participants to read the transcripts of their interviews; however, this does not completely eliminate the potential for interpretation errors as:

- ✧ the transcripts are in English and the participant's level of English literacy may limit their ability to understand the text
- ✧ the transcripts were supplied some two weeks post-interview and so the passage of time may have interfered with the ability to recollect what was said in the interview.

Findings

This project focused on gaining an understanding of the experiences of deaf students in comprehending and utilising the wide range of pathways from secondary school to VET and on to employment. As the project title implies, a key aim of this project was to 'connect the dots'. Too often, deaf students are given inappropriate career advice, which results in inappropriate choice of tertiary study, with the final outcome being an inability to obtain employment in the field in which they are qualified. This is not only an unsatisfactory outcome, but also a costly one to the community, both in the area of wasted resources and, worse still, wasted potential.

This project aimed to gain insights into how this progression of advice, study and employment occurred in order to identify the areas in need of intervention so that, ultimately, the dots could be connected more effectively and a satisfactory outcome (that is, employment in the field in which the deaf person is qualified) could be achieved.

The interviews revealed that students were able to access a wide range of pathways. These pathways include work experience, studying the Victorian Certificate of Applied Learning (VCAL) at school and access to careers advisors, traineeships, apprenticeships and post-secondary VET studies.

The findings are presented in the following categories, which were themes from the original research questions. These questions were:

- ✧ Are these students able to make informed choices about the pathways and opportunities for further study from the career guidance and other advice and services available to them?
- ✧ What experiences of or opportunities from VET do deaf students have during their years of study?
- ✧ What are the employment outcomes for people who have completed their VET courses? Are they able to obtain employment commensurate with their skills and qualifications? How quickly does this occur?
- ✧ What other pathways to further study need to be available and how can identified barriers for those who are deaf be overcome? What are the barriers to employment and how can these be addressed?

Informed choices

Career guidance and services

All of the participants interviewed reported that they relied on their parents, teachers of the deaf and peers to assist them in considering their future career, a practice consistent with the general population. Phillip, Scott, Stephen and Brent all have enough hearing to cope in a mainstream classroom without additional support and were able to participate in generic career development programs. Phillip, Scott and Stephen were able to access the Victorian Certificate of Applied Learning and VET in Schools to assist them in choosing their pathway. Scott said he found the Victorian Certificate of Applied Learning subjects at school more manageable and he was able to cope with the workload better. The teachers here were able to provide him with ideas of what he could do when he finished his studies.

The remaining three (Jasmine, Dylan and Glenn) had a severe-to-profound hearing loss and required additional support and were, therefore, unable to access the careers program provided by the school. Jasmine found the experience of careers advice and information problematic. She was given careers information to review but looked at it and felt that nothing really ‘struck’ her and she ‘didn’t really understand it’.

Nonetheless, there is a perception in the broader community and amongst careers professionals that, regardless of degree of hearing loss, these young people are still ‘deaf’ and therefore unable to undertake a range of employment options. This is a general perspective, although erroneous, on deaf and hearing-impaired people.

Comprehension of written and electronic careers information

Four of the participants found the written careers guidance information that was aimed at young people difficult and complex to read and comprehend. The general consensus from the four students was that it would have been extremely beneficial to have access to deaf role models and to discuss careers with deaf people themselves. They felt that, by gaining an understanding of what other deaf people were doing, they could have made a more informed choice about their future career options.

Literature is not much help. It would be much better, much more enjoyable for me to meet someone face to face and find out what they do in their jobs. I had some problems reading it [the literature]. I wasn’t sure about the different options and I couldn’t quite make head or tail of it so it didn’t help in defining a focus for me. (Interview with Jasmine, November 2004)

I suppose the information was probably useful but I didn’t feel I could access it exactly because it was all in English, because it was text-based. If I’d maybe had it translated into Auslan maybe I would have thought about that again. (Interview with Brent, February 2004)

I had a big book with different kinds of apprenticeships in there. I looked under ‘Mechanic’ and read about it. I had some help from the teacher to help me understand it. (Interview with Scott, November 2004)

Deaf role models

By discussing his future with a few other deaf people who had already left school, one participant, who went to a specialist deaf facility, decided to defer his studies after high school.

Well, I’ll tell you a bit of a story. I have two friends, Simon and John [not their real names]. Simon decided to study for another year at TAFE. He went straight into TAFE. John, however, decided to get a job first. One year later Simon still hadn’t finished TAFE but he decided to leave. He couldn’t be bothered continuing with it, whereas John knew that he wanted to go on to TAFE. He felt motivated to study. He was bored with the job that he had, so that made him motivated to continue with his study. I look at my two friends and think that I’m probably better to follow John than I am to follow Simon.

(Interview with Dylan, November 2004)

Two of the participants were informed they couldn’t undertake certain careers—as policewomen and railways apprentices. In these situations, the professionals who advised the deaf students tended to make judgements about the types of jobs a deaf person could do, without allowing for the fact that there are different levels of hearing loss and that not all people are profoundly deaf. A more positive approach would have been to focus on the students’ areas of interest and look at the range of options available. In addition, in one instance an employer refused to give work to a deaf school leaver due to perceived occupational health and safety risks. Providing students with examples of deaf role models in various occupations would be a means of empowering them to overcome any barriers they may face in their career pathway. Knowing the range of jobs available and the barriers they will have to face would enable young people to feel more informed about the choices they have and their ability to overcome any problems.

Well, I guess if I had someone to go and talk to give me more information, rather than reading about it and considering it myself. Someone to help me to do the research and finding out that detailed information, I guess. (Interview with Glenn, February 2005)

I think having deaf speakers would have helped. Perhaps a way to do it would have been to get an idea from the students in Year 10 of what they, perhaps, wanted to do career-wise. If they wanted to become a lawyer or a doctor or an academic at university, I think it would have been an idea to actually try and bring in a guest speaker—a lawyer—and then the students can ask them how they got to where they are, did they do law straight after school or did they do TAFE for two years and then move into law. I think the students would have benefited from having someone up there who's in the profession and who can tell them how they got there. I think it means more. (Interview with Brent, February 2005)

I think the best thing would have been meeting a lot of different deaf role models and having them give me information about their careers. (Interview with Jasmine, November 2004)

Work experience

All students participated in work experience during Year 10 at secondary school and all reported that it was useful. However, the work experience did not appear to influence the decision-making of two participants when it was time to apply for further study. Jasmine's work experience at the local Deaf Society involved undertaking a range of basic administration duties. Her comments were:

It was a good experience because it got me involved in the deaf community. But it didn't help me with information about working with deaf kids. I needed information what was involved in those jobs. (Interview with Jasmine, November 2004)

As previously discussed, the majority of the people interviewed reported they would have liked to have had presentations at their school from other deaf people doing the types of jobs in which they were interested. This appears to indicate that many experienced barriers to employment opportunities and they were deterred from completing courses, or were unsure of the outcome due to the uncertainty of sustainable employment opportunities. They were also unsure whether they would be able to overcome perceived negative employment barriers by employers.

Experiences and opportunities in VET

Enrolment

The students interviewed did not appear to have any problems with enrolment into a course. Most of them applied for the course directly to the TAFE institute they wanted to attend. Two students went through the Victorian Tertiary Admissions Centre straight from school and two enrolled in a TAFE institute to undertake an apprenticeship or traineeship.

Participation

For some students, especially those who communicated using Auslan and who had been through a deaf facility or deaf school, the challenge of commencing a VET course with 20–30 other hearing people who did not know Auslan was quite daunting. As one student puts it:

I just wondered if it would be a good or bad year, whether people would be nice to me, whether I would fit in the group, whether the interpreter would be good enough and will there be availability of interpreters? (Interview with Jasmine, November 2004)

Two students who use Auslan had different experiences of VET. One student decided to enrol in a TAFE institute one-and-a-half hours away from his home simply to have the company of another deaf student who was doing the same course and could communicate in Auslan.

... this was where my friend was going and I thought it would be good to have another deaf mate to keep me company and not be the only deaf person on campus, just doing my work and having no ability to socialise. I thought it would be good to have the company, so we both came here. But then three or four weeks later my friend lost a bit of interest. I continued on by myself.

(Interview with Glenn, February 2005)

Well, I didn't really make any friends. But when I was on my own in the class, as the only deaf student, my classmates would sometimes write notes to me, or sometimes the interpreter would interpret for casual conversations and we'd have a bit of chat then, just through the interpreter ... I had no one to just chat with. I could talk to the interpreter during lunch break or in breaks between class.

(Interview with Glenn, February 2005)

The other student enrolled in a bridging course to become a nurse but withdrew after one week 'because it [was] too scientific, way too hard'. The student then enrolled in a business administration course where 'all the class have been learning to sign, not just the one person although she did start it'. This certainly helped the student's confidence and ability to feel part of the class. 'They have been very inclusive as a group.' (Jasmine, November 2004)

Communication/technical support

Three of the students interviewed required the support of an Auslan interpreter in the classroom. Two of those students had participated in a VET course and the third had deferred his studies for 12 months but was considering undertaking studies at Gallaudet University, which is a university for deaf people in the United State of America.

Well here in Australia there are some issues with interpreters and notetakers, whereas at Gallaudet I'd learn directly from a lecturer and I wouldn't have to go through a third party. I'd rather the direct communication.

Dylan, like many people who communicate using Auslan, finds it a challenge to watch interpreters all the time; it is very draining having to watch the same person for several hours. 'It makes it harder to concentrate' but if the lecturer communicates directly in sign language as they do in the United States, it is much more direct and more personal and therefore requires a lot less concentration. 'I feel that if I was communicating directly with the lecturer then I would feel more in tune with them'.

The other two students who decided to undertake a VET course, identified problems in attracting and retaining interpreters. The most frustrating experience for them was when interpreters or notetakers were sick or did not turn up and there was no time to find a replacement. This meant that these students had to either miss the class or sit in the classroom and not understand what was being discussed, which is a very demoralising experience for deaf people.

On the first day it was a really bad day, in fact. The interpreter didn't turn up. The notetaker I had was no good, she was really lousy. She was trying to control me, and I was telling her that it was her job to write notes and not to tell me what to do!

There were a few classes where I took my own notes, but I found it pretty difficult trying to take notes because when I looked down to my page I'd miss out on the interpretation. I couldn't see what the interpreter was signing at the same time as I wrote my notes. But, most of my classes were actually quite practical so I didn't really need a notetaker in those.

As noted earlier, researchers from the Rochester Institute of Technology found that deaf students only comprehended 60–75% of information relayed by a Native Sign Language (NSL) interpreter compared with 85–90% obtained by hearing peers (Marschark et al. 2004). This reinforces the need for deaf people to have greater support, in addition to an Auslan interpreter, during all levels of education, in particular with the provision of extra tutorial support to ensure they reach a comprehension level of 85–90%—equivalent to their hearing counterparts.

Two students used an FM system in the classroom (which uses a localised FM transmitter and receiver to supplement the residual hearing in those who are hearing-impaired) but found that just having an FM system in the classroom was not enough to ensure they were able to understand what was happening. Often tutorial support was required to clarify information discussed and ensure that they properly understood what was being taught. This service was available to them at secondary school but they found they were not able to get the tutorial support at TAFE.

I did but I did not like wearing it. Sometimes I'd take it to class and the other kids would like playing with it. They all loved to talk into it. It was really hard for me to concentrate, you know. (Interview with Scott, November 2004)

I had an FM unit and I relied a lot on lipreading and clarifying with the teacher, and also asking my other classmates. (Interview with Phillip, February 2005)

They [the teacher's aide] helped out by clarifying and helping me understand the context. If I didn't need any help they'd help other people in the class as well. (Interview with Phillip, February 2005)

Graduation

Jasmine was the only participant who had actually graduated from a VET course in 2004. Brent and Glenn had both undertaken VET courses the previous year but had not completed their studies.

When Brent left school, he hoped to get into law at university; however, to his disappointment his TER (Tertiary Education Rank) score was not high enough. So he decided to enrol in a VET course at a local TAFE and work his way through that course and eventually return to study law as a mature-age student.

I was just learning from books and theory and studying and in my day-to-day life I had no way to apply it, the practical knowledge, so I lost interest in doing that. (Interview with Brent, February 2005)

Well, looking back firstly perhaps I made a bit of a mistake trying to study whereas I should have looked for a job etc., but there's not much I can do about that now. I think that what would have helped me is going back to the guest speaker idea ... For deaf students perhaps even deaf role models would have been a good idea. (Interview with Brent, February 2005)

After a series of drop-outs and breaks in study undertaking both VET and higher education courses, Brent was able to gain a traineeship and found that working and studying simultaneously worked best for him.

It's quite different to tertiary and secondary school study. I had to get used to it. It's at your own pace and you really can't fail because if you haven't done something to their satisfaction you do it again. I'm not used to that, so it took me a long time to get used to that. (Interview with Brent, February 2005)

What really motivates me is that for the first time I'll have a real say in what I want to do, and maybe even determine what sort of job I'll do. They may even create one. There's that possibility, of coming up with something to do and then maybe creating a position. That's a huge difference from anything I've done before, so this is the first time I've really felt positive about the future. (Interview with Brent, February 2005)

Glenn, on the other hand, found he needed time to re-assess what he wanted to do in the future. Like Jasmine, he was looking for employment. Both Glenn and Jasmine were considering further study if they were unable to obtain employment.

Partly it was the travelling and also that I didn't have enough time to finish my homework when I was at home because I wasn't getting enough sleep. I was travelling such a long way. And also because there were problems with the interpreters and notetakers, particularly when they weren't able to make it to class. When they didn't turn up it made it very difficult for me.

And, yes, I was feeling lonely and isolated as well. That wouldn't have been a major complaint, though. I could have coped with being in the hearing world. In August ... it had become too stressful trying to study and doing all of that travelling. It made me realise I was becoming more and more stressed to a point where I just couldn't continue.

(Glenn, February 2005)

If I don't get a job then I'll come back here and do the next certificate—Certificate IV.

(Jasmine, November 2004)

Employment outcomes

Each of the people interviewed as part of this project has had direct experience in looking for work, either as a result of completing their studies, as a break between secondary school and further study, or as part of an apprenticeship/traineeship. From the information obtained through the interviews, it was clear that those who have a clear career pathway through either an apprenticeship or traineeship had more success in obtaining work related to their studies. By comparison, those who did not have a clear pathway were unsuccessful in gaining employment during the six-month period of the study.

Registering with an employment agency

Three of the participants are registered with employment agencies. Jasmine and Scott live in Western Victoria so have found it difficult to find an employment agency that specialises in assisting deaf people in that region, as the only agencies with that speciality are based in Melbourne. Jasmine has registered with a generic disability employment agency. Jasmine needs to communicate using Auslan, and her employment officer knows how to sign 'a little bit'. Some of her detailed and complex appointments are conducted with the services of an Auslan interpreter, but the agency has limited funding and was unable to supply interpreters for each appointment. 'They would supply an Interpreter to talk to me about jobs, or if I had an interview.'

Scott has registered with generic agencies with no experience with people with disabilities or hearing loss. Scott has also registered with an Australian Apprenticeship Centre specialising in assisting people with disabilities. However, to date, he has not been able to obtain an apprenticeship and this may be due to the fact he wants to be in his local community and near his family. It is unclear whether his hearing loss may be a barrier to his obtaining an apprenticeship.

Many 'disability specific' organisations are unaccustomed to working with deaf people, particularly in relation to advocating for adjustments and overcoming attitudinal barriers raised by employers—because they are unaware of what adjustments can be made and how to overcome perceived occupational health and safety risks.

Employer awareness

As documented in the literature review, deaf people experience a wide range of barriers to employment, many of which can be attributed to the lack of awareness amongst employers about the skills and abilities of deaf people. Many employers are unaware of the ways in which a person with a hearing loss can, both safely and adequately, contribute fully in the workplace and not become a 'burden' to be accommodated by the employer. This concern was raised at Australian Government level, and an Employer Roundtable for People with Disabilities was established in July 2005. Its brief was to develop a national action plan by the end of 2005 aimed at increasing the employment opportunities for people with a disability.

For Jasmine, looking for work has been a frustrating and demoralising experience. Jasmine wants to capitalise on her studies and believes her qualification should be sufficient to assist her in obtaining work in the field.

I'd say [I've applied for] around about three or four [jobs] per week, however many weeks have passed. I'd say over 150 different applications during that time. I get very few responses. I've had no success whatsoever. Some were for data entry positions, some for office work and a few have been for other computer-related jobs, but not all specifically for office work. It hasn't been broader than that.

Last year was really good and I tried some classes again this year, but there were only three people from my Cert III who progressed into Cert IV. The rest of them got jobs. They all had contacts. Some got jobs in the medical area, another one got a job at the Council, another one got a call centre job and here I am without one. I find it really interesting that there were 8 people who got jobs, so I don't see the point in getting a Cert IV. Those 8 people had a Cert III and they got jobs.

I don't think I need to be more highly qualified than a hearing person to get a job. It shouldn't be like that. They should just accept my deafness as they would accept a hearing person.

Glenn obtained employment after he dropped out of his course. He did not have the confidence to work in the field of his study and—like other members of his family—knew that deaf people were able to obtain employment in a factory, so that was his focus. In addition, the employer had employed deaf people before and was comfortable with having a deaf person work in his organisation. This meant the employer was able to see beyond the disability and look at Glenn's skills and abilities. However, he does not see his current employment as long-term and would like to return to study when he finds the right educational institution, one that will provide him with the support he needs.

Once they found a job I was interested in I attended an interview. A woman from Job Focus attended the interview with me. I was shown around the workplace, and shown what I would be doing. We had a discussion there at the factory. I got a phone call a few days later to say that I had the job. The woman from Job Focus interpreted the interview for me, and interpreted during the tour of the factory and the explanation of the job requirements.

Maybe it's to do with being deaf and with communication. I got this factory job because there had been other deaf people who had worked there prior to me. On the first day I attended work, the boss asked me if I was okay. He talked to me about my safety on the job, and specifically he talked to me about forklifts in the factory. I told him that I would be okay because I have a certain amount of hearing thanks to my hearing aids. I told him that I would keep my eyes open. My manager was pleased with that. He just told me to be aware of forklifts at all times.

This task of raising awareness is, indeed, a massive one, as it requires a major paradigm shift by not only employers, but also by the community at large. Legislation has provided for equality of rights, but it has not changed attitudes and misconceptions about the skills and abilities of deaf people. It is hoped that the Commonwealth Employer Round Table will provide some long-term strategies to improve the current situation.

Experiences in the workplace

Both Phillip and Stephen were employed in the hospitality industry and both had a mild and moderate hearing loss. Both of these young men worked very hard to ensure they were able to be part of the team they worked with. Both use a hearing aid.

Phillip works at the local restaurant in town. He admits his hearing loss creates some problems within the workplace but he is slowly developing strategies to overcome this.

Sometimes I can't understand people on the telephone at work, but I usually then hand the telephone to one of the other workers. (Interview with Phillip, June 2005)

Stephen looks back on his decision to go into hospitality as opposed to working in the railways where he was told he could not get a job due to his hearing loss. Stephen wonders if he made the right decision, especially in light of an incident at his work the previous week, where he had to sacrifice some of his salary because of a disgruntled customer. He hadn't fully understood what the person had said and is concerned it could happen again, but understands, given the industry he is working in, that this is one of the things he will have to manage.

This last week my confidence has hit rock bottom because of the stuff-up that happened on Saturday night, a bit of discrimination that was chucked towards me from the actual customer ... I sort of just got [sic] back over it again and kept going.

I just apologised to the customer and put their food through as quick as I could on the computer, then contacted [the supervisor] to check the order to make sure it went out quickly. I then contacted the manager and the customer again who got quite shitty saying they'd had to wait an hour already. But that's partly their fault; too, because they failed to notify any staff that probably after 20–30 minutes their meals hadn't come. They asked for free desserts in exchange for the error and the boss said 'Well I'm not giving them something worth \$4.40 and a cake and some sort of an ice cream. They can have an ice cream, and a scoop for the kids, and that's it!' The customer then demanded their whole bill for free, which was over 22 people. It cost the boss around about \$100 or so, so he told me. But then I also lost my pay on the Saturday night for the three hours [to cover the short fall]. I thought 'What the heck. Who cares'. There's not much I can do about it.

(Interview with Stephen, June 2005)

Pathways

This research project reveals that the seven deaf people interviewed are accessing a wide range of pathways. However, it is clear that the 'dots' are not being connected to ensure deaf people are able to make the most of their progress to achieve a satisfying career outcome. The majority of the people interviewed, especially those who communicate using Auslan, were still unsure about what their long-term career path would be.

For Brent, who wanted to be a lawyer and undertook work experience in that field but did not have the academic results to attain his goal, it has been a long road over five years to get where he is now. While it is a good outcome for him, the question remains whether, with the right career advice and support, he may have reached this pathway at an earlier stage and progressed further in his career.

I've come to the realisation that you can't start off your career or [have] an ambition to inspire or empower other people unless you inspire yourself first. It needs to come from yourself first and other people will see that and take that on board. I had a bit of a flaw of logic back then but I have a new focus now.

(Interview with Brent, June 2005)

I have to admit, since leaving school, this is the first time that I've really felt confident about my future. I've encountered a few dead-ends before, and I've gained a lot of experience and knowledge, but I think this time I've come to a good thing.

(Interview with Brent, June 2005)

For Dylan, the school leaver who wanted to go to Gallaudet University and changed his mind when he realised it would cost US\$30 000 to attend as an international student, the future is unclear. For a young man who had so much potential and enthusiasm, it is sad to see that potential not being captured and encouraged.

I've changed my plan a bit for this year. I had said that I wanted to have a year of rest and relaxation but I have started to look for jobs, and I want to fix my car and make some modifications. That has to be done soon. I was wondering what I should do next, for the rest of the year, and I thought I might do a short course, like a 10-week course in mechanics ... a quickie [sic] course! Then, I was thinking about next year starting an apprenticeship in

mechanics. That's a possibility. I think that would be pretty good. My hobby already is to work on the cars and I'm pretty good at it. That's quite a change from what I said before. I think mechanics would be quite a good job for me. So I could do the 10-week short course in the near future as preparation, and it could potentially save me one year off my apprenticeship. I think that's pretty cool.

Dylan does not realise that to become a mechanic, he needs to obtain an apprenticeship with an employer and work and study over a number of years on an apprentice's wage. He is also quite vague about the support he can expect while he is doing a VET course.

I have a mate who signs and they could interpret for me. He has his own business, with people working for him. He has his own business, booking Interpreters, so I could approach him.

Implications for policy

It is important to note that, historically, expectations of deaf people who use sign language to communicate have been extremely low and do not reflect the skills and abilities of the individual. Deaf people have been undereducated and underemployed for at least the last century. This was as a direct result of beliefs that were held about the importance of the development of speech skills. The academic abilities held by this population were not taken into account.

For people with a mild or moderate hearing loss, the situation is a great deal better, as they are able to manage with the assistance of a hearing aid in general day-to-day activities.

This is why, in the year 2005—high but realistic—expectations are crucial. In particular, school career advisors need to be updated about the appropriate provision of advice to deaf people. Deaf people are now better educated, yet many are still streamed into a handful of potential employment areas that are seen as a ‘good’ job for a deaf person. This situation needs to change.

While the sample size was limited, a number of suggestions for improved levels of service can be made on the basis of the experiences of the seven students interviewed. These include the following:

- ✧ Access to information related to career pathways should be improved, with information provided in a format accessible to deaf students (for example, video clips in Auslan).
- ✧ Funding should be allocated for the employment of specially trained careers counsellors/life coaches to assist deaf school leavers to obtain a full and accurate snapshot of all available career pathways and programs. In addition, access to deaf role models from the workplace would further assist them to determine an appropriate career pathway. Either or both of these approaches would assist this client group to have greater career maturity, reduce career indecision and remove anxiety associated with perceived career barriers due to hearing loss.
- ✧ A resource kit should be developed to educate deaf students about disability discrimination law and provide strategies to deal with obstacles in educational and employment settings. This resource kit could be regularly updated and include information on deaf role models.
- ✧ High but realistic expectations should be encouraged of the students, both by employers and tertiary education establishments in relation to what deaf and hard of hearing people are able to achieve as long-term goals and employment aims.
- ✧ Obstacles associated with obtaining interpreter and/or notetaker support for study should be reduced or eliminated.
- ✧ A longitudinal study to track a group of deaf students who are in deaf schools, deaf facilities and in mainstream settings and which would study their progress from school, to VET/higher education and to employment should be established.
- ✧ A better understanding of the numbers of deaf people who require support in an educational setting and whether those people are obtaining employment outcomes commensurate with their training should be attempted.

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Support document details

Additional information relating to this research is available in *Connecting the dots: A successful transition for deaf students from vocational education and training to employment: Case studies of deaf people who have graduated from VET or who have just commenced study in a VET course—Support document* and *Students with a hearing loss in VET in Australia: A statistical snapshot—Support document* which can be accessed from NCVER's website <<http://www.ncver.edu.au/publications/1798.html>>. The documents contain:

- ✧ case studies of seven deaf people either enrolling in a VET course or looking for work
- ✧ a statistical snapshot of students in the VET sector who have hearing loss.

Appendix: The case studies

Case study questionnaire

Background

- 1 Obtain personal details
- 2 How old are you?
- 3 What high school did you go to?
- 4 Did you go to any other high school before that?
- 5 Were you educated in a mainstream classroom or as part of a hearing support unit?
- 6 What do you regard your primary mode of communication to be?
- 7 Is anyone else in your family deaf?
- 8 How do you regard your education at school?

Career guidance

- 1 When you were in Year 10, did you start thinking about what you wanted to do after school?
- 2 Who did you talk to about this?
- 3 If you didn't, why not?
- 4 What made you decide to do further study?
- 5 What do you hope to be when you finish school?
- 6 How did you find out about the course you want to do?
- 7 Did you have the support of the school careers advisor? If not, why not?
- 8 How do you think you can become better informed about career choices and what you want to do?
- 9 Were you able to participate in a VET in school program? If not, why not?

Preparing for TAFE/VET

- 1 How did you apply to TAFE/VET?
- 2 Did you go through the VTAC process?
- 3 Did you state on the application form that you were Deaf?
- 4 Did you talk to a Disability Liaison Officer about your support for next year?
- 5 How did you know what to do?
- 6 What do you expect when you think about going to TAFE/VET?
- 7 What do you think will change and what do you think will stay the same?
- 8 Did you have support at school? If so, what support?

- 9 Have you spoken to anyone else about going to TAFE/VET?
- 10 Did you go to any TAFE Open days?
- 11 Was there any information available for you telling you what you could expect when going to TAFE/VET?
- 12 Do you think the Disability Liaison Officers understand your needs? Or do you have to tell them?
- 13 When you communicate with the Disability Liaison Officer, how do you communicate?
- 14 Do you get help from family members?
- 15 When you want to contact TAFE/VET what do you do? Call via TTY, NRS, SMS or email?

What is your experience of TAFE/VET?

- 1 When you arrived at TAFE/VET was it what you had expected?
- 2 Did your teachers know that you were Deaf and did they know how to communicate with you?
- 3 Were they positive about having you in the class?
- 4 Did you have any support in the classroom? If so, what type of support and how many hours?
- 5 Were there any classes where you did not have support? If so, why?
- 6 Did your teachers know how to work with your support staff?
- 7 Were you able to communicate with other students in your class?
- 8 Did you feel you were part of the class, or did you feel isolated?
- 9 What made you feel isolated?
- 10 Did teachers expect you to work hard, did they provide you with support if you were having problems?
- 11 Did your interpreter/notetaker have to explain their role to the teachers?
- 12 Have you used an interpreter/notetaker before coming to TAFE?
- 13 Were you familiar with your role with notetakers/interpreters?
- 14 Who did you talk to if you were having problems in class?
- 15 Was the Disability Liaison Officer available when you needed to talk to them?
- 16 Did you get extra time for tests or exams?

Preparing for graduation

- 1 Were you given any support from Disability Liaison Officers or Student services in TAFE about how to prepare yourself for when you graduate?
- 2 Will you attend the graduation ceremony?
- 3 Have you registered with any employment agencies? If so, which ones?
- 4 Why did you select those agencies?
- 5 Have you received any advice from careers services at your TAFE/VET College?
- 6 If not, why not?
- 7 Have you been given information about graduate programs?
- 8 Have you been given information about potential employers who are looking for graduates?
- 9 Have you thought about where you would like to work when you finish TAFE/VET?
- 10 Who do you think will help you with that?

Completed TAFE—finding a job

- 1 Which employment agency is helping you look for work?
- 2 How did you find out about this employment agency?
- 3 How long have you been registered with them?
- 4 Do they understand your needs as a deaf person?
- 5 Are they looking for jobs that meet your skills? If not, why?
- 6 Have you had any interviews?
- 7 Do you require support in job interviews?
- 8 Do you think you are getting a 'fair go' in looking for work?
- 9 What barriers do you think you are experiencing when you meet employers?
- 10 What strategies are you aware of that can help you overcome these barriers?
- 11 Are you able to tell employers about these barriers?
- 12 Do you have interviews with recruitment agencies? What are their attitudes?
- 13 What companies have you applied for?
- 14 What jobs have you applied for?
- 15 Have you had training in job search techniques? If not, why not?
- 16 If you need an interpreter, are you able to get on quickly to do the job interview?
- 17 Are you missing out on job interviews because you cannot get an interpreter?



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